

# **PROFESSIONAL SCRUM PRODUCT OWNER LEVEL 1 (PSPO I) EXAM PREP**

## **BOOTCAMP SESSION 2**

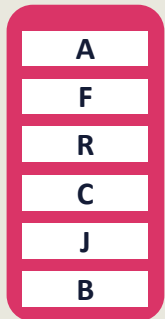
Instructor: Barb Waters, MBA, PMP  
Class will begin at 11:00 am Eastern Time

# DAILY SCRUM OR STAND-UP

Inputs from Executives, Team,  
Stakeholders, Customers, and Users



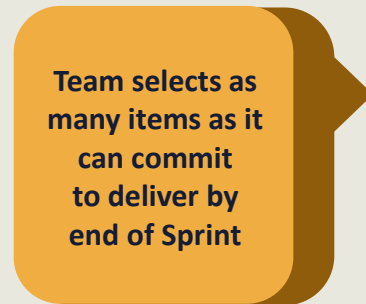
Product  
Owner



Product  
Backlog



Developers

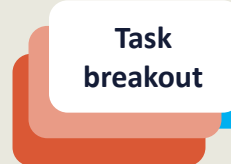


Sprint planning meeting

Team selects as  
many items as it  
can commit  
to deliver by  
end of Sprint

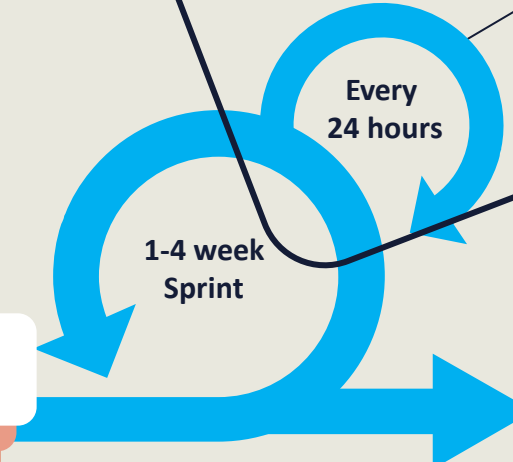


Scrum  
Master



Sprint  
Backlog

Task  
breakout



1-4 week  
Sprint

Sprint end date and  
Team deliverable  
do not change

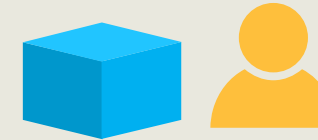


Daily Scrum  
meeting

Every  
24 hours



Sprint Review



Finished work



Sprint Retrospective

# ROLES DURING THE DAILY SCRUM

What about upper management outside of the Scrum Team?

## Scrum Master

- Promotes Scrum best practices
  - Stick to the time box
  - Team values
- Removes impediments
- Coaches the team
  - Problem solving
  - Roles and responsibilities
- Serve as a buffer for the team
- Attendance not required



## Product Owner

- Explains the value of each backlog item
- Must be easily accessible
- Answer questions
- Provide clarification
- Seek additional clarification from stakeholders
- Last minute reprioritization
- May cancel a Sprint
- Attendance not required



## Developers

- Lead the conversation
- Answer three questions
  - What did I do yesterday?
  - What do I plan to do today?
  - Do I have any blockers?
- Inspect daily progress against the Sprint goal
- Ask clarifying questions about the user stories



# DAILY SCRUM

“What did I do yesterday?”

“What will I do today?”

“What are my roadblocks?”



Typically 15 minutes or less, regardless of Sprint length

- Developers own this event
- The Daily Scrum is held at the same time and same place each day
- The routine keeps things simple
- Although it is also known as the “Daily Standup”, team members are not required to stand
- Inspect and adapt Sprint backlog
- Identify progress and remaining work against the Sprint goal
- Shared understanding of the most important work to do next in order to achieve the Sprint goal
- Reserve off-topic subjects for a separate discussion
- Scrum Master and Product Owner presence is helpful but not required







# DOES THE DAILY SCRUM REALLY HAVE TO BE “DAILY”?

If Developers meet less frequently:

- They lose opportunities to inspect and adapt the Product Backlog
- Impediments are not raised or addressed as quickly
- The Sprint Backlog becomes less empirical, or fact-based

# IN CASE OF ABSENCE

- The Product Owner or Scrum Master will not be available to attend today's Daily Standup/Scrum.
- What should the team do? Should they meet, or should they cancel?
- Developers make the best decisions possible to assure progress toward the Sprint Goal, re-aligning with the Product Owner once they are available again.



OUT OF  
OFFICE

# SCRUM OF SCRUMS

Used to scale Agile

- When teams are >12 members
- Each team selects an ambassador

Report on

- Completions
- Next steps
- Impediments

Resolve coordination challenges between teams

Scrum of Scrums has its own backlog of these items

May meet a few times per week



Team A



Team B



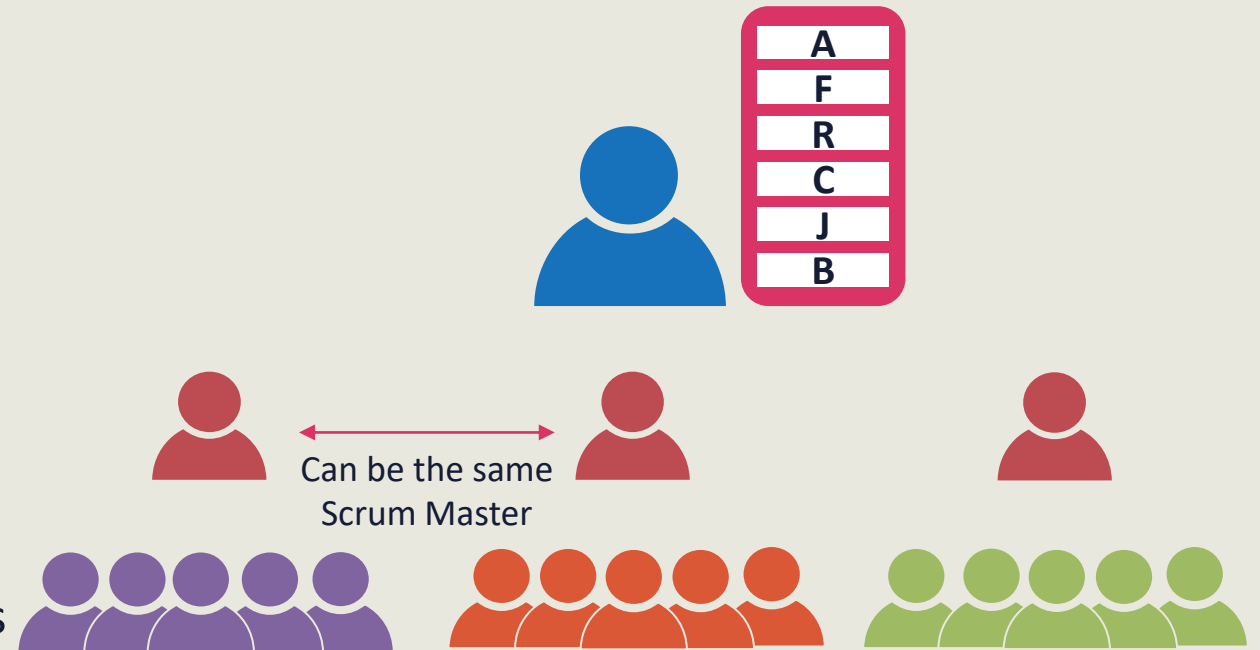
Team C



Scrum of Scrums

# MULTIPLE DEVELOPER TEAMS

- One Product Owner
- One Product Backlog
- Multiple Developer teams working on increments of the backlog
- Each Developer team has a Scrum Master
- One Scrum Master can serve multiple teams
- Developer teams may have their own “Definition of Done” that is specific to their work
- All Definitions of Done should be clear to all teams
- Combined work must be fully integrated, valuable, and potentially releasable.





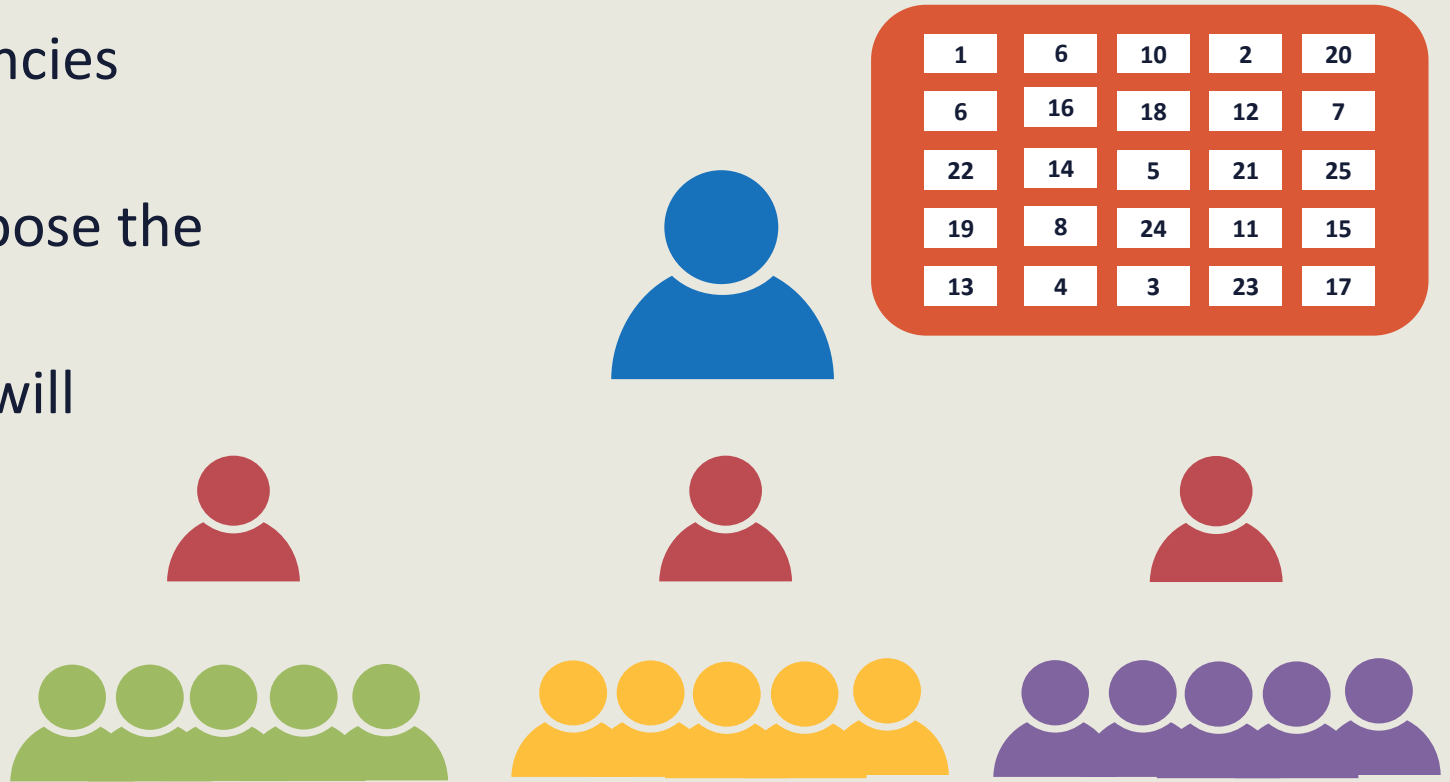


# PROBLEM WITH MULTIPLE PRODUCT OWNERS

- “The Product Owner is one person, not a committee” - Scrum Guide
- One Product Backlog = One Product Owner
- Promotes personal accountability
- Reduces complexity

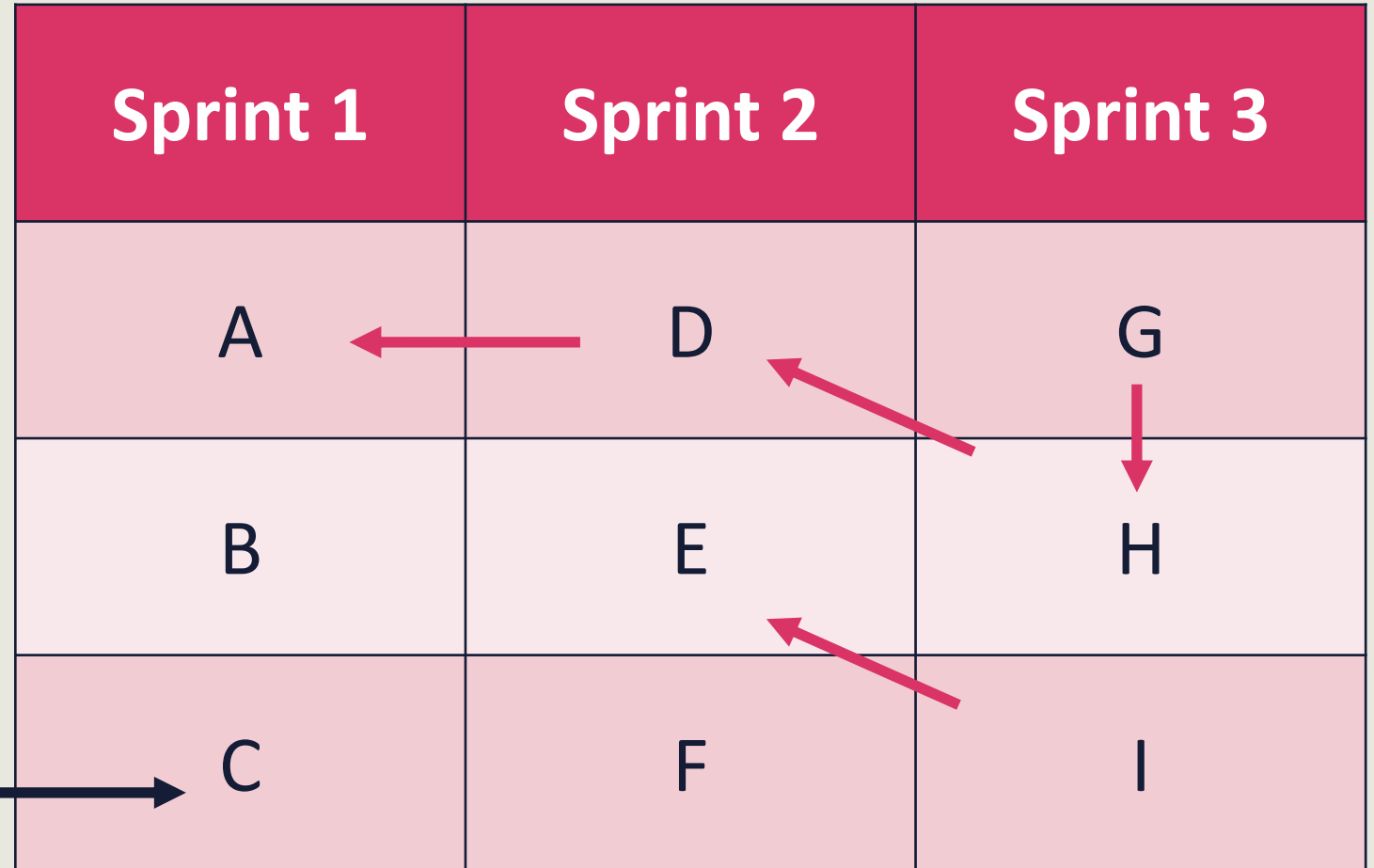
# CROSS-TEAM REFINEMENT

- Minimize or eliminate dependencies across the teams
- Developers analyze and decompose the work
- Developers decide which team will deliver backlog items
- This is ongoing



# REORDER TO REDUCE DEPENDENCIES

*Dependencies between Product Backlog items and other external influences may require Product Backlog reprioritization*





# DEVELOPERS ARE SELF-ORGANIZED AND SELF-MANAGING

- Decide how they will be organized
- Manage the Sprint Backlog and their approach to the work
- Play a role in selecting new team members
- This is also true for multiple teams working together
- Self-organization benefits:
  - Personal accountability
  - Commitment
  - Innovation and creativity



*Self-organization applies to scaled frameworks too*

# FEATURE TEAM

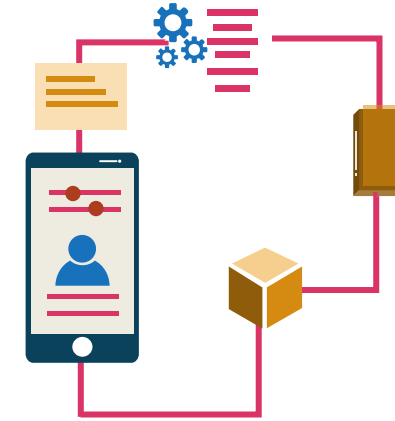


Preferred



- More modern
- Focuses on customer view
- Requires cross-functionality
- Whole team ownership of tasks
- Reduces bottlenecks
- Requires strong team collaboration
- Communication centered around the user story

# COMPONENT TEAM

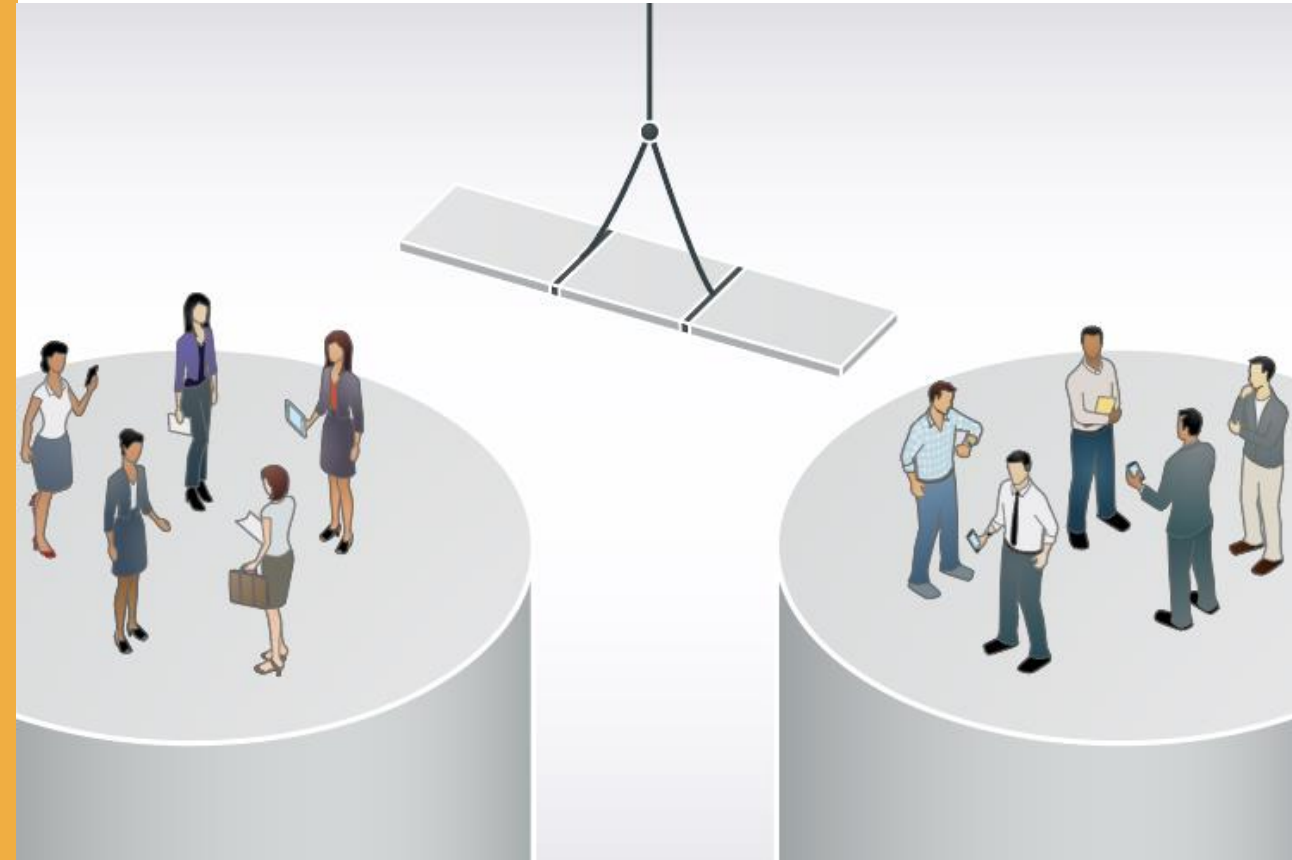


- Older approach
- Focuses on a specific technical layer (UI, database, etc..)
- Team members are specialized
- Tasks are divided and assigned
- Can create dependencies
- Tasks are more sequential/waterfall
- Communication centered around tasks



# FEATURE TEAMS WORK MORE COHESIVELY

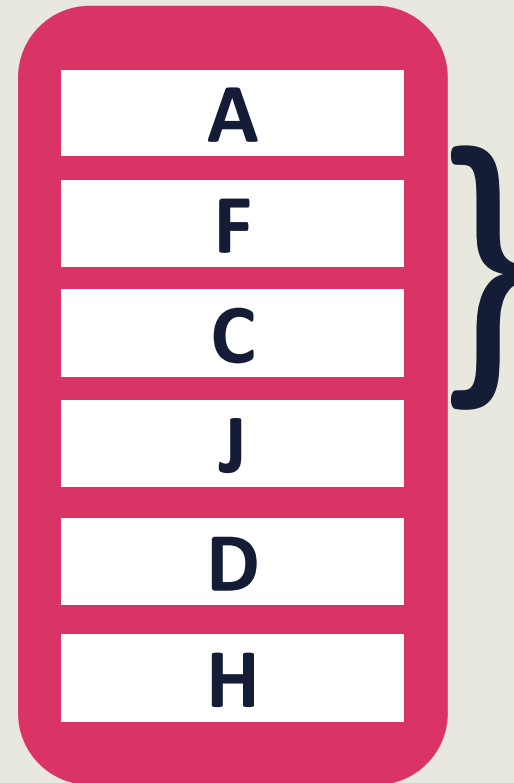
- Every team member is focused on how the product will be used
- Team members tend to be cross-functional with broad skillsets
- Create end-to-end functionality
- Fewer bottlenecks
- When switching from component team to feature team, productivity will temporarily drop



# SPRINT BACKLOG

- Belongs to the Developers
- Subset of the product backlog
- Used to achieve the goal for the current Sprint
- Highly detailed and visible
- The Developers decide:
  - How to approach and select the work
  - When it is appropriate to update the Sprint Backlog
- Developers hold themselves and each other accountable
- Although tasks are divided, each Sprint backlog item is owned by the entire group
- May need to be renegotiated with Product Owner in order to meet the Sprint Goal

## Sprint Backlog



## Developers





# CHANGES TO THE SPRINT BACKLOG

- During the Sprint, Developers may learn more about the work needed to achieve the Sprint Goal
- The Sprint Backlog may emerge
- Developers may add to the Sprint Backlog
- Only Developers can add or modify the Sprint Backlog
- This means that some work may not originate directly from the Product Backlog
- This is different than new “requirements”, which should always come from the Product Backlog

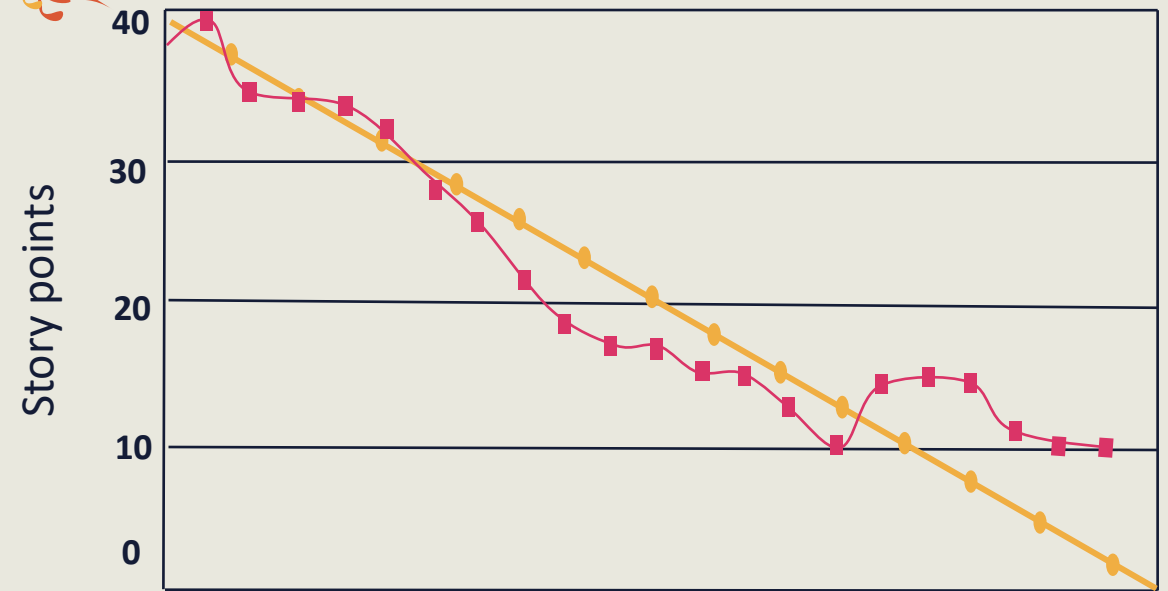
# PERFORMANCE TRACKING: BURN CHARTS



Burndown and burnup charts

“Information Radiators”

- Generic term for a highly visible information display
- Graphs, charts, data dashboard
- Communication tool
- Shows remaining work for the Sprint
- Trend line shows the running average, and what will likely happen if progress continues at this rate

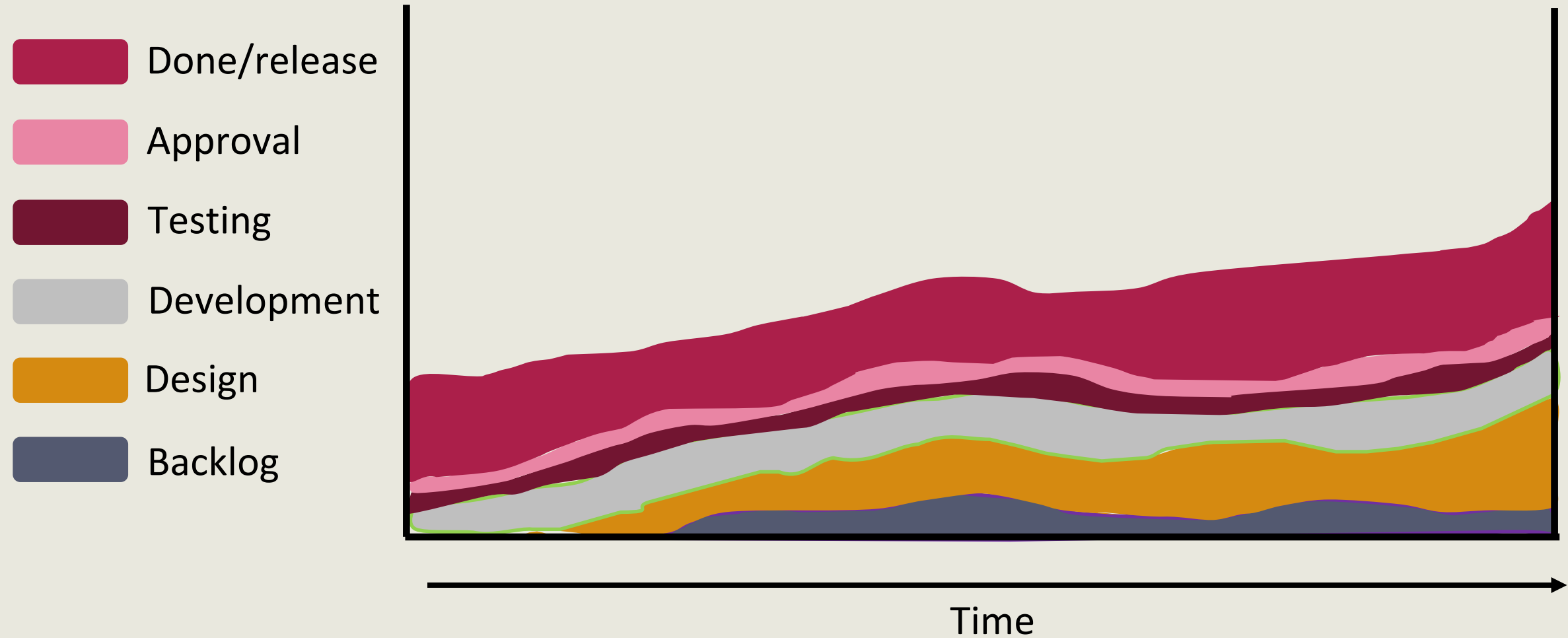


Ideal



Remaining Points

# PERFORMANCE TRACKING: CUMULATIVE FLOW DIAGRAM





# THE SPRINT GOAL IS UNREALISTIC.

What should the Developers do?

Options:

- Ensure that the Scrum Team is aware, start the Sprint, and monitor progress
- Renegotiate with Product Owner to remove or change selected Product Backlog items

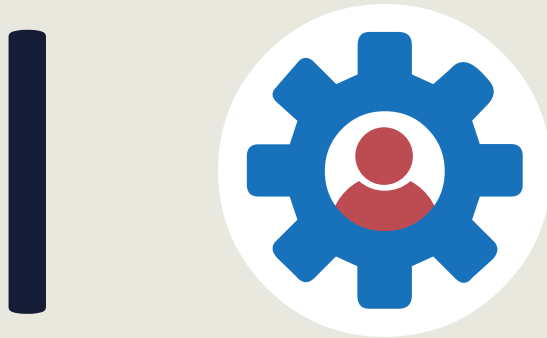


# SPECIALISTS VS. GENERALISTS

## I-shaped

- Specialist
- Narrow skillset
- More hand-offs required

“I have one main skill”



## T-shaped

- Generalizing specialist
- Not multi-tasking!
- Allows teams to “swarm” on a task

“I have many skills”



# SPECIALISTS (I-SHAPED)

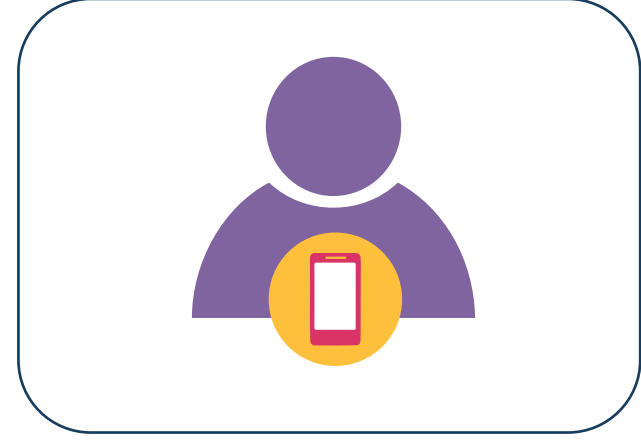
"We only design"



"We only code"



"I only test"



# GENERALIZED SPECIALISTS (T-SHAPED)

"We only design"



"We can code  
*and* test"



"I can code  
*and* test "

Ready  
for  
release



# STAGES OF TEAM DEVELOPMENT

Also known as the Tuckman Ladder

1

Forming

2

Storming

3

Norming

4

Performing

5

Adjourning

Not typical in Scrum

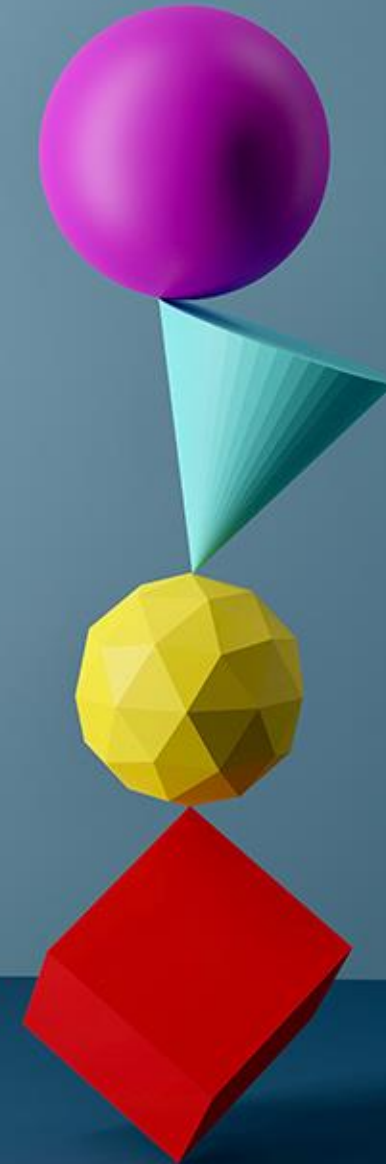


Team members may change, and productivity may be temporarily impacted



# CROSS-FUNCTIONAL DEVELOPMENT TEAM

- There is a balance of skills among the developers
- Every necessary skill and competency is represented
- “Developer” is a generic term. It includes every person who contributes to the “Done” product increment
- Borrowing team members can be disruptive
- Teams are organized around the project
- Team members may change
  - Consider the impact on productivity
  - More of an exception



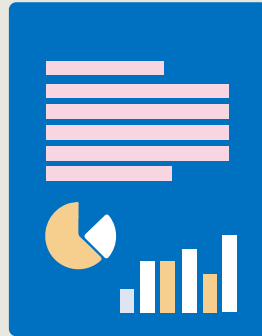
# INVESTING IN TEAM MEMBERS

A team member doesn't have adequate skills. What should I do?

?



Scrum Master



Employee

# REMOVING TEAM MEMBERS

- Disruptive team members can be considered an **impediment**
- Who has the authority to remove a team member?
- Suggestions are presented by the **Scrum Master** to management outside of the team

I have tried to coach a team member but nothing I do helps. They are so disruptive, and it is hurting the team's performance. What should I do?



Scrum Master

%\*#&!



Developer



# HIRING TEAM MEMBERS

- Who decides if the Scrum Team can hire more developers?
- Who conducts the interviews?
- Who decides how the development team will be organized?

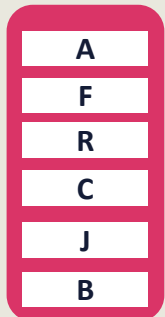


# SPRINT REVIEW

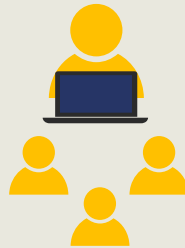
Inputs from Executives, Team,  
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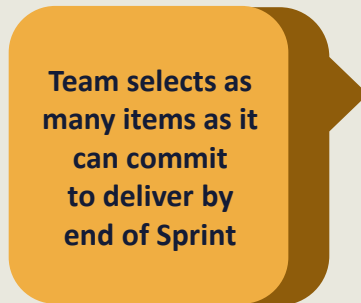
Product  
Owner



Product  
Backlog



Developers

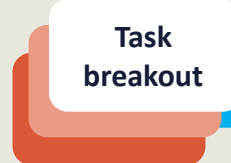


Sprint planning meeting

Team selects as  
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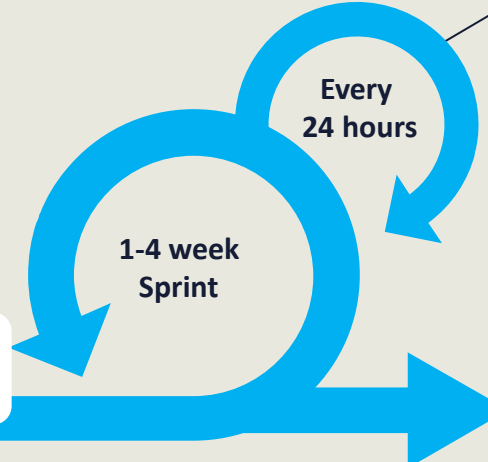


Scrum  
Master



Sprint  
Backlog

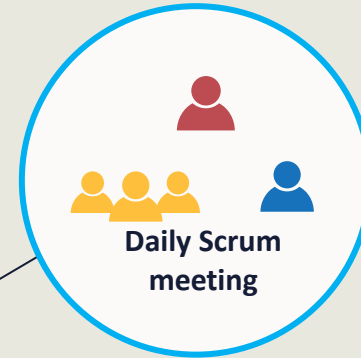
Task  
breakout



1-4 week  
Sprint

Every  
24 hours

Sprint end date and  
Team deliverable  
do not change



Daily Scrum  
meeting



Sprint Review

Finished work



Sprint Retrospective



# SPRINT REVIEW

- Occurs at the end of a Sprint
- Participants
  - Developers
  - Scrum Master
  - Product Owner
  - Stakeholders (invited by Product Owner)
- Developers demonstrate the product increment
- Inspect the product increment with stakeholders and collect feedback
- Product Owner may work with Developers to adapt the Product Backlog based on feedback



Typically 1 hour per week of Sprint



# ROLES DURING SPRINT REVIEW

## Product Owner

- Presents the product backlog
- Explains progress
  - What was completed
  - Planned items that were not done
- Lead discussion of what to work on next



## Developers

- Demonstrates new product increment
- Answers questions about the product
- Discuss challenges



## Scrum Master

- Facilitates the event
- Promotes adherence to the time box
- Clarify roles and responsibilities



## Stakeholders

- Invited by Product Owner
- Try the new product increment
- Provide feedback



# SPRINT REVIEW

- Informal gathering
- Elicit feedback
- Does it solve a problem?
- Does it serve a purpose?
- Is it user friendly?





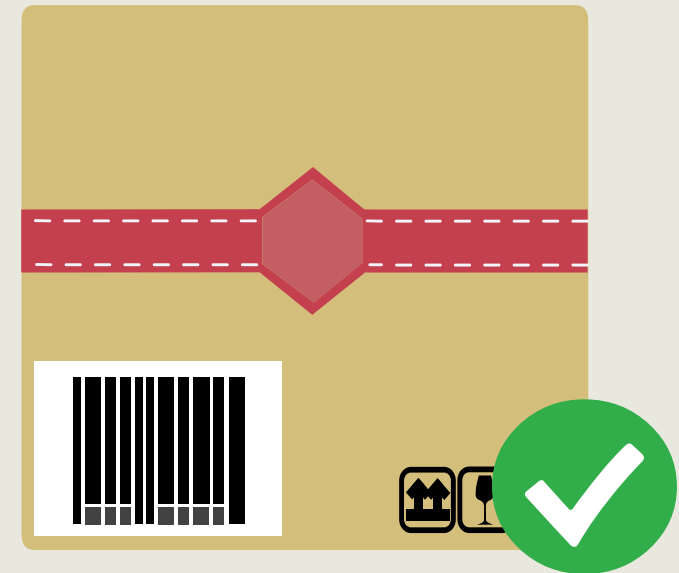
# SPRINT REVIEW BEST PRACTICES

- Put the item in the hands of the customers
- Observe their interaction with the product
- Request feedback
- Ask probing questions
- Maintain a friendly and informal environment
- Thank the stakeholders for their time and feedback

# PRODUCT INCREMENT

- A valuable, useful set of product features
- Developers are accountable for creating the increment
- The result of the latest Sprint
- Demo during sprint review
- Must meet the “Definition of Done” established during planning
- Incomplete work is not demonstrated
- Validate assumptions about value.

## Product Increment





# **“POTENTIALLY” RELEASABLE PRODUCT INCREMENT**

**Complete**

**Acceptance Criteria**

**Definition of Done**

**Tested**

**Avoid escaped defects**

**Deliverable Now**

**No remaining work, including user instructions, etc.**

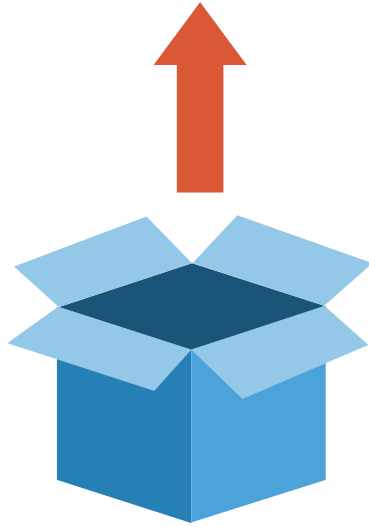
**Reasons the Product Owner might delay release**

**Costs associated with release**

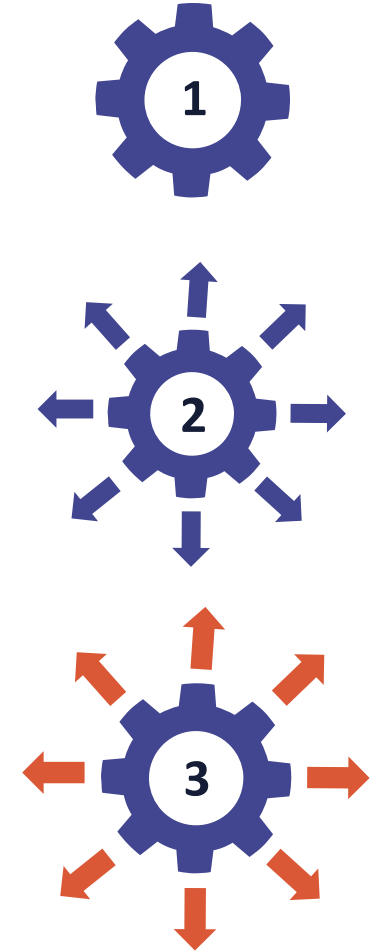
- **Marketing expenses**
- **Additional customer support**
- **Customer’s willingness to adapt**
- **Inadequate Definition of Done**



# PRODUCT SCOPE EVOLVES

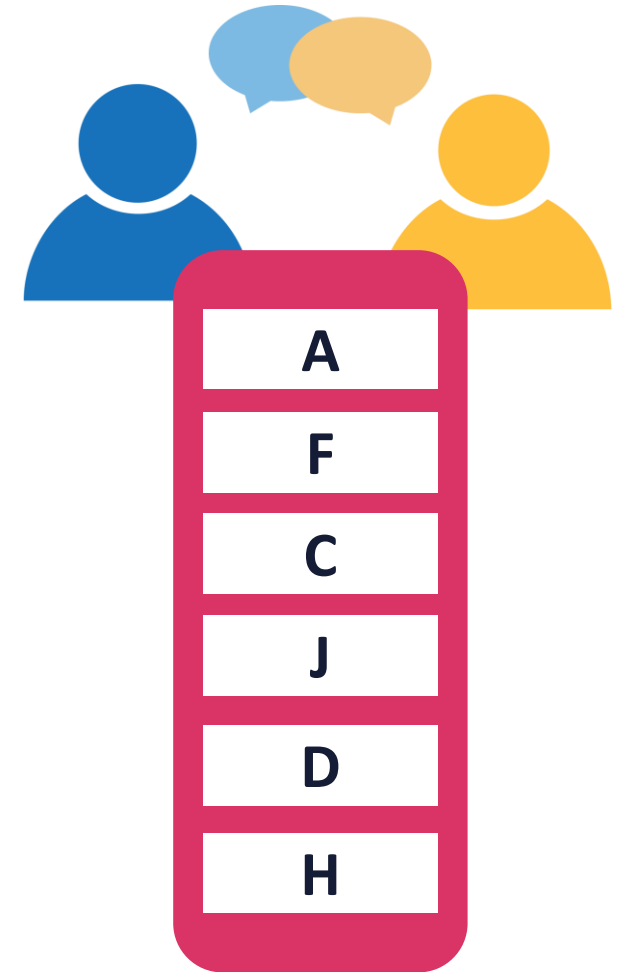


With each release, the  
product becomes more  
robust



# SPRINT REVIEW AND PRODUCT BACKLOG TRANSPARENCY

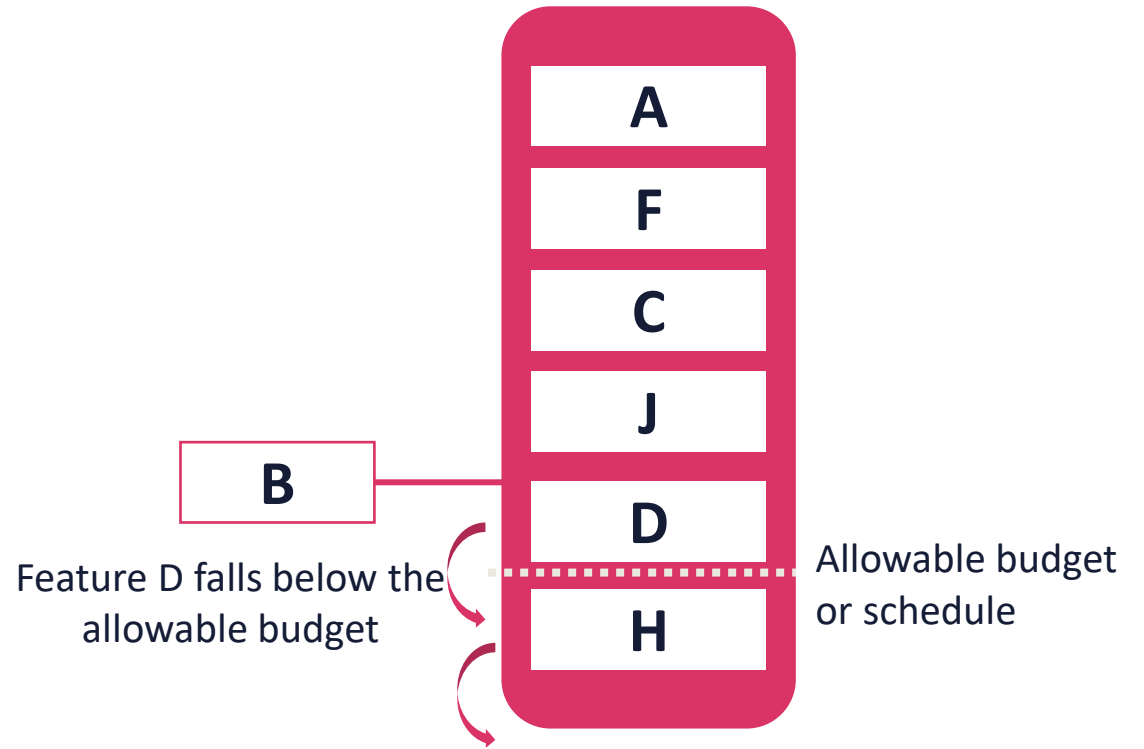
- Product Owner shares the current state of Product Backlog at the Sprint Review, which, combined with the inspection of the Increment, leads to an updated Product Backlog.
- This process fulfills all of the three Scrum pillars of empiricism
  - It ensures transparency – a shared vision among stakeholders
  - It can be inspected
    - the order of backlog items should reflect value
    - it is available to all stakeholders
  - It promotes adaptation, by incorporating new items into the Product Backlog



# PRODUCT BACKLOG REFINEMENT

**New features can be inserted into the priority list at any time**

- Not a Scrum event or meeting
- Sprint Review can result in new requirements
- Can be performed any time
- Product Owner can choose their own approach, tools, and techniques as needed
- Backlog constantly changes, based on:
  - customer needs
  - new learning
  - value
- Items are reprioritized based on value
- Product Owner makes the final decision



*The Product Owner is responsible for ordering the items in the Product Backlog to best achieve the Product Goal, thereby optimizing the value of the work the Developers perform.*

# TIPS FOR A REALISTIC AND EFFICIENT PRODUCT BACKLOG

- Set a target of 100 items
- Remove items that haven't been discussed recently
- Do not spend time planning lower items
- Consider a separate archive for old items



# TECHNICAL DEBT

- “We’ll deal with that later”
- Intentional decision
- Tool for getting ahead
- Choose speed over perfection
- Must be repaid or productivity will decrease
- Should be part of regular communication with Product Owner
- Prioritize maintenance in the product backlog, along with new development

*Ward Cunningham coined the term “Technical Debt” and likened it to a bank loan.*



# IMPACT OF TECHNICAL DEBT

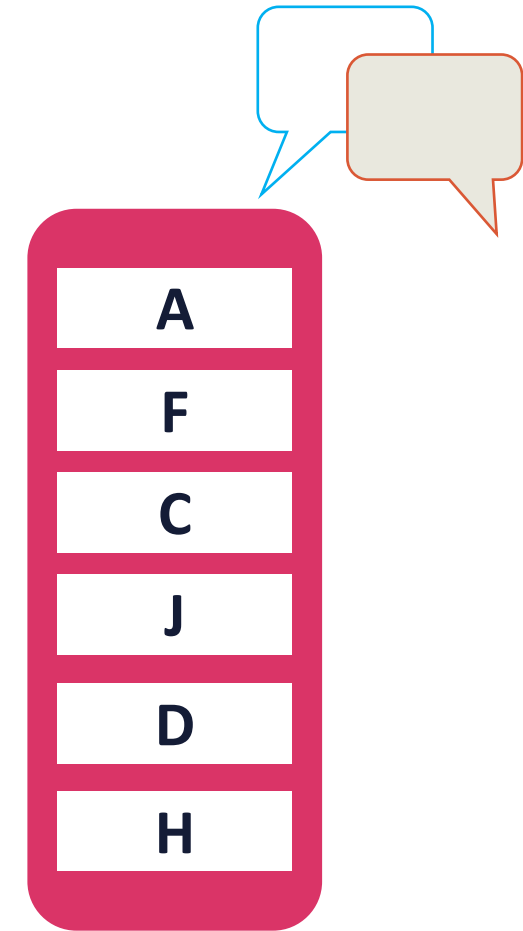
- A higher percentage of the product's budget must be spent on maintaining the product.
- New features and functionality take longer to create, slowing time to market.
- Effort is focused on tasks that do not add value.





# PRODUCT OWNER AND BACKLOG COMMUNICATION

- There is no right or wrong way for the Product Owner to communicate Product Backlog progress
- Any practice is fine if it includes the trends of work completed and forecasts for upcoming work
- Common tools used to forecast progress
  - burn-down chart
  - burn-up chart
  - cumulative flow diagram
  - No particular tools are prescribed or required by Scrum
- Nothing can replace empiricism. What *will* happen is unknown



# WHO CAN DIRECT THE PRODUCT OWNER TO ADD PRODUCT BACKLOG ITEMS?

- The Product Owner has the final word when it comes to prioritizing the backlog
- There is NO exception
- For the Product Owner to succeed, the entire organization must respect their decisions



# INTERNAL STAKEHOLDERS

The Project Manager, who is working with the Scrum Team, raises concerns about the budget and progress. What should the Product Owner do?

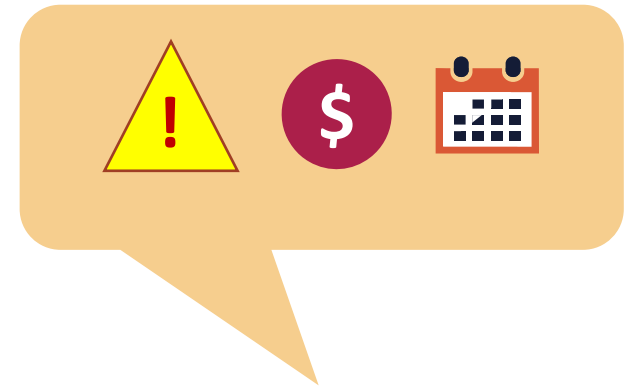
- Share the Product Backlog to promote transparency
- Share current impediments and Sprint forecast from information radiators (burn chart, etc..)



Product Owner



Project Manager



# TIMING OF STAKEHOLDER FEEDBACK

- Sprint Review is formal opportunity for stakeholders to interact with the whole Scrum Team
- Sprint Review is not the only opportunity for feedback
- Product Owner engages with stakeholders regularly
- Product Owner and stakeholders can communicate through any preferred method
- Feedback is constantly incorporated into the Product Backlog
- Stakeholders do not attend other Scrum events, but their feedback is always important to achieve customer satisfaction
- Customer satisfaction should be measured frequently



# PERSONAS

- Quick reminder of stakeholder needs
- Composite
- Represents majority of actual users
- Not a replacement for stakeholders
- Focus on value and priorities

*Mario is an employee of ABC Company. He must use his ID badge to access his work computer. For security reasons, the computer automatically logs users out after 5 minutes of inactivity. Mario would like to remain logged in while he is sitting at his desk.*

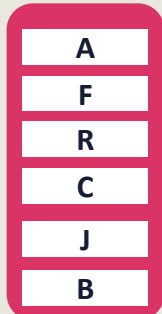


# SPRINT RETROSPECTIVE

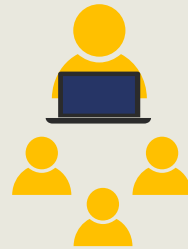
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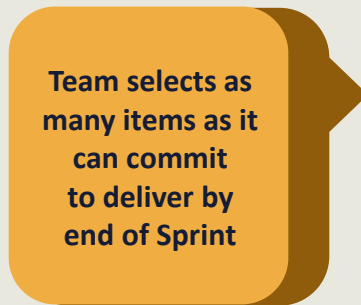
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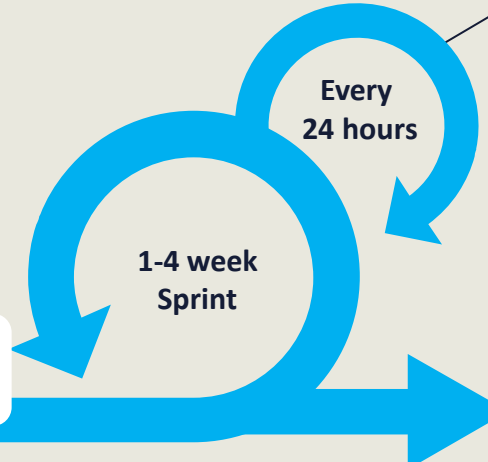
Sprint planning meeting



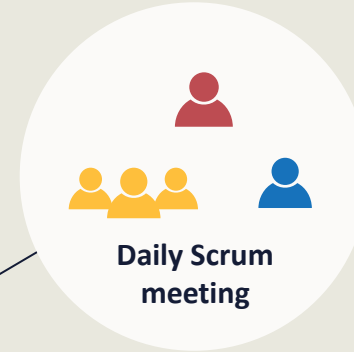
Scrum  
Master



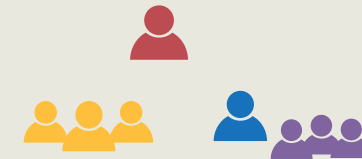
Sprint  
Backlog



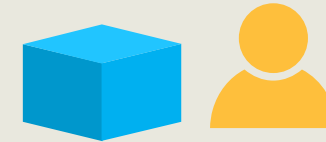
Sprint end date and  
Team deliverable  
do not change



Daily Scrum  
meeting



Sprint Review



Finished work



Sprint Retrospective



# ROLES DURING THE RETROSPECTIVE

What about upper management and stakeholders outside of the Scrum Team?

## Scrum Master

- Promotes Scrum best practices
  - Stick to the time box
  - Reminder of team values
- Facilitates the meeting
- Introduces team-building exercises
- Guides problem solving and goal setting
- Participates in the discussion
- Commits to continuous improvements



## Product Owner

- Attends as a member of the Scrum Team
- Participates in the discussion
- Commits to continuous improvements

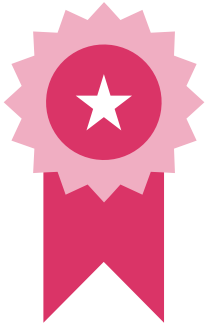


## Developers

- Attend as a members of the Scrum Team
- Participates in the discussion
- Commits to continuous improvements



# SPRINT RETROSPECTIVE TOPICS



**What went well**

Best practices



**What could be better**

Areas of opportunity



**Next sprint**

Team commitments

# SPRINT RETROSPECTIVE

- Participants
  - The Scrum Team
    - Developers
    - Scrum Master
    - Product Owner
- Evaluate the last Sprint
  - What went well? What could have gone better?
  - Focuses on the team's own dynamic
    - People (communication, collaboration)
    - Processes (improving the Definition of Done and our approach to planning, what's working and not working)
    - Tools (do we need training, access to software, etc..)
  - May identify process improvements for next iteration
  - This event does NOT focus on the deliverable



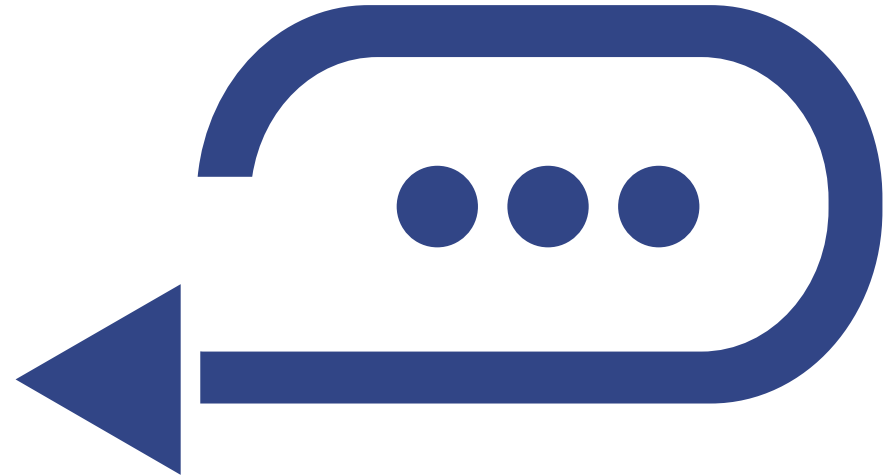
Typically .75 hours per week of Sprint



# FEEDBACK LOOPS

A feedback loop is an opportunity to Inspect and Adapt, two of the three Scrum Pillars

- Daily Scrum
- Sprint Review
- Sprint Retrospective



# LESSONS LEARNED



Small steps for incremental  
improvements





# SAFE ENVIRONMENT

- Ask for help
- Share problems
- Admit mistakes
- Understand barriers to lessons learned
- Kaizen
  - Small, achievable steps
  - Identify and remove impediments
  - SMART goals





# DO WE REALLY NEED THE RETROSPECTIVE?

- The Scrum Team is high-performing
- Everyone is getting along well
- The Retrospective takes time
- Can we skip it?

# MAINTAINING THE SCRUM FRAMEWORK

- Meeting is already on the calendar
- There is an appropriate time for discussion
- Allows the Developers to focus on work
- Retrospective is part of inspecting and adapting



# CANCELING A SPRINT

Only the Product Owner can make the decision

- Sprint goal becomes obsolete
- New constraint in the project environment
- Decision is based on value
- Something else is more urgent

Done Work

- Determine if there is enough for a Sprint Review

Work in Progress (WIP)

- Re-estimate incomplete work and return it to the product backlog







# SPRINT CADENCE

## Maintain consistency

- Cadence is like a regular heartbeat
- Sprint durations should be equal
- Sprints should be one month or less
- Determines frequency of stakeholder interaction
- New Sprint starts immediately after the conclusion of the previous Sprint.

## Considerations for a canceled Sprint

- Changing the cadence can disrupt the rhythm
- Shorten the Sprint by moving up the Sprint Review (if any) and the Retrospective
- Easier with shorter Sprints
- Product Owner will decide how cancelation impacts the cadence

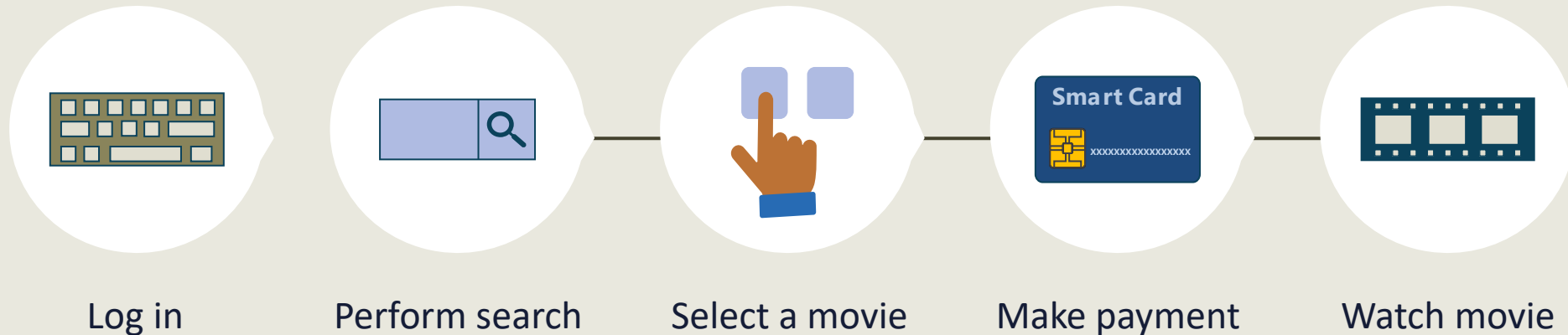
# SPRINT TO SPRINT

- There is no gap in between Sprints
- Start the next Sprint Planning immediately after the Sprint Retrospective
- This continues indefinitely



# MINIMUM VIABLE PRODUCT

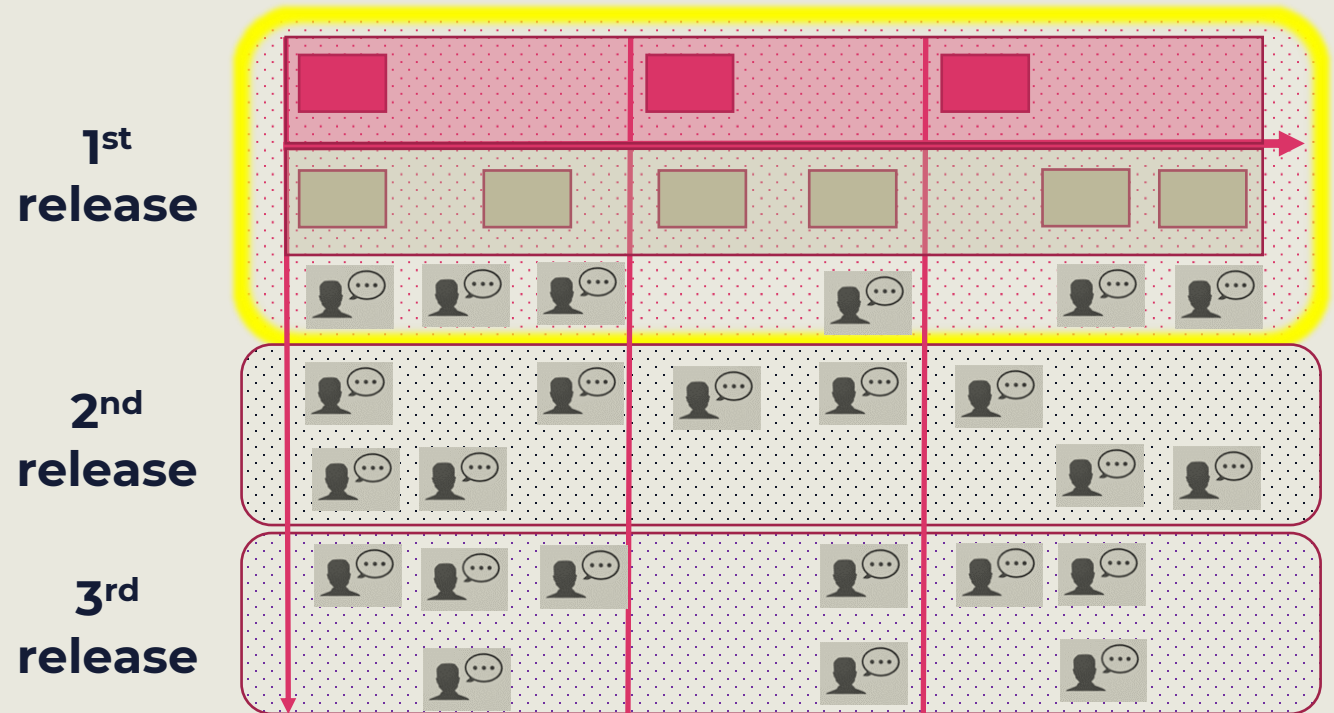
- Customer Journey
- Story Map
- End-to-end functionality
- Example: video streaming service



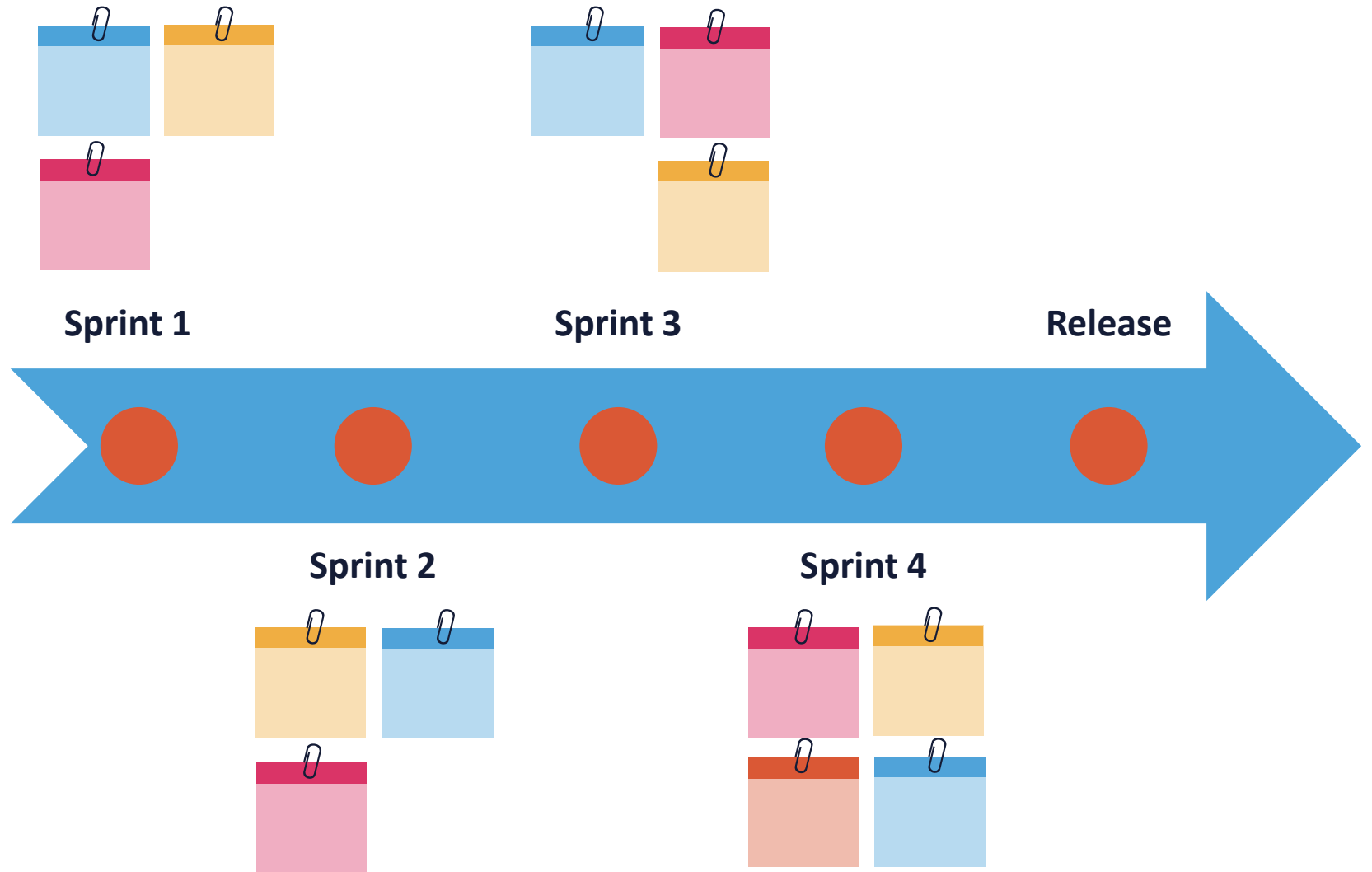


# PRODUCT ROADMAP

- Story map with timing of deliverables
- Considers priorities against Developers' velocity
- Subject to change as backlog is refined
- With each release the product becomes more robust



# SAMPLE RELEASE PLAN



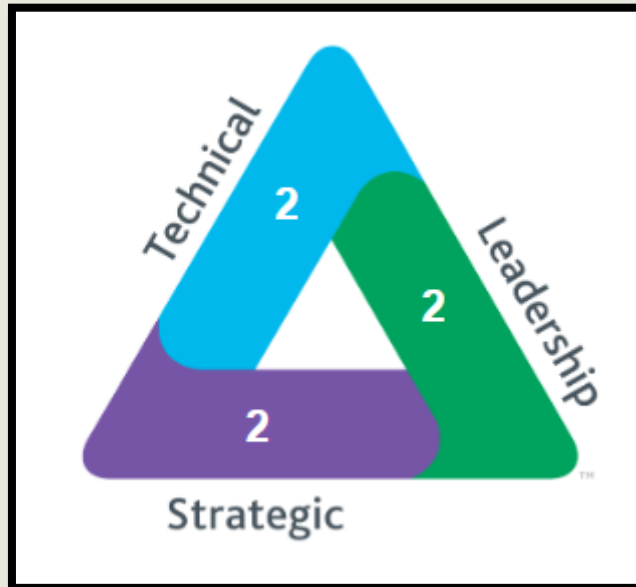
# COMMON THEMES

- Scrum is not prescriptive. If an answer indicates that you can only do something a particular way, be cautious.
- Roles are roles. They should be respected and followed per the Scrum Guide.
- All Scrum roles are equal. Nobody tells anyone else what to do.
- The Product Owner is a value-maximizer, using Product Backlog prioritization to maximize the value that Developers generate for stakeholders
- The Product Owner decides on the direction of the product but has no say over how the Developers approach their work
- The Product relies on input from stakeholders and the Developers, but ultimately the Product Owner decides on the order of Product Backlog items.

# PMI RECERTIFICATION (PDUs)

If you have a PMI certification, you may use the PDU claim code below to claim six (6) Professional Development Units (PDUs) for this course.

**PDU Claim Code 1008YQC4LE**



# **DAILY BOOTCAMP SURVEY**

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**Please share your thoughts**