



PROFESSIONAL SCRUM MASTER LEVEL 2 (PSM II) EXAM PREP

BOOTCAMP

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

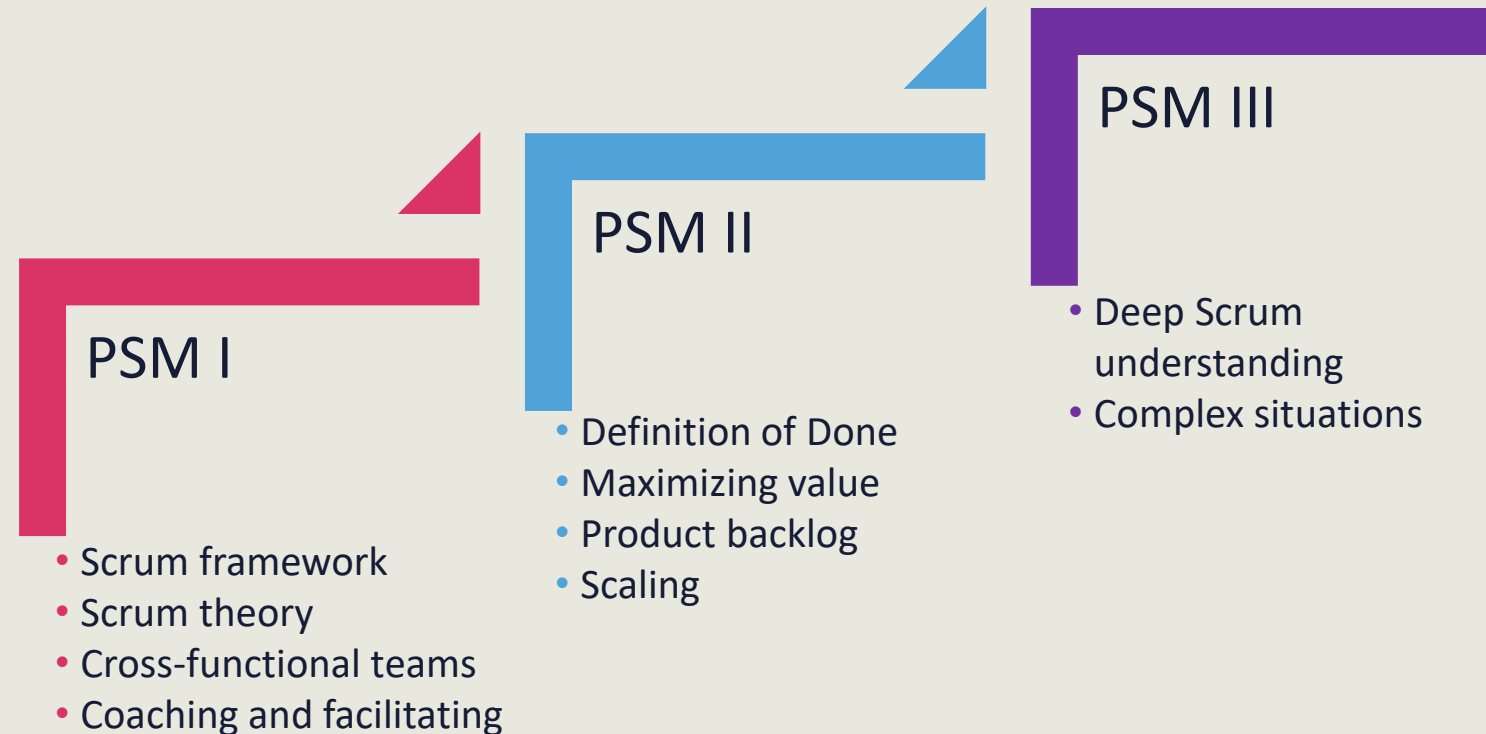
TARGET AUDIENCE



This Bootcamp is for:	This Bootcamp is:
<ul style="list-style-type: none">• anyone who would like to prove their underlying knowledge of Scrum principles and show that they can apply these in the real world	<ul style="list-style-type: none">• not ideal for those with no Scrum knowledge or experience• (it is better to start with PSM I or Intro to Scrum Bootcamp)
<ul style="list-style-type: none">• anyone who would like to better understand the Definition of Done, Maximizing value, Product backlog management, and Scaling fundamentals	<ul style="list-style-type: none">• not a starting point for the PSM II exam. (it is better to be PSM I certified or to start with the PSM I Bootcamp)
<ul style="list-style-type: none">• certified Professional Scrum Masters who might be interested in pursuing the PSM II exam. Also, students who would like to combine PSM I and PSM II learning to pursue the PSM II exam.	<ul style="list-style-type: none">• not limited to PSM I and PSM II candidates. Everyone is welcome!• It is helpful if you have basic Scrum knowledge

PROFESSIONAL SCRUM MASTER JOURNEY

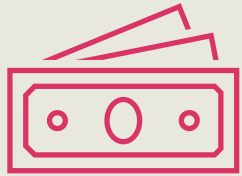
Progression of certifications



COMPARISON OF PSM I AND PSM II CURRICULUM

TOPIC	PSM I	PSM II
Scrum framework	✓	✓
Scrum theory and principles	✓	✓
Cross-functional teams	✓	✓
Coaching and facilitation	✓	✓
Done and not done		✓
Maximizing value		✓
Product backlog management		✓
Scaling fundamentals		✓

PSM II EXAM DETAILS



\$250 per attempt



Multiple choice,
Multiple answer, True/False



Recommended reading
[Scrum.org](https://www.scrum.org)



90 minutes



PSM I recommended
No formal prerequisite



30 questions,
partial credit
Passing grade = 85%

The PSM II is a lifetime certification. Renewal is not required.

INDEPENDENT STUDY



Articles



Videos



Podcasts



Practice

SCRUM GUIDE

**BY KEN SCHWABER & JEFF
SUTHERLAND**

Ken Schwaber & Jeff Sutherland

The Scrum Guide

The Definitive Guide to Scrum: The Rules of the Game

November 2020

<https://www.scrumguides.org/>



The Nexus™ Guide
The Definitive Guide to Scaling Scrum with Nexus

January 2021

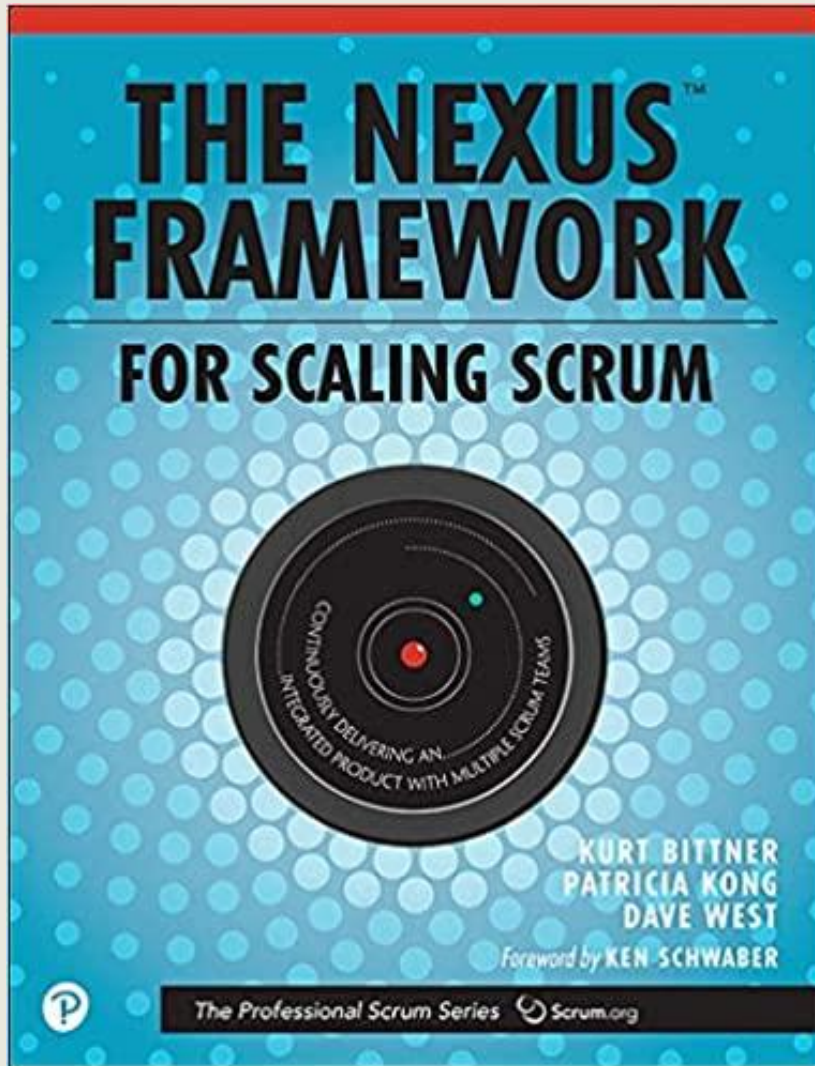
THE NEXUS™ GUIDE

BY KEN SCHWABER & JEFF SUTHERLAND

- The Nexus Guide builds upon the foundation established by The Scrum Guide.
- It is the Body of Knowledge (BOK) for scaling Scrum.

<https://www.scrum.org/resources/scaling-scrum>

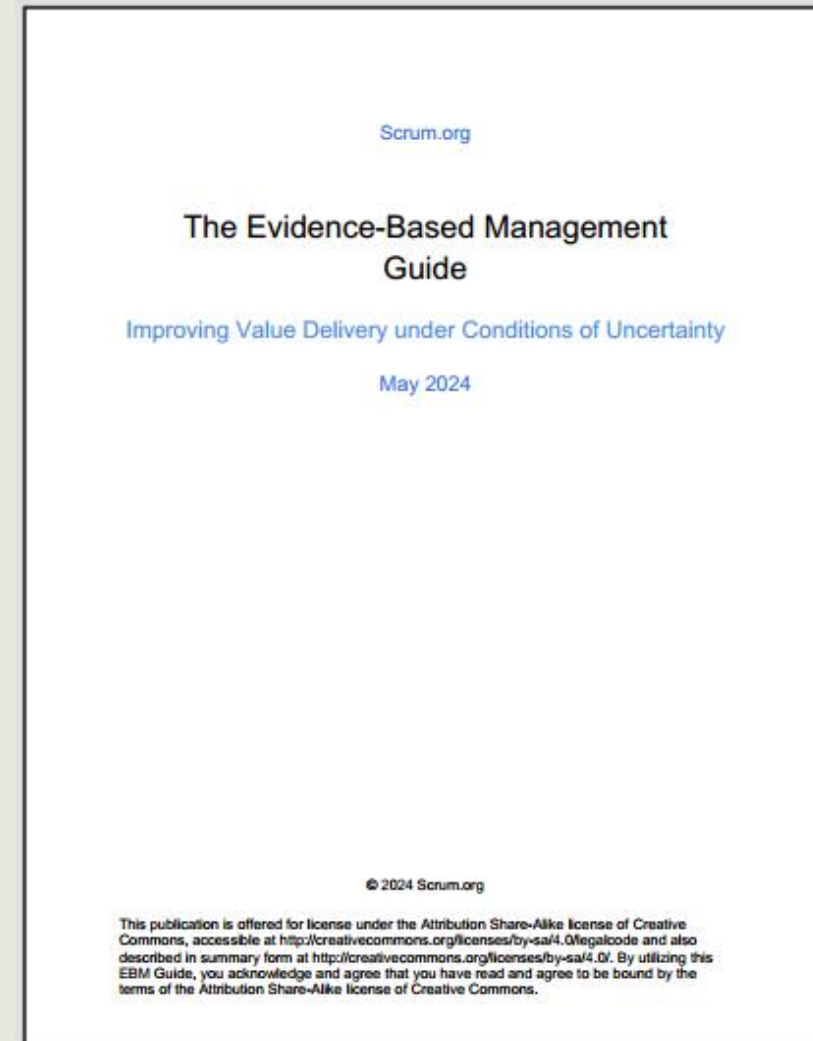
<https://www.scrum.org/resources/nexus-guide>



ADDITIONAL SUGGESTED READING

THE EVIDENCE- BASED MANAGEMENT GUIDE

A Formal Approach to Measuring and Maximizing Value



EVIDENCE-BASED MANAGEMENT

Four Key Value Areas (KVAs):

- **Current Value (CV)**

What value is currently being delivered by the organization and its products?

- **Time to Market (T2M)**

How quickly can we deliver new value, such as a product, service, or feature?

- **Ability to Innovate (A2I)**

Are we able to deliver new or improved value (such as a new feature) to better meet customer needs?

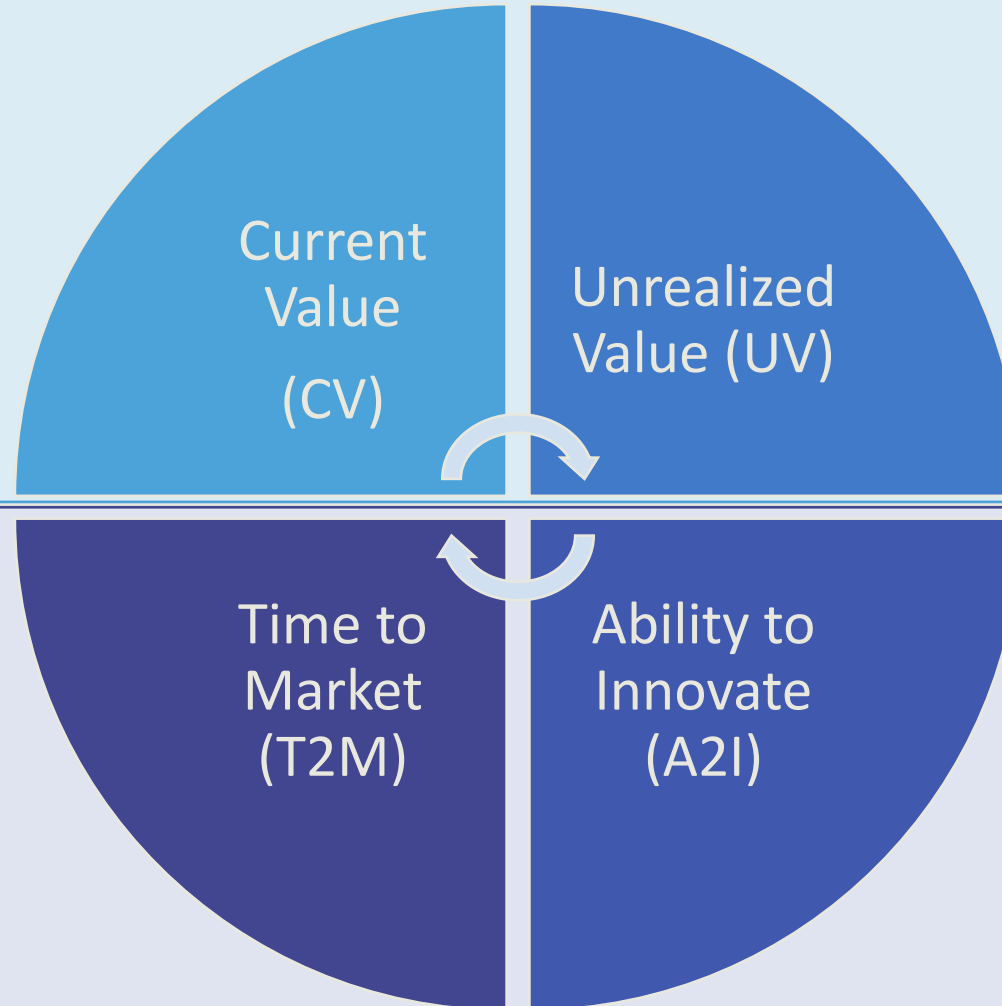
- **Unrealized Value (UV)**

What additional value could we deliver if we met all of the customer needs now?



BALANCING VALUE AND AGILITY

Current situation – market value



Ability to deliver value - capabilities

PRODUCT OWNER

- Develops product vision
- Serves as voice of the stakeholders (liaison)
- Collects requirements from stakeholders
- Determines value of features
- Prioritizes backlog items based on value
- Controls the budget
- Oversees return on investment
- Validates product quality



Product Owner



Stakeholders

PRODUCT OWNER'S

#1 Responsibility

Maximize Value



**Product Owner works with the rest of
the Scrum Team to create value**

COLLABORATION LEADS TO VALUE



Product Owner

Understands effort vs. value



Developers

Keep stakeholders needs in mind

If the Product Owner is not available, the developers make the best decisions they can and touch base when possible.



VALUE METRICS

- Responsibility of the Product Owner
- Return on Investment (ROI)
- Total Cost of Ownership (TCO)
 - The sum of all costs across the product life cycle
conceive + develop + operate + maintain
- Product Owner can choose any metric



TECHNICAL DEBT

- Impacts Value
- More time and money to be spent on maintenance
- Less time and money spent on new functionality

Ward Cunningham coined the term "Technical Debt" and likened it to a bank loan.

Vision, Mission, Goals

Vision Statement

Describes the high level impact or change the organization wants to make

Mission Statement

Explains why the organization is in a unique position to deliver on the vision.
“Why us?”

Goals

Marks of incremental progress toward achieving the mission and vision



GOAL SETTING

Strategic Goal

- High level, aspirational
- States “what” is needed, but “how” is not clear

Intermediate Goal

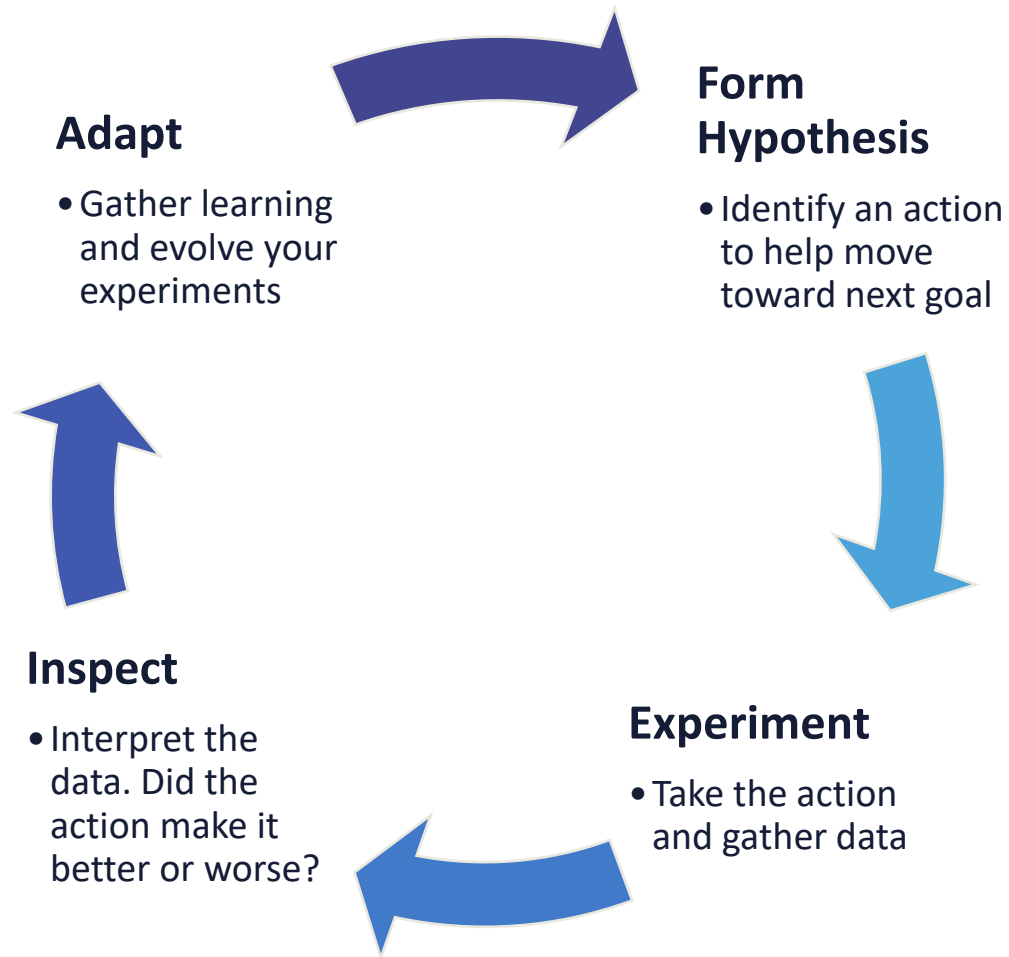
- Milestones that show progress toward the strategic goal

Tactical Goal

- Immediate
- Focus of current efforts



EXPERIMENT LOOP

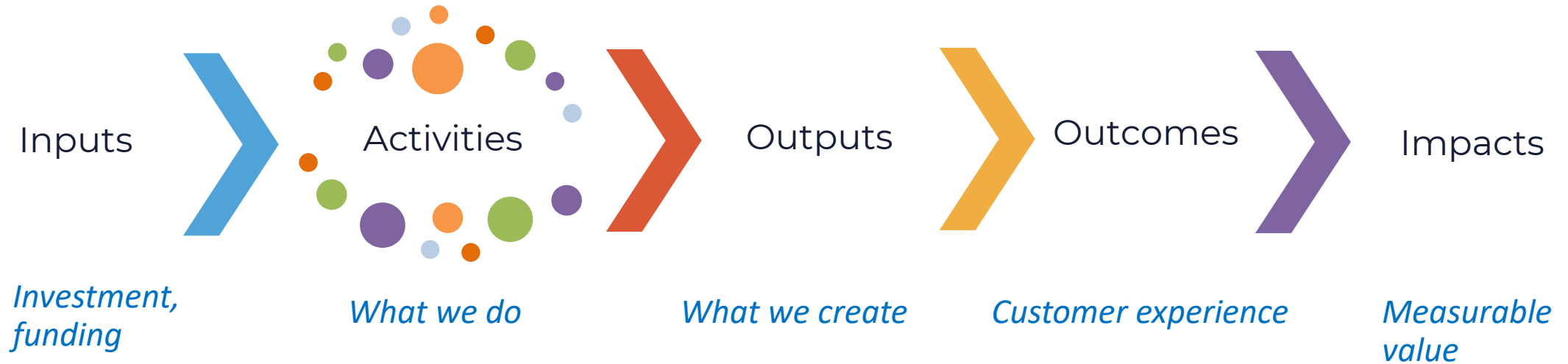


Small Steps to Achieving Goals

- Move from the current state to the strategic goal incrementally
- Empiricism: fact-based decisions

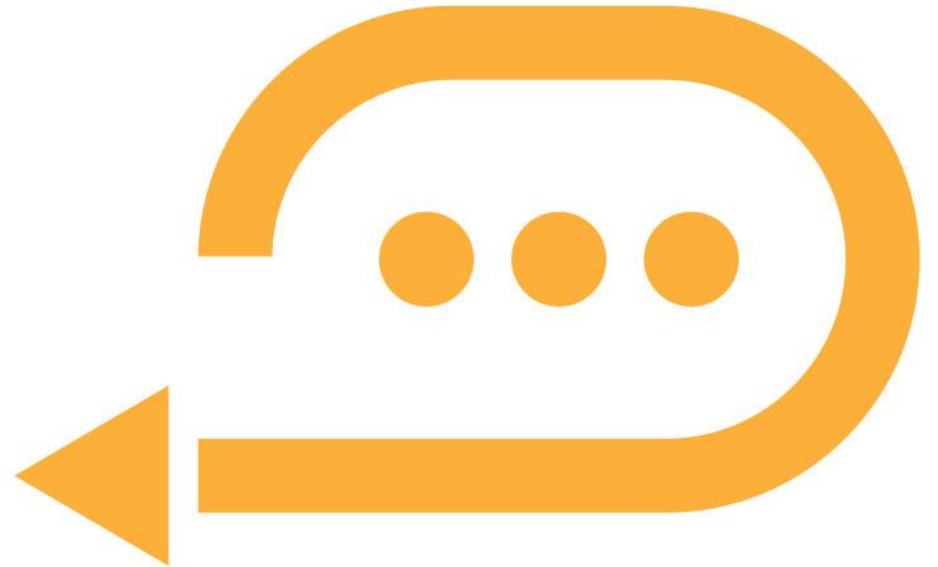
DELIVERING VALUE

Benefits Analysis Challenge: it can be easy to measure activities and outputs, but it can be difficult to translate and track to outcomes and value.



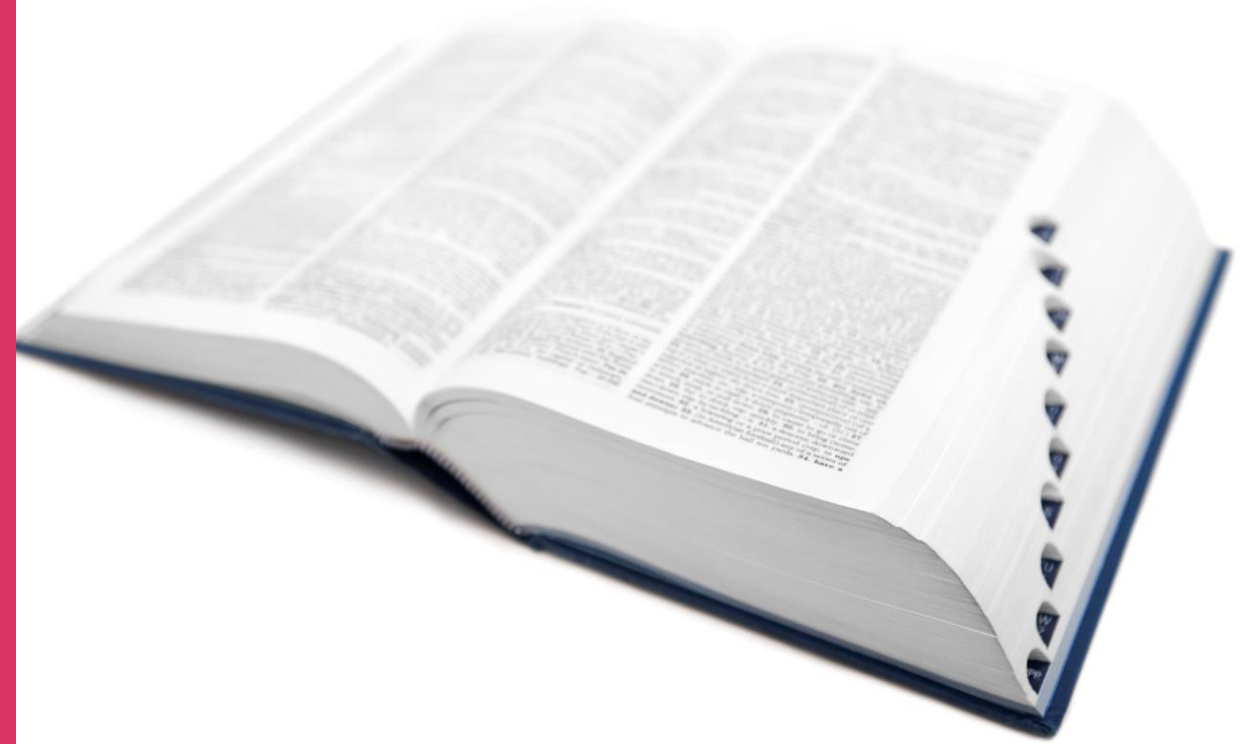
FEEDBACK LOOPS AND VALUE

- Release frequently
- Validate assumptions
- Incorporate feedback
- Reprioritize as needed



WHAT IS A NEXUS?

A Nexus is a connection or series of connections linking two or more things.



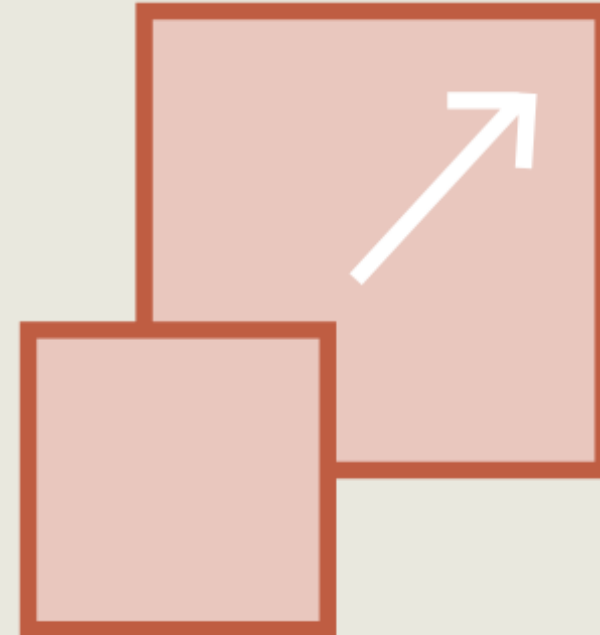
WHAT IS A NEXUS IN SCRUM?

In Scrum, a Nexus is a group of between 3 -9 Scrum teams that work together to deliver a product. It creates a network among teams.



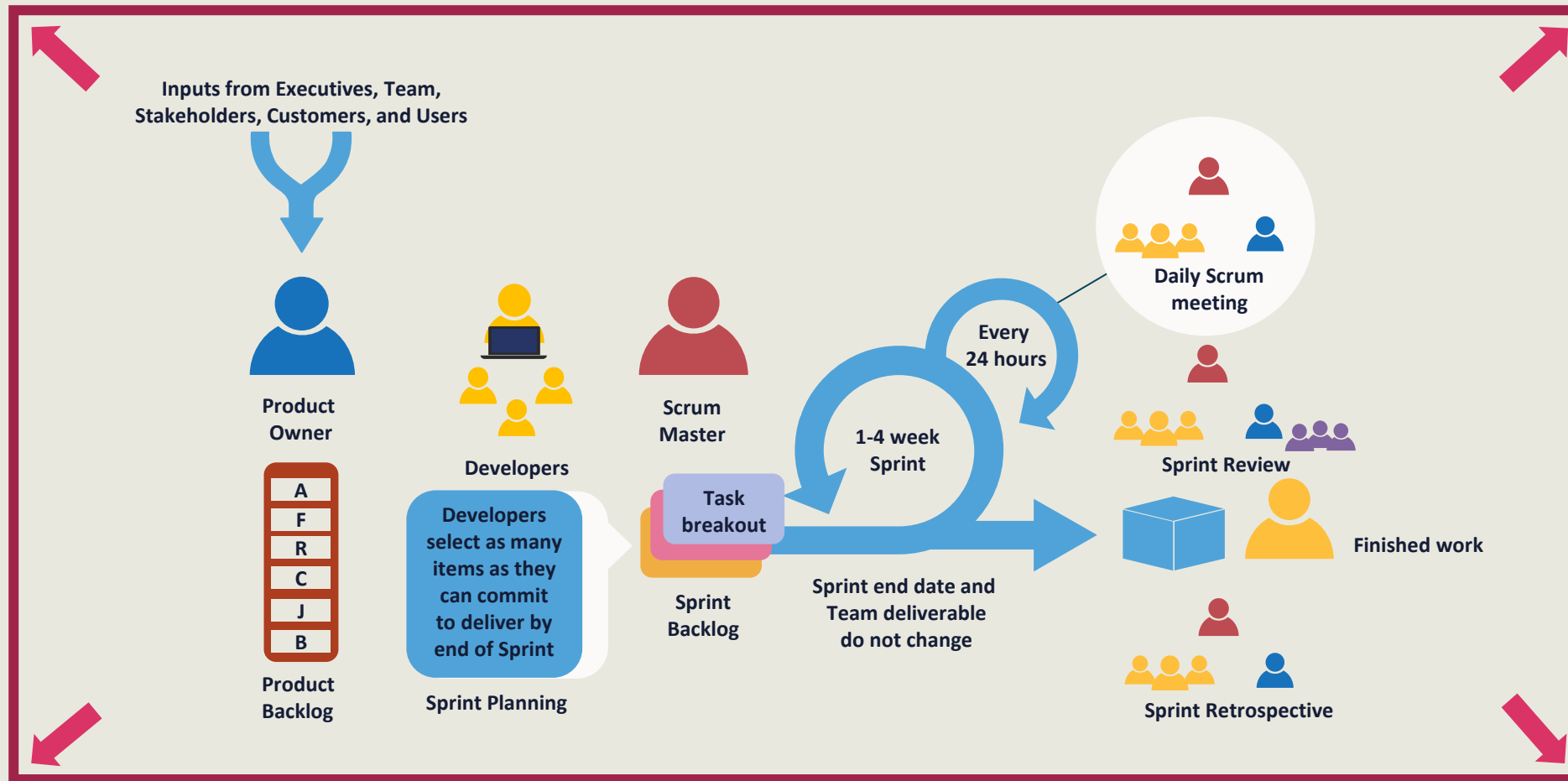
BEST PRACTICES OF SCALING

- Deciding whether to scale or not to scale
- Apply Scrum in more complex situations
- Evaluate trade-offs and cost/benefit of scaling
- Maintain Scrum core values and principles
 - Transparency, Inspection, and Adaptation
 - Self-organizing teams
 - Continuous improvement



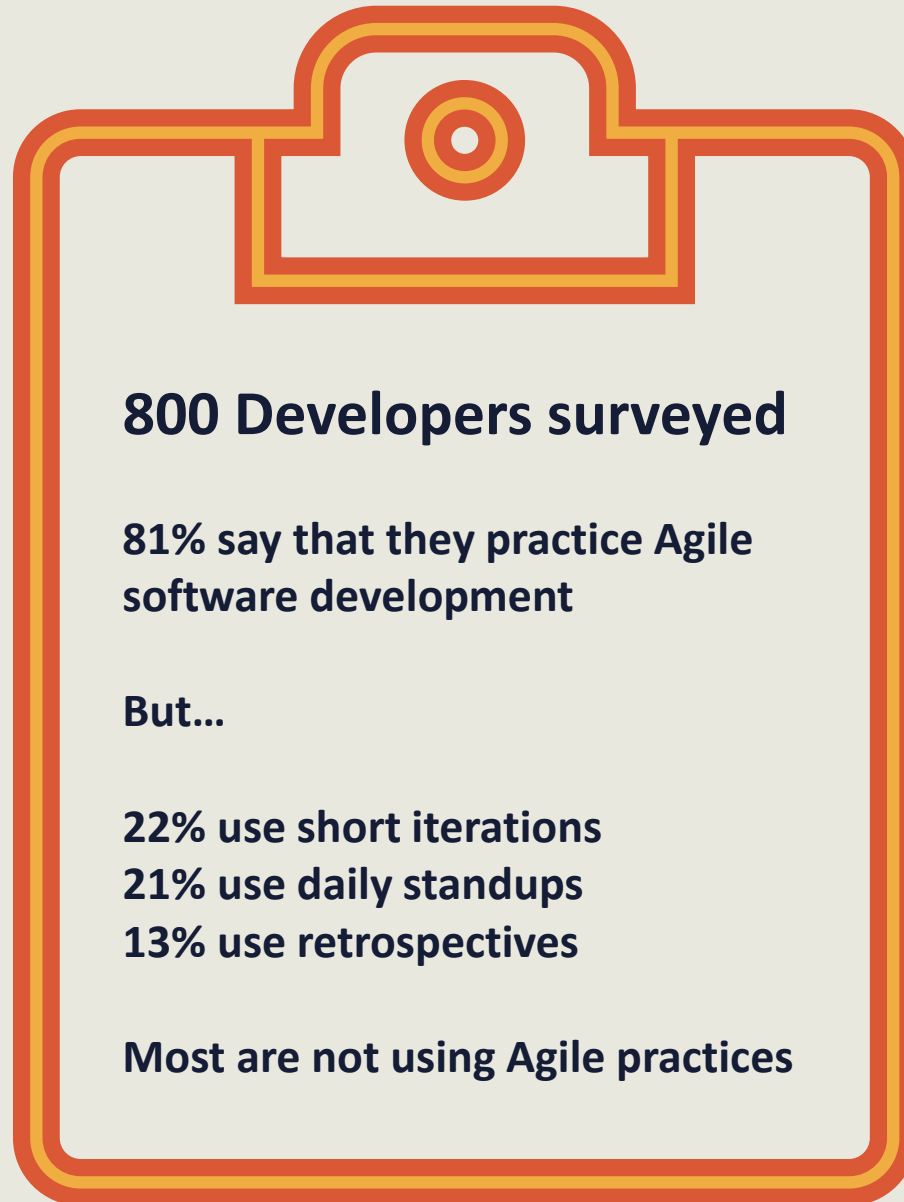
SCRUM FRAMEWORK

“The Nexus minimally extends the Scrum framework only where absolutely necessary”.
It isn’t ideal, but in today’s working environment it is realistic.



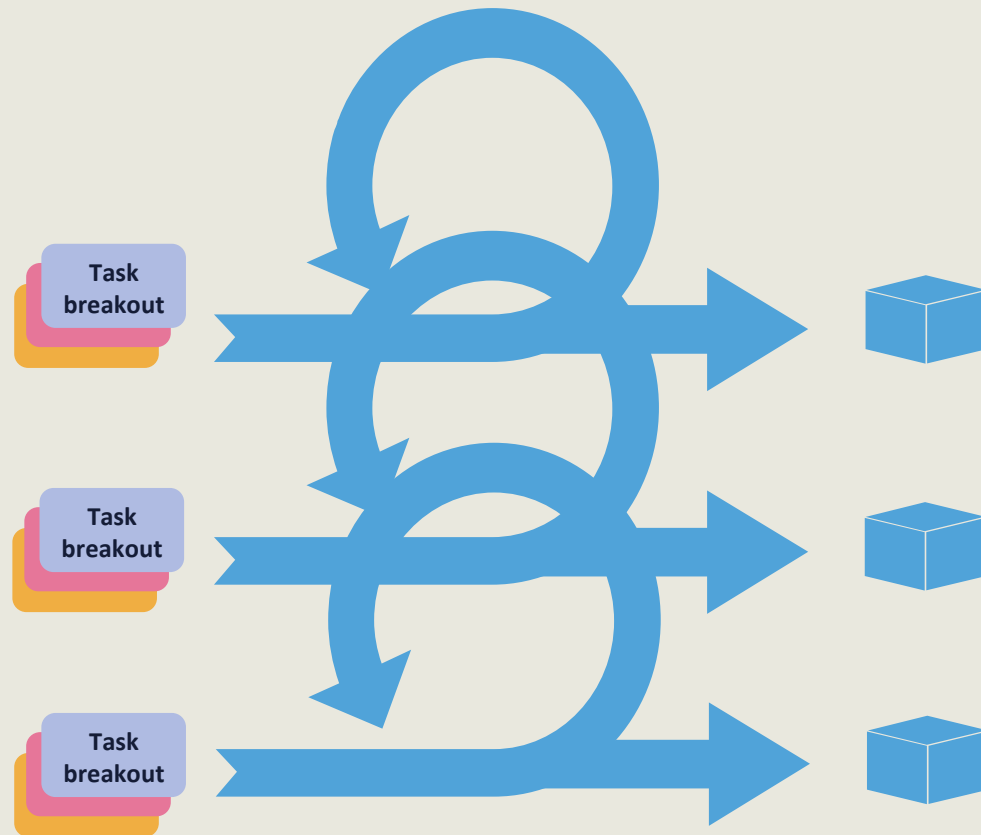
“Without first implementing the foundational Scrum concepts, any scaling will be painful and will actually reduce productivity.
– Ken Schwaber

OPTIMIZE GOOD PRACTICES FIRST



“What is Nexus? An Introduction to the Framework for Scaling Scrum”, by Patricia Kong
<https://www.youtube.com/watch?v=6jln5J-bwr0>

MAXIMIZE VALUE OR OUTPUT?



INCREASE VALUE AND REDUCE COMPLEXITY



REDUCE DEPENDENCIES

	Sprint 1	Sprint 2	Sprint 3
Scrum Team 1	A	D	G
Scrum Team 2	B	E	H
Scrum Team 3	C	F	I

```
graph LR; A --> D; B --> E; C --> F; G --> H;
```

The diagram illustrates dependencies between tasks across three sprints and three teams. The tasks are arranged in a 3x3 grid. Arrows indicate dependencies: D depends on A, E depends on B, F depends on C, and H depends on G.

MULTIPLE TEAMS NEED THE SAME RESOURCE AT THE SAME TIME

What should the Scrum Master do or say?

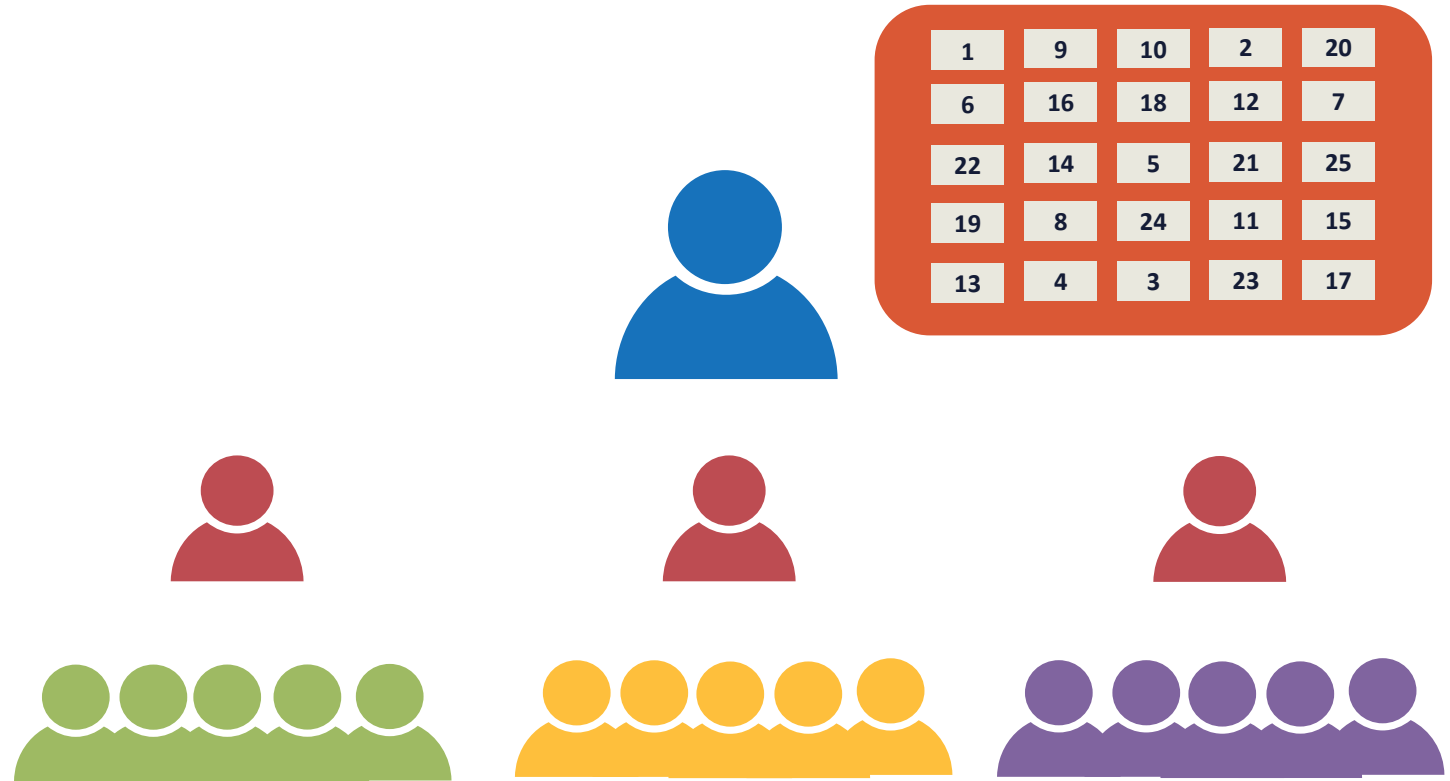
Consider:

- The Tuckman Ladder
 - (stages of team development)
- Task switching



CROSS-TEAM REFINEMENT

- Minimize or eliminate dependencies across the teams
- Determine which team will deliver backlog items
- This is ongoing



NEXUS FRAMEWORK

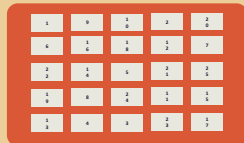
NEXUS
DAILY
SCRUM

NEXUS SPRINT PLANNING

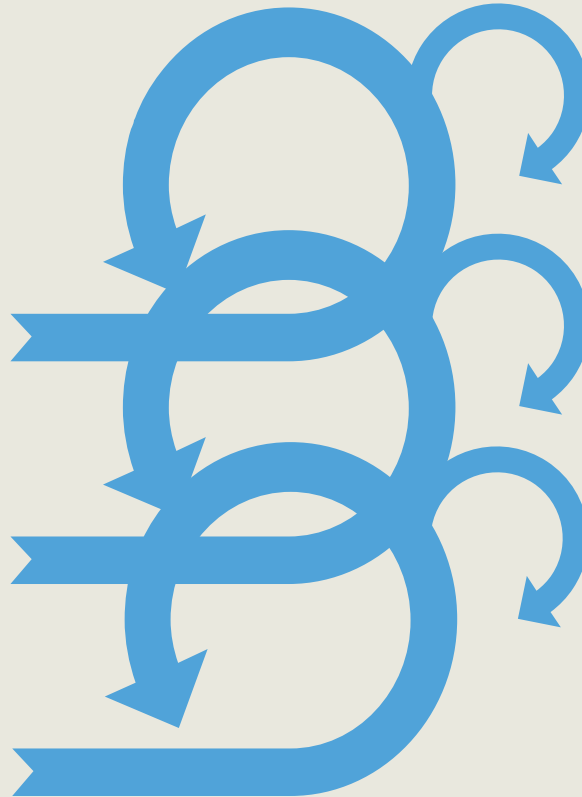
Task
breakout

Task
breakout

Task
breakout



NEXUS SPRINT
BACKLOG



NEXUS SPRINT REVIEW



SINGLE INTEGRATED
PRODUCT INCREMENT

NEXUS SPRINT RETROSPECTIVE

Team 1
Retro

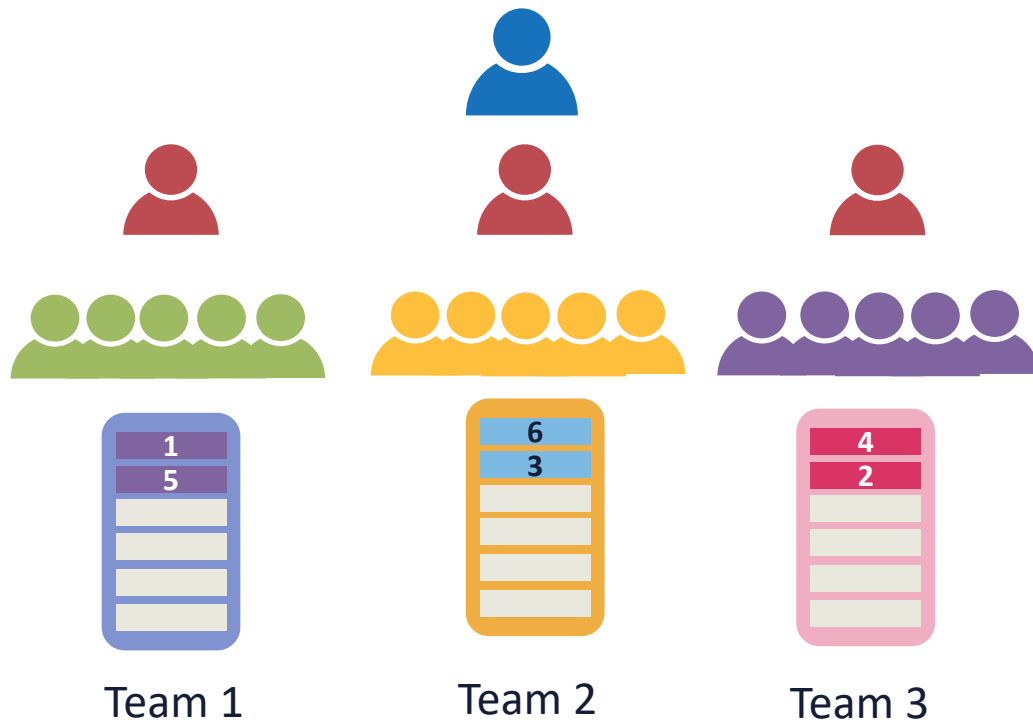
Team 2
Retro

Team 3
Retro

NEXUS SPRINT RETROSPECTIVE

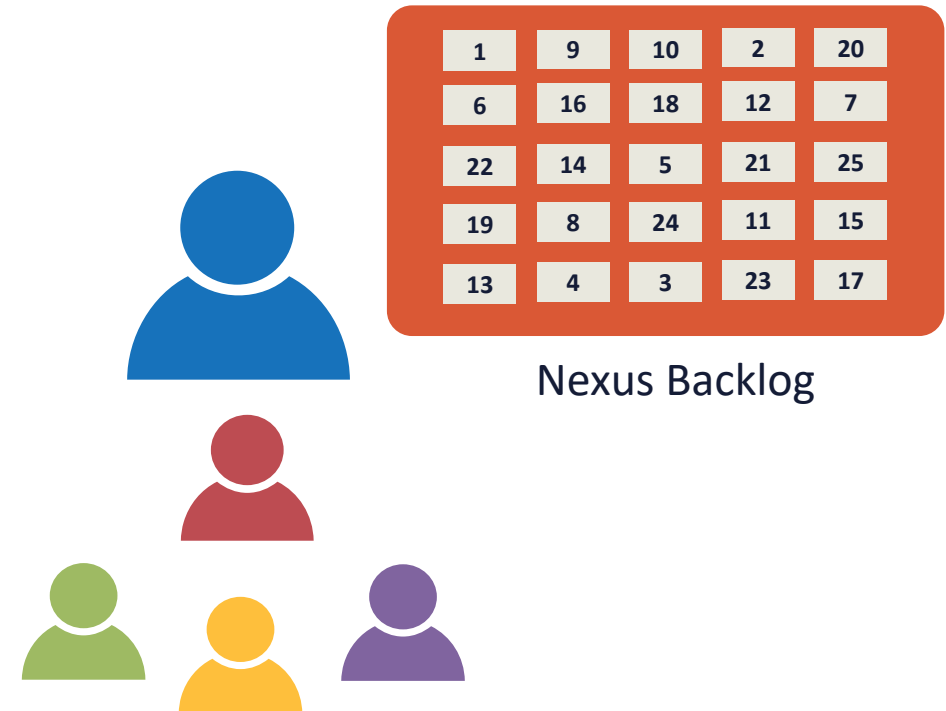
MULTIPLE SCRUM TEAMS

- The Product Owner (there is only one)
- Scrum Master(s) - can serve more than one team
- Each team has its own Sprint backlog
- One Definition of Done for the combined increment

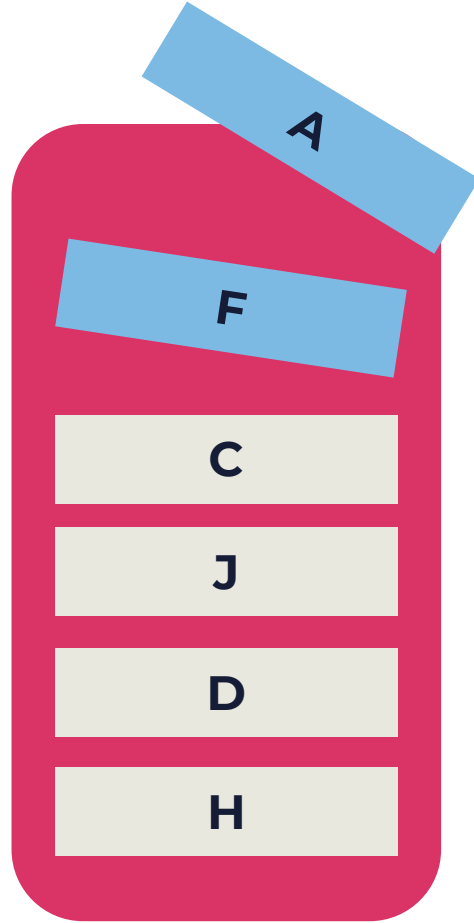


NEXUS INTEGRATION TEAM

- The Product Owner (there is only one)
- A Scrum Master
- Nexus Integration Team Members



Membership in the Nexus Integration Team takes precedence over membership on a Scrum team. The purpose is to 1) help the Scrum Teams with practices that deliver value, 2) provide ongoing coaching and consulting to the Nexus and 3) preserve bottom-up intelligence.

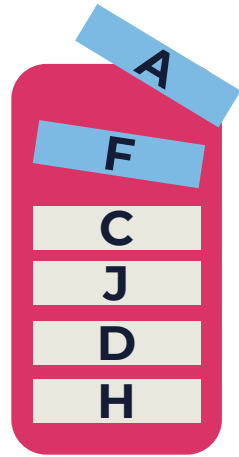
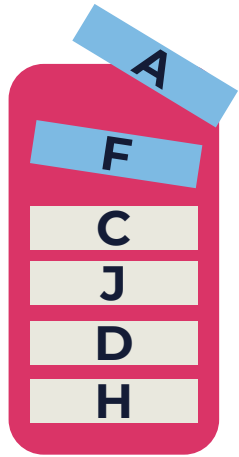
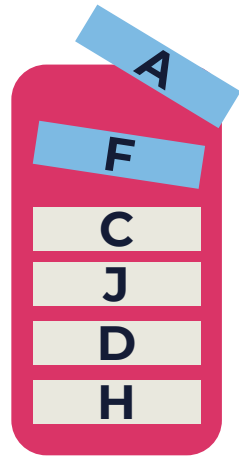
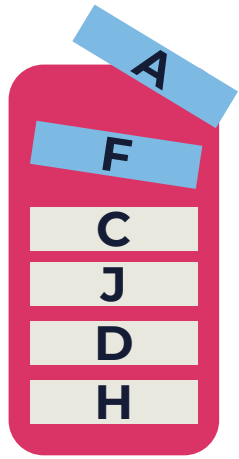


SCRUM FRAMEWORK

SPRINT GOAL

The result of the latest Sprint

Must deliver a *valuable* and *useful* product

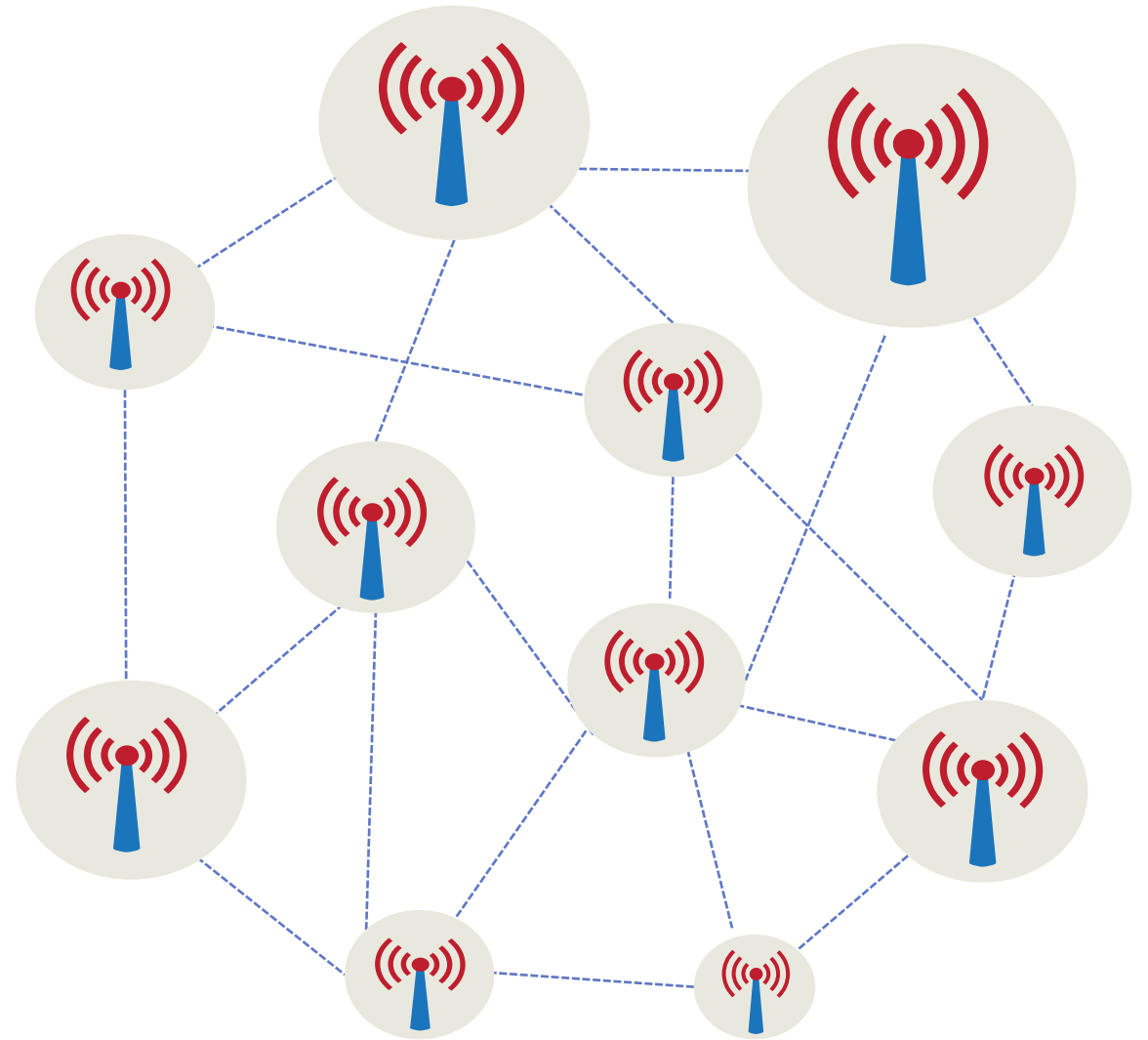


NEXUS FRAMEWORK SPRINT GOAL

Must deliver an **INTEGRATED**, valuable, and useful product at least once every Sprint

NEXUS FRAMEWORK CHALLENGE: “COMMUNICATION”

Reducing the number of communication channels helps to reduce complexity.



COMMON SCALING ASSUMPTION

Scaling the value that is delivered will require adding more people.

True or False?



COMMON SCALING ASSUMPTION

Scaling the value that is delivered will require adding more people.

False

Adding more people can increase complexity and dependencies. It can also increase the number of communication channels.

Delivering more value may sometimes be accomplished by scaling *down*.

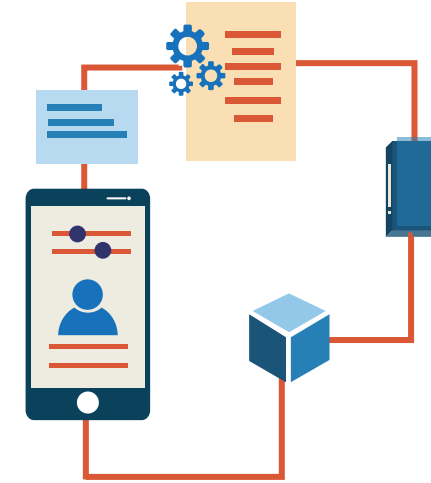


✓ FEATURE TEAM



- 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

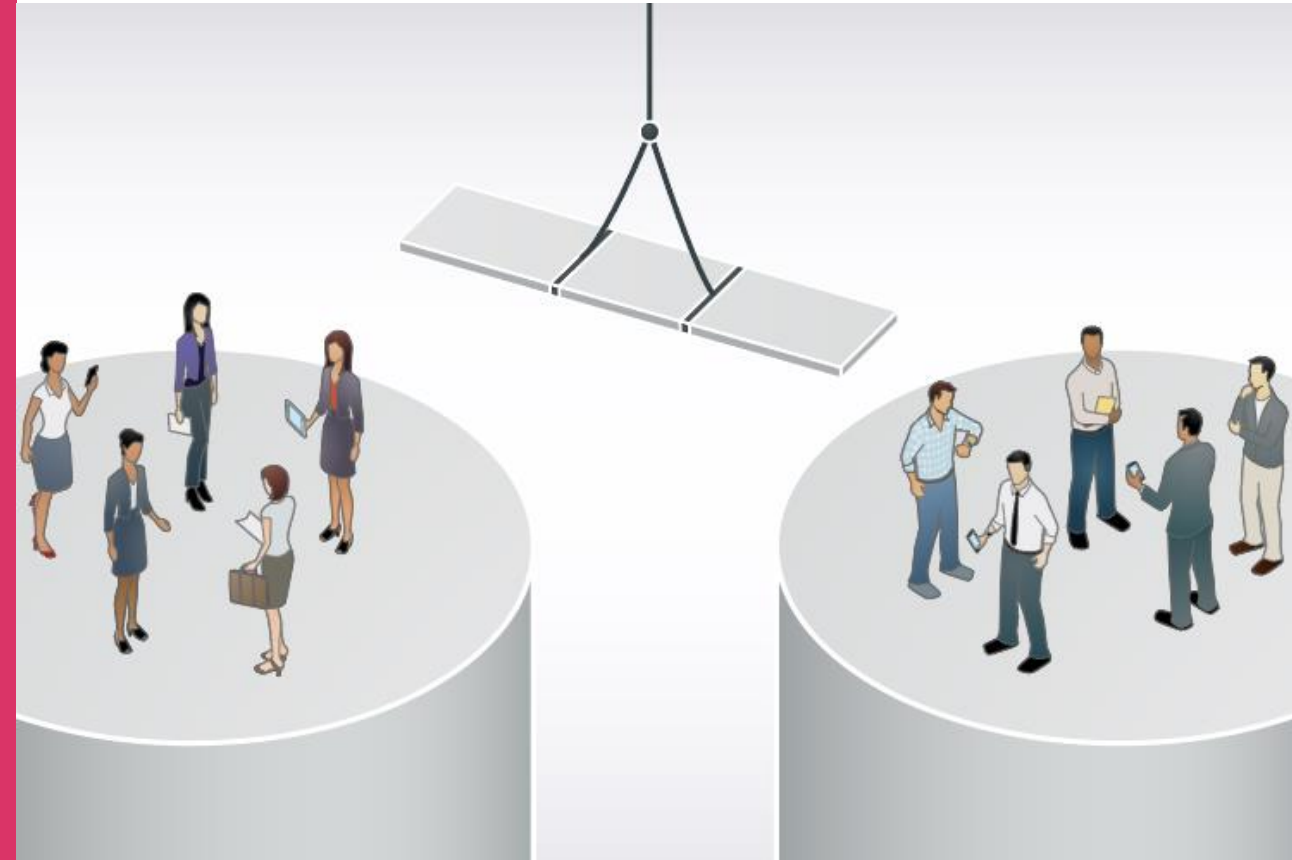
COMPONENT TEAM



- Older approach
- Focuses on developer view and 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

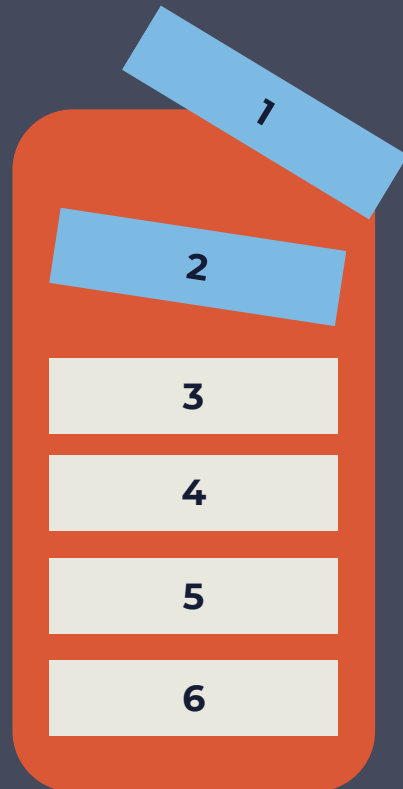
FEATURE TEAMS WORK MORE COHESIVELY

- 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



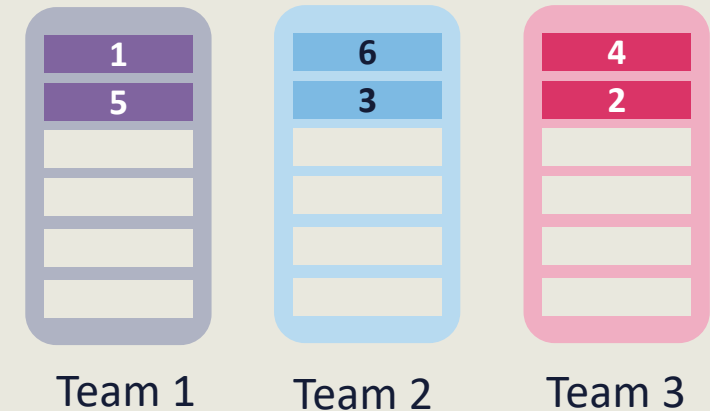
TRADITIONAL SCRUM

Product Backlog Items
Selected to create the Sprint Backlog



MULTIPLE SCRUM TEAMS

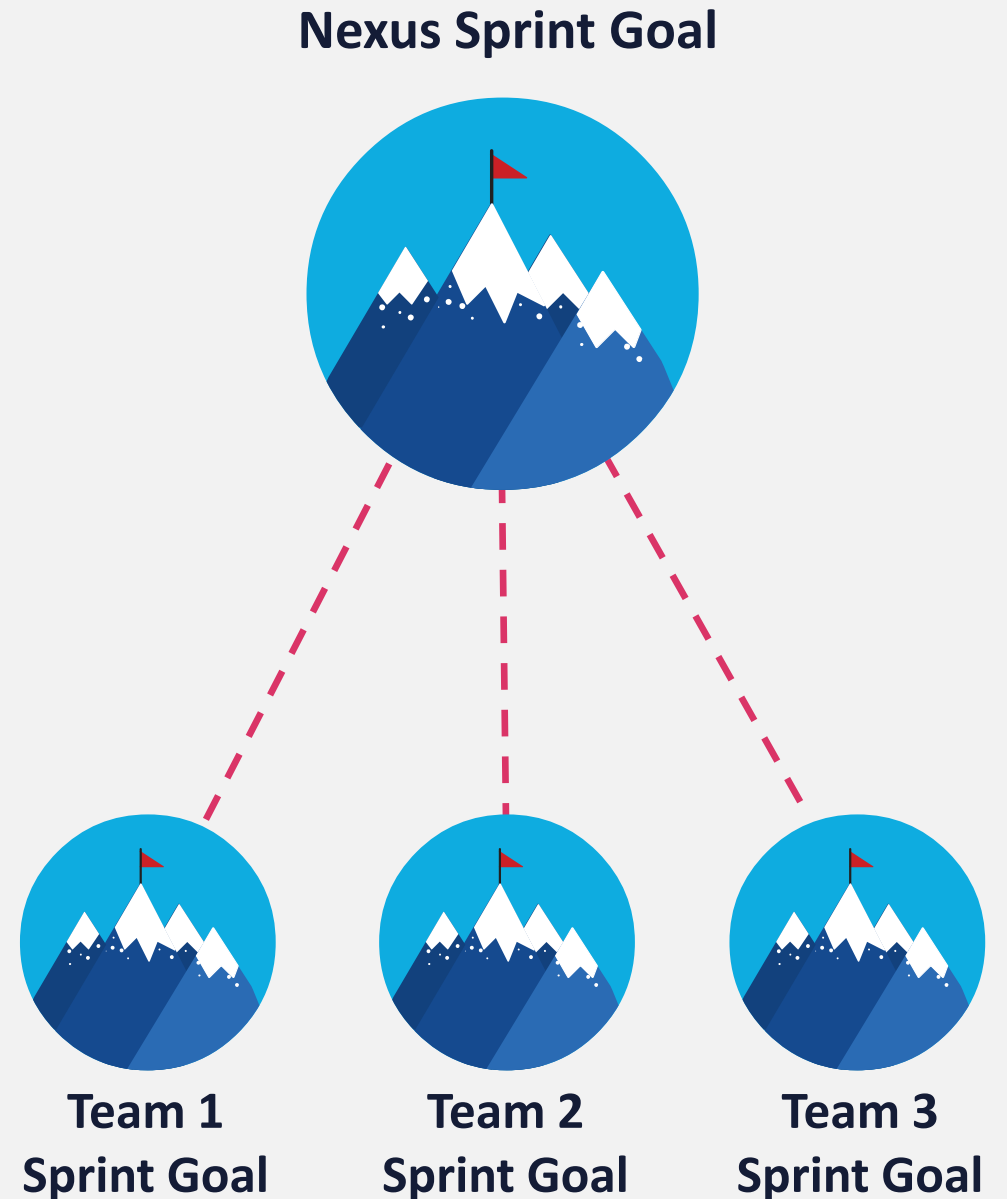
Sprint Backlogs



- Each Scrum team has its own Sprint backlog
- How can we detect and minimize dependencies across teams?

NEXUS SPRINT PLANNING

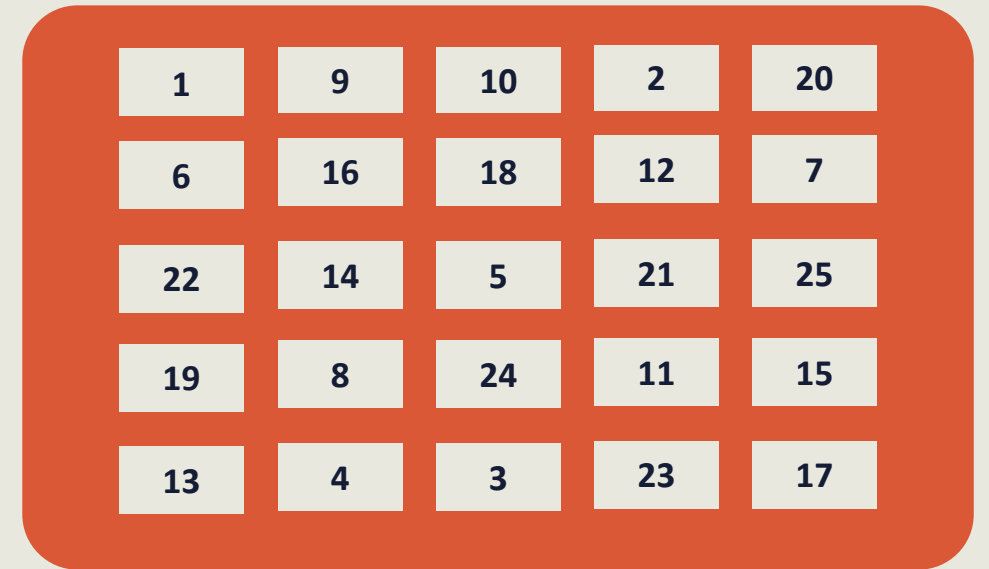
- Nexus Sprint Goal
- Sprint Goal for each Scrum Team
 - Aligned to the Nexus Sprint Goal
- Single Nexus Sprint Backlog
- Sprint Backlog for each Scrum Team
- Minimize dependencies, or make them transparent
- The goal is fixed, the Sprint backlog can evolve



SPRINT BACKLOGS

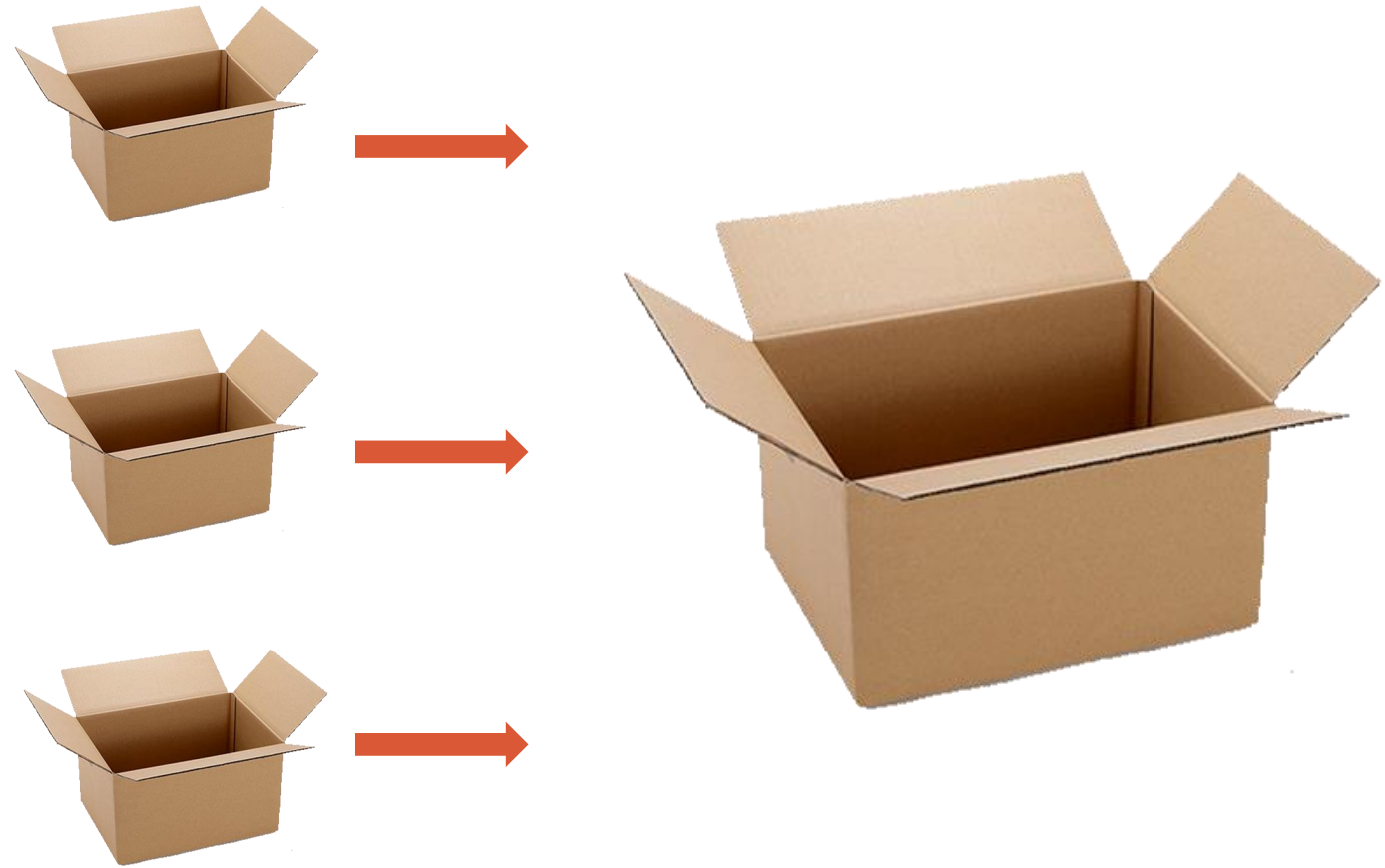


NEXUS SPRINT BACKLOG



- Nexus Sprint Goal (single objective)
- Teams work together on this backlog

INTEGRATED INCREMENT

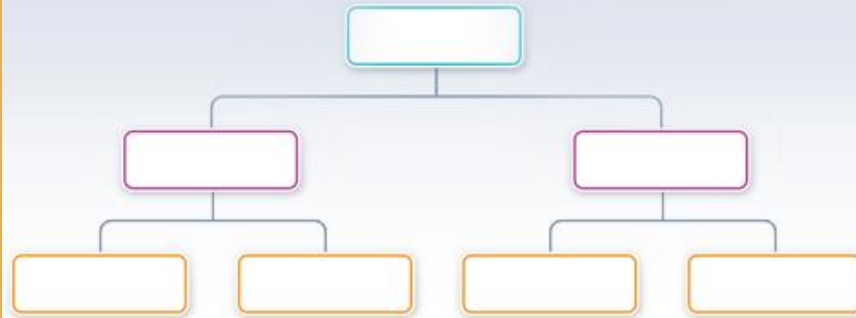


- The sum of all teams' work
- Integrated, valuable, and useful product
- Represents incremental progress toward the product goal
- Has its own Definition of Done
- Unfinished work is not demonstrated and goes back to the top of the Product Backlog

DEFINITION OF DONE

ORGANIZATIONAL LEVEL AND PRODUCT LEVEL

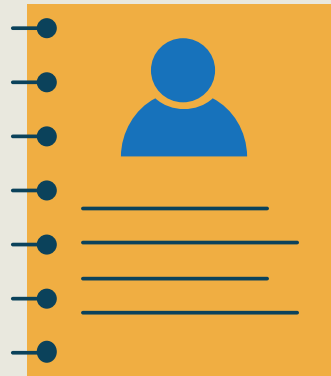
*Sometimes called
“Conditions of Satisfaction”*



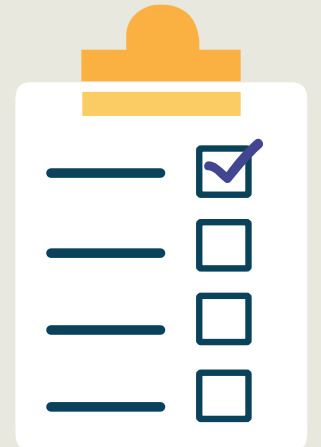
If the Definition of Done for an increment is part of the standards of the organization, all Scrum Teams must follow it as a minimum.

If it is not an organizational standard, the Scrum Team must create a Definition of Done appropriate for the product.

ACCEPTANCE CRITERIA AND DEFINITION OF DONE



Acceptance Criteria	Definition of Done
Specific (user story)	Applies to all work
Meet user needs	Team's shared understanding
Functional features for users	Includes non-functional and quality requirements
Acceptance Criteria <u>and</u> Definition of Done	
<ul style="list-style-type: none">• agreed to as a team• updated as new learnings come to light• testable• clear• concise	



Development Organization may
have standards for security and
compliance

“Organizational DoD”



Team A



Team B



Team C

Developers may have standards for
product requirements



Team A

DEFINITION OF DONE

Established by the **Development
Organization and/or by the
Developers**

“Organizational DoD”

And

“Product DoD”

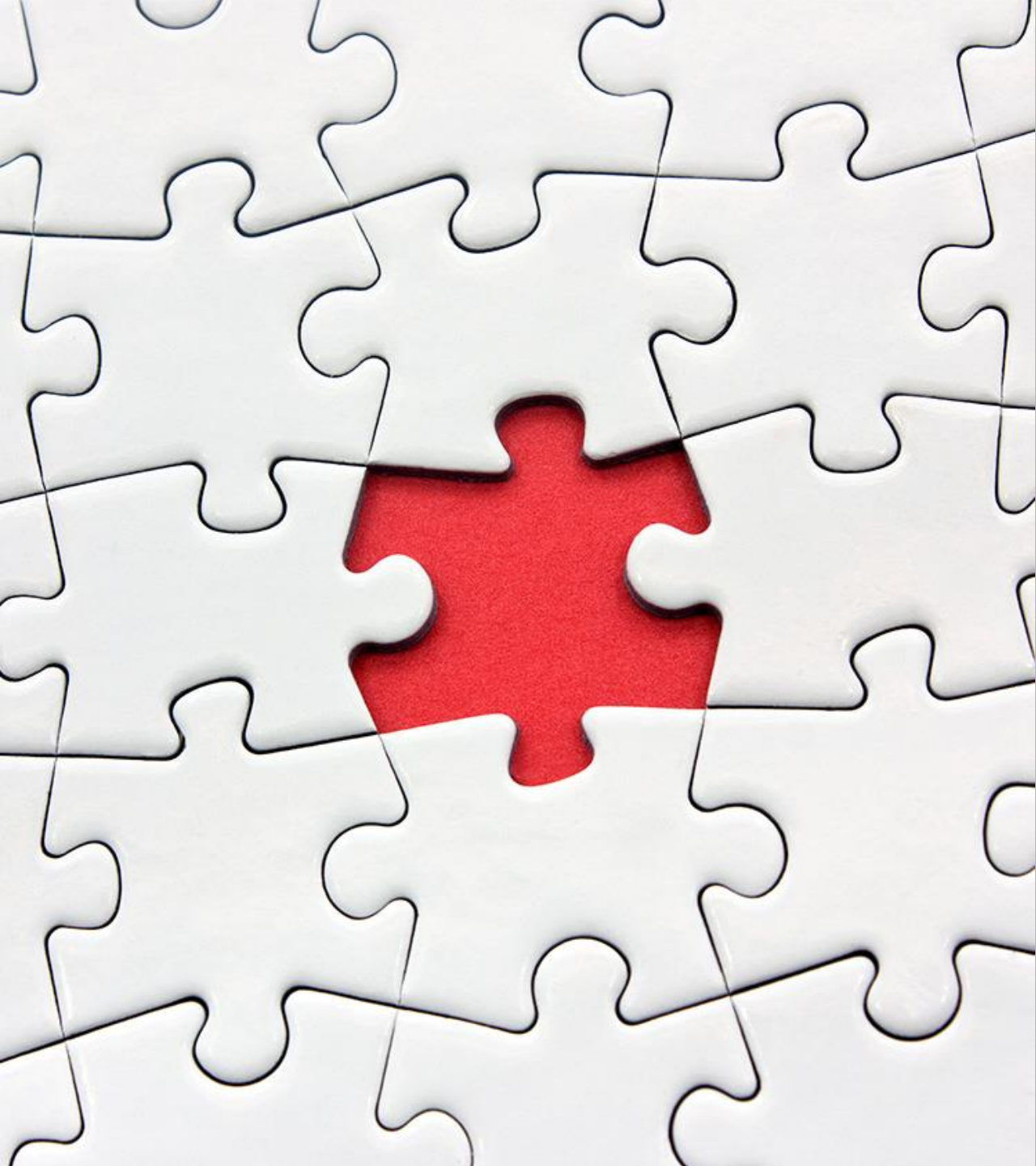
IS IT DONE?

We have just a little more testing to do on this product increment.

Is it done?

Can it be released?





NON-FUNCTIONAL REQUIREMENTS

- Part of Definition of Done
- Often invisible, but critical features
- Specified by subject matter experts
- Customer may not think about these
- Examples:
 - Security
 - Regulatory
 - Scalability
 - Reliability

The site must be available 99.9% of the time and must be able to accommodate 1,000 simultaneous users.



What if....

STAKEHOLDERS ARE NOT HAPPY DURING THE SPRINT REVIEW?

Possible reasons:

- Lack of stakeholder engagement and communication
- Product Owner has not kept stakeholders adequately informed
- Scrum Master has not emphasized the importance of transparency and inspection during the Sprint Review



SCRUM EVENTS

What should you do?

- **The Developers would like to change the daily standup to 2-3 times per week.**
- **The Developers want to expand the time block for certain Scrum events.**



REMINDER

COACHING AND FACILITATING

The Scrum Master will challenge Scrum Team members to work through problems and collaborate to reach solutions.

Scrum Master coaches the team and teaches techniques for:

- problem solving
- decision making
- adhering to Scrum best practices

The Scrum Master does not:

- solve the team's problems
- make decisions for the team
- dictate how work will be done



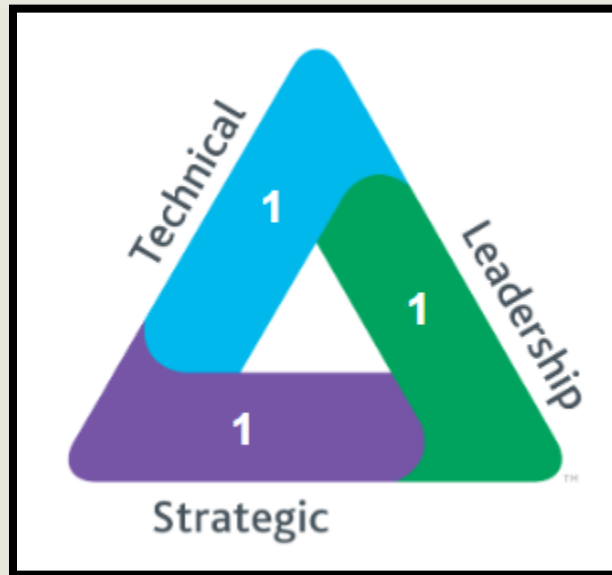
TEAM CULTURE AND PROBLEM-SOLVING



PMI RECERTIFICATION (PDUs)

If you have a PMI certification, you may use the PDU claim code below to claim three (3) Professional Development Units (PDUs) for this course.

PDU Claim Code 10082Q1VQ2





DAILY BOOTCAMP SURVEY

At the end of each Bootcamp session please let us know how we are doing. Your feedback helps us to offer the best possible Bootcamp experience.

Please share your thoughts