



We'll get started soon!

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Certified Scrum Master Training

Version 34.05



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Iconology

Different icons will appear throughout the student handbook and the slides. They signal the appearance of key information.



Insight



Common Mistake



Great Idea



Introspection



Time to Work



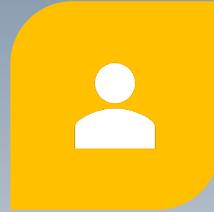
Agenda



INTRODUCTION



AGILE DEVELOPMENT
AND SCRUM



SCRUM ROLES



SCRUM EVENTS



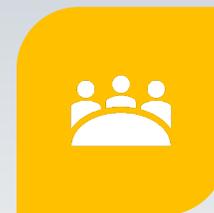
SCRUM ARTIFACTS



SPRINTING



SUPPORTING THE
PRODUCT OWNER



SUPPORTING THE
ORGANIZATION



Logistics and Ground Rules



ELIMINATE ALL
DISTRACTIONS



QUESTIONS – PLEASE
ASK, ANYTIME!



BREAKS - COME BACK
IN TIME, PLEASE



DO NOT HOLD SIDE
CONVERSATIONS



DO NOT BE
NEGATIVELY
ARGUMENTATIVE



PARTICIPATE IN ALL
QUIZZES AND
DISCUSSIONS



Path to Certified Scrum Professional – Scrum Master



Agile Development and Scrum



First Age of Computing

- Approximately 1900-1980
- Colossus, Eniac, Univac
- System 360, System 370, PDP-VAX, etc.
- Atari, Commodore-64, TI 99/4A
- Applications limited to business, gaming and research

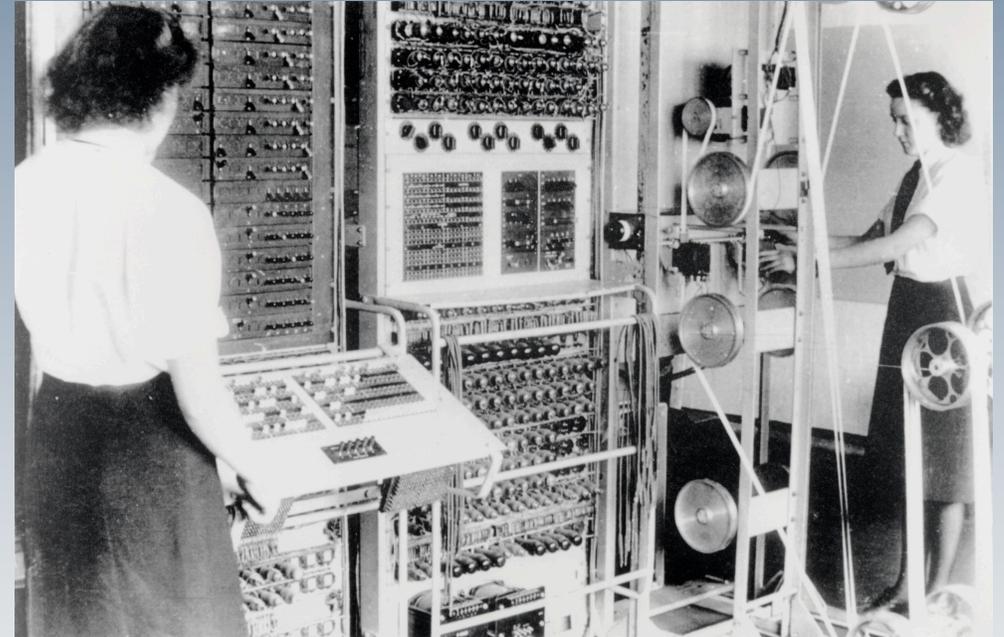


Table 1: The Colossus Computer in Operation

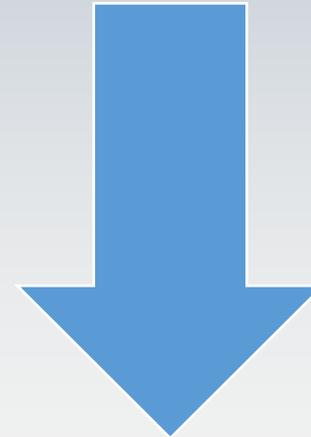
The Second Age of Computing

- 1980-present
- Began with the IBM PC, then Apple products



Increasing

- Computers
- Applications
- Programmers
- Cost
- Overhead



Decreasing

- Quality
- Value
- Safety
- Satisfaction



Agile Manifesto

We are uncovering better ways of developing software by doing it and helping others to 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**



Scrum

- **Jeff Sutherland created Scrum in 1992**
- **Ken Schwaber and Mike Beedle codified Scrum by 2002**
- **Built to**
 - **Address complex, adaptive problems**
 - **While also delivering products of the greatest value**



The Agile Values and Scrum

- **Individuals and Interactions**
 - Cross-functional, empowered Scrum Teams
- **Working Software**
 - Sprints end with shippable product
- **Customer Collaboration**
 - Customers encouraged to work directly with Scrum Teams
- **Responding to Change**
 - The content and order of the work can be modified at any time.



The Agile Principles and Scrum

Our highest priority is to satisfy the customer through early and continuous delivery of valuable software

- Short sprints provide for quick, continuous delivery.
- The list of work to do is usually ordered by business value.



The Agile Principles and Scrum

Welcome changing requirements even late in development. Agile processes harness change for the customer's competitive advantage.

- Content of the Product Backlog can be changed at any time (except for work currently in progress)



The Agile Principles and Scrum

Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.

- The longest Sprint duration in Scrum is one calendar month, well within the shorter timescale preference recommended by the Agile principles.



“Skipping a couple...”

The Agile Principles and Scrum

The best architectures, requirements, and designs emerge from self-organizing teams.

- Scrum teams begin with items that are not fully detailed and progressively elaborate the items in time to do the actual work.





Quiz!

For each question, provide a short answer.





Question 1

- How does Scrum implement the Agile value of Customer Collaboration over Contract Negotiation?





Question 2

- How is the principle of “Simplicity” exemplified in Scrum?



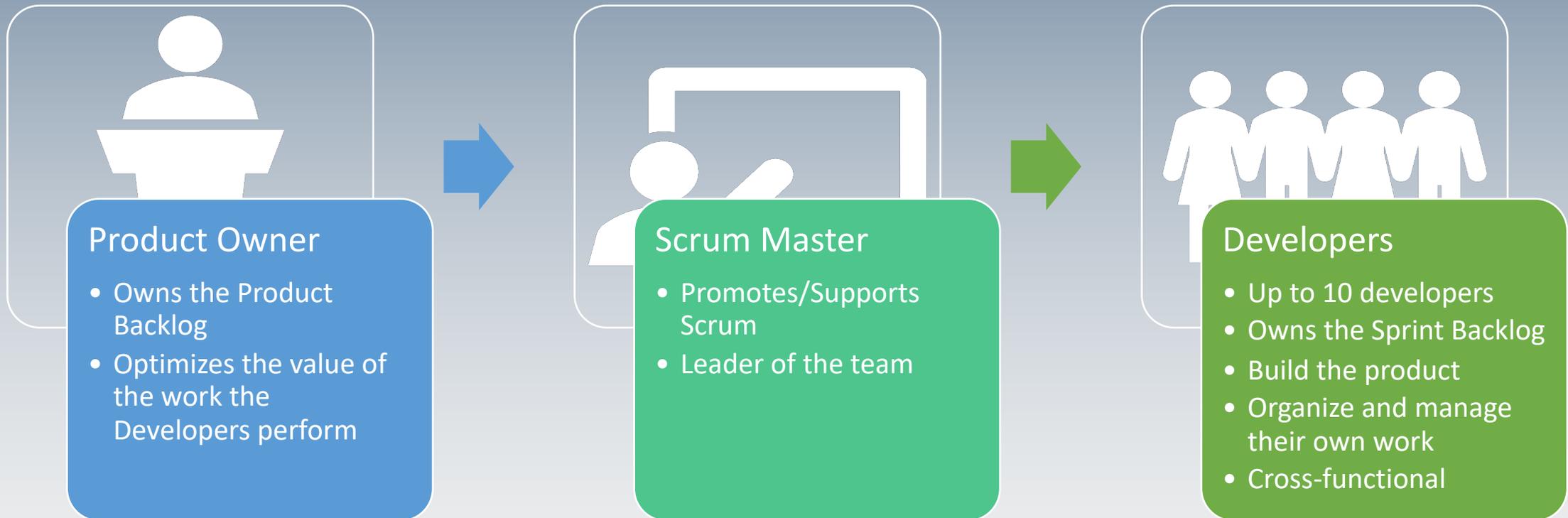


Question 3

- How does Scrum implement the value of “responding to change over following a plan?”



The Scrum Roles



- All three roles work together to do the work.



The Scrum Artifacts

Product Backlog

- A list of everything that might need to be built

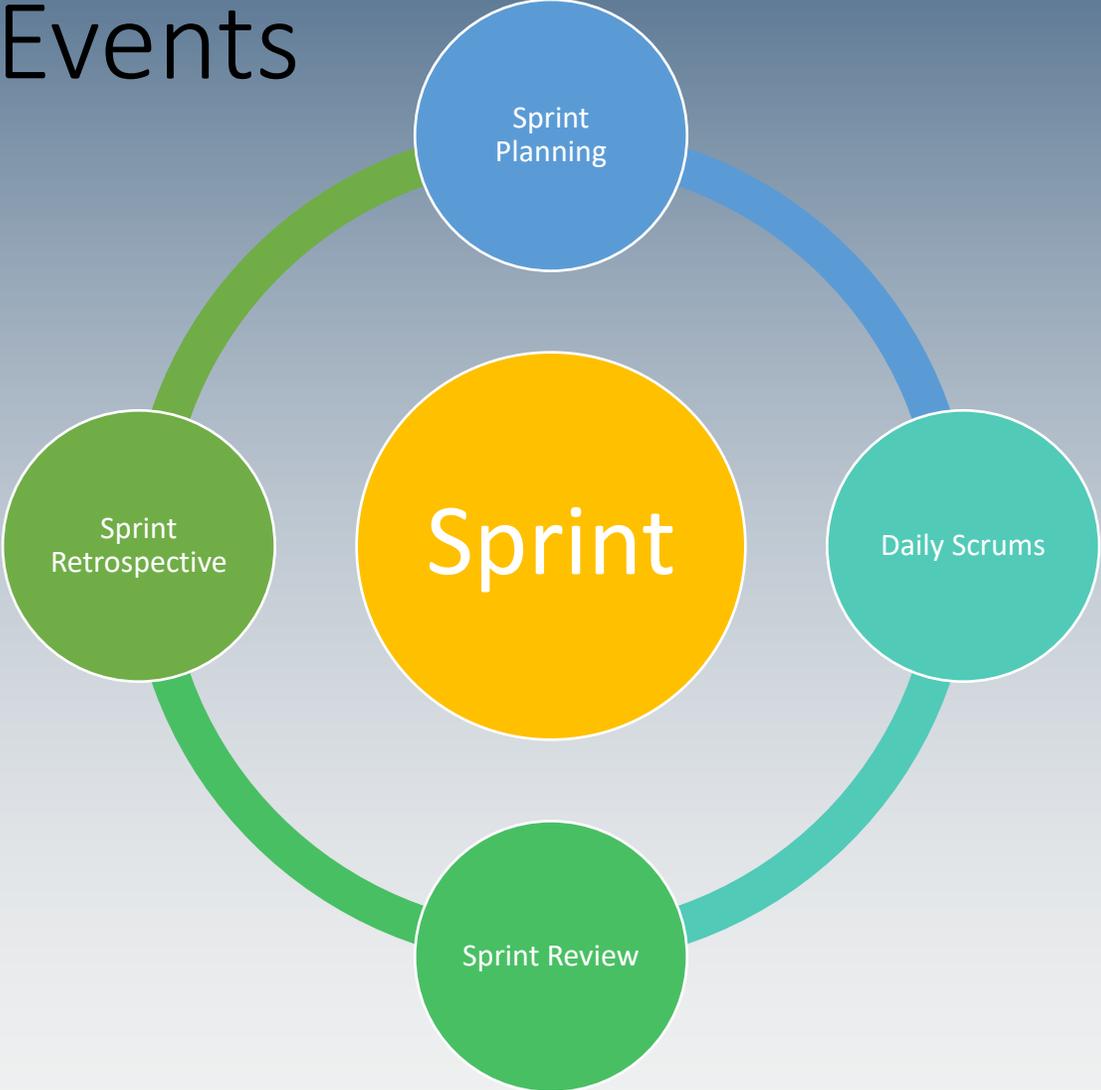
Sprint Backlog

- A list of everything planned for the current Sprint

Increment

- The working result of the current Sprint

The Scrum Events





Quiz!

For each question, provide a short answer.



Question 1

- Scrum is the most used agile framework in the world. What properties of Scrum most likely supports this outcome (i.e., why is it so popular)?





Question 2

- Which Scrum event runs as a fixed timebox (cannot be lengthened or shortened) as compared to a maximum timebox (could be shortened if the event goal is met)?



Question 3

- Why is it important that a Scrum team be self-organizing? What would happen if they were given specific direction by a manager or other outside authority?





Question 4

- ACME Corporation just launched five “Coding Teams” (teams that are coders only). What should be expected with regard to the quality of the resulting product?



The Scrum Values



Commitment

- Team members commit to completing the Sprint Goal mutually agreed to during Sprint Planning.



Courage

- Team members possess the courage to do and say what is right and attack the problems that need to be addressed.



Focus

- When team members work closely together and are not frequently interrupted, they enter a state of "flow" during which a significant amount of work can be completed.



Openness

- Team members and stakeholders both agree to be open about the work to be performed and the challenges (risks) involved in doing the work.



Respect

- Team members respect one another as capable, independent people.

COMMITMENT



Committed team members support one another to achieve the goals of the team.



Supportive, committed team members is one of the attributes of high-performing teams (according to Google's Aristotle project).



COURAGE



Team members do what's right to achieve their goals.



Team members are willing to point out when the team does something wrong.





FOCUS



You are subjected to 25,000 attempts at your attention every day



The average office worker is interrupted once every 3 to 5 minutes



Context switching takes an average of 23.5 minutes from which to recover



If only 10% of interruptions cause context-switching, the average office worker loses almost 4 hours a day to context-switch recovery



OPENNESS



Team members are willing to admit when they make a mistake.

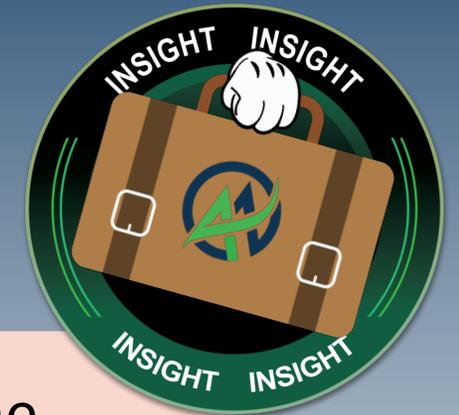


Team members are willing to admit when they don't know how to do something.



No team member keeps a hidden agenda





RESPECT



Team members respect the judgement of others on the team.



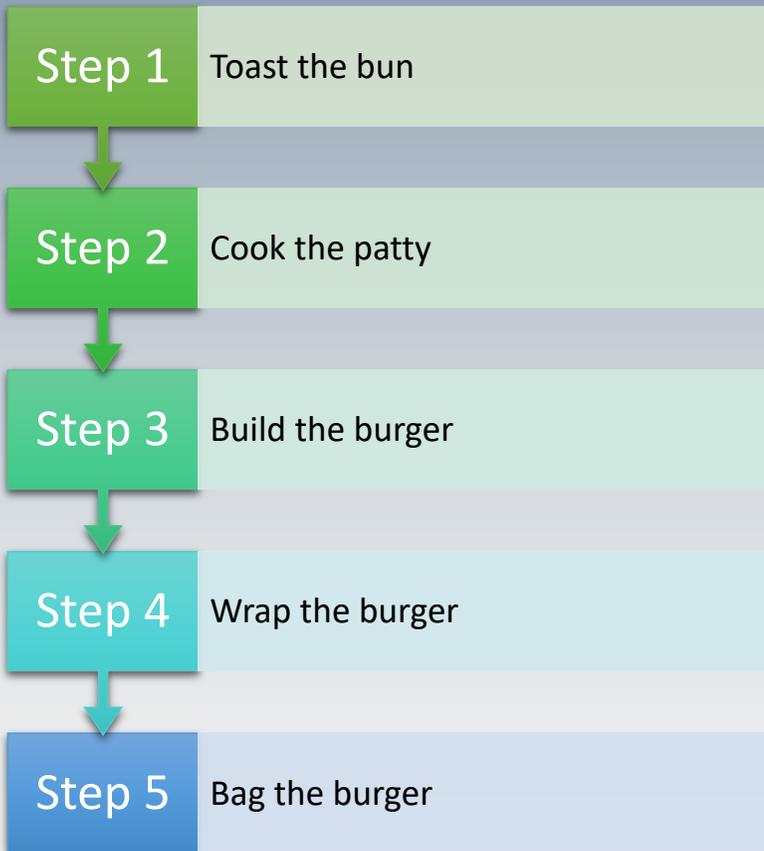
There is always an assumption of positive intent.



If something goes wrong, the first question is “How do we fix?” not “Who did it?”



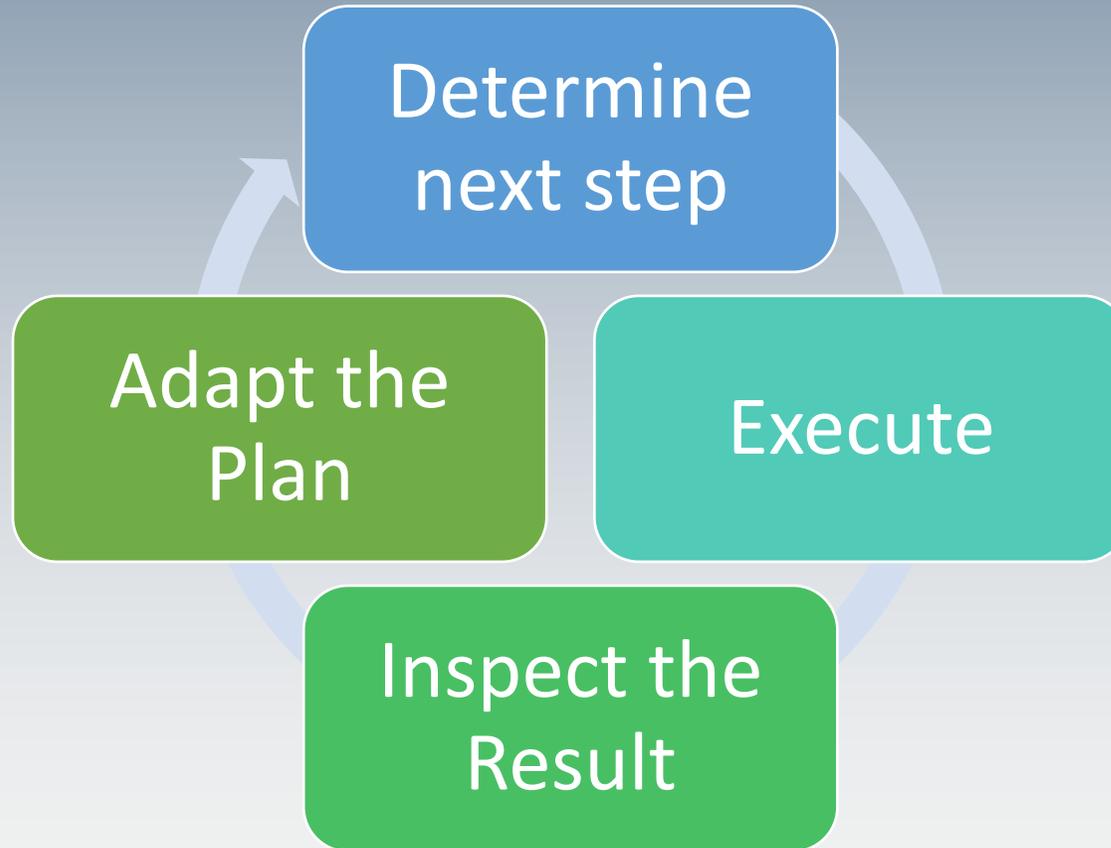
Defined Workflow



14



Empirical Workflow



The “Three Pillars”



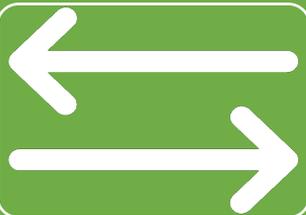
Transparency

- the ability to see the work clearly at all times



Inspection

- the act of reviewing the transparent deliverable



Adaptation

- the act of modifying the work plan based on the results of the inspection

Partial Implementation (hybridization)



- Everything planned up front
- Team is told what to load into the Sprint
- One or two team members do all the planning
- Skip the daily Scrum or the Sprint Retrospective
- Doing a “Sprint Demo”
- 20 minute “Sprint Planning”
- Team did poorly if they didn’t finish everything they planned





Quiz!

For each question, provide a short answer.



Question 1

- How does a defined workflow differ from an empirical workflow?



Question 2

- What are the Scrum values?



Question 3

- What are Scrum's 3 Pillars of Empiricism?





Question 4

- How does Scrum exemplify the pillar of “transparency” regarding the product?



Question 5

- Your team just decided NOT do to Sprint Retrospectives anymore. What is a likely cause for this decision and what is the most likely result of not holding regular Sprint Retrospectives?



Class Project, Part 1



Class Project, Part 1

Our customers (people who travel a lot), would like a simple document that provides the following information about 30 beautiful and interesting cities around the world: fascinating pictures that would make me WANT to go there, lists of things to do and see, currency and how it translates to USD, population of the country in which the city exists, language, tipping policies for taxi drivers, wait staff, bellhops)



Class Project, Part 1



The product must

- Be built in Google Docs so that the entire team can collaborate.
- Be written in English (with proper grammar and punctuation),
- Be decorated with pictures,
- Use a consistent format throughout the document, and
- Include a well-organized index, an attractive title page and a table of contents.



Class Project, Part 1

As a team, here is your first task - build a list of items that the team would like to include in the document. The list might include

- Title Page
- Washington DC, USA
- Sydney, Australia
- Vancouver, BC, Canada
- Etc.



Scrum Roles



The Scrum Team



Product Owner

- Accountable for
 - Develop and Communicate the Product Goal
 - Create and Communicate Product Backlog Items (including business value)
 - Ordering the Product Backlog
 - Ensuring that the Product Backlog is Understood

Developers

- Developers are committed to creating the Increment each Sprint.
- The specific skills needed depend on the work
- Developers are always accountable for:
 - Creating a plan for the Sprint, the Sprint Backlog;
 - Instilling quality by adhering to a Definition of Done;
 - Adapting their plan each day toward the Sprint Goal; and,
 - Holding each other accountable as professionals.





Quiz!

For each question, provide a short answer.



Question 1

- Which role is responsible for the ordering of the Product Backlog?



Question 2

- Which role is responsible for the determining the value of a Product Backlog Item?



Question 3

- Which role is responsible for determining the content of a Sprint?



Question 5

- Which role is considered the leader of the Scrum team?

Scrum Master

- Leaders who serve the Scrum Team and the larger organization
- Accountable for the Scrum Team's effectiveness



Scrum Master

Serves the Team by:	Serves the Product Owner by:	Serves the Organization by:
<ul style="list-style-type: none">• Coaching the team members in self-management and cross-functionality;• Helping the Scrum Team focus on creating high-value Increments that meet the Definition of Done;• Causing the removal of impediments to the Scrum Team's progress; and,• Ensuring that all Scrum events take place and are positive, productive, and kept within the timebox.	<ul style="list-style-type: none">• Helping find techniques for effective Product Goal definition and Product Backlog management;• Helping the Scrum Team understand the need for clear and concise Product Backlog items;• Helping establish empirical product planning for a complex environment; and,• Facilitating stakeholder collaboration as requested or needed.	<ul style="list-style-type: none">• Leading, training, and coaching the organization in its Scrum adoption;• Planning and advising Scrum implementations within the organization;• Helping employees and stakeholders understand and enact an empirical approach for complex work; and,• Removing barriers between stakeholders and Scrum Teams.



Facilitation



In a recent survey of 182 senior managers in a range of industries: 65% said meetings keep them from completing their own work. 71% said meetings are unproductive and inefficient. 64% said meetings come at the expense of deep thinking. 62% said meetings miss opportunities to bring the team closer together.

Scrum Event Worksheet



Scrum Event (circle one): Planning Daily Scrum Review Retrospective

Scrum Team: *Perfect Pug*

Sprint (name/date): *Milkbone Sprint (November 2019A)*

Topic	Goal	Approach	Timebox
<i>Sprint Goal</i>	<i>Go around the team and see if anyone wants to contribute to a Sprint Goal. Vote to determine goal.</i>	<i>Discuss and vote</i>	<i>10 minutes</i>
<i>Retrospective Finding</i>	<i>Discuss the retrospective finding(s) from the previous Sprint and decide how to incorporate into the Sprint.</i>	<i>Discuss, delegate into Sprint if more information is needed.</i>	<i>10 minutes</i>
<i>Scope the Sprint</i>	<i>Determine the PBI content of the Sprint</i>	<i>Q&A and up/down votes. Down requires more discussion. 3 downs excludes PBI</i>	<i>70 minutes (plus 15 minute break)</i>
<i>Solve the content</i>	<i>Determine how to solve each PBI</i>	<i>Breakouts (15 minutes) with report out until solution.</i>	<i>120 minutes (plus 15 minute break)</i>

Evaluation (how did it go?)

Facilitation –
Design and Plan a
Scrum Event



Facilitation – Other techniques

- Follow-up – if someone commits to doing something, follow-up once or twice to see if they have what they need to do it (and that they get it done).
- Decision making – help your team make decisions
 - Modified Borda
 - Multi-Voting / Dot-Voting
 - Consensus Decision – majority or super-majority



Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

Your Developers are split down the middle on a solution. Some team members favor solution “A,” the others favor solution “B.” What can you do to resolve the challenge?
Note: you can't get management involved.

(5 minutes)



Coaching

Coaching is about helping your Scrum team develop their skills and abilities in order to help them improve their performance. The idea is for the coachee to find the solution on their own.

- Active Listening
- Powerful Questions



Active Listening

- Be attentive, in the moment
- Focus on what's being said
- Don't start framing your own response
- Use silence

“Tell me more...”

“I hear what you are saying, but it seems like you mean something else...”



Powerful Questions

- Ask probing questions
- Make the coachee think
- Get them to uncover their opinions
- Get them to create next steps

“what else could you have done in that situation?”

“if you could do anything you wanted, what would it be?”

“What’s stopping you from moving forward?”



Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

What's the difference between coaching, facilitation, mentoring, and training?

(5 minutes)



Servant Leadership



SERVE YOUR TEAM; HELP THEM CONTINUOUSLY IMPROVE



WHAT'S GOING WRONG THAT THEY DON'T SEE?



WHAT DO THEY NEED TO KNOW THAT NO ONE ELSE IS LIKELY TO SAY?



HELP YOUR TEAM STAY FOCUSED ON THEIR VISION AND GOALS.

Servant Leadership



keeping an INTENSE focus on the Sprint goal,



ensuring RADICAL collaboration,



inciting a HUNGER to crush the work in front of them, and



creating a universal EXCITEMENT when anyone on the team succeeds.



Servant Leadership



Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

Write a job description for a Scrum Master (entry-level or advanced)

(8 minutes)



Scrum Master as an Impediment Remover

Illness of team members

Unforeseen and undesired changes in team composition

Issues with the tooling for the Developers

Scarcity of skills

Lots of technical debt

Problems with suppliers

Unavailability of the Product Owner

Undesired pressure from management

Conflict between team members

Lots of unimportant meetings the Developers have to attend

Restrictions to the team environment

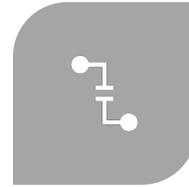
An indecisive Product Owner



Scrum Master as an Impediment Remover



USE A SPRINT GOAL



UNDERSTAND THE
DIFFERENCE BETWEEN
'BLOCKS' AND
'IMPEDIMENTS'



IMPROVE
TRANSPARENCY BY
USING AN 'IMPEDIMENT
BOARD'



KEEP TRACK OF FIXED
IMPEDIMENTS



UNDERSTAND THE
ORGANIZATION'S
CULTURE



BE BRAVE AND CREATIVE
IN REMOVING
IMPEDIMENTS



COLLABORATE WITH THE
PRODUCT OWNER



Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

Your team keeps getting blocked by the same type of skill and the same team member. What's wrong and what can you do to fix it?

(5 minutes)



Role Interactions (Product Owner and Devs)

Product Owner supports the Developers by

- Ensuring that Product goal, scope, and product domain are understood by everyone on the Scrum Team as well as possible by being the voice of the customer,
- Answering questions about priority and requirement,
- Prioritizing work,
- Inspecting work and making suggestions, and
- Determining when work is DONE and ready to deliver.



Role Interactions (Devs and Product Owner)

Developers support the Product Owner by

- Indicating how much work can be done during the Sprint,
- Identifying solutions for building the work,
- Determining WHICH solution and HOW the work will be done in the Sprint,
- Advising when a tradeoff can be made that improves ROI, and
- Providing working, potentially shippable product by the end of the Sprint.



Role Interactions (Scrum Master)

Scrum Master supports the Product Owner by

- Finding techniques for effective Product Backlog management;
- Helping the Scrum Team understand the need for clear and concise Product Backlog items;
- Understanding product planning in an empirical environment;
- Ensuring the Product Owner knows how to arrange the Product Backlog to maximize value;
- Understanding and practicing agility; and,
- Facilitating Scrum events as requested or needed.



Role Interactions (Scrum Master and Devs)

Scrum Master supports the Developers by

- Coaching the Developers in self-management and cross-functionality;
- Helping the Developers to create high-value products;
- Removing impediments to the Developer's progress; and,
- Facilitating Scrum events as requested or needed.



Role Interactions (Scrum Master)

Scrum Master supports the organization by

- Leading and coaching the organization in its Scrum adoption;
- Planning Scrum implementations within the organization;
- Helping employees and stakeholders understand and enact Scrum and empirical product development;
- Causing change that increases the productivity of the Scrum Team; and,
- Working with other Scrum Masters to increase the effectiveness of the application of Scrum in the organization .



Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

A stakeholder has bullied the Product Owner aside and is now demanding that the Developers COMMIT to twice as much work as they have ever done in a Sprint.

Understanding your role as a Scrum Master and servant leader, what aspects of Scrum does this violate and how would you address this?

(8 minutes)





Quiz!

For each question, provide a short answer.



Question 1

- Which role is responsible for supporting the Scrum team through coaching and facilitation?



Question 2

- The Scrum Master keeps talking about the vision for the product and why its so important for the team. Which attribute of a servant leader is she exemplifying? (HINT: you'll find the attributes of a servant leader on page 27).





Question 3

- Which role determines the solutions to be built during the Sprint?



Question 4

- What's the largest allowable number of Developers on a Scrum team?





Question 5

- The Scrum Master listens intently to a developer and doesn't provide a single answer to the problems they are discussing! The Scrum Master just keeps asking more questions. What technique is the Scrum Master using?





Question 6

- Bonus question: with regard to the previous question, what is the Scrum Master trying to accomplish behaving the way they are?



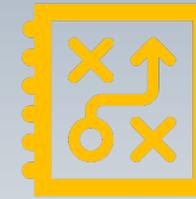
How Scrum Changes Organizations



Scrum emphasizes FOCUS as a value.



Agile emphasizes incremental development.



Agile emphasizes changing plans when changes are appropriate.

Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

Any examples of changes made to your organization because of Scrum or Agile?

(3 minutes)



Where Did the Project Manager Go?

- Traditional project management responsibilities are now split across Scrum roles
- In larger implementations (3 or more teams), a project manager CAN be very helpful in managing the coordination overhead.



Class Project, Part 2



As a team, review the list of items you created for the travel document and add to each item the total number of minutes the team believes it will take to complete the item. Think in terms of EFFORT, not DURATION.

(15 minutes)

Scrum Events



Timeboxes

- All Scrum events are timeboxed.
- Timeboxes cause the team to be
 - More focused
 - Goal oriented rather than task oriented
 - Lean in their approach to getting work done
 - More visible
 - More accountable



The Sprint



WHO? THE ENTIRE
SCRUM TEAM



OUTCOME? A NEW
INCREMENT



TIMEBOX: UP TO ONE
CALENDAR MONTH

Roles During the Sprint

Product Owner –

- checks in with the Developers as frequently as the team needs, ensuring understanding and validating what's been built so far.
- The Product Owner will spend the large majority of the Sprint time
 - Liaising with stakeholders, customers, and users
 - Preparing for Product Backlog Refinement
 - Tuning the Product Backlog to maximize ROI

Developers

- builds the product and ensures DONEness
- asks questions of the Product Owners, stakeholders, customers, and users when necessary
- stays focused.

Scrum Master

- supports the team by removing impediments to progress
- coaching and guiding the team
- protecting the team from unnecessary interruption.



Sprint Planning, Part One



When? First part of the first day of the Sprint



Who? The entire Scrum team plus stakeholders and SMEs as needed



Outcome? The Sprint Goal for the Sprint.



Timebox? No more than 8 hours total (parts 1, 2, and 3)

Roles During Sprint Planning, Part One

Product Owner

help determine the Sprint Goal

Developers

help determine the Sprint Goal

Scrum Master

facilitate as required or requested.

Sprint Planning, Part Two



When? Immediately after Part One ends



Who? The entire Scrum team plus stakeholders and SMEs as needed



Outcome? The PBIs forecast for inclusion in the Sprint.



Timebox? No more than 8 hours total

Roles During Sprint Planning, Part Two

Product Owner

identify and explain PBIs that will help the team achieve the Sprint Goal

maximize the value produced by the Developers.

Developers

identify and understand PBIs that will help the team achieve the Sprint Goal

decide which PBIs are forecast for completion in the current Sprint.

Scrum Master

facilitate as required or requested.



Sprint Planning, Part Three



When? Immediately after
Part Two ends



Who? The entire Scrum
team plus stakeholders
and SMEs as needed



Outcome? The Sprint
Backlog (including the
Sprint Goal).



Timebox? No more than 8
hours total

Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

Your team is planning a Sprint. What kinds of activities should your team consider when planning a Sprint to ensure the highest quality is produced by Sprint end?

(8 minutes)



Roles During Sprint Planning, Part Three

Product Owner

helps the Developers by further clarifying Product Backlog Items
making tradeoff decisions when the Developers cannot do everything they decided to do in Sprint Planning, Part I.

Developers

determines an overall design for the product to incorporate the PBIs forecast in Sprint Planning, Part II
solving and identifying the work necessary to turn the forecasted PBIs into product; ensures that the work that will be done first is sliced into small enough tasks and ready to be immediately started;
should be able to explain their approach to the entire Sprint by the end of Sprint Planning.

Scrum Master

facilitate as required or requested.



The Daily Scrum



When? Every day of the Sprint



Who? The Developers and the Scrum Master



Outcome? Additional discussion on how to keep the Sprint forecast true



Timebox? 15 minutes

Roles During Daily Scrum

Product Owner

Participation not mandated by Scrum

Developers

update each other on progress and impediments
determine if the Sprint Goal is going to be achieved by the end of the Sprint.

Scrum Master

facilitate as required or requested.

The Sprint Review



When? Near the end of the last day of the Sprint



Who? The entire Scrum team plus stakeholders and SMEs as needed



Outcome? Decisions on what to work on next



Timebox? No longer than 4 hours.

Roles During Sprint Review

Product Owner

make a final determination regarding DONEness of each PBI in the Sprint

update attendees on changes in timeframe, budget, priority, staffing

update attendees on the state of any release dates.

Developers

provide a demonstration of completed functionality during the Sprint

report on development challenges faced by the team during the Sprint and how those challenges were resolved

identify product improvements to the Product Owner to be added to the Product Backlog

field questions from the Product Owner and any other stakeholders about the product functionality.

Scrum Master

facilitate as required or requested.



The Sprint Retrospective



When? Immediately after the Sprint Review



Who? The entire Scrum team



Outcome? Decisions on how to improve the team's performance in the next Sprint



Timebox? No longer than 3 hours.

Roles During Sprint Retrospective

Product Owner & Developers

discuss how the team could be more effective in the next Sprint.

Scrum Master

facilitate as requested or required
ensure that follow-up commitments are upheld



Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

The Scrum Master's is responsible for ensuring Scrum events occur properly, meet their goals, are positive, and concluded within the timebox of the event. Other than facilitation, what else might a Scrum Master do during a Scrum event?

(5 minutes)





Quiz!

For each question, provide a short answer.



Question 1

- What's the longest a Sprint Planning event can be?



Question 2

- Who must attend the Daily Scrum?



Question 3

- Who determines the actual content of the Sprint?



Question 4

- Who determines the Sprint Goal?



Question 5

- Who works to remove impediments during the Sprint?





Question 6

- Who owns the right to set the business value of a Product Backlog Item?





Question 7

- Bonus Question: What are my options as a Developer if the Product Owner requests a very small change to my work during the Sprint?



Class Project, Part 3



- Assuming a Sprint length of three five minute “days”, plan a Sprint to build the document.
 - Part one: how many items can the team complete in fifteen minutes?
 - Part two: how do you plan to work together to get the work done?
- Hold a 2-minute Daily Scrum after days 1 and 2 (day 3 ends when the “working” part of the Sprint ends).
- Sprint Review – demo, get feedback, what did we learn about building the product?
- Sprint Retrospective – how could the team work better together?

Scrum Artifacts



The Increment



Owned by – The Scrum Team



Purpose – The Increment represents the product as it exists at the end of the Sprint; committed by the Definition of Done

The Product Backlog



A LIST OF EVERYTHING
THE PRODUCT OWNER
MIGHT WANT TO PUT IN
THE PRODUCT



FEATURES,
ENHANCEMENTS, FIXES



MADE UP OF PRODUCT
BACKLOG ITEMS AND
THE PRODUCT GOAL



OWNED AND ORDERED
BY THE PRODUCT
OWNER

The Sprint Backlog



A LIST OF EVERYTHING
THE DEVELOPERS HAVE
FORECAST FOR THE
SPRINT



REPRESENTS THE PLAN
FOR THE DEVELOPERS
TO COMPLETE THE
FORECAST WORK



MADE UP OF PRODUCT
BACKLOG ITEMS, TASKS,
AND THE SPRINT GOAL



OWNED AND
MAINTAINED BY THE
DEVELOPERS

DONEness Definition

- Ensures a consistent, shared, and common definition of production quality
- Owned and maintained by the Scrum Team
- Items like
 - Works as the Product Owner wishes,
 - Integrated with the rest of the existing product and nothing broke,
 - There are no known errors,
 - All documentation has been created,
 - All approvals have been achieved, and
 - All standards and regulatory required have been satisfied.
- When there are multiple teams on a product, they will share a single DONEness definition at the product level

Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

The team creates the DONEness Definition. What will most likely happen if they create a weak one?

(5 minutes)



Technical Debt

- The difference between the desired quality and the delivered quality
- Will have to be paid back, usually at a greater cost
- Avoiding technical debt
 - Keep a Low Work in Progress
 - Only allow small PBIs in Sprints
 - Continuous Integration
 - Pair Programming
 - Automated and Continuous Testing



Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

Your Scrum team is experiencing a lot of post-Sprint defects. What changes would you recommend, why, and in what order? How could you convince the Developers that the extra effort to take on these changes is worth the time?

(8 minutes)



The Product Goal

- The “root” of the Product Backlog; changed when needed.
 - Product Backlog Items are created that will achieve the Product Goal
- Owned by the Product Owner
- Examples
 - Complete the pilot by March 2020
 - iOS implementation by December 2020
 - Get the product to 10,000 users by May 2021
- As each Sprint is planned, the Sprint Goal is derived from the Product Goal.

Product Backlog Items



Features, functions, fixes, problems to be solved, services to be provided, etc.



Should have four attributes

Description

Rank

Value

Estimate



Could also include

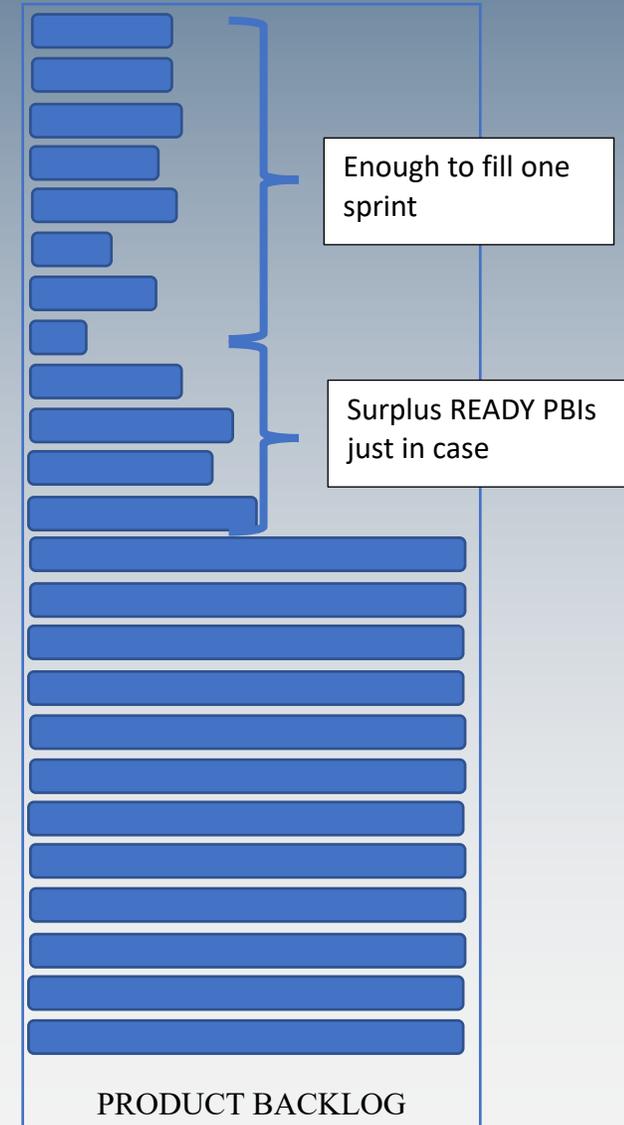
Acceptance criteria

Test descriptions

Product Backlog Refinement

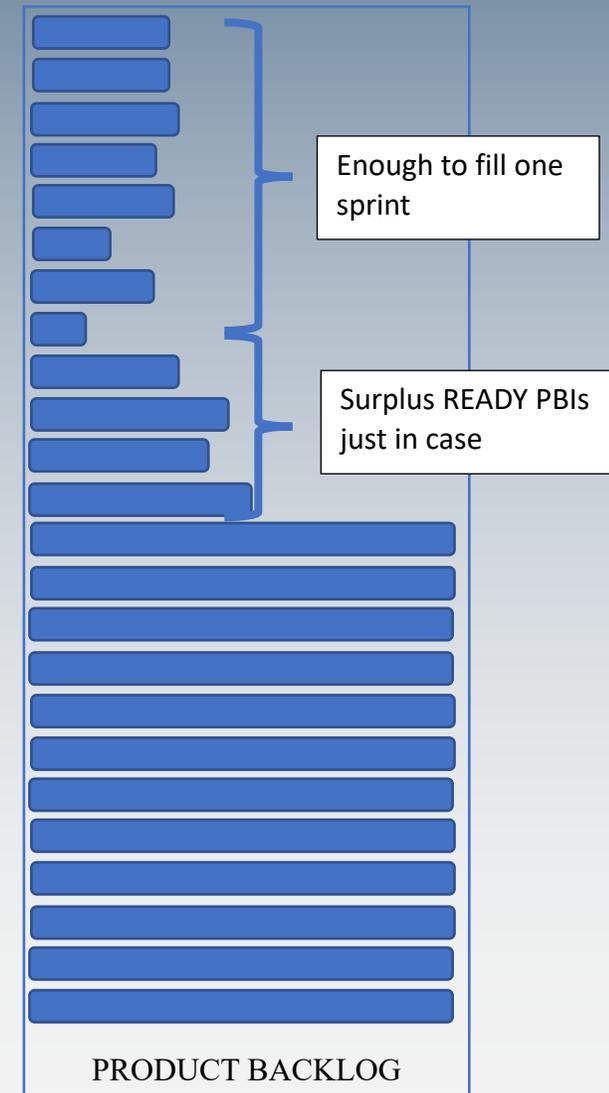
- leads to a better understanding of the Product Backlog Items,
- leads to better solutions for the Product Backlog Items,
- reduces waste caused by excess complexity,
- keeps the team more focused on value,
- allows for more targeted value-based ordering, and
- results in more productive Sprints.

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Product Backlog Refinement Activities

- Discussing large Product Backlog Items to better understand them.
- Slicing large Product Backlog Items into smaller PBIs.
- Sizing the smaller PBIs.
- Assigning business value to the smaller PBIs.
- Ordering the smaller PBIs in the context of the rest of the Product Backlog.



Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

What are the most likely short-term and long-term results of doing poor or no refinement?

(8 minutes)



User Stories

A way to write user-centric PBIs (not part of Scrum, not a required)

“As a student, I want to add a class to my course schedule so that I can create the most efficient use of my time.”

“Add class to student schedule.”

Slicing User Stories

A way to reduce the size of the PBI to something smaller and therefore

- Simpler
- Easier to understand
- Easier to solve
- Easier to build

“As a registrar, I want to be able to access the roster for a specific class.”

Show only the last names.

Click to drop a student

Add first name and ID

Click to add a student

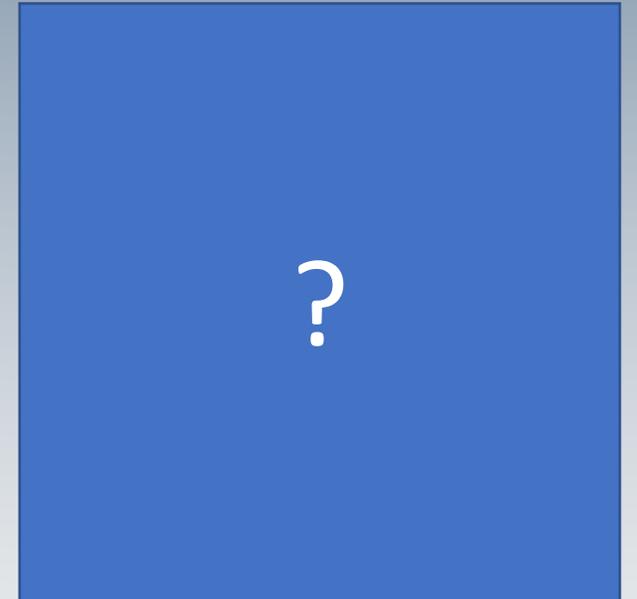
Paginate

Click to revise a student



Story Point Estimation

- A quick and easy way to consistently size backlog items without having to solve them first
- Involves comparing
 - Complexity
 - Risk
 - BIGness
- Uses limited sizing sequences like Fibonacci or doubling





Quiz!

For each question, provide a short answer.

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Question 1

- Which Scrum artifact details the content of the Sprint?





Question 2

- Why is it so important to avoid/reduce technical debt?





Question 3

- We've written and put value on some new Product Backlog Items. What's the remaining attribute that the Developers must provide?





Question 4

- Which role is responsible for identifying Product Backlog Item value?



Sprinting



Sprint Structure



No more than one calendar month

Cancelling a Sprint



Only the Product Owner can Cancel



Usually done when the Sprint Goal is obsolete

Company changes direction
Market or technology conditions change

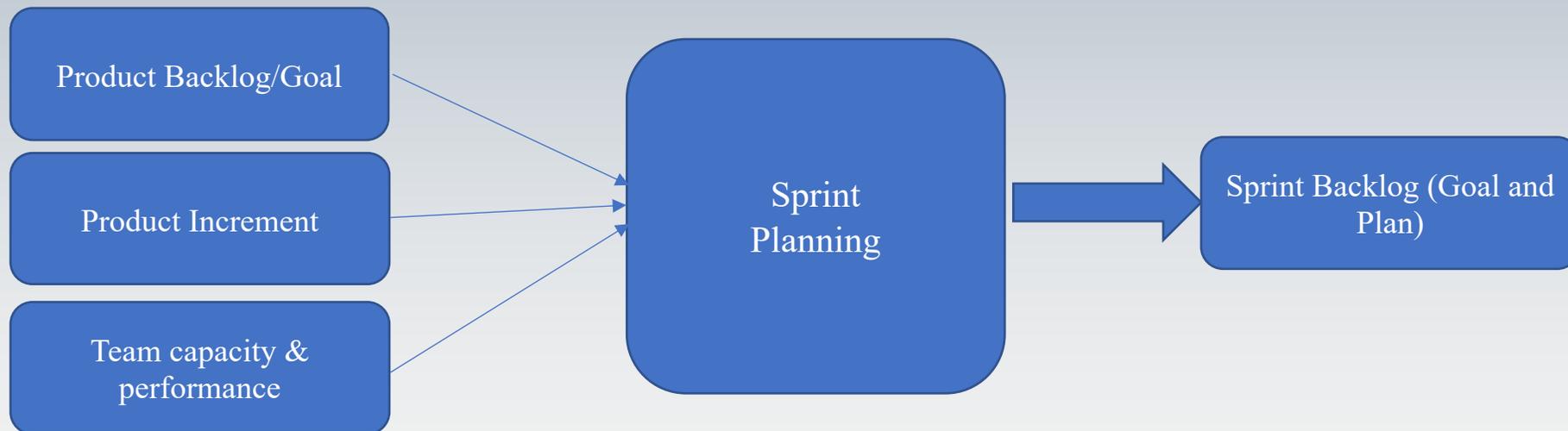


Sprint Review is done

NOT DONE work is re-estimated and returned to the Product Backlog
DONE items are reviewed for inclusion in the Product increment

Sprint Planning

- Part One: why are we doing this Sprint?
- Part Two: what are we doing to achieve the Sprint Goal?
- Part Three: how will the work get done?



Sprint Goal

- Helps to focus the Scrum Team
- Derived from the Product Goal
- Can be goals like
 - Complete five PBIs and fix all production defects
 - Create added value for the customer in the very first sprint
 - Create a deliverable that can be given to the customer in one sprint
 - Kill the bugs!!! (this is a fun way to motivate the team to remove all remaining, known defects)
 - Create more value by correcting our shortfall in specific coding skills



Sprint Goal Rules



No changes are made that would endanger the Sprint Goal;



Quality goals do not decrease; and,



Scope may be clarified and re-negotiated between the Product Owner and Developers as more is learned.



Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

- Why is it so important that the Sprint Goal not be changed during the Sprint?

(5 minutes)



The Sprint Backlog

- the set of Product Backlog items selected for the Sprint
- plus, a plan for delivering the product Increment and realizing the Sprint Goal
- a forecast by the Developers about what functionality will be in the next Increment
- makes visible all the work that the Developers identify as necessary to meet the Sprint Goal

PBI: Send out party invitations.

Task: search catalog for ideal invitation

Task: order invitations

Task: build mailing list

Task: purchase stamps

Task: approved received invitations

Task: prepare for mailing

Task: take to post office



The Daily Scrum

- Daily, 15-minute time-boxed event during which the Developers plan work for the next 24 hours,
- optimizes team collaboration and performance by inspecting the work since the last Daily Scrum and forecasting upcoming Sprint work, and
- Is held at the same time and place each day to reduce complexity.
- The Developers use the Daily Scrum to inspect progress toward the Sprint Goal and to inspect how progress is trending toward completing the work in the Sprint Backlog.
- The structure of the meeting is set by the Developers



Sprint Review

- The Product Owner explains what Product Backlog items have been "Done" and what has not been "Done";
- The Developers discuss what went well during the Sprint, what problems it ran into, and how those problems were solved;
- The Developers demonstrate the work that it has "Done" and answers questions about the Increment;
- The Product Owner discusses the Product Backlog as it stands. He or she projects likely target and delivery dates based on progress to date (if needed);
- The entire group collaborates on what to do next;
- Review of how the marketplace or potential use of the product might have changed what is the most valuable thing to do next; and,
- Review of the timeline, budget, potential capabilities, and marketplace for the next anticipated releases of functionality or capability of the product.



Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

- Your stakeholders don't want to attend the Sprint Review. What could you tell them that might change their minds about the importance of attending?

(5 minutes)



Sprint Retrospective

- Inspect how the last Sprint went with regards to people, relationships, process, and tools;
 - Identify and order the major items that went well and potential improvements; and,
 - Create a plan for implementing improvements to the way the Scrum Team does its work.
- What worked and what didn't work?
 - What do we need to 1) start doing, 2) stop doing, 3) do more of, or 4) do less of?
 - What's propelling us forward and what's holding us back?
 - What made you happy during the Sprint and what made you angry?
 - If you could improve anything about the previous Sprint, what would it be?





Quiz!

For each question, provide a short answer.

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Question 1

- What is the longest amount of time a Sprint may take?



Question 2

- If a Product Owner asks for minor changes during a Sprint what are the possible options for handling the change?





Question 3

- Do my Developers have to use the three questions in the Daily Scrum as defined by the Scrum Guide?





Question 4

- What is the output of the Sprint Planning Event?



Question 5

- What is the output of the Sprint Review Event?



Question 6

- Who owns the Sprint Backlog?



Question 7

- Which Scrum event occurs immediately when a Sprint is cancelled?





Question 8

- Bonus Question: Why would a Sprint be cancelled?



Class Project, Part 4

- Assuming a Sprint length of three five minute “days”, plan a Sprint to build the document.
 - Part one: how many items can the team complete in 15 minutes?
 - Part two: how do you plan to work together to get the work done?
- Hold a 2-minute Daily Scrum after days 1 and 2 (day 3 ends when the “working” part of the Sprint ends).
- Sprint Review – demo, get feedback, what did we learn about building the product?
- Sprint Retrospective – how could the team work better together?



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(35 minutes)



Supporting the Product Owner



Supporting the Product Owner

What the Scrum Guide Says:	What you can do:
<p>Ensure that goals, scope, and product domain are understood by everyone on the Scrum Team as well as possible.</p>	<ul style="list-style-type: none">• Make sure everyone acknowledges the goals and scope during Sprint Planning. Get voice agreement.• Make sure that the goals and scope are somewhere visible and public so that no one can easily forget them.• Remind everyone at team meetings during the Sprint.• Schedule short product training sessions with subject matter experts once a Sprint.



Supporting the Product Owner

What the Scrum Guide Says:	What you can do:
<p>Finding techniques for effective Product Backlog management and for maximizing value.</p>	<ul style="list-style-type: none">• Find tools and techniques that the Product Owner can use to make managing the Product Backlog easier.• Help the Product Owner by ensuring that every Product Backlog Item has a defined value on it.• Help the Product Owner by continuously encouraging value-based ordering (don't let lower value work get done before exhausting most or all of the higher value work).



Supporting the Product Owner

What the Scrum Guide Says:	What you can do:
<p>Helping the Scrum Team understand the need for clear and concise Product Backlog items.</p>	<ul style="list-style-type: none">• Teach the Scrum Team techniques for writing clear and complete product backlog items.• Help your team write vertical slices of functionality instead of horizontal slices that create technical debt.• Introduce the use of acceptance criteria, wireframing, scenarios, and specification by example to support clarity in the backlog items.



Supporting the Product Owner

What the Scrum Guide Says:	What you can do:
<p>Understanding product planning in an empirical environment.</p>	<ul style="list-style-type: none">• Help your Scrum Team understand that it is far more important to build a little bit of working functionality and get feedback than to build a lot of functionality because of a perceived “economy of scale.”• Ensure that the Product Owner is always working to invite stakeholders, customers and users to Sprint Review (though you don’t want to turn it into a mob scene).



Supporting the Product Owner

What the Scrum Guide Says:	What you can do:
Understanding and practicing agility.	<ul style="list-style-type: none">• Help your Scrum team understand the effectiveness of experimentation to find opportunities; that all details don't need to be known if the team is comfortable that missing information can be identified in time.• Help your Product Owner appreciate the effectiveness of tradeoffs that result in net increased business value. Its less about doing what was planned and more about doing what offers the greatest value.• Help your Product Owner understand that the Developers own "HOW" the work gets done and the Product Owner owns "WHAT" work gets done first. Product Owner's should not provide solutions to Developers and Developers should not be telling Product Owners the order in which the work should be done (except in cases of technical precedence, in which case they can suggest an alternative approach).



Supporting the Organization



Supporting the Organization

What the Scrum Guide Says:	What you can do:
Leading and coaching the organization in its Scrum adoption.	<ul style="list-style-type: none">• Provide all the support you can to help the organization understand agility and Scrum. Provide lunchtime training sessions; newsletters;• Help the organization find and vet external coaches and trainers to support your organizational goals;• Build a community of practice (CoP) of Scrum Masters, Developers, Product Owners, etc to discuss experiences and learning so everyone can learn from everyone.• Keep learning!



Supporting the Organization

What the Scrum Guide Says:	What you can do:
Planning Scrum implementations within the organization.	<ul style="list-style-type: none">• Keep a journal of your experiences setting up new teams; create a running log of challenges, solutions, and how long it took to get your team to full speed. Use this information to plan additional implementations.• Employ your agile experiences to help your organization in their agile journey; make sure they don't miss the more intangible but important aspects, like culture change.



Supporting the Organization

What the Scrum Guide Says:	What you can do:
Helping employees and stakeholders understand and enact Scrum and empirical product development.	<ul style="list-style-type: none">• Teach employees and Scrum teams about empirical product development; inspect-and-adapt; value-driven ordering



Supporting the Organization

What the Scrum Guide Says:	What you can do:
Causing change that increases the productivity of the Scrum Team.	<ul style="list-style-type: none"><li data-bbox="817 458 2308 554">• Identify waste that the team is doing but really doesn't need to; eliminate it.<li data-bbox="817 604 2308 758">• Eliminate metrics that cause behavioral dysfunctions and keep only those few that 1) provide operational status and 2) measure progress against team goals.



Supporting the Organization

What the Scrum Guide Says:	What you can do:
<p>Working with other Scrum Masters to increase the effectiveness of the application of Scrum in the organization.</p>	<ul style="list-style-type: none">• Create a ScrumMaster Community of Practice; get everyone together once every other week to discuss problems and solutions.• Document your organization's use of Scrum (only where it varies from the definition in the Scrum Guide) and use this for onboarding.



Team Exercise

The class will be evenly and randomly split into breakout sessions (private groups). The question to answer is:

- Your teams want to slice the DONE portion of their backlog items from the NOT-DONE portion of the backlog items at the end of the Sprint. Why? What's the root cause of this? How do you fix it?

(5 minutes)



And Finally...

The key to creating a high performing team has **NOTHING** to do with productivity.

The key to creating a high performing team is totally about

CAPABILITY

Improve a team's capabilities, and productivity takes care of itself.





Certified Scrum Master Training

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