



Professional SCRUM FOUNDATIONS



 @ScrumDotOrg

Tremeur Balbous - tbalbous@pyxis-suisse.ch - 06-07/03/2019 | Valence

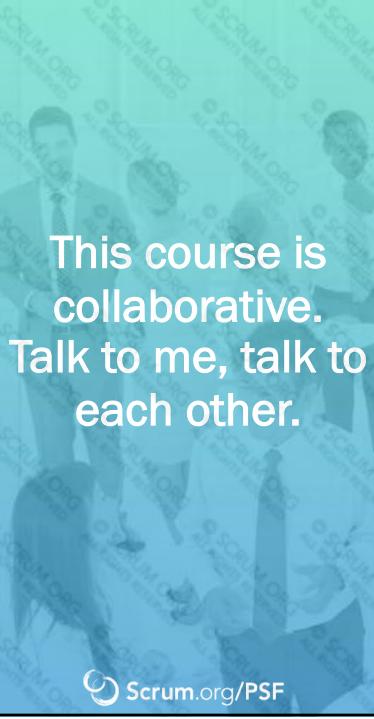
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Agenda

- Introductions
- Fundamentals of Scrum
- The Scrum Framework
- Mastering Scrum
- Planning with Scrum
- Getting Started

With joyful exercises and actual
Sprints along the way!



This course is collaborative.
Talk to me, talk to each other.



It's Your Experience. Own It.

Guidelines for how to work during this class:

- Day timing
- Lunch, break times and exercises
- Electronics such as phones, tablets, and laptops
- Off-track discussions

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"If you haven't found it yet, keep looking. Don't settle.
As with all matters of the heart, you'll know when you
find it."

- Steve Jobs



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Introductions

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Scrum.org Mission

*Improving the Profession of
Software Delivery*

Professional Scrum at Scrum.org

www.scrum.org/courses



Everyone!



Scrum Masters • Managers •
Scrum Team Members



Experienced Scrum Masters



Product Owners • Product
Managers • Advanced
Practitioners



All members of a Scrum Team
including Developers • Scrum
Masters • Product Owners •
Analysts • Testers ...



Development Leads and
Managers • Scrum Masters •
Project Managers • Advanced
Practitioners



Managers • Leaders • Product
Owners • Scrum Masters



Experienced Scrum Masters •
Advanced Practitioners



UX Practitioners • Product Owners
• All members of Scrum team

Professional Scrum Competencies

www.scrum.org/professional-scrum-competencies

The Professional Scrum Competencies help guide an individual's personal development with Scrum.

Benefit from a common understanding of the competencies and focus areas to evaluate and balance your team's proficiencies based on your unique needs.

See how all Scrum.org courses map to the competencies and focus areas by visiting:

www.scrum.org/courses/professional-scrum-training-competency-mapping



Professional Scrum Foundations Course

PURPOSE

- Provide practical insights into the Scrum Framework through practice
- Build complex products in teams with a mix of discussion and exercise to understand empirical decision making

AUDIENCE

- Anybody, from those new to Scrum to existing practitioners, looking to refine their understanding of the Scrum framework and help each other learn it
- Ideally, attendees have read the Scrum Guide and have passed the Scrum Open assessment

Exercise

Why Are You in This Class?

15
minutes

 Scrum.org/PSF

Let's take a moment to learn a bit about each other

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Exercise

Team Start-Up

10
minutes

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Make roughly even-sized, multi-disciplinary teams of 5 members, or less.

- Ensure these Scrum Teams have a mixture of skills
- Technical and non-technical skills will matter

Post for all to see:

- An animal mascot for your team
- The added value of working as teams
- 3 Things you want to learn in this class

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"A man who carries a cat by the tail learns something he can learn in no other way."

- Mark Twain

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Kickoff

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Case Study – Animal Website

Animal Website Introduction



I am a passionate fan of _____ (animal name)

Which is why I have hired your team to build a website dedicated to this animal. The site will present facts about the animal, pictures, statistics, etc.

- A list of my wants and needs is available in the handout
- The site may be made in any language the team chooses. English, Klingon, Estonian, Japanese, or whatever is appropriate to the classroom.
- During the review, the site must be shown from a single team-member's machine or the instructor's machine.



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Case Study – Animal Website

Kickoff



60 minutes

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You have 30 minutes to review your requirements, determine how to best meet them and turn them into a website.

After the time-box, each team will demonstrate its website (15 min) and reflect on how the work went (15 min).

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Fundamentals of Scrum

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Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

Individuals and interactions over **processes and tools**
Working software over **comprehensive documentation**
Customer collaboration over **contract negotiation**
Responding to change over **following a plan**

That is, while there is value in the items on the right,
we value the items on the left more.

12 Agile Principles

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Working software is the primary measure of progress.
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity—the art of maximizing the amount of work not done—is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

Exercise

Pocket Principles

Understand the value of principled agile behavior

12 minutes

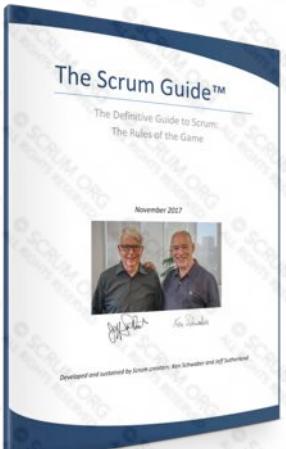
As a team:

- Bring each principle down to three words or less
- Identify two principles you feel are most important
- Identify any principles you do not agree with or support



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Definition of Scrum



www.scrumguides.org

Scrum (*noun*):

A framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value.

Scrum is

- Lightweight tool for enabling business agility
- Simple to understand, yet difficult to master

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Scrum: What's in a Name?

“...as in Rugby, the ball gets passed within the team as it moves as a unit up the field.”

- Takeuchi-Nonaka – *The New New Product Development Game* (1986)

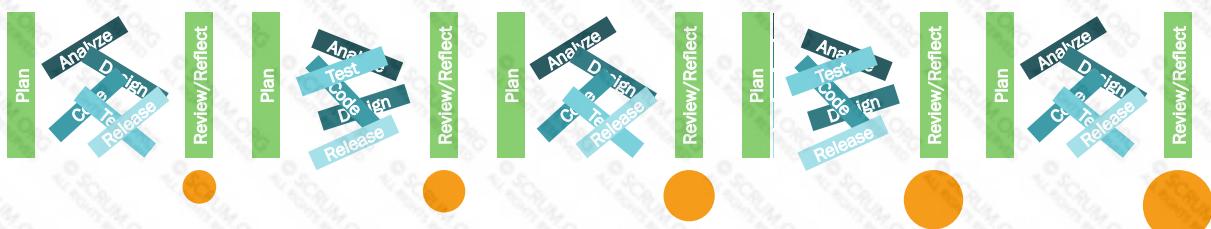


Scrum Delivers Frequently

Traditional Development



Scrum



Exercise

The Importance of the Increment

5
minutes

 Scrum.org/PSF

Having a “Done” Increment at the end of each Sprint is our primary measure of progress. This is a game changer.

Why does it matter that we have a “Done” Increment of potentially releasable product at the end of each Sprint?

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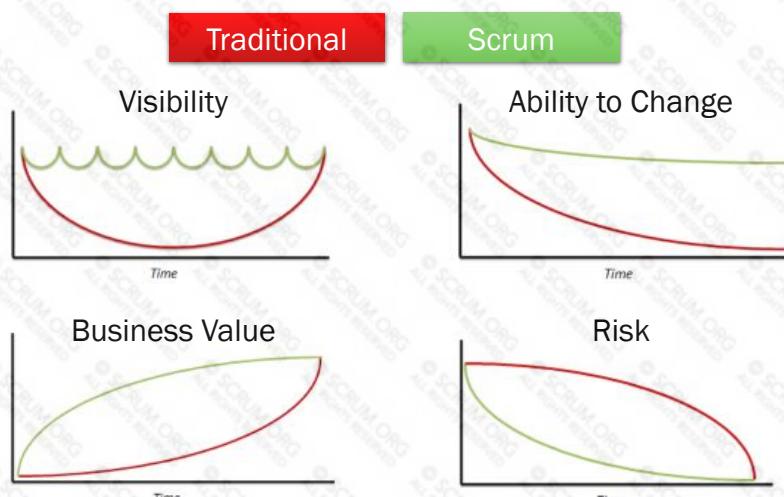
Exercise

Comparing Evolutions

5
minutes

 Scrum.org/PSF

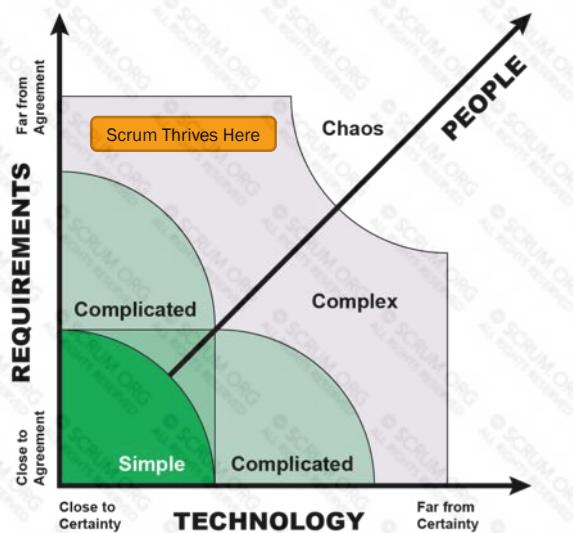
As a team, explain how Scrum might differ from traditional approaches.



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The Complexity of Software Development



- Simple
everything is known
- Complicated
more is known than unknown
- Complex
more is unknown than known
- Chaotic
very little is known

Source: Ralph Stacey, University of Hertfordshire

Scrum for Complex Work

- Not just for software!
 - Research and identify markets
 - Hardware
 - Government
 - Process development
 - Managing organizational operations
 - Marketing
- Release products and enhancements, as frequently as many times per day
- Support the entire product, through its entire lifecycle



<http://wikispeed.org/car/>

Situation Dictates the Type of Process

DEFINED

- Given a well-defined set of inputs, the same outputs are generated every time
- Follow the pre-determined steps to get known results



EMPIRICAL

- Frequent inspection and adaptation occurs as work proceeds
- Outputs are often unpredictable and unrepeatable



Scrum Implements the Empirical Process

We all know what is going on.

Transparency

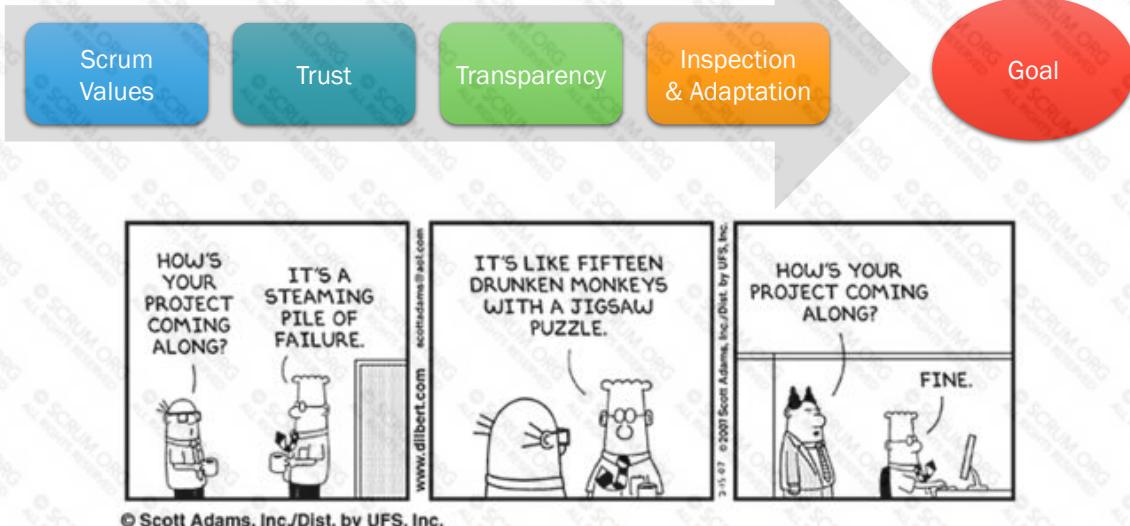
OK to change tactical direction.

Adaptation

Inspection

Check your work as you do it.

Empirical Processes Require Trust



Exercise

Scrum Values

Making a connection with the Scrum Values

5
minutes

- Form 5 groups
- Each group pick a unique Scrum Value
- Post for all to see your group definition of this value (90 seconds)
- Share within your group, how is this value demonstrated by your organization or team?

Share your understanding of the Scrum Values with each other



Scrum Values

- The Scrum Values are the foundation for behavior and practices in Scrum.
- They are closely related to the theory and first principles of Scrum and support teams in their work.
- Scrum Masters can always fall back on these essentials.



Scrum Values are the life blood of the Scrum framework.

Exercise

Living the Scrum Values

Bringing Scrum Values to our teams

12
minutes

Pick a Scrum Value that means the most to you

- Individually (1 min) – Write down some concrete ways in which this value is *missing* in your organization
- In groups of 3 (9 min) – One at a time:
 - Share your findings while the others listen
 - Listeners offer advice and consult on actionable solutions to the missing parts

What catches your attention about living the Scrum Values within your organization or team?

Share findings with the class

TAKE AWAY

Fundamentals of Scrum

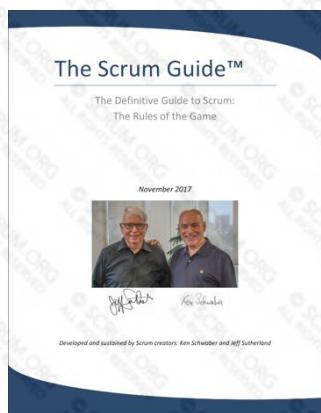
 Scrum.org/PSF

- Software development resides in the complex domain.
- The right process produces the right results; the best fit for complexity is the empirical process.
- The 3 legs of empiricism are inspection, adaptation and transparency.
- Transparency requires trust and courage.
- Living the Scrum Values builds trust.


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Suggested Reading

“The Scrum Guide” (Schwaber, Sutherland)



“The New New Product Development Game” (Takeuchi, Nonaka)


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The Scrum Framework (1)

Exercise

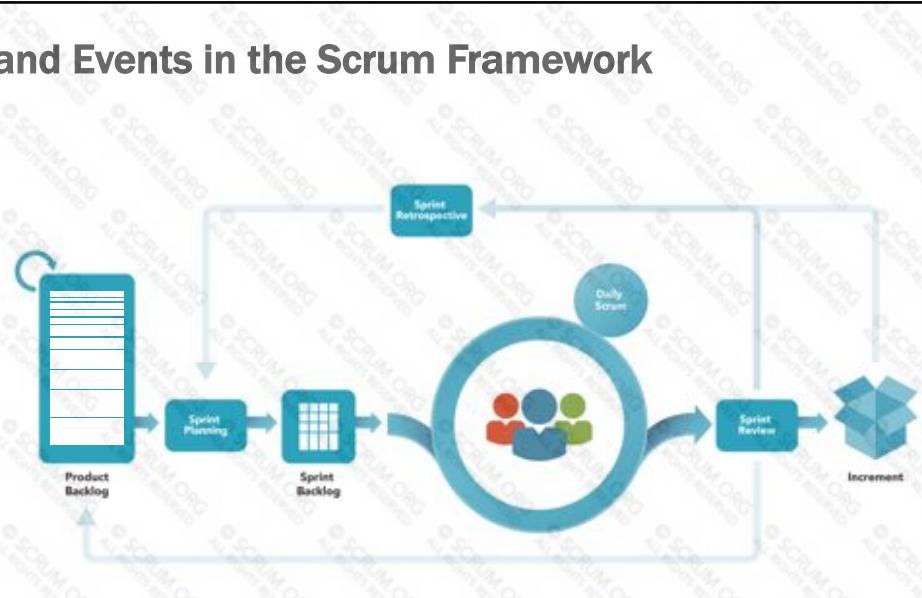
What is Needed For Scrum?

5
minutes

Do you know the elements of the Scrum framework?

Roles, Artifacts and Events in the Scrum Framework

Roles
<ul style="list-style-type: none"> • Product Owner • Development Team • Scrum Master
Artifacts
<ul style="list-style-type: none"> • Product Backlog • Sprint Backlog • Increment
Events
<ul style="list-style-type: none"> • Sprint • Sprint Planning • Daily Scrum • Sprint Review • Sprint Retrospective



Scrum is more than its elements

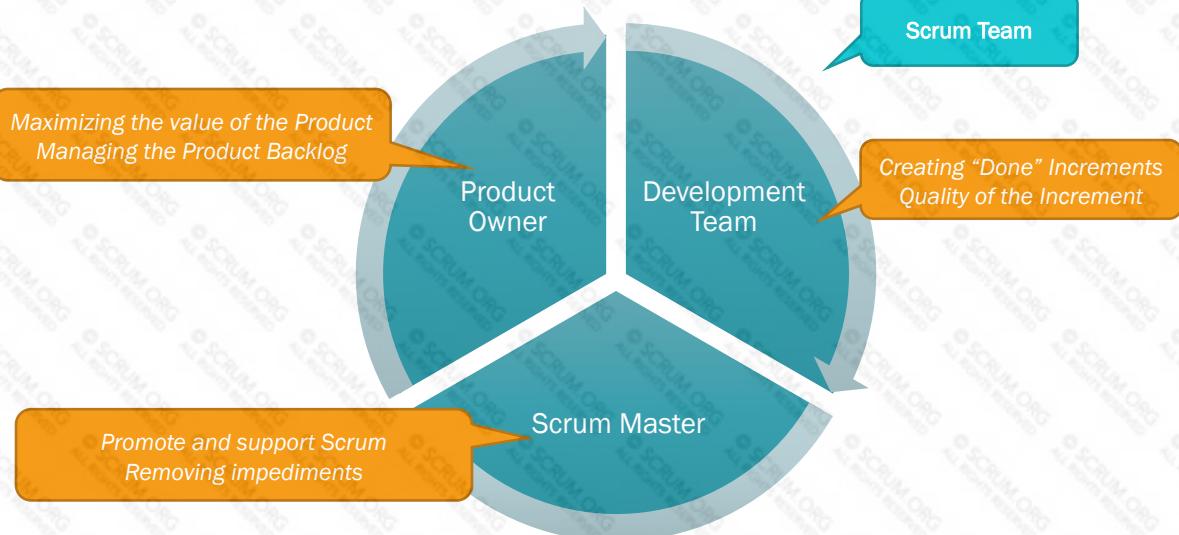
The elements of Scrum are only part of the story.

“The rules of Scrum bind together the roles, events, and artifacts, governing the relationships and interaction between them.”

– Scrum Guide



Roles: Each One Has a Specific Accountability



Ideally, Product Owners have Profit & Loss accountability for the product.

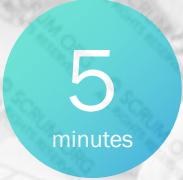
Product Owner



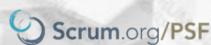
- Maximizes the value of the Product
- Manages the Product Backlog
- Chooses what and when to release
- Represents stakeholders and customers to the Development Team

Exercise

Identify Your Product Owner



5
minutes



**Who will be the Product Owner in your team?
What qualities are you looking for?**



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Self-organizing rarely means self-managing



The Development Team



- Creates the product Increment
- Operates in a series of Sprints
- Organizes itself and its work
- Collaborates with Product Owner to maximize value

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The Development Team



Must have all the skills it needs to deliver a done Increment – ideally more than one team member has the competency.

*Personifies
agility and
professionalism*

Scrum Master



- Promotes and supports Scrum as defined in the Scrum Guide
- Helps everyone understand Scrum theory, values, practices, and rules
- Provides guidance and support for the Scrum Team and organization

Exercise

Identify Your Scrum Master

Who will be the Scrum Master in your team?
What qualities are you looking for?

5 minutes



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Scrum Roles Service



May Select

Product Owner

Development Team

Scrum Master

Service

ROLE

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Artifacts: Each One Contains Specific Information

Product Backlog

- Holds the requirements for the product
- Managed by the Product Owner

Sprint Backlog

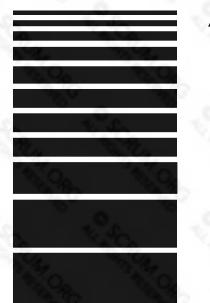
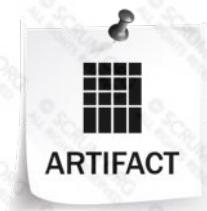
- Holds all work for the Sprint Goal
- Managed by the Development Team

Increment

- Working addition to the product
- Potentially releasable

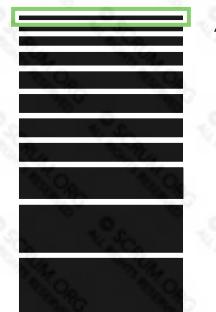
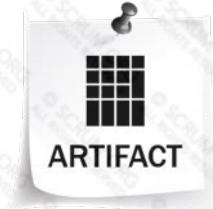
Product Backlog Holds the Plan for Future Sprints

- The single source of truth of ordered potential changes to the product
- Minimal but sufficient
- Owned and managed by the Product Owner
- Public, available and transparent



Product Backlog Item (PBI)

- Transparent unit of deliverable work
- Sized appropriately
 - May be completed within a single Sprint
- Each one is ideally discrete without dependencies
- Contains clear acceptance criteria
 - Answering what will be true when this works



Exercise

What's a PBI

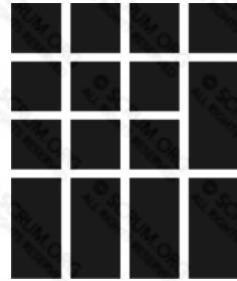
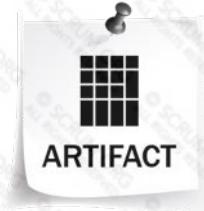
5
minutes

What kind of work do you think makes a valid Product Backlog Item?

Identify types of work which could be included in a Product Backlog

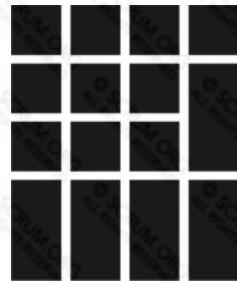
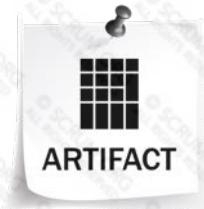
Sprint Backlog Holds the Plan for the Current Sprint

- Progress within the Sprint must be transparent
- Owned and managed by the Development Team
 - Process improvements may affect the whole Scrum Team and should be jointly owned
- Adapted by the Development Team throughout the Sprint when work emerges



What Goes in a Sprint Backlog?

- The selected Product Backlog items (“forecast”) for the Sprint by the Development Team in collaboration with the Product Owner
- A plan, often a list of tasks, to deliver the Product Backlog items against the Sprint Goal
- At least one high priority process improvement identified in the previous Retrospective



Exercise

Visualize Your Product Backlog and Sprint Backlog

10 minutes

Visualizations are often used by Scrum Teams to help with inspection and provide focus

Product Backlog



PBI - A
PBI - B
PBI - C
PBI - D
PBI - E
PBI - F

Sprint Backlog



FORECAST	TO DO	IN PROGRESS	DONE

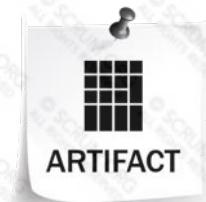
Visualize your Product Backlog and Sprint Backlog for the work we're doing in class

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Increment

- The Increment is the sum of all the Product Backlog items completed during the Sprint
- The product is the sum of all Increments
- Is usable and it works
- Is potentially releasable
- Must be DONE
 - As per Scrum Team standards
 - With no work remaining






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Exercise

What Work is Part of Product Development?

5
minutes

In addition to creating software, what other kinds of work are included in product development?

Come up with a list of items with your team.

About the Definition of Done (DoD)

- The Definition of Done is a shared understanding of completeness – it reflects *release quality*
- Must be universally understood and agreed upon to increase transparency
- It's the minimum amount of work a Development Team needs to do on a Product Backlog Item
- Helps the Product Owner and everyone to understand what is included in the Increment that is “Done”.



Exercise

Defining Done

Only completed features may be shown at Sprint Review. How will your team know what may be shown in the next Sprint Review here in class?

Post a simple definition of “Done” for your team so that all items shown in Sprint Review are known to meet a baseline expectation of quality and completeness.

5
minutes

Events: Each One Has a Specific Purpose

Sprint Planning

- From: Product Backlog
- To: Sprint Goal, Sprint Backlog

Daily Scrum

- From: Daily Progress
- To: Updated Daily Plan

Sprint Review

- From: Sprint, Increment
- To: Updated Product Backlog

Sprint Retrospective

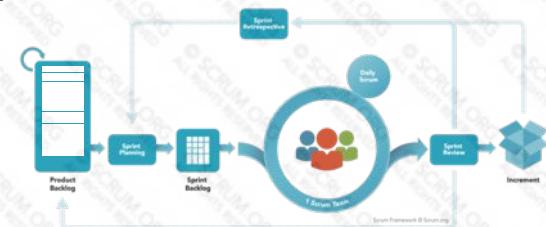
- From: Past Sprint
- Improvements For Next Sprint

Sprint

- Container Event
- One month, or less, in duration

Sprint

- A container for all activities and the other Scrum events
- Focus is on creating a “Done” Increment of value
- One month or less to enable regular feedback



Sprint Planning

- First event in a Sprint
- Product Backlog is inspected
- A Sprint Goal is created (*Why*)
- Sprint Backlog is created (*What and How*)
- The entire Scrum Team attends



Sprint Goal

An objective to be met in the Sprint

- Through the implementation of the PBIs selected in Sprint Planning
- Providing guidance to the Development Team

Allows flexibility in delivering the Increment

- Allows wiggle room for exact implementation of PBIs

Is fixed throughout the Sprint

- As the Development Team works, it keeps this goal in mind
- The Development Team inspects and adapts their plan to meet the Sprint Goal in every Daily Scrum

Some Sprint Goals

Make the application run on SQL Server in addition to Oracle

Automatically clear a default insurance case using the new OCR system

Deliver a minimal set of administration features

Increase find accuracy of misspelled search terms



Daily Scrum

- An opportunity for the Development Team to:
 - Inspect progress toward the Sprint Goal
 - Create a plan for the next 24 hours
 - Optimize collaboration
- 15 minute daily meeting
- Same time and place


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Sprint Review

- A collaborative working session focused on the Increment
- The Scrum Team shows the Increment to stakeholders
- Feedback is heard from all present, used to guide next steps
- Working software, no slides
- The Product Backlog is updated with insights gained from feedback



Sprint Retrospective

- Last event in a Sprint
- The Scrum Team discusses
 - What went well in the Sprint
 - What could be improved
 - What will we commit to improve in the next Sprint



TAKE AWAY

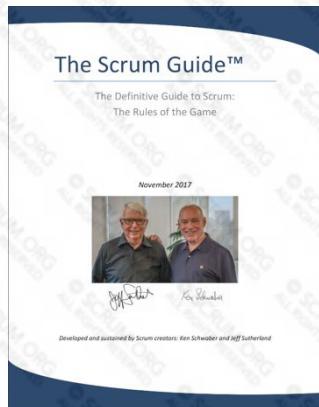
The Scrum Framework (1)

- Scrum implements empiricism in software development
- Every Scrum role (3) has a clear accountability
- The Scrum artifacts (3) provide transparent information
- All Scrum events (5) serve inspection, adaptation and transparency

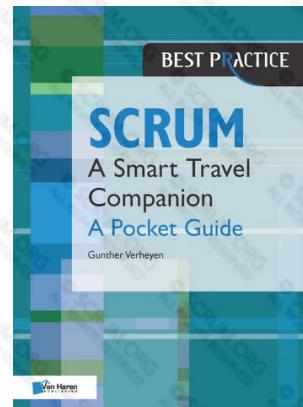


Suggested Reading

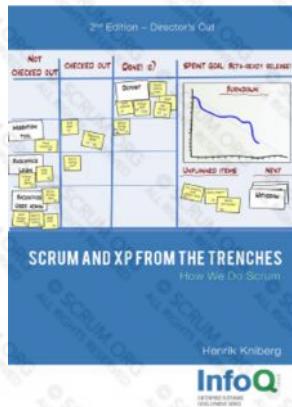
"The Scrum Guide"
(Schwaber, Sutherland)



"Scrum – A Pocket Guide"
(Gunther Verheyen)



"Scrum and XP from the trenches" (Henrik Kniberg)



"There is nothing so annoying as to have two people talking when you're busy interrupting."

- Mark Twain

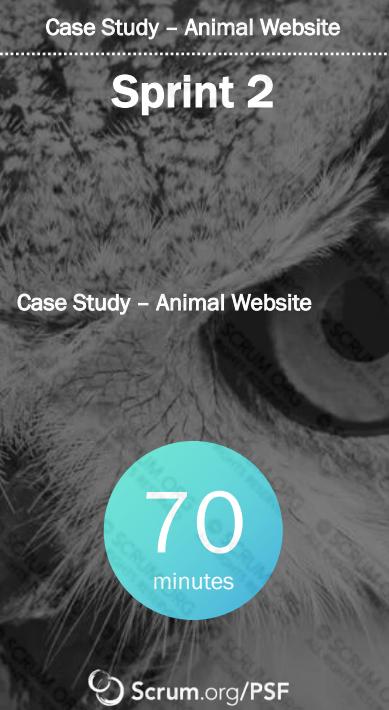
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Sprint Two

Case Study – Animal Website

Sprint 2

Case Study – Animal Website



70 minutes

Scrum.org/PSF

The PO has collected the new requirements.

- Plan the Sprint (10 min)
- Build an Increment of product (30 min)
- Review the Increment (15 min)
- Hold a retrospective on how the work went (10 min)
- Debrief with the class (5 min)

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The Scrum Framework (2)

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Who the Product Owner Is

- Defines features and functionality
 - The level of detail provided will vary
 - Some Product Owners will work closer to implementation details than others
- Has the final word on the content and the ordering of the Product Backlog
- Not the Development Team's assistant
 - May have the Development Team manage Product Backlog items
 - Spend as much time with the Development Team as needed to let them be effective

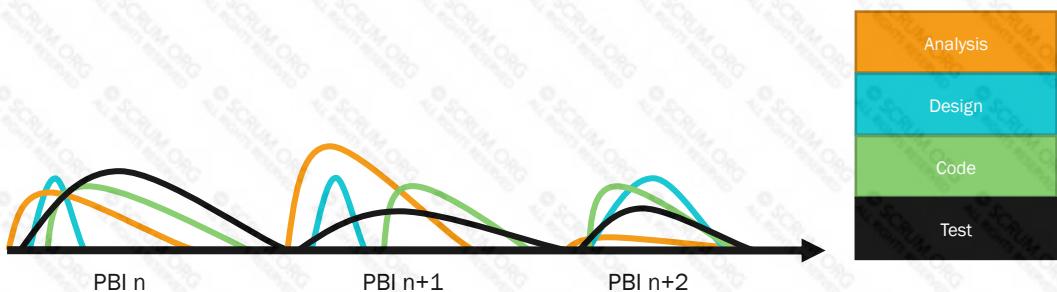
The Development Team

- Composition is constant throughout a Sprint
- Sized appropriately (optimally more than 2, less than 10)
- Team members are ideally fully allocated



The Development Team

- Everyone pitches in regardless of individual skill specialty
- The Development Team is held to account as a unit
- The complexity of work influences the needs for each PBI



Scrum Master

- Manages the adoption of Scrum by the Scrum Team and the organization
 - Facilitates self-organization
 - Embodies agility for all to see
 - Does NOT “drive” the team by giving tasks or by telling what to do
- Removes impediments to the Development Team’s success that they are unable to remove themselves

“Ask Your Team” – The Scrum Master’s motto



Exercise

Events: Each One Has A Specific Purpose

PURPOSE
Explore the role of the Scrum elements in empiricism

5 minutes

Event	Inspection	Adaptation
Sprint Planning	A?	Sprint Goal, Sprint Backlog
Daily Scrum	Sprint Backlog, Progress toward Sprint Goal	B?
Sprint Review	Increment, Sprint, Product Backlog	C?
Sprint Retrospective	D?	Actionable and committed improvements

Question: What is missing? How is it transparent? Who should attend? What's the time-box?

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The Sprint

- Best to have consistent durations
- Starts right after the previous one
- Scope is reviewed constantly throughout
 - Between Development Team and Product Owner
 - This recognizes uncertainty even within the Sprint
- There are no special Sprints
 - No Sprint 0, Design Sprints, Testing Sprints, Hardening or Planning Sprints

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Time-Boxes

- A time-box is the maximum amount of time allotted to achieving the purpose of an event
- Helps maintain focus
- Helps reduce waste



Scrum Event Time-boxes (at most)

Event	One Month	3 Weeks	2 Weeks	1 Week
Sprint Planning	8 hours	Less than 8 hours (~6 hours)	Less than 8 hours (~4 hours)	Less than 8 hours (~2 hours)
Daily Scrum	15 minutes			
Sprint Review	4 hours	Less than 4 hours (~3 hours)	Less than 4 hours (~2 hours)	Less than 4 hours (~1 hour)
Sprint Retrospective	3 hours	Less than 3 hours (~2 hours 15 mins)	Less than 3 hours (~1 hour 30 mins)	Less than 3 hours (~45 mins)

Exercise

Sprint Planning

5
minutes

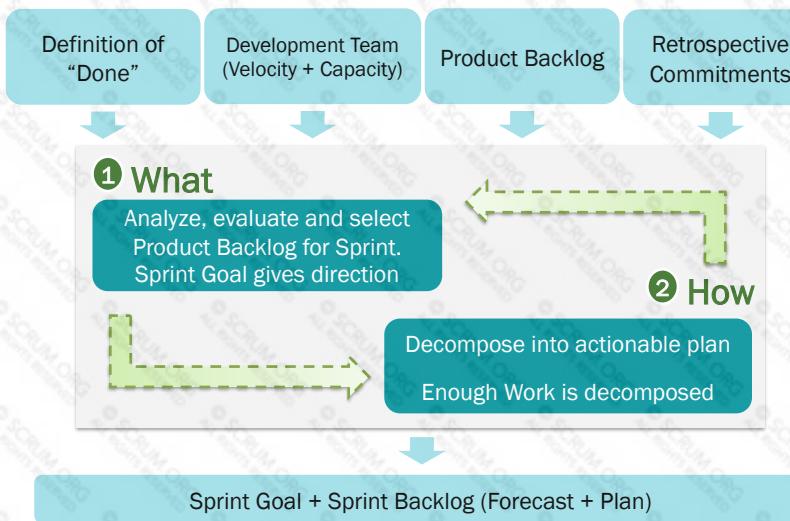

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List the activities and responsibilities for each Scrum role during the Sprint Planning event:

- **Product Owner**
- **Development Team**
- **Scrum Master**

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Sprint Planning Event Flow



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Why a Daily Scrum?

- Maximize chances of meeting the Sprint Goal
- Create focus
- Increase and maintain situational awareness

Development Teams may have many ways of conducting a Daily Scrum to increase collaboration



A Daily Scrum in Microsoft Patterns and Practices

Discussion Points for a Sprint Review

Product Discussion Points

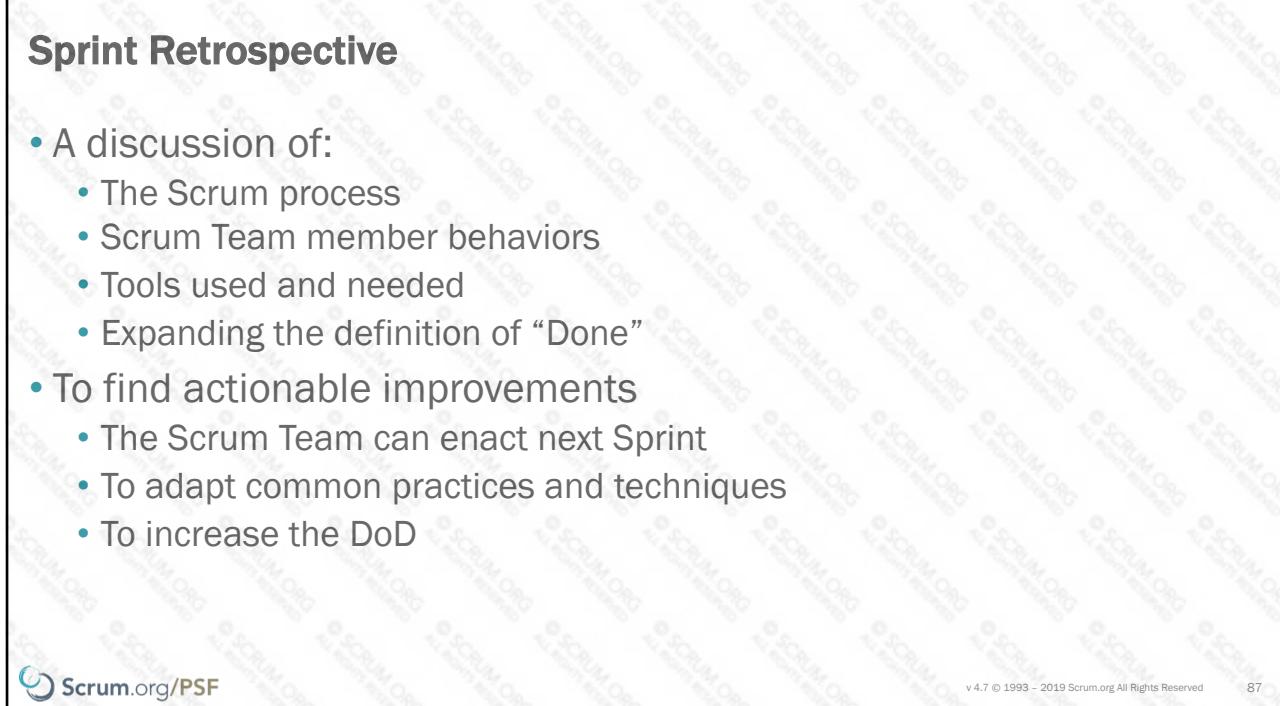
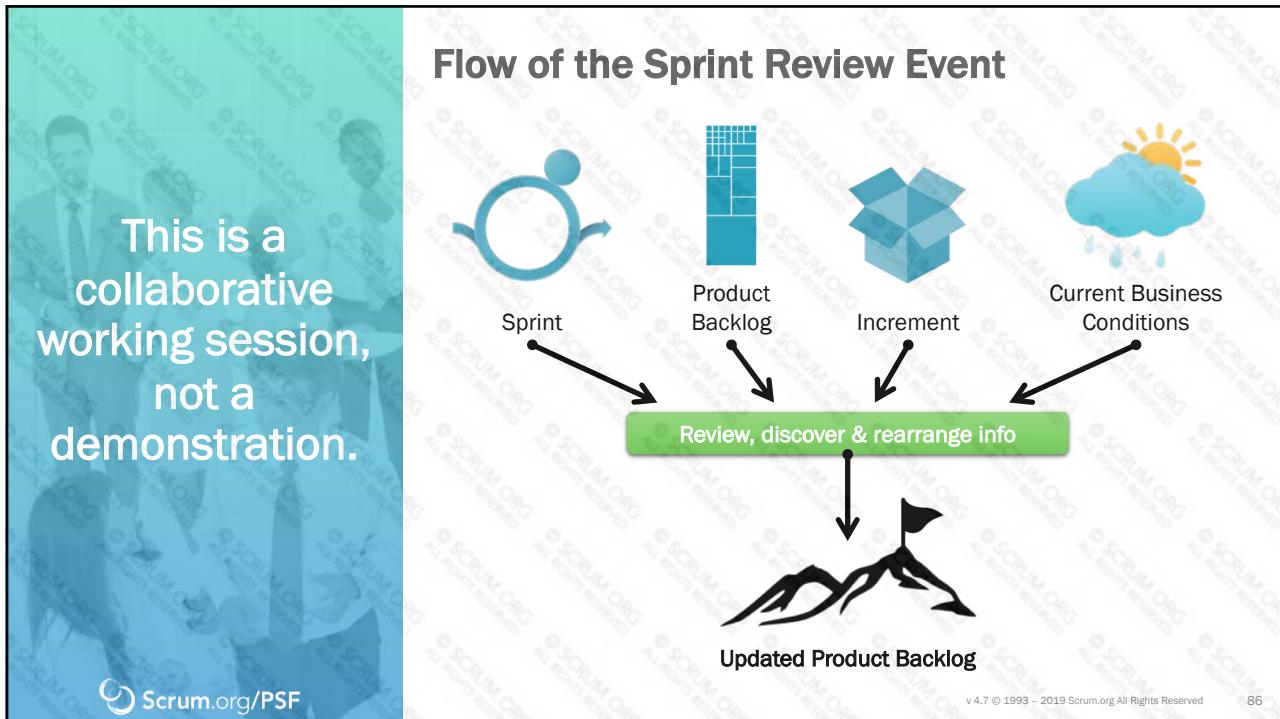
- The goal of this Sprint
- What was done
- State of the Product Backlog
- Projections of likely release targets

Work Discussion Points

- The actual Increment of software
- What happened in the Sprint
- How problems were addressed and the effect on the Increment

Feedback Opportunities

- From everyone!
- Questions from Scrum Team for stakeholders
- Thoughts on Increment from stakeholders



Kaizen – Continuous Improvement

改善

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The Sprint Retrospective

- The Scrum Team's opportunity to improve
- After every Sprint Review
- Full Scrum Team participates
 - Scrum Master
 - Product Owner
 - Development Team

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The Retrospective Prime Directive

“Regardless of what we discover, we understand and truly believe that everyone did the best job they could, given what they knew at the time, their skills and abilities, the resources available, and the situation at hand.”

- Norm Kerth,
Project Retrospectives: A Handbook for Team Reviews

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Anti-Pattern: Poor Use of Retrospectives



Beware gripe sessions rather than learning sessions

What worked?
What didn't work?
What will we commit to doing in the next Sprint?

A Typical Sprint Retrospective Model

What worked well?

What could be improved?

What will we commit to doing in the next Sprint?

Scrum Team members make actionable commitments

Retrospective Commitments for the Next Sprint

Answer:

What will your team do in the next Sprint?

- Keep these visible to all
- Keep a growing list of them
- Watch DoD grow over time

Sprint #	What we committed to for the next Sprint
3	Increment shown in Sprint Review builds via automated process
4	Development Team members pair up on work to increase knowledge
5	New features will have corresponding unit tests
6	Tests will run as part of the automated build process

Ask Questions Like These Regularly

- Is our DoD increasing in scope?
- Is our quality improving?
- Are we learning more from each other?
- Are we hiding or ignoring anything?

And for each answer why or why not.

These questions make a nice addendum discussion to Sprint Retrospectives

Product Backlog Refinement

- Refining means
 - Planning the PBL to an actionable level of detail
 - Maintaining a Rolling Backlog Projection
- Refinement usually consumes no more than 10% of the capacity of the Development Team.
- Top ordered Product Backlog items are well understood and easily selected in Sprint Planning
→ They are ‘Ready’

Definition of the Definition of Done (DoD)

- The definition of “Done” is a shared understanding of completeness
- Must be universally understood and agreed upon for transparency
- The common denominator of quality for the product



DoD Tips

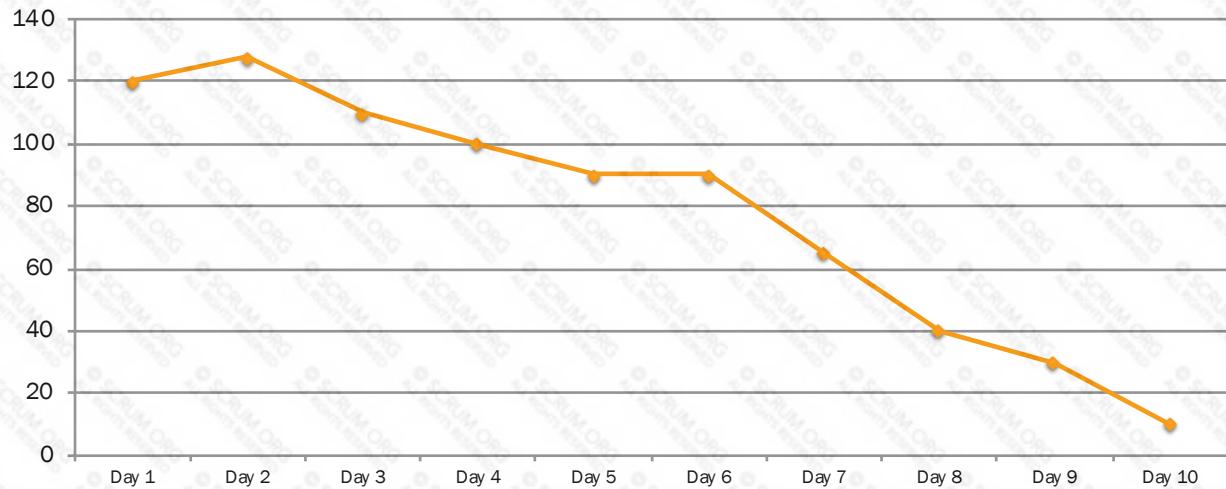
- In general the DoD is for the Increment and all Product Backlog items
- Checklists for definition of “Done” at various levels and checkpoints can be helpful
- Visit definition of “Done” in each Retrospective

If the development organization does not have a common definition of “Done” for that product, product family, or system (to reflect product fit for purpose), it defaults to the Development Team to define and own.

Monitoring Sprint Progress

- Measurement is for the Development Team
 - No one else
 - Part of self-managing the Sprint’s work
- Measurement is an indication of:
 - Progress in the Sprint
 - When scope should be reviewed with the Product Owner

Sprint Burndown Chart



Sprint Progress Monitoring Cautions

- Can be easily misused
 - To micromanage the Development Team
 - To demonstrate false progress
- May change abruptly when
 - New work is added or removed during the Sprint
 - Scope is reviewed with the Product Owner
 - New things are learned about the work of the Sprint

Velocity



A measure of Product Backlog items delivered per Sprint

- Used by the Development Team to gauge how much work to pull in a Sprint Planning event
- Used by the Product Owner to provide forecasts on Product Backlog level

Exercise

The Nature of Velocity

5
minutes

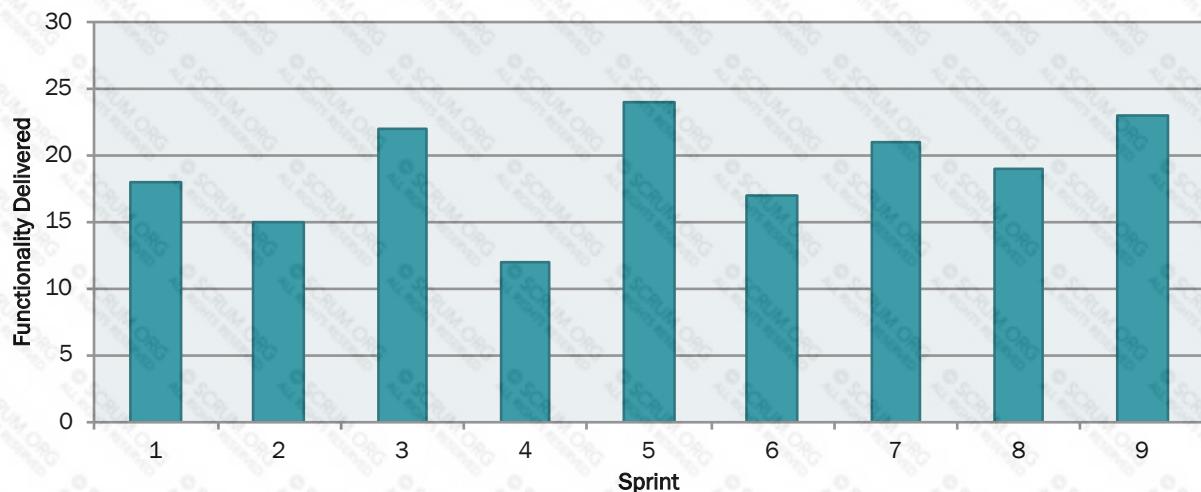
The Development Team has been together for several months. You are the Scrum Master. Velocity is fairly stable, but has changed dramatically in some sprints.

The CTO asks: “Is the changing velocity good or bad, and what is causing it?”

He also asks: “What are you doing to help the team improve their velocity?”

What is your response to the CTO?

Velocity



TAKE AWAY

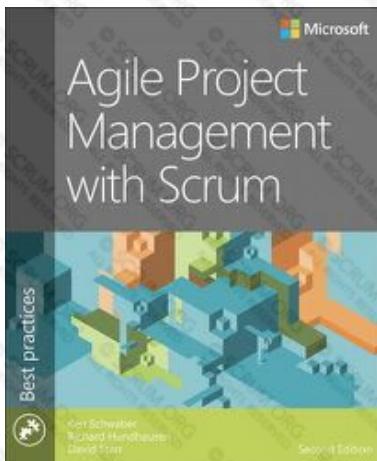
The Scrum Framework (2)

- The Scrum artifacts provide transparent information
- All Scrum events are an opportunity for inspection and adaptation

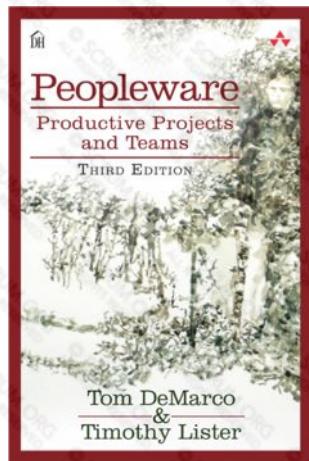


Suggested Reading

"Agile Project Management with Scrum" (Ken Schwaber)



"Peopleware" (DeMarco, Lister)



7

Mastering Scrum

The skill is using self-organizing teams to the organization's advantage

 Scrum.org/PSF

Self-Organization

- A structure or pattern appears in a system without a central authority or external element imposing it through planning
- It is a primal behavior in nature
- Scrum leverages self-organization



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Self-Organizing Development Teams

No one (not even the Scrum Master) tells the Development Team how to turn Product Backlog into Increments of potentially releasable functionality;

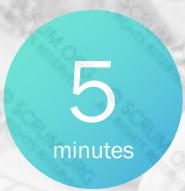
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Exercise

Self-Organization

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Each team consider:

What does it mean for a Development Team to be self-organizing?

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Examples of a Self-Organizing Development Team

- Select a realistic and challenging amount of work for the Sprint
- Ask clarifying questions from the Product Owner
- Determine how best to meet requirements and create tasks
- Decide who does what and when
- Decide who is needed on the team and not
- Ask help with external disruptions (Impediments) when needed
- Define and improve their technical practices
- Select their own Scrum Master

i.e. They take responsibility for their work!

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2 Parts of the Scrum Discussion

PEOPLE PRACTICES

- Planning
- Empiricism
- Collaboration
- Self-Organization
- Leadership
- Communication
- Transparency

ENGINEERING PRACTICES

- Design
- Coding
- Testing
- Automation
- Deploying
- User Experience
- Emergent Architecture

Anti-Pattern: Reverting to Familiar Behavior

- Scrum is simple, but hard
- Giving up when it feels hard undermines everyone else
- Scrum Teams need time and support to adopt the successful disciplines
- “Just this one time with no unit tests..”
Don’t do it.



Using Self-Organizing Teams Well

- Provide a clear goal and desired outcomes
- Provide a framework within which the team operates
 - Scrum rules
 - Knowledge and skills
 - Domain
 - Technical
- Sprint challenge and pressure



Cross-Functional People

- In a multi-disciplinary Development Team of appropriate size, people need to move beyond their areas of specialization
- Task pairing and sharing grows everyone
- Focus shifts from fulfillment of individual duties to the overall success of the team



Exercise

Handling Impediments

5
minutes

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You are the Scrum Master. The Development Team reports having 2 impediments:

- Network operations is late delivering a needed server
- One of the developers refuses to attend the Daily Scrum

What do you do?

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Impediments

Anything that:

Impedes or slows a Scrum Team's progress
and

Cannot be resolved by the Scrum Team internally



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Exercise

Undone Work



5
minutes

It is the last day of a Sprint and the Development Team has completed all work, except one item. The remaining item is too small to be split. It is too large to be completed.

The Development Team is unsure what to do.

What is your guidance?

Always Be Ready to Release

- The only requirement is that by the end of the Sprint there is an increment that is “Done” and must be in useable condition regardless of whether the Product Owner decides to actually release it
- Can release whenever a Product Backlog item is “Done”
 - Practices such as Continuous Delivery can be used with Scrum
- Utilizing DevOps practices and principles will help



Done!

TAKE AWAY

Mastering Scrum


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- Self-organization, what it is and how it is employed in Scrum
- Growing your personal skills helps the Scrum Team achieve their goals


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Suggested Reading

“The New New Product Development Game” (Takeuchi, Nonaka)



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Sprint Three

Case Study – Animal Website

Sprint 3

70
minutes

The PO has collected the new requirements.

- Plan the Sprint (10 min)
- Build an Increment of product (30 min)
- Review the Increment (15 min)
- Hold a retrospective on how the work went (10 min)
- Debrief the class (5 min)

Anti-Pattern: The Hero Developer

- High functioning organizations do not need heroes
- Heroes almost always ignore quality: Tests, Documentation, Automation
- Needing a hero means the overall system is fundamentally broken
- Heroes resist Scrum as focus moves
 - To the team
 - Away from the individual



Anti-Pattern: Absent Product Owner (APOD)

- Very common and very destructive
- Increases wait time and creates waste
- Feature decisions are often decided by those least appropriate to do so



"In life, as in football, you won't go far unless you know where the goalposts are."

- Arnold H. Glasgow

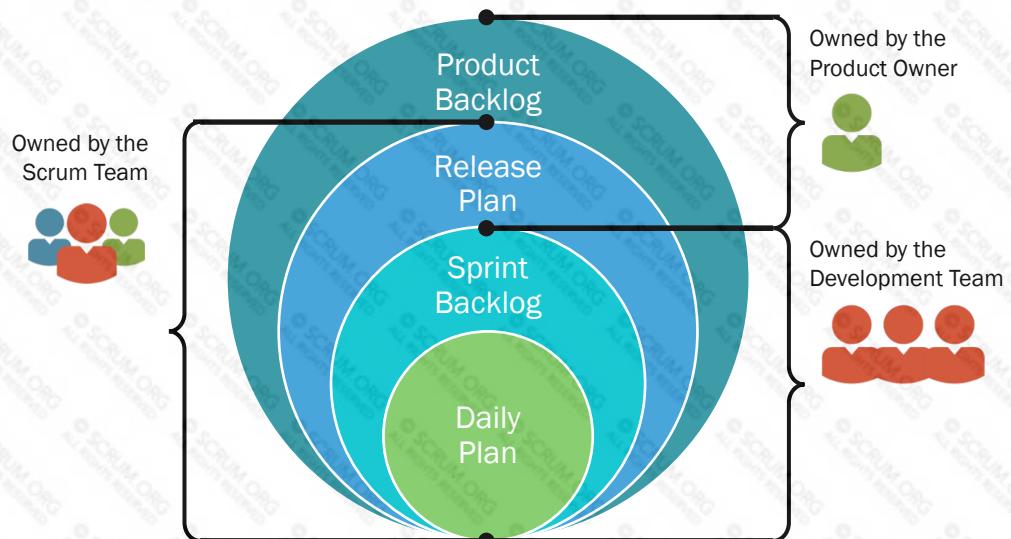
9

Planning With Scrum

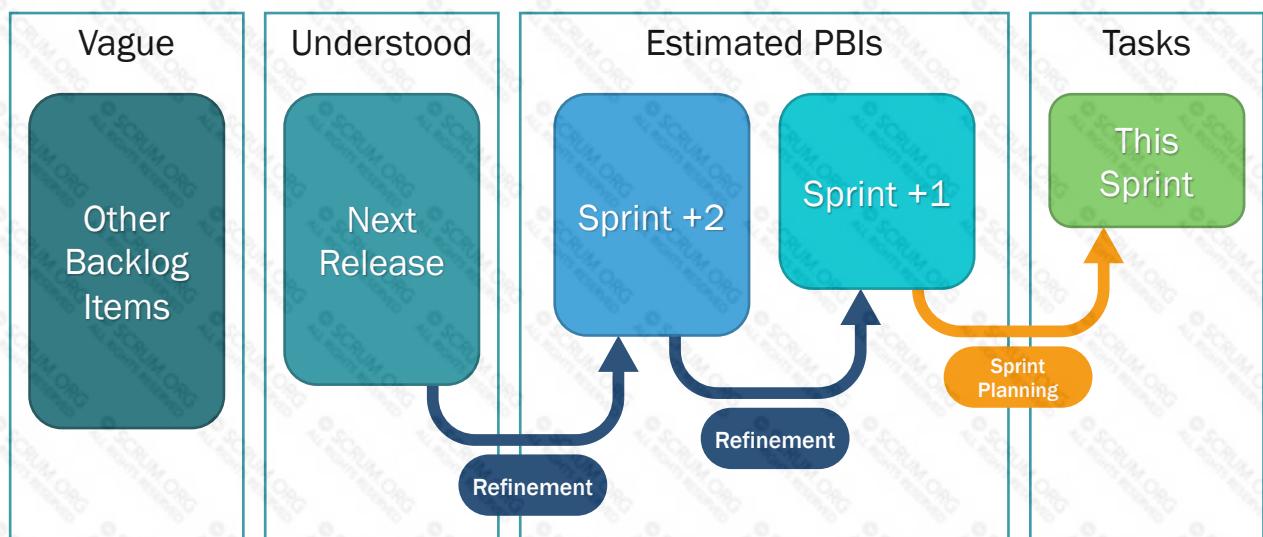
Scrum Planning

- Plan constantly, not just in the beginning
- Planning is an activity, not a document
- Recognize, embrace, and support change rather than trying to control it

Planning Horizons



Backlog Accuracy and Item Detail



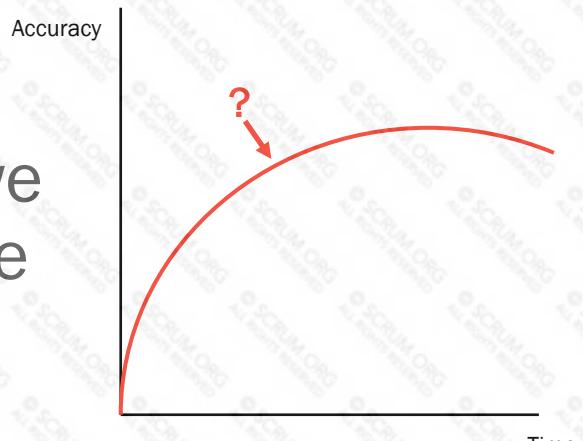
Estimating With Groups

Group derived estimates include a wider set of experiences and perspectives than estimates by individuals.



Analysis and accuracy

How accurate do we need to be to move ahead?



Story Points



- Based on size, effort and complexity, not duration
- Numerically relative to each other
- Different for each team of estimators
- Points are additive
- Non-linear in progression
- Use units that help planning
 - 1, 2, 3, 5, 8, 13, 21
 - 1, 2, 4, 8, 16, 32

Planning Poker Rules



- Each Developer has a deck of estimation cards
- Customer/Product Owner reads a story and it is discussed briefly
- Each Developer individually selects a card that is his or her estimate
- Cards are turned over so all can see them (simultaneously)
- Discuss the differences (especially outliers)
- Re-estimate until estimates converge

Exercise

Make Your Decks

5
minutes

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Create a deck of cards as follows:

- 1, 2, 3, 5, 8, 13, 21

Or, download a planning poker app for your smartphone

- Even if you don't use the same app, everyone should have the same sequence



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Exercise

Planning Poker

10
minutes

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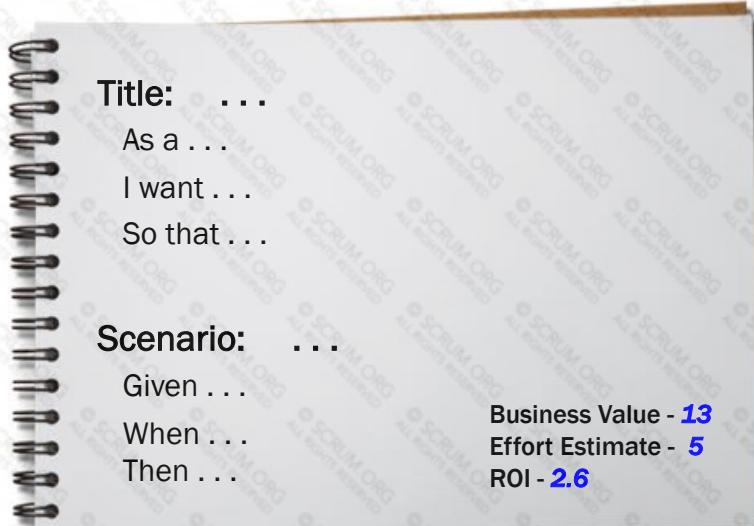
Estimate the following with the planning poker technique:

- Plant a tree
- Paint your house
- Clean your garage
- Get ready for work
- Replace your car engine

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Product Backlog Item Attributes



Money to be earned
Clients to be retained
Delight to bring to users
Market share to capture
Money to be saved
Improvement to User Experience

Business Value

- The Product Owner is responsible for this
- It isn't always just revenue
- Can be estimated or calculated
 - MoSCoW
 - 1...100

**Ordered in a way
to maximize
value delivered**

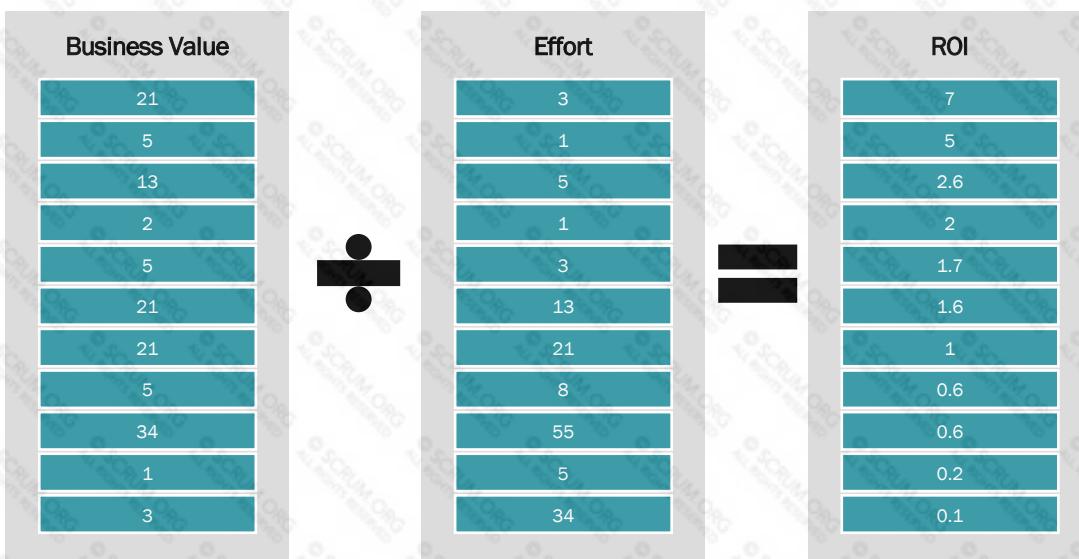

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Ordering the Product Backlog

- Risk
 - Identify risk for items in the Backlog
 - Do highest risk items first
- Return on Investment (ROI)
 - Simple business value ranking system
 - This gives a single number by which to rank work
- Because the Product Owner says so

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ROI Index Ordering



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Two Basic Types of Release Planning

DATE TARGET PLANNING

- The product will release on a specific date

We Must Answer

How much of the backlog will be complete by a given date?

FEATURE TARGET PLANNING

- The product will release when specific features are ready

We Must Answer

When will features A, B, and C be ready?

Exercise

When Will Item “A” Likely Be Released?

5
minutes

At a Sprint Review one of the stakeholders wants to know when item A is likely to be released.

How would you deal with this question?

- Average Team Velocity = 33
- Sprint Length = 2 weeks

PRODUCT BACKLOG

Size: 13
Size: 21
Size: 21
Size: 3
Size: 5
Size: 1
Size: 8
Size: 13
Size: 3
Size: 89
Size: 13

A

Exercise

What Is Likely to be Released in 8 Weeks?

5 minutes

At a Sprint Review one of the stakeholders wants to know what is likely to be released in 8 weeks.

How would you deal with this question?

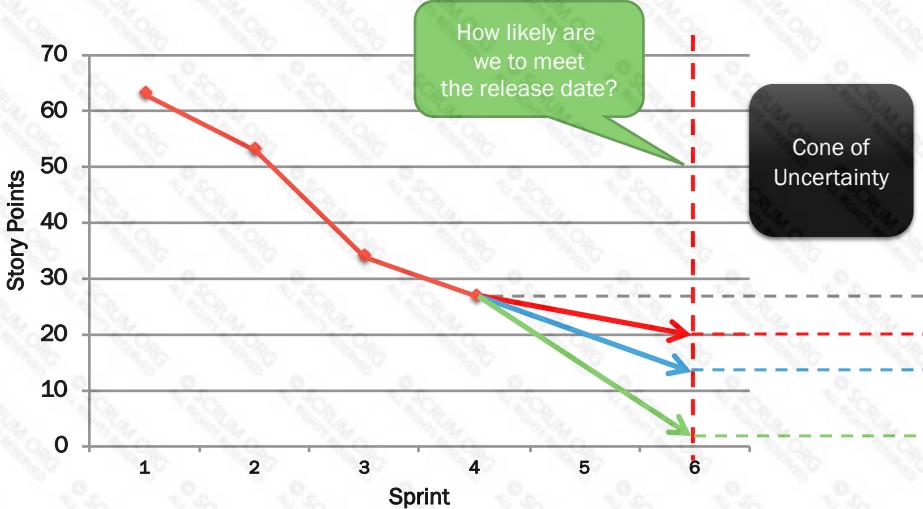
- Average Team Velocity = 18
- Sprint Length = 2 weeks

PRODUCT BACKLOG	
?	Size: 13
?	Size: 1
?	Size: 2
?	Size: 8
?	Size: 5
?	Size: 13
?	Size: 3
?	Size: 13
?	Size: 5
?	Size: 8
?	Size: 2

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Monitor Progress Balancing Date or Feature Targets

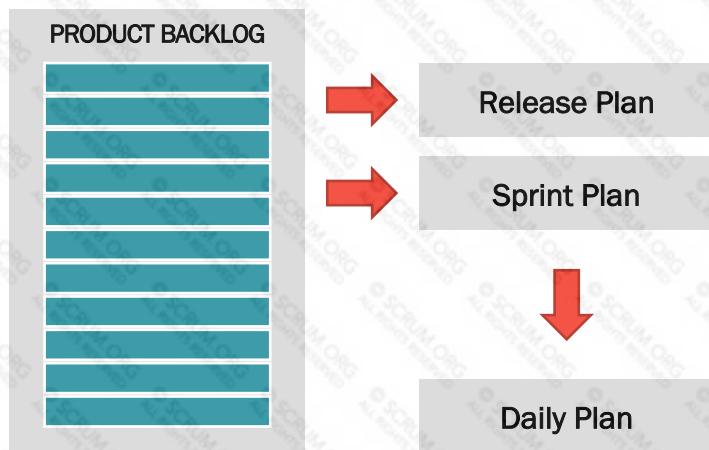
COMPLEMENTARY PRACTICE



PRODUCT BACKLOG	
?	Size: 13
?	Size: 1
?	Size: 2
?	Size: 8
?	Size: 5
?	Size: 13
?	Size: 3
?	Size: 13
?	Size: 5
?	Size: 8
?	Size: 2

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Section Summary



TAKE AWAY

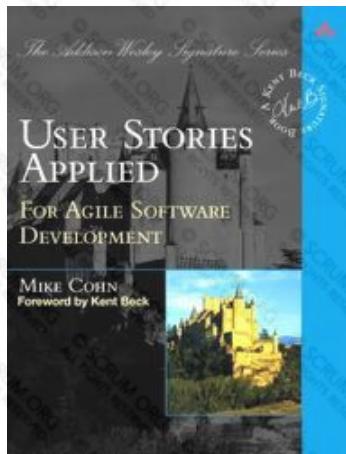
Planning With Scrum

- Product Backlog holds all the work for the Product
- Product Backlog gives transparency
- Product Backlog is a living artifact
- Product Backlog holds all information needed for forecasting, planning and reporting

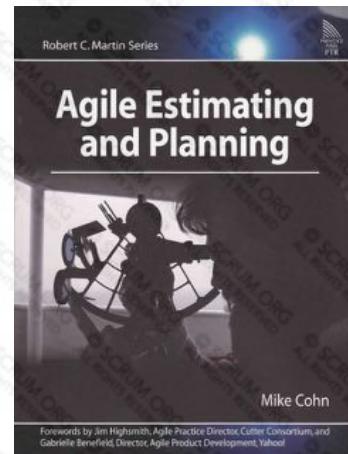


Suggested Reading

“User Stories Applied” (Mike Cohn)



“Agile Estimating and Planning” (Mike Cohn)



10

Sprint Four

Case Study – Animal Website

Sprint 4



Scrum.org/PSF

Competitor announced new product



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Case Study – Animal Website

Sprint 4



70
minutes

Scrum.org/PSF

Scrum Team, prepare to inspect your Product Backlog.

- Plan the Sprint (10 min)
- Build an Increment of product (30 min)
- Review the Increment (15 min)
- Hold a retrospective on how the work went (10 min)
- Debrief with the class (5 min)

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Getting Started

Culture:

“The way we do things here.”

Agility Requires Organizational Change

- Today's culture is finely tuned to produce current conditions
- Agility is an entirely new state
- Culture must change to achieve Agility
- Organizational change is a difficult multi-step process that requires leadership

Exercise

Getting Started With Scrum

15 minutes

Reasons to use or not use Scrum	What is not working for us now?	Who can support us and how?
1	3	5
What will happen if we don't change?	What changes do we want to see in 6 months?	Who needs support from us and how?
2	4	6

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Exercise

Agile Transition Backlog

10 minutes

Create and order a backlog for your organization's transition to agility with Scrum.

Who will be the Product Owner for this Scrum transition backlog?

Who will work with this Product Owner to refine this backlog?

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Exercise

So You Decided to Use Scrum

15 minutes

<ul style="list-style-type: none"> Fill out the canvas for your initial Scrum decisions Follow the boxes in order 		
Who fills the Scrum roles for your product efforts?	How do you know your Increment is "Done?" <ul style="list-style-type: none"> Deployed? Tested? How? Documentation? 	Product Backlog <ul style="list-style-type: none"> How and where will it be managed and made visible? How will it be refined?
1	3	5
First Sprint <ul style="list-style-type: none"> How long? When will it start/end? What would a valid first Sprint Goal be? 	Information Radiators <ul style="list-style-type: none"> Will you use them? Where will they be? What will they show? 	Who will set up the Sprint events?
2	4	6

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TAKE AWAY

Getting Started

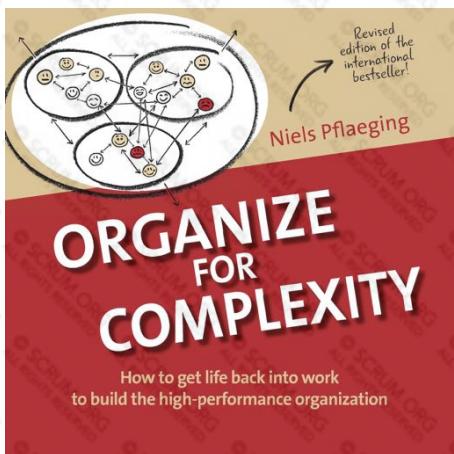
- Understanding Scrum helps
- Thinking about Scrum helps
- Start, inspect, adapt



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Suggested Reading

"Organize for Complexity" (Niels Pflaeging)



"Nothing focuses the mind like a noose."

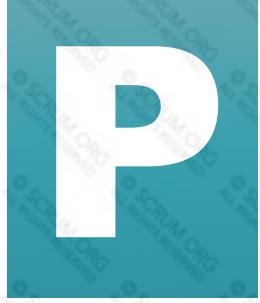
- Mark Twain

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Closing

Three Things You Wanted to Know (Revisit)

- Did we cover what you absolutely wanted to know?
- Did we set some questions aside that we still need to go into?



Exercise

It's Your Call

I've had 2 great days of discovery about Scrum. But, when I go back to work I still have to deal with many old ways of working (dates, actuals, predictions).

Identify 3 actionable ideas or improvements from this class you will try.

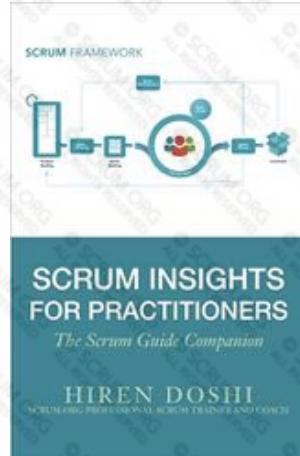
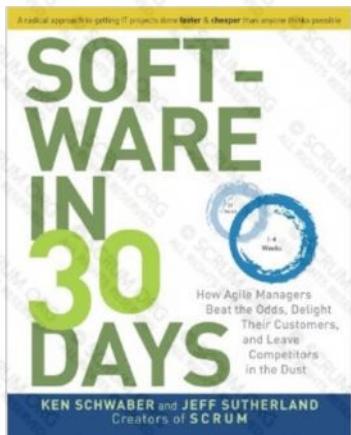


10
minutes

Suggested Reading

Software in 30 Days (Schwaber, Sutherland)

Scrum Insights for Practitioners (Hiren Doshi)



Inspect Your Knowledge – Feedback in 14 Days or Less!



Over the past 2 days, you have learned the importance of inspection, adaptation, and fast feedback cycles. To reinforce those concepts, if you attempt the Professional Scrum Master I (PSM I) certification assessment within 14 days and do not score at least 85%, you will be granted a 2nd attempt at no further cost.

- Test your basic knowledge of Scrum and learn from immediate feedback by taking an Open assessment:
www.scrum.org/assessments/open-assessments
- Use the Open assessments to prepare for Level I assessments

Continue Your Learning Online

www.scrum.org/pathway/scrum-master

Pathways include:

- Scrum Master
www.scrum.org/pathway/scrum-master
- Product Owner
www.scrum.org/pathway/product-owner-learning-path
- Agile Leader
www.scrum.org/pathway/agile-leader-learning-path
- Development Team
... coming soon!


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Review Your Class Experience Using Trustpilot

Share your experience with other potential students!



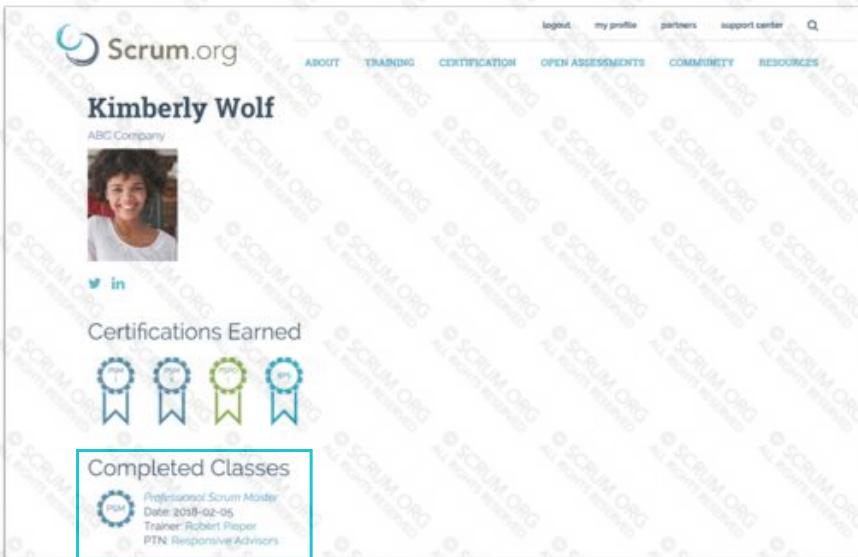
Your review will be visible on our website:


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Your Scrum.org Profile



The screenshot shows a user profile for Kimberly Wolf from ABC Company. It includes a photo, social media links (Twitter and LinkedIn), and sections for 'Certifications Earned' (with four icons) and 'Completed Classes' (with one entry: Professional Scrum Master, Date 2018-02-05, Trainer: Robert Pfeifer, PTN Responsive Advisors).

Feedback

Feedback is important, and we take it seriously. Your feedback helps us to continually inspect and adapt our courses.

Share your feedback on the class you attended at:

www.scrum.org/feedback

Connect With The Scrum.org Community



Forums
Scrum.org
/Community



Twitter
@scrumdotorg



LinkedIn
LinkedIn.com
/company/Scrum.org



Facebook
Facebook.com
/Scrum.org



RSS
Scrum.org/RSS



Scrum.org | Blog

Insights from Scrum.org's community of experts

SCRUM PULSE

A free monthly webcast by Scrum.org Professional Scrum Trainers addressing common challenges faced by the software profession.

Thank You!



KEEP
CALM
AND
SCRUM
ON