



Scrum Developer Certified (SDC)

Chapter 02 - Introduction to Scrum

WORKBOOK



Chapter

Introduction to Scrum

Lessons Covered

What is Scrum

Key Principles

Learning Objectives

- You will learn
 - The reasons for Agile Development methods
 - The benefits of Scrum
 - The 6 Key Scrum Principles
 - The 5 Scrum Aspects



Terms to Know

- Adaptation
- Agile Manifesto
- Information Radiator
- Inspection
- Portfolio
- Program
- Project
- Scrum
- Scrum Guidance Body
- Time-boxing
- Transparency
- Waterfall

Lesson

Scrum Overview

Topics Discussed

Overview

History

Benefits

Scalability

Aspects

Processes

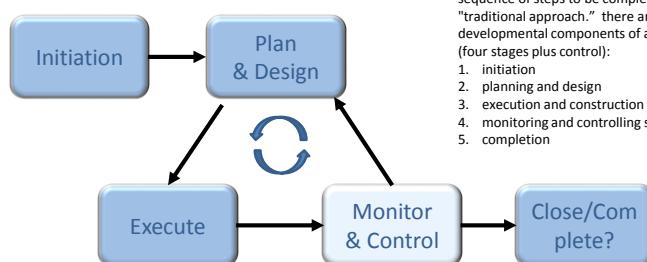
Scrum Overview

- Projects are a management tool
 - Manage resources
 - People
 - Time
 - Produce products or services that deliver value to stakeholders
 - Require engagement of multiple groups of stakeholders
 - Produce “artifacts” and “deliverables”
 - Project Management Frameworks provide
 - Structure
 - Control
 - Management



Project Management as a Discipline

- Project Management is a discipline
 - Planning
 - Organizing
 - Motivating
 - Control of resources
- Project Management achieves a specific goal

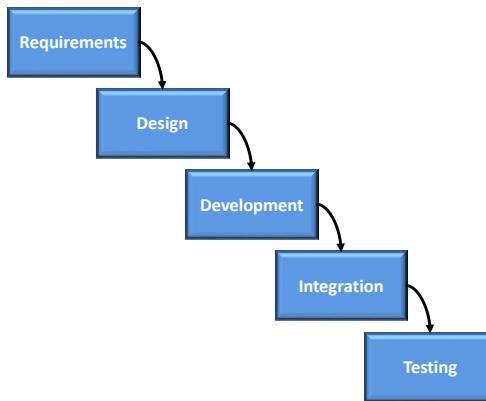


Software Development Lifecycle Management

- Execute projects and integrate software solutions
- Combines requirements, design, development (or acquisition), integration testing, validation, and (possibly) deployment
- Produces a product or service with a lifecycle of its own
- Product or service changes as business and customer needs change

Traditional PM

- Based on a delegation approach (that includes waterfall)
- Places more value on planning than outcomes
- Not the best method for software development
 - Predictive not adaptive
 - Doesn't easily accommodate rate of change
 - Elapsed calendar time doesn't equate to percent complete



History of Agile

- Agile Manifesto – February 2001
- Resetting the Value Proposition

We value these more than the items on the right	We value these, but not as much as the items on the left
Individuals and Interactions	Processes and Tools
Working Software	Comprehensive Documentation
Customer Collaboration	Contract Negotiation
Response to Change	Following a Plan

Agile Manifesto Principles 1-5

- Customer satisfaction is the highest priority
 - Achieved through early & continuous delivery of valuable software
- Accommodating change provides the customer with a competitive advantage.
- Deliver working software frequently
 - Within short time frames
- Business people and developers work together daily
- Build projects around motivated individuals.
 - Give them the environment and support they need
 - Trust them to get the job done.

Agile Manifesto Principles 6-12

- Face-to-face conversation
 - Most efficient and effective way to communicate with & within the development team.
- Working software is the primary measure of progress
- Agile processes promote sustainable development
 - Sponsors, developers, and users should maintain a constant pace indefinitely
- Continuous attention to technical excellence enhances agility
- Simplicity is essential
 - Maximize the amount of work not done
- The best architectures, requirements, and designs emerge from self-organizing teams
- Teams reflect regularly on how to become more effective, and adjusts their behavior accordingly

Agile Methods

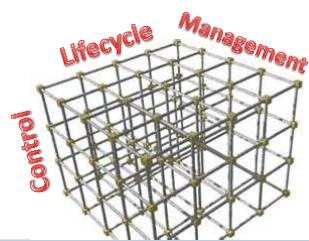
- Many Agile methods exist, with different areas of emphasis
 - Lean Kanban
 - Extreme Programming (XP)
 - Crystal
 - Dynamic Systems Development Method (DSDM)
 - Feature Driven Development (FDD)
 - Test Driven Development (TDD)
 - Adaptive Software Development (ASD)
 - Agile Unified Process (AUP)
 - Domain-Driven Design (DDD)
- In the course, we will focus on Scrum, which leverages techniques from many of the others

Scrum History

- Begins in 1980s with Takeuchi and Nonaka
 - Working as a team – a holistic or “rugby” approach vs a relay race (‘passing the baton’)
- Expanded in 1995 by Schwaber and Sutherland
 - Initial proposal of what would become the Scrum approach

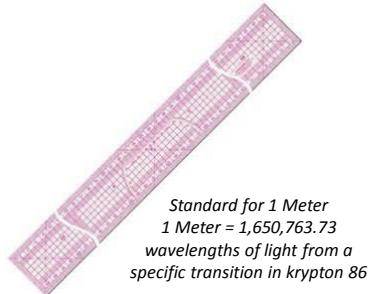
Scrum Benefits

- Scrum provides
 - Adaptability
 - Transparency
 - Continuous feedback
 - Continuous Improvement
 - Continuous Delivery of Value
 - Sustainable Pace
 - Early Delivery of High Value
 - Efficient Development Process
 - Motivation
 - Faster Problem Resolution
 - Effective Deliverables
 - Customer Centric
 - High Trust Environment
 - Collective Ownership
 - High Velocity
 - Innovative Environment



Scrum Scalability

- Effective Scrum teams are 6-10 members
- Scrums of Scrums enable scalability to larger scope projects, programs, and portfolios
- Use of a Scrum Guidance Body



*Standard for 1 Meter
1 Meter = 1,650,763.73
wavelengths of light from a
specific transition in krypton 86*

Lesson

Scrum Concepts & Principles

Topics Discussed

Concepts

Principles

Aspects

Scrum Principles

- Empirical Process Control
- Self-organization
- Collaboration
- Value-based Prioritization
- Time-boxing
- Iterative Development

Empirical Process Control

- Transparency – All facets of a Scrum process can be observed by anyone
 - Meetings
 - Artifacts
 - Information Radiators
- Inspection – Constant means of feedback from stakeholders
- Adaptation – Through Inspection we then adapt solutions to meet evolving customer needs
 - Quality
 - Risk
 - Change
 - Expert Guidance

Self-Organization

- Scrum is grounded in self-organization: participants seek and take greater responsibility
- Leadership approach is based on “servant leaders”
 - Scrum Master as coach, facilitator, team protector
- Seeks to create
 - Team buy-in and shared ownership
 - Motivation, which drives improved performance
 - Innovative, creative environment conducive to growth

Collaboration

- Play off each other to produce outputs greater than the sum of the parts
- Core dimensions are
 - Awareness – Visibility into one another's work
 - Articulation – Partitioning and re-integration of work
 - Appropriation – Adapt technology to fit the situation
- Drives
 - Clarification of requirements
 - Reduced need for Change
 - Risk Identification and Mitigation
 - Continual Improvement
- Colocation Preferred

Value-Based Prioritization

- Focus on ongoing prioritization of features and capabilities based on business value
- Uses Prioritized Product Backlog as the basis for Sprint Planning and value delivery
- Considers
 - Value to the business
 - Risk
 - Dependencies

Time-Boxing

- Time is valuable!
 - Many Scrum activities are intentionally constrained to a particular amount of time
 - Benefits include
 - Efficient Development
 - Less Overhead
 - High(er) velocity for team performance
 - Scrum Time-boxes
 - Sprint – 1-6 weeks
 - Daily Standup Meeting – 15 minutes
 - Sprint Planning Meeting – 4 hours for 2 week Sprint, 8 hours for one month Sprint
 - Sprint Review Meeting – 2 hours for 2 week Sprint, 4 hours for one month Sprint
 - Retrospect Sprint Meeting – 2 hours for 2 week Sprint, 4 hours for one month Sprint

Iterative Development

- Iterative models reflect real-world issues with development
 - Requirements change
 - Changes might lead to reprioritization
 - Higher value deliverables are delivered sooner
 - Risks identified and mitigated sooner
- By using iterative development, we acknowledge these “moving targets” and work to keep the team constantly focused on delivering optimized business value

Scrum Aspects

- Organization
- Business Justification
- Quality
- Change
- Risk

Lesson

Scrum Phases & Processes

Topics Discussed

Initiate
Plan & Estimate
Implement
Review & Retrospect
Release

Scrum Phases

- Initiate
 - Plan & Estimate
 - Implement
 - Review & Retrospect
 - Release

Initiate

- Create Product Vision
- Identify Scrum Master and Stakeholders
- Form Scrum Team
- Develop Epic(s)
- Create Prioritized Product Backlog
- Conduct Release Planning

Plan & Estimate

- Create User Stories
 - Approve, Estimate, and Commit User Stories
 - Create Tasks
 - Estimate Tasks
 - Create Sprint Backlog

Implement

- Create Deliverables
 - Conduct Daily Standup
 - Groom Prioritized Product Backlog

Review & Retrospect

- Convene Scrum of Scrums
- Demonstrate and Validate Sprint
- Retrospect Sprint

Release

- Ship deliverables
- Retrospect Project

Summary

Chapter Summary

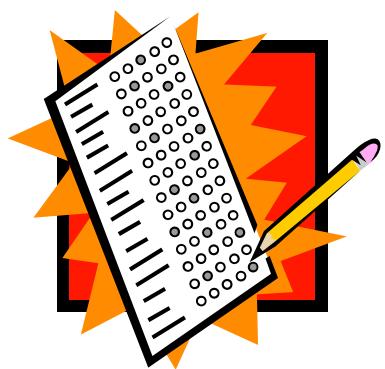
Topics Discussed

*What is Scrum
Benefits
Scalability
Key Principles
Aspects
Phases & Processes*

Introduction to Scrum Summary

- What is Scrum
- Benefits
- Scalability
- Key Principles
- Aspects
- Processes

Chapter Quiz





Questions and Answers

Review Questions:

1. What is the difference between agile software development and traditional software development?
 - A. At the level of actual software development, there isn't a difference. Both produce code aimed at solving a problem
 - B. Traditional development focuses more on plans and process while agile focuses more on outcomes and value
 - C. Agile development focuses more on plans and process while traditional development focuses more on outcomes and value
 - D. Traditional development is much more disciplined than agile because of the distinct phases
2. Which of the following are benefits of using Scrum?
 - A. Adaptability
 - B. Continuous development
 - C. Sustainable pace
 - D. Customer centric
 - E. High Velocity
 - F. Motivation
 - G. Clear requirements
 - A. All of the above
 - B. A,B,C,D
 - C. B,C,D,E,G
 - D. A,C,D,E,F
3. How does the Scrum Guidance Body (SGB) contribute to scalability?
 - A. It doesn't, it only provides documentation and guidance
 - B. The SGB determines how Scrum scales within the organization
 - C. The SGB recommends when to hold various meetings that are part of Scrum
 - D. The SGB documents the rules for scalability
4. Which of the following is NOT a Scrum principle?
 - A. Iterative Development
 - B. Collaboration
 - C. Inspect and adopt
 - D. Self-organizing teams

5. What is value-based prioritization?
 - A. The priority assigned to a user story by the Development Team
 - B. The priority assigned by the Product Owner
 - C. The priority assigned that represents business value
 - D. The priority agreed by negotiation between the Product Owner and the Development Team
6. The business case documents the business justification for the Scrum project. What else does the business case provide?
 - A. Basis for project scope
 - B. Estimated costs
 - C. Options
 - D. Risks
 - A. A and B
 - B. B and C
 - C. A and D
 - D. All of the above
7. What is true of the two aspects of the Review & Retrospect phase?
 - A. The Review focuses on lessons learned; the Retrospect focuses on customer value
 - B. The Review focuses on customer value; the Retrospect focuses on lessons learned
 - C. The Review focuses on process improvement; the Retrospect focuses on demonstration, inspect and adapt
 - D. The Review focuses on demonstration, inspect and adapt; the Retrospect focuses on process improvement
8. Which of the following is NOT considered as part of the Plan and Estimate phase?
 - A. Create the Sprint Backlog
 - B. Plan the Release
 - C. Create User Stories
 - D. Estimate Tasks

Answer Key:

1. B
B is correct. Agile development is usually more disciplined (with respect to outcomes, not process) than traditional development.
2. D
D is correct.
3. C
C is correct.
4. C
This is a little tricky. The SBOK included Inspect and Adapt as part of empirical process control.
5. C
While the Product Owner does assign priority based on value, that isn't really the answer to the question. C is correct.
6. D
D is correct.
7. D
D is correct.
8. B
Release planning is part of the Initiate phase. B is correct.



Scrum Developer Certified (SDC)

Chapter 03 - Initiating a Project

WORKBOOK



Chapter

Initiate

Lessons Covered

*Creating a Project Vision
Identifying the Scrum Master
Identifying the Scrum Team
Developing Epics
Prioritized Product Backlog
Release Planning*

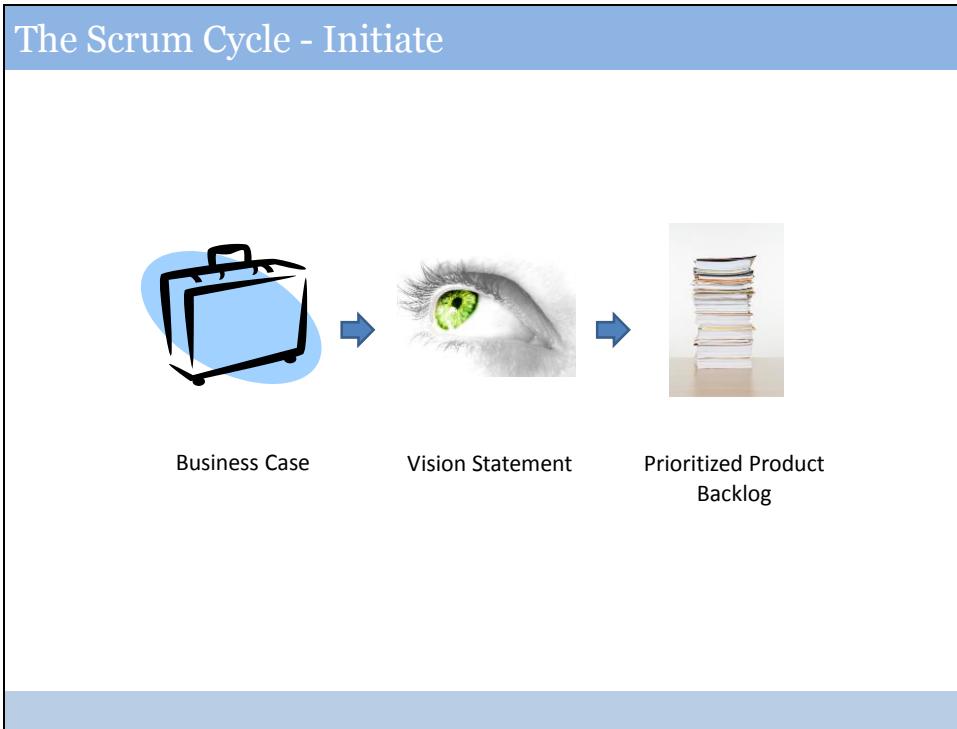
Learning Objectives

- You will learn
 - The aspects of a business case
 - The use of a Project Vision
 - Key Roles in a Scrum project
 - Aspects of a Prioritized Product Backlog
 - Working with Stakeholders to Develop Epics and Personae
 - How Sprints support a Release Plan
 - How to establish a Definition of “done”



Terms to Know

- Business Case
 - Done Criteria
 - Epic
 - Gap Analysis
 - 100 Point Method
 - JAD Session
 - Kano Analysis
 - Length of Sprint
 - MoSCoW Analysis
 - Paired Comparison
 - Persona
 - Prioritized Product Backlog
 - Project Vision Meeting
 - Product Owner
 - Scrum Master
 - SWOT Analysis
 - User Story



Lesson

Creating the Project Vision

Topics Discussed

Project Vision Meetings

JAD Sessions

SWOT Analysis

Gap Analysis

Outputs

Create The Project Vision

- A business case triggers a Scrum project.
 - May incorporate:
 - Bigger objectives at the Program or Portfolio level
 - Organizational mission/vision
 - Results from trials or other “proof of concept” activities
 - Market studies
 - Tools include:
 - Project vision meetings
 - JAD sessions
 - SWOT analysis
 - Gap analysis
 - A vision describes a set of outcomes.

Project Vision Meeting

- Engage Program stakeholders
 - Identify
 - Business context
 - What the expected outcomes or benefits?
 - Business requirements
 - Stakeholder expectations
 - Scrum requires **on-going** engagement with stakeholders

JAD Sessions

- Facilitate requirements gathering workshop
 - Enable consensus building on
 - Scope
 - Objectives
 - Specifications
 - Leverage Agile techniques to support time-boxing

SWOT Analysis

- Allows the stakeholders to define a desired end-state based on current internal strengths and weaknesses and external opportunities and threats/risks.



Gap Analysis

- Look at the current baseline performance or capabilities
 - Identify the future target desired
 - Establish what will be needed to move from A to B

Identify

- Existing processes
 - Existing business capabilities
 - Processes to obtain the desired outcome
 - Aspirational business capabilities
 - The gap

Develop

- The means to fill the gap
 - Prioritized capabilities to fill the gap

Outputs of Creating a Project Vision

- Identify the Product Owner
 - Responsible for achievement of business value
 - Responsible for Articulating Customer Requirements
 - Represents the Voice of the Customer
 - The Project Vision statement
 - Focus on flexibility...things will change
 - Focus on the problem, not a particular solution
 - Example: DCC needs to more efficiently track and manage instructor expenses
 - Project Vision: Develop an easy to use and aesthetically pleasing instructor expense management system
 - Project Charter – official and formal authorization to begin working
 - Project Budget – cost of people and materials allocated to the project. Managed on an ongoing basis by the Product Owner and Scrum Master

Lesson

Identifying the Scrum Master

Topics Discussed

Identifying the Scrum Master

Identifying the Stakeholders

Outputs

Identify the Scrum Master

- The Scrum Master is the servant leader of the Scrum team
 - Moderates & facilitates team interactions
 - Coach & mentor
 - Works with the team to identify and remove roadblocks to the team's successful performance.
 - Teaches and reinforces Scrum principles
 - Selection criteria include
 - Problem solving skills
 - Availability
 - Commitment
 - Servant Leadership Style

Identify the Stakeholders

- Scrum describes roles as Core and Non-core.
 - Core roles are:
 - Product Owner
 - Scrum Master
 - Scrum Team
 - Non-core roles include
 - Stakeholders
 - Customers
 - Users
 - Sponsors
 - Vendors
 - Scrum Guidance Body

Lesson

Forming the Scrum Team

Topics Discussed

Team Selection

Outputs

Form the Scrum Team

- Next step is team formation.
- Scrum teams are cross-functional.
- Key skills:
 - Independent thinking
 - Self-motivation
 - Customer-focused
 - Responsible
 - Collaborative
- Typical Scrum team is 6-10 people.

Outputs from Forming the Scrum Team

- Identifies
 - Scrum Team members
 - Back-up persons
 - Collaboration Plan
 - Team Building Plan
 - Tuckman's Model
 - Forming
 - Storming
 - Norming
 - Performing
 - Conflict Management: Seeking Win-Win

Lesson

Developing Epics

Topics Discussed

Epics

Personas

Outputs

Develop Epic(s)

- Epics are large high-level unrefined user stories
 - Desired functionality
 - Easy to understand
 - Estimable
 - Used to craft more detailed user stories
 - Gather requirements in
 - User Group Meetings
 - User Story Workshops
 - Focus Group Meetings
 - User/Customer Interviews
 - Questionnaires
 - Used to identify & write customer requirements
 - Help
 - Formulate acceptance criteria
 - Product Owner prioritizes requirements
 - Team identifies and assess risk

Epics & Personae

- Epics tell a story. What would the customers and users like to happen?
- Personae describe an example bringing the connection to life: How would the solution drive value for a specific type of stakeholder?
- For example: Jim is a busy traveling instructor from Michigan. He frequently travels to teach Scrum to customers across the country. He needs to quickly and easily report his expenses to ensure he is reimbursed before his credit card bill arrives at the end of the month. He gets frustrated when the bill arrives before the money does.

Outputs from Developing Epics

- Epics
 - Personae
 - Approved Changes
 - Identified Risks

Lesson

Creating the Prioritized Product Backlog

Topics Discussed

What is the Product Backlog?

MoSCoW Analysis

Paired Comparison

100 Point Method

Kano Model

Done Criteria

Outputs

Create the Prioritized Product Backlog

- Prioritized Product Backlog: a prioritized list of Epics, User Stories, Changes, and perhaps Risks to be managed during the project
 - Product Owner: develops and maintains the Prioritized Product Backlog.
 - Scrum Master may facilitate User Group Workshops or Focus groups to help prioritize options.
 - Techniques include but are not limited to:
 - MoSCoW analysis
 - Paired Comparisons
 - 100 Point Method
 - Kano Analysis

MoSCoW Analysis

- M –Must have
 - S – Should have
 - C – Could have
 - W – Won’t have

REQUIREMENT CATEGORY	EXPLANATION
MUST (M)	Defines a requirement that has to be satisfied for the final solution to be acceptable e.g. The HR system "must" store employee leave history
SHOULD (S)	This is a high-priority requirement that should be included if possible within the delivery time box. Workarounds may be available for such requirements and they are not usually considered as time-critical or Must-haves. e.g. The HR system "should" allow printing of leave letters
COULD (C)	This is a desirable or nice-to-have requirement (time and resources permitting) but the solution will still be accepted if the functionality is not included e.g. The HR system "could" send out notifications on pending leave dates.
WON'T or WOULD (W)	This represents a requirement that stakeholders want to have but have agreed will not be implemented in the current version of the system, that is, they have decided it will be postponed e.g. The HR system "won't" support remote access

Paired Comparison

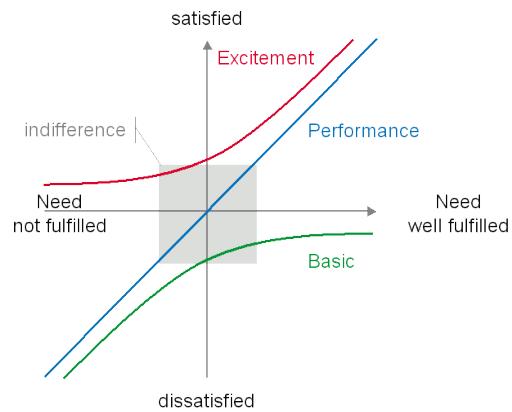
- List all of the User Stories
 - Compare them, two at a time
 - Keep going until all the User Stories are prioritized

100-Point Method

- Each user gets 100 points to vote for User Stories
- Points can be allocated among the stories any way a user wishes
- Aggregated point total drives the prioritization

Kano Analysis

- Classifies features as
 - Exciters/Delighters
 - Satisfiers
 - Dissatisfiers
 - Indifferent



Other Considerations & Inputs for Prioritization

- User Group Meeting feedback
- Plan for Value
 - Value Stream mapping
- Risk Assessment
- Project Value Estimation
- User Story Estimation methods
 - Planning Poker
 - Fist of Five
- SGB Guidance

Outputs of Planning the Prioritized Product Backlog

- Prioritized Product Backlog
 - Value-centered
 - Manages Risk and Uncertainty in Priority
 - Identifies Dependencies
 - Estimates
 - Done Criteria
 - A set of Rules applicable to all User Stories
 - Demonstrated to and Approved by the Product Owner
 - Augmented by Specific User Story Acceptance Criteria
 - Using the project designing an expense report system for DCC as an example:
 - The Design is approved by HR
 - The prototype meets organizational policy requirements for security and privacy
 - The Cost Estimation for the solution is approved by Corporate Finance

Lesson

Release Planning

Topics Discussed

*Release Planning
Length of Sprint
Release Preferences
Outputs*

Conduct Release Planning

- Deliver high-value functionality to the customer sooner rather than later.
- Release Planning meetings ensure shared expectations for delivery timelines between the Scrum team, the Product Owner and other stakeholders (like the Sponsor)
- Release Strategies
 - Continuous Deployment – feature centered
 - Phased Deployment – time-centered
- Needs to reflect organizational release planning and priorities

Outputs of Release Planning

- Release Planning schedule usually evolves as the project progresses
- Length of Sprint?
 - Most Scrum practices max out at 4 weeks
 - Some last 6 weeks
 - Many prefer shorter Sprints of 2 or 3 weeks
 - Sprint Length should be consistent across a project.
- Define Target Customers for a release
- Product Owner may update Prioritized Project Backlog

Summary

Chapter Summary

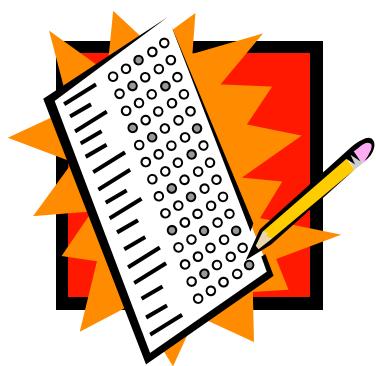
Topics Discussed

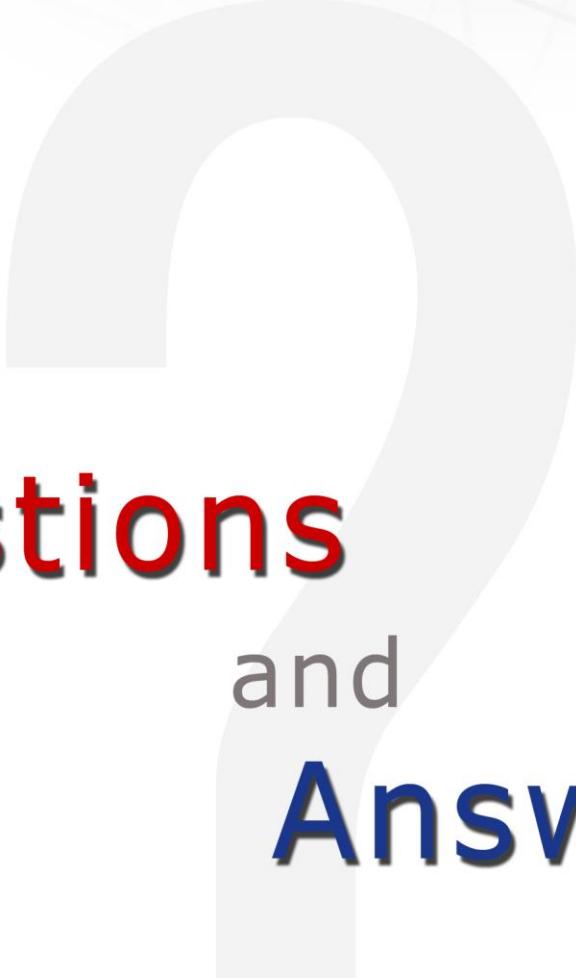
- Create Project Vision*
- Identify Scrum Master and Stakeholders*
- Form Scrum Team*
- Develop Epics*
- Create Prioritized Product Backlog*
- Conduct Release Planning*

Initiating a Project Summary

- Create Project Vision
- Identify Scrum Master and Stakeholders
- Form Scrum Team
- Develop Epics
- Create Prioritized Product Backlog
- Conduct Release Planning

Chapter Quiz





Questions and Answers

Review Questions:

1. What is the purpose of the Create the Project Vision?
 - A. Identify who will use or benefit from the products produced by the product
 - B. Make sure the requisite meetings and artifacts are produced before the project starts
 - C. Make sure the project is viable before it starts
 - D. Identify the project deliverables and the value provided
2. What is true about Gap Analysis?
 - A. Identify current state
 - B. Document target state
 - C. Determine Scrum processes required to achieve the target
 - D. Determine a possible path to achieve the target
 - A. A,B,C
 - B. A,B,D
 - C. B,C,D
 - D. All of the above
3. Which one of the following is NOT a characteristic of a good Scrum Master?
 - A. Good facilitator
 - B. Most knowledgeable person about Scrum
 - C. Effective listening
 - D. Motivator and coach
4. Why is it important to identify stakeholders early in the development effort?
 - A. Stakeholders are required to be engaged throughout the project lifecycle
 - B. Vendors may have an interest in the outcomes, so this has to be identified
 - C. It's not important to identify stakeholders early, as long as they are identified before development starts
 - D. It is critical to identify everyone that has a vested interest in the outcomes of the development effort as soon as possible so that their input is considered before it's too late

5. Which of the following are some of the key skills for the Scrum Team?
 - A. Fast programming
 - B. Self-motivated
 - C. Good debugging
 - D. Responsible
 - E. Language lawyer
 - F. Works well with others
 - G. Independent thinking
 - A. A,B,C,D
 - B. B,D,F,G
 - C. B,E,F,G
 - D. A,D,E,F
6. What is the purpose of the Develop Epic(s) process?
 - A. Create user stories that serve as a high-level baseline on scope and requirements
 - B. Assure that there is a way to formulate a complete set of user story acceptance criteria
 - C. Estimate and commit user stories
 - D. Epic stories are refined and prioritized by the Development Team to form the basis of the Sprint Backlog
7. How are the items in the Product Backlog organized and prioritized?
 - A. It is solely the Product Owner's responsibility to put items into the Product Backlog and determine their priority
 - B. The Product Owner works with stakeholders to develop not only the items included in the Product Backlog, but also their priority
 - C. The Scrum Master runs and facilitates the various meetings where the items for the Product Backlog are considered and prioritized
 - D. The entire Scrum team works with project stakeholders to discuss the requirements for the project. With full information the team then works to be sure the items included in the Product Backlog are assigned the proper priority to deliver the maximum value

8. What is the purpose of the Conduct Release Planning process?
 - A. It is one of the last things the team does to get ready to release and deploy the finished products from the project
 - B. Release planning is conducted near the end of each Sprint before the results from the effort are transitioned to the customers/users
 - C. Release planning makes sure the products that developed one or more Sprints are properly bundled into a Release Package to maximize the business value
 - D. Release planning starts before any products are developed to help focus the Scrum Team to provide the maximum business value as quickly as possible

Answer Key:

1. D
D is correct.
2. B
B is correct.
3. B
While it's important the Scrum Master be knowledgeable about Scrum, it's entirely likely that for early projects the Scrum Master won't be any more or less familiar with Scrum than anyone else on the Team. The important skills are the others listed, not specifically Scrum knowledge. B is correct.
4. A
While you could argue that everyone has some vested interest in the project outcomes, the SBOK is clear that the stakeholders only include customers, users, and sponsors. A is correct.
5. B
While A, C and E might be important for some people on the projects, they aren't the core skills needed by every member of the cross-functional Scrum Team. B is correct.
6. A
Epics are high-level unrefined user stories that need to be refined / broken down into simpler implementable user stories. Epics are more complex (because they are unrefined) than the user stories used for development. If it's not in the Epic it won't be in the resulting user stories crafted from the Epic. This is part of the definition of scope. A is correct.
7. B
B is correct.
8. D
D is correct. Release planning begins at the beginning of a project to establish the MMF (minimum marketable features) required before there is sufficient functionality to generate business value. Release planning then continues throughout the project as customer requirements and changes are taken into account.



Scrum Developer Certified (SDC)

Chapter 04 - Planning & Estimating a Project

WORKBOOK



Chapter

Planning & Estimating a Project

Lessons Covered

- Create User Stories
- Approve, Estimate, and Commit User Stories
- Create Tasks
- Estimate Tasks
- Create Sprint Backlog

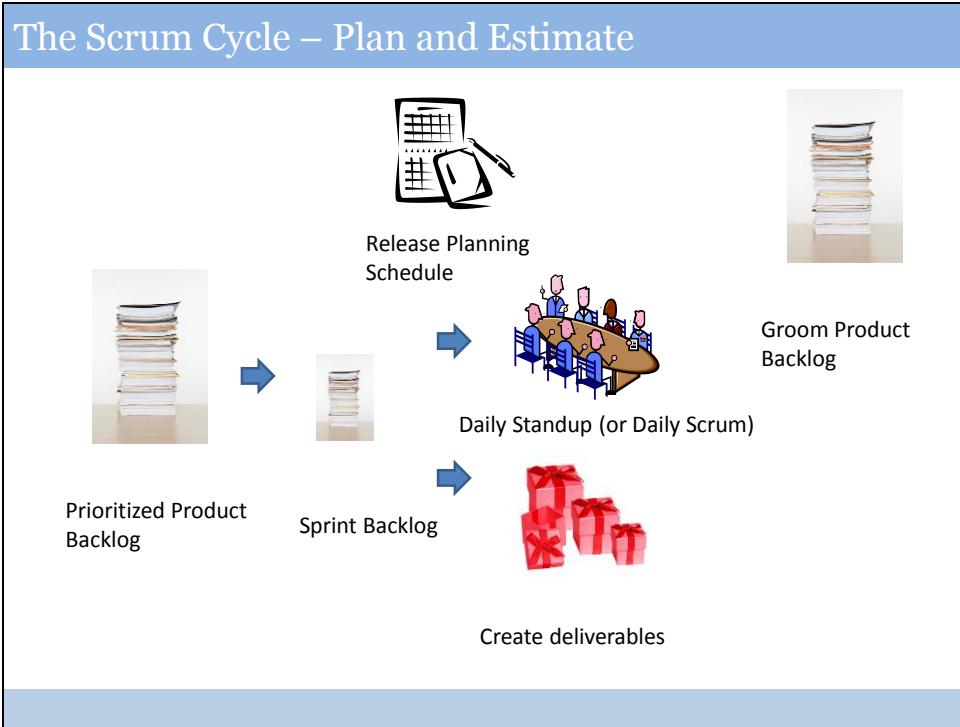
Learning Objectives

- You will learn
 - How to Create User Stories
 - How to Approve, Estimate, and Commit User Stories
 - Create Tasks
 - Estimate Tasks
 - Create Sprint Backlog



Terms to Know

- Acceptance Criteria
- Dependency
- Fist of Five
- Planning Poker
- Scrumboard
- Sprint Backlog
- Sprint Burndown Chart
- Story Points
- Task (Sprint) Planning Meeting
- Velocity
- Wideband Delphi



Lesson

Creating User Stories

Topics Discussed

User Group Meetings

Writing User Stories

User Story Format

User Story Acceptance Criteria

Outputs

User Story Meetings and Workshops

- User group meetings & workshops write Epics and create user stories.
 - User stories describe
 - Requirements
 - Increments of desired functionality
 - Story acceptance criteria
 - A user story tells
 - Who uses the system
 - What work the system performs
 - Why this is valuable to the customer
 - The Prioritized Product Backlog is a dynamic list of User Stories in priority order
 - Developed and maintained by the Product Owner

Write User Stories

- User Stories follow a specific format

As a <insert role or persona here>, I should be able to <do this thing I want to do> so that <I get a benefit I want>

Example: As a traveling instructor, I should be able to submit my expenses from my laptop through any internet connection so that I can get reimbursement in a timely way.

User Story Acceptance Criteria

- Since User Stories are subjective, the Acceptance Criteria enable the team to establish objective measures of whether a User Story is Done or Not Done.
 - Product Owner defines & communicates the Acceptance Criteria to the Scrum team.
 - Scrum Master ensures that the Product Owner does not change the Acceptance Criteria **during a Sprint**.
 - New Acceptance Criteria identified during a Sprint can be written into new User Stories for subsequent Sprints.

Outputs for Writing User Stories

- The User Stories
 - User Story Acceptance Criteria
 - Updates to the Prioritized Product Backlog
 - Updated or Refined Personae

Lesson

Approve, Estimate & Commit User Stories

Topics Discussed

User Group Meetings

Planning Poker

Fist of Five

Points for Cost Estimation

Other Techniques

Outputs

User Group Meetings

- Engage relevant stakeholders
 - Primarily users or customers for the product
 - Provide Scrum Team first had user expectations
 - Provides valuable insight for Epics
 - Prevent expensive rework resulting from ambiguity
 - Promote buy-in for project

Planning Poker

- Uses a deck of cards number in some sequence (e.g., Fibonacci)
 - Each team member has their own deck
- Product Owner presents a User Story to the team.
- Scrum team assess and asks questions about the story to try to understand it
- Each team member picks a card to reflect their estimate for that story
 - Number chosen represents team member estimation of difficulty or effort (depending on team member)
- If the majority select the same card, continue with next story
 - Agreed card is the estimated effort for “this” story.
- No consensus: outliers are given opportunity to discuss their selection followed by another round of card selection
 - Discussion and card selection continues until there is agreement

Fist of Five

- It is a simple mechanism to drive discussion and (hopefully) achieve consensus
 - After discussion, the Scrum Master asks the team to vote on a 1-5 scale.
 - Each team member is asked to explain their vote, to allow for addressing team member concerns.
 - 1) I disagree with the group's conclusions and have major concerns
 - 2) I disagree with the group's conclusions and would like to discuss some minor issues
 - 3) I am not sure and would like to go with the group's consensus conclusion
 - 4) I agree with the group's conclusion and would like to discuss some minor issues
 - 5) I wholeheartedly agree with the group's conclusions

Points for Cost Estimation

- Uses Story points, not monetary units
- Estimation technique in relative terms.
- In trying to estimate costs to complete a User Story, it is often helpful to have a benchmark.
- Baseline User Story = 10 points (e.g.)
- How many story points of effort will User Story cost?
 - Relative to the baseline story
- Decisions are not changed during a Sprint.

Other Estimation Techniques

- Wideband Delphi
 - Relative Sizing/Story Points
 - Affinity Estimation
 - Estimate Ranges

Outputs from Approve, Estimate & Commit User Stories

- User Stories Committed by the Team for the Sprint
 - Basis for Sprint Backlog
 - Product Owner approves the initial User Stories for a Sprint
 - Final Decision lies with the Scrum team (with consultation from the Product Owner as needed)

Lesson

Create Tasks

Topics Discussed

Task /Sprint Planning Meetings

Using Index Cards

Decomposition

Dependencies

Outputs

Task Planning Meeting

- Run at the beginning of each Sprint
 - Sometimes called Sprint Planning Meeting
 - Two main parts
 - What to do
 - Product Owner and Development Team
 - Select items from the Product Backlog for inclusion in the Sprint
 - How to do it
 - Development Team
 - Identify & estimate tasks to turn selected User Stories into increment of functionality
 - Meeting is time-boxed
 - 2 hours for each week in the Sprint
 - Time split 50/50 between the two main parts
 - What to do
 - How to do it
 - Product Owner
 - Confirms the accuracy of the Product Backlog

Two Parts of a Task Planning Meeting

- Part One – The User Stories
 - Product Owner suggest User Stories for the Sprint
 - Scrum team determines how many User Stories it can deliver in the Sprint
 - Consensus is reached on the User Stories to be included in the Sprint
 - Part two – The Tasks
 - The Scrum team breaks down the User Stories into Tasks to create a Product Increment
 - The Scrum team commits to the deliverables
 - The Task Estimation activities covered in the next lesson often combine here

Use Index Cards

- User Stories are written on small Index Cards
 - Only Essential Details are documented
 - Index Cards
 - Facilitate Collaboration and discussion
 - Increase visibility and transparency
 - Reduce risk and assist with problem determination

Decomposition

- Decomposition breaks down tasks into lower-level, more detailed tasks.
 - User Stories should be sufficiently decomposed to allow the Scrum team to create the desired deliverables from the tasks mentioned in the task list.

Determine Dependencies

- Once tasks are identified, consider technical & people dependencies.
 - Mandatory dependencies
 - Discretionary dependencies
 - External dependencies
 - Internal dependencies

Outputs for Create Tasks

- Task List
 - Updates to the Approved, Estimated, and Committed User Stories
 - Dependencies

Lesson

Estimating Tasks

Topics Discussed

Task Estimation Meetings

Estimation Criteria

Outputs

Task Estimation Meetings

- Often combined with Task/Sprint Planning Meetings
 - Estimate
 - People
 - Resources Needed
 - Use Task List to drive shared perspective
 - Use previously introduced techniques
 - Planning Poker
 - Fist of Five
 - Other techniques (Wideband Delphi)

Establish Estimation Criteria

- Keep sizes relative
 - Minimize the need for re-estimating
 - Samples include
 - Story Points
 - Ideal time i.e. how long it would take without interruptions

Output for Estimating Tasks

- **Effort Estimated Task List**
 - Provides key input for producing the Sprint Backlog and Sprint Burndown Chart
 - Allows the team to see if they can take on more commitment or reduce commitment for a Sprint
 - **Updated Task List**

Lesson

Creating the Sprint Backlog

Topics Discussed

Creating the Sprint Backlog

Creating a Sprint Burndown Chart

Velocity

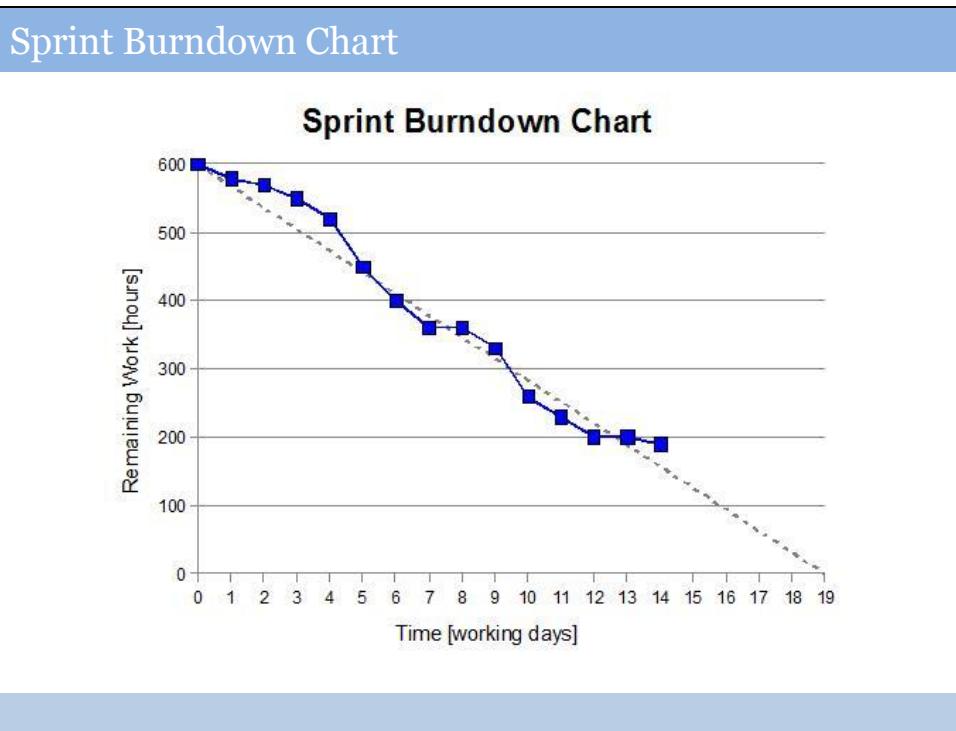
Outputs

Create the Sprint Backlog

- The Sprint Backlog takes input from
 - Committed User Stories
 - Changes
 - Risks
 - Effort Estimated Task List
- The Sprint Backlog is simply the list of User Stories to be delivered in that Sprint
- A Scrumboard helps organize the User Stories & tasks

Slide 30

Scrumboard				
Story	To-do	In Process	Verify	Done
Support MasterCard® and Visa®... 8 points	Write the... 8 points Write the... 3 points Test the... 5 points	Test the... 6 points Write the... 9 points Test the... 4 points	Write the... DM 6 Test the... PVS 7	Test the... PVS 6 Write the... Test the... Test the... SC 6 Test the... SC 5
Accept PayPal™... 6 points	Write the... 7 points Write the... 5 points	Test the... 7 points Write the... 2 points	Write the... DM 5	Test the... SC 6 Test the... SC 3



Velocity

- Measure of the number of User Stories/Sprint done
- Useful in longer-term planning of progress across many Sprints
- Can provide input and measures of team affinity and improved efficiency and effectiveness of practices
- Improved velocity comes from more effective practices and better teamwork, and is not to be confused with other higher-priority goals, like delivering value for the business

Sprint Tracking Metrics

- Business value delivered – value of the User Stories from a business perspective
 - Number of User Stories (nominal or weighted)
 - Velocity (up/down)

Output of Creating the Sprint Backlog

- Sprint Backlog
 - Sprint Burndown Chart

Summary

Chapter Summary

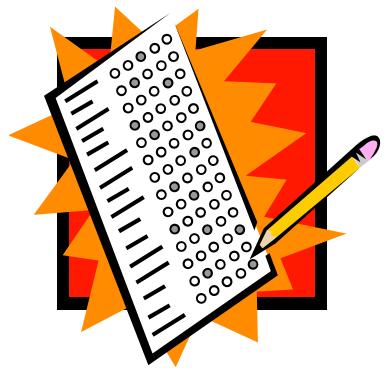
Topics Discussed

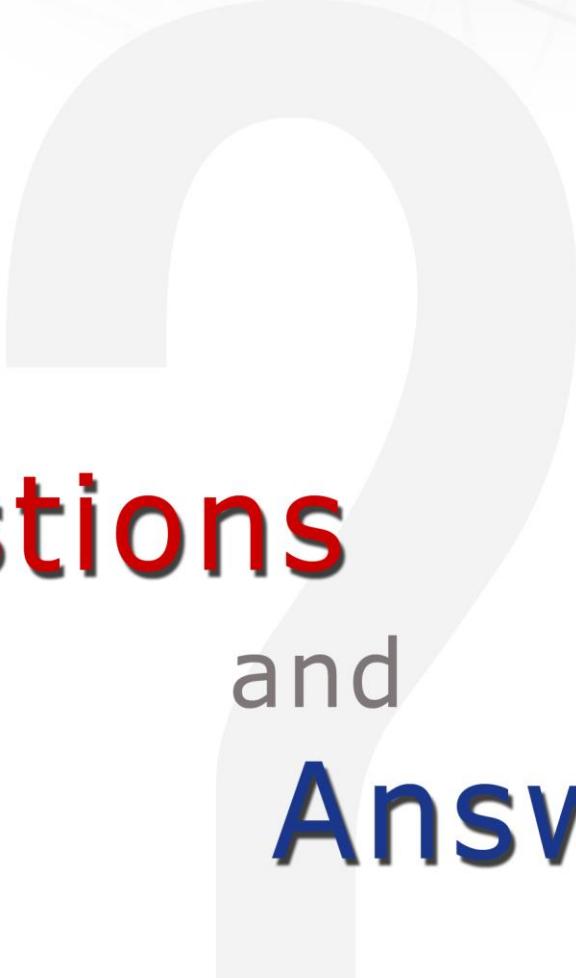
*Creating User Stories
Committing User Stories
Creating Tasks
Estimating Tasks
Creating the Sprint Backlog*

Planning & Estimating a Project Summary

- Creating User Stories
 - Committing User Stories
 - Creating Tasks
 - Estimating Tasks
 - Creating the Sprint Backlog

Chapter Quiz





Questions and Answers

Review Questions:

1. Which of the following is a simple valid user story?
 - A. Mary needs to be able to enter expenses into the XYA Form
 - B. ABC Company sales people (aka mobile workers) need to be able to view client information on company supplied tablets while on the road so that they have up-to-date information about outstanding (or open) orders (i.e., orders that have not been shipped) before meeting with the client
 - C. As a PDQ Executive I need to be able to view executive data but only if it is in a secure location because the data is sensitive
 - D. As an ABC employee I need to be able to log into my system
2. What is true about all of the methods used to estimate user stories?
 - A. The techniques help develop precision regarding the effort required to turn a user story into working code
 - B. User story estimation is a necessary first step, but much more work is needed to be able to determine the real effort that will be required
 - C. All of the estimation techniques produce relative estimates of complexity and/or effort based on consensus
 - D. The estimation techniques are a good starting point, but it's up to the Product Owner to verify that they fit the customer expectations
3. What is an output from Approve, Estimate and Commit User Stories?
 - A. Basis for a Sprint Backlog
 - B. Basis for the Product Backlog
 - C. Entries for the Sprint Burndown Chart
 - D. Epic stories
4. When is the task planning meeting run?
 - A. At the beginning of each project
 - B. At the beginning of the Refine Epic(s) process
 - C. At the beginning of Estimate, Approve and Commit User Stories
 - D. At the beginning of each Sprint

5. Why is it important to write the user stories on something no bigger than a 3 x 5 card?
 - A. Keeps the stories short
 - B. Facilitate collaboration
 - C. Transparency
 - A. A and B
 - B. B and C
 - C. A and C
 - D. All of the above
6. Task estimation meetings are used to estimate what?
 - A. Risk
 - B. Completion dates
 - C. Cost
 - D. Resources needed/required
7. What is the Sprint Backlog?
 - A. It's used with the Product Owner to determine the work required to complete the project
 - B. It is the list of user stories used by the development team
 - C. It is the stories left over from the previous Sprint
 - D. It is a progress estimation and tracking tool
8. Which of the following are sprint tracking metrics?
 - A. Derived business value
 - B. Cost of developing the stories in the sprint
 - C. Time spent developing the stories in the sprint
 - D. Number of user stories completed in the sprint
 - E. Velocity
 - A. All of the above
 - B. A,B,C
 - C. C,D,E
 - D. A,D,E

Answer Key:

1. B
A doesn't include a measure of done or acceptance. C and D are more epic than user story. B is correct even though it's not formally written in the presented format (As a... etc.).
2. C
C is correct.
3. A
A is correct.
4. D
D is correct. The Task Planning Meeting is also known as the Sprint Planning Meeting.
5. D
D is correct.
6. D
D is correct.
7. B
B is correct.
8. D
D is correct.



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Chapter 05 - Implementing a Project

WORKBOOK



Chapter

Implementing a Project

Lessons Covered

Create Deliverables
Conducting the Daily Standup
Grooming the Product Backlog

Learning Objectives

- You will learn
 - How to produce deliverables
 - What happens in a Daily Standup Meeting (or Daily Scrum)
 - How Scrum reduces technical debt and improves the agility and maintainability of code
 - How impediments are identified and managed



Terms to Know

- Daily Standup Meeting (Daily Scrum)
- Deliverables
- Design Patterns
- Impediment Log
- Refactoring
- Technical Debt
- Test Driven Development (TDD)
- War Room

Lesson

Creating Deliverables

Topics Discussed

*Create the Deliverables
Update the Scrumboard
Impediment Log
Refactoring*

Create the Deliverables

- Obvious main activity within the Sprint
 - Do the work
 - Deliver the goods
- Along the way
 - Update the Scrumboard
 - Identify Impediments
- Impediment Log
 - Logs any hindrance to the progress of the team
 - e.g. Too bright on sunny afternoons, license issues
 - Can be internal or external
 - Builds an action item list for the Scrum Master

Build Deliverables

- Scrum teams produce working, potentially shippable solutions each Sprint
- Including all necessary cross-functional work
 - Requirements
 - Design
 - Development
 - Testing
 - Demonstration at the Sprint Review Meeting
- Many organizations use Test Driven Development
 - Write a test
 - Fail it
 - Write enough to make it pass
 - Refactor
- Dramatically reduces Technical Debt and speeds up Value delivery to the Business

Refactoring

- Specific to software projects
- Goal is to improve quality & maintainability of the code
 - Simpler
 - More concise
 - More flexible
- Changes the design and flow of the code without changing its perceived external behavior
 - Eliminates repetitive and redundant code
 - Breaks methods and functions into smaller routines
 - Creates clearly define variables and method names
 - Simplifies code design
 - Makes code easier to understand and modify
- Establishes use of Design Patterns

Outputs for Creating Deliverables

- Sprint Deliverables
 - Updated Scrumboard
 - Updated Impediment Log
 - Updated Risk Identification and Mitigation
 - Updated Dependencies
 - Unapproved Change Requests

Lesson

Conducting the Daily Standup (or Daily Scrum)

Topics Discussed

The Daily Standup Meeting

Three Questions

War Room

Managing Distributed Teams

Conduct the Daily Standup Meeting

- Daily meeting
- Time-boxed to 15 minutes duration
- All team members expected to attend
- Proceeds if anyone has to miss
 - Report Progress
 - Plan the Day's Activities
- Discussions are encouraged, but mostly occur as sidebars after the meeting to honor the time commitment
- Team members generally stand in a circle
- Facilitated by the Scrum Master

Three Daily Questions

- Each Team member answers three questions:
 - 1) What did I complete yesterday?
 - 2) What will I complete today?
 - 3) What impediments or obstacles (if any) am I currently facing?
- Answers to the first two questions should be quantitative to avoid lengthy, qualitative answers. More detail should be discussed in a sidebar.

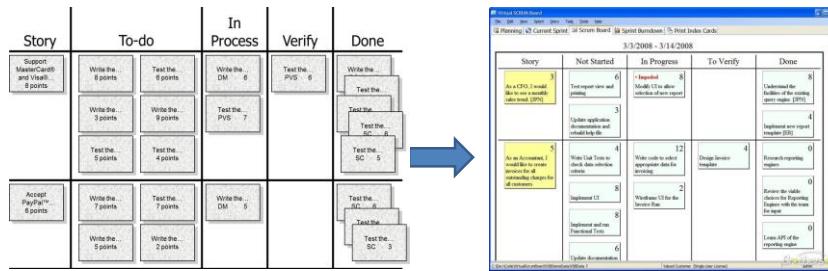
The War Room

- Scrum works better with colocated teams
 - Location is generally called a War Room
 - Enables freedom of movement, work, and collaboration
 - Extensive use of index cards, sticky notes, visuals like the Scrumbard and Burndown charts
 - Sometimes a bit noisy!



Manage Distributed Teams

- Practical issues sometimes force Scrum teams to be distributed
- Care has to be given to facilitating open communications
 - Video Conferencing Tools
 - Easy to use Collaboration Tools
 - Electronic Scrumboards and Burndown Charts



Outputs from Conduct Daily Standup

- Updates to:
 - Sprint Burndown Chart
 - Impediment Log
 - Scrumboard
 - Unapproved Change Requests
 - Identified and Mitigated Risks
 - Dependencies
- Team Motivation and Morale
 - Each member is important
 - Self-organization
 - Enhanced performance
 - Improved quality of deliverables

Lesson

Grooming the Prioritized Product Backlog

Topics Discussed

*Prioritized Product Backlog Review Meeting
Change Requests
Risks
Outputs*

Product Backlog Review Meetings

- Driven by the Product Owner
- Engage with
 - Relevant stakeholders
 - Scrum Master
 - The Scrum team
- Check for understanding
 - User Stories
 - Acceptance Criteria
- Ask questions
 - Do we need to update to reflect new customer priorities?
 - Change requests?
 - Risks and risk mitigation activities?
- Set the table for the next Sprint...

Facilitate Communications

- Scrum facilitates ongoing, informal communications
- Requirements change
 - Customer needs
 - Priorities
- The Scrum team uses learned techniques such as:
 - MoSCoW
 - Paired Comparisons
 - Kano Model
 - Planning Poker
 - Fist of Five
 - Etc.
- The Product Owner ensures the Prioritized Product Backlog is regularly groomed to reflect customer needs

Outputs of Grooming the Prioritized Product Backlog

- Updated Product Backlog
- Updated Release Planning Schedule

Summary

Chapter Summary

Topics Discussed

Creating Deliverables

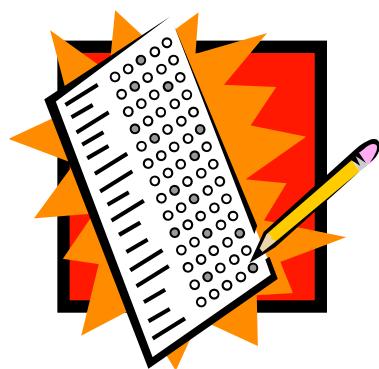
Conducting the Daily Standup Meeting

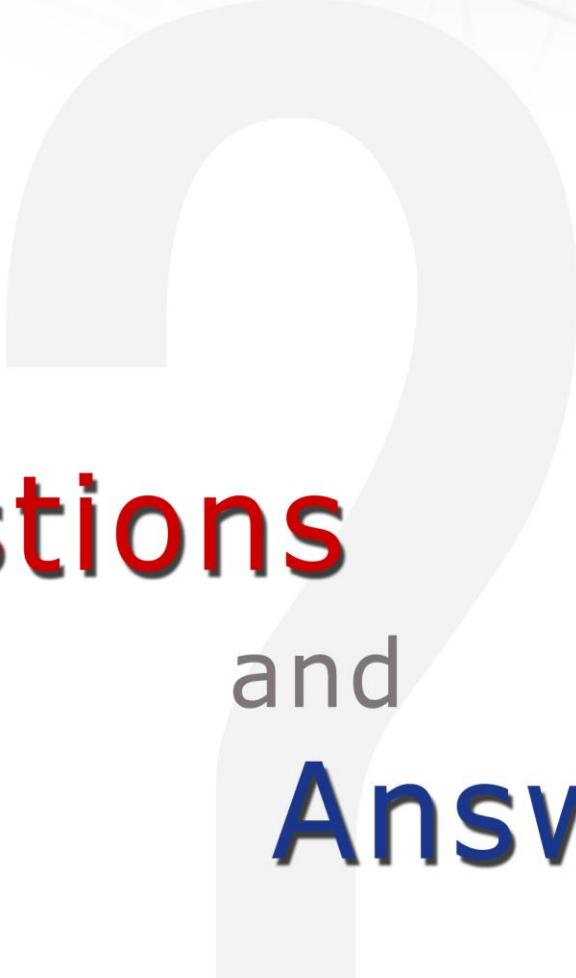
Grooming the Prioritized Product Backlog

Implementing a Project Summary

- Creating Deliverables
 - Conducting the Daily Standup Meeting
 - Grooming the Prioritized Product Backlog

Chapter Quiz





Questions and Answers

Review Questions:

1. What happens during the Create Deliverables process?
 - A. Acceptance testing
 - B. Document business benefits
 - C. Finish a lessons learned report
 - D. Do the work of the Sprint
2. What is Test Driven Development (TDD)?
 - A. A way of automating testing after the code is complete
 - B. A way of automating the development of tests
 - C. Develop story-based tests before writing the code to implement the story
 - D. Develop epic-based test to help verify that epics are properly refined into user stories
3. Why is refactoring important?
 - A. Re-think the code
 - B. Break the code in factors
 - C. It is part of design patterns
 - D. Improve code quality and maintainability
4. The _____ participates in the daily standup and the _____ facilitates it.
 - A. Scrum Master and Team Lead
 - B. Team leads (plural) and Product Owner
 - C. Development Team and Product Owner
 - D. Development Team and Scrum Master
5. What happens during the daily standup?
 - A. Team shares status, immediate plans and risks
 - B. Answers questions
 - C. Decisions are made
 - D. Nothing really happens, the team just updates the Product Owner

6. Which of the following statements is true?
 - A. Teams should be co-located
 - B. Distributed development teams are hard to manage and discourages
 - A. A is true, B is false
 - B. A is false, B is true
 - C. Both are true
 - D. Both are false
7. When does grooming take place?
 - A. Only before new development starts (before a sprint begins)
 - B. After new development has started (within a sprint)
 - C. It's up to the product owner to do the grooming whenever it's needed
 - D. Both before and after new development starts
8. When is it critical to groom the backlog?
 - A. It's up to the Product Owner
 - B. All stories are subject to grooming
 - C. It's critical to groom Epics before User Stories
 - D. As stories move up the Product Backlog, it's more important to groom them (i.e., the ones near the top of the backlog)

Answer Key:

1. D
D is correct.
2. C
C is correct.
3. D
D is correct.
4. D
D is correct.
5. A
Status: what I did yesterday; immediate plans: what I plan to do today; risks: impediments or obstacles. A is correct.
6. A
A is correct.
7. D
Grooming takes place before development begins as part of the Sprint Planning meeting and anytime during the sprint if the team discovers they need input from stakeholders (or the product owner).
8. D
While the Product Owner can groom the Product Backlog at any time, it is really critical as stories near the top of the backlog, before the stories are picked up by a development team. D is correct.



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Chapter 06 - Sprint Review and Retrospect

WORKBOOK



Chapter

Sprint Review and Retrospect

Lessons Covered

Scrum of Scrums
Demonstrate & Validate Sprint
Retrospect Sprint

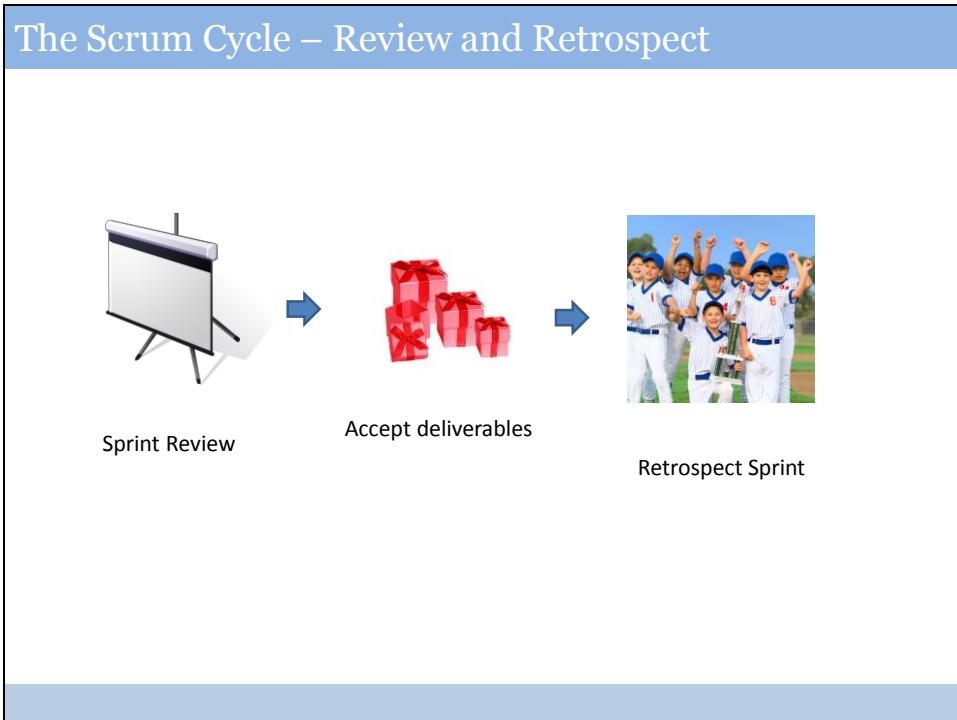
Learning Objectives

- You will learn
 - What happens in a Sprint Review
 - Why use a Scrum of Scrums
 - What happens in a Sprint Retrospect
 - How these drive performance improvements



Terms to Know

- Agreed Actionable Improvements
- Cumulative Flow Diagram
- Earned Value Analysis
- ESVP
- Retrospect Sprint Meeting
- Scrum of Scrums
- Speed Boat
- Sprint Review Meeting



Lesson

Convene a Scrum of Scrums

Topics Discussed

Projects, Programs, & Portfolios

Scaling Scrum

Convening a Scrum of Scrums

Four Questions

Projects, Programs & Portfolios

- Bigger Projects, Programs, and Portfolios of Products require scalability and integration
- Scrum scales itself through regular integration points
- Roles can be aligned across the levels
- Chief Product Owner → Program Product Owner → PO
- Chief Scrum Master → Program Scrum Master → SM
- Alignment is maintained using a Scrum of Scrums

Scrum of Scrums

- Relatively Short, but NOT time-boxed to allow for more team information-sharing
- One representative from each Scrum team (often but not always the Scrum Master)
- Held at predetermined intervals or when required
- Helps to monitor
 - Risks
 - Issues
 - Dependencies

Four Questions per Team

- Similar to Daily Standup Three Questions
- The Four Questions:
 - What has my team worked on since the last meeting?
 - What will my team do until the next meeting?
 - What were other teams counting on our team to finish that remains undone?
 - What does our team plan to do that might affect other teams?
- Where necessary, leverage video conferencing for non-colocated teams

Outputs from Scrum of Scrums

- Better Team Coordination
- Resolved Issues
- Updates to
 - Impediment Log
 - Dependencies

Lesson

Demonstrating & Validating Sprint

Topics Discussed

Sprint Review Meeting

Tracking Overall Progress

Outputs

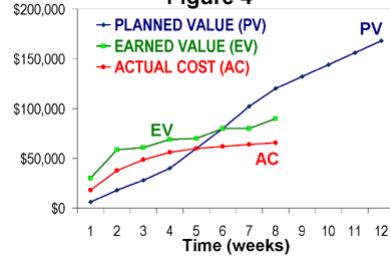
Sprint Review Meeting

- Each Sprint produces whole capabilities: demonstrable user stories end-to-end
 - The Sprint Review meeting offers a chance to:
 - Demonstrate the completed User Stories to the Product Owner and other customer Stakeholders
 - Allow the Product Owner to confirm User Stories are done
 - Consider stakeholder requested changes for subsequent Sprints
 - Identify any issues and how the team addressed them
 - Update the Product Backlog when the Product Owner reviews
 - Focus is on the Product being delivered

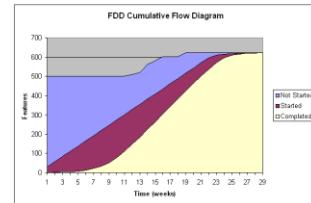
Track Overall Progress

- Gantt Charts are limited in tracking the overall value generated in a project
 - Scrum recommends the use of
 - Earned Value Analysis
 - Cumulative Flow Diagrams

Figure 4



FDD Cumulative Flow Diagram



Outputs of Demonstrate & Validate Sprint

- Accepted Deliverables
- Rejected Deliverables (return to the Product Backlog)
- Updated
 - Risks
 - Release Plan
 - Dependencies
- Earned Value results

Lesson

Retrospect Sprint

Topics Discussed

*Retrospect Sprint Meeting
Explorer-Shopper-Vacationer-Prisoner
Speed Boat
Metrics and Measuring
Outputs*

Conduct the Retrospect Sprint Meeting

- Retrospect Meetings help the team improve its performance
 - Held in an open, relaxed environment after the Sprint Review at the end of the Sprint
 - All Scrum team members attend
 - Scrum Master facilitates
 - Another team member acts as Scribe
 - Product Owner may attend, but not required
 - Explore things the team needs to
 - Keep doing – best practices
 - Begin doing – process improvement
 - Stop doing – process problems & bottlenecks
 - Results in Agreed Actionable Improvements
 - Focus is on the team's processes & collaboration

Explorer-Shopper-Vacationer-Prisoner (ESVP)

- Technique for the Scrum Master to assess engagement & participation in the Retrospect
 - Explorer
 - Wants to participate in & learn everything from the Retrospect
 - Shopper
 - Wants to listen to everything & choose what to take away from the Retrospect
 - Vacationer
 - Wants to relax & be a tourist in the Retrospect
 - Prisoner
 - Wants to be elsewhere & is attending the Retrospect because it is required
- Votes are anonymous, but the overall information is shared with the group to set expectations

Speed Boat

- Scrum technique to identify team improvements
- Team members role-play a team on a ship trying to reach its destination (like the project vision)
- Team is asked to identify
 - Engines – things that will speed them up
 - Anchors – things that slow them down
 - All are identified and prioritized
 - Engines are acknowledged and mitigation options identified for the Anchors
- Time-boxed to a few minutes to maintain focus

Metrics & Measurement Review

- Team velocity – Number of story points in a given Sprint
- Done success rate – Percentage of points done versus those committed
- Estimation effectiveness – Number and percentage of deviations between estimated and actual time spent on tasks and user stories
- Feedback ratings from Stakeholders
- Team morale ratings from self-assessments
- Peer feedback – 360 degree review facilitates constructive criticism and insight into team performance
- Progress to release or launch – demonstrates business value achieved as a result of the team's performance

Outputs from Retrospect Sprint

- Agreed Actionable Improvements
- Assigned Action Items and Due Dates
- Proposed Non-Functional Requirements for the Prioritized Product Backlog
- Retrospect Sprint Log
- Scrum Team Lessons Learned
- Recommendations for the Scrum Guidance Body

Summary

Chapter Summary

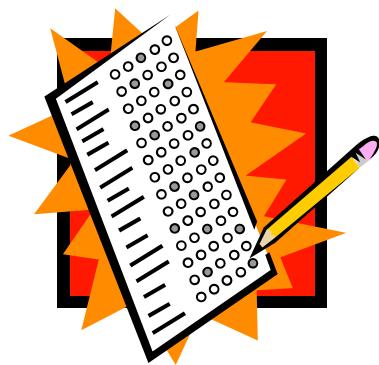
Topics Discussed

Scrum of Scrums
Demonstrate and Validate Sprint
Retrospect Sprint

Sprint Review & Retrospect Summary

- Scrum of Scrums
 - Demonstrate and Validate Sprint
 - Retrospect Sprint

Chapter Quiz





Questions and Answers

Review Questions:

1. How does Scrum scale?
 - A. How Scrum scales depends on whether the overall project reports to a project or program management office
 - B. Scrum doesn't scale, team size is limited
 - C. For really large projects Scrum scales using a Scrum of Scrums
 - D. The only way to scale is the Scrum of Scrums
2. If there is a Scrum of Scrums, what is the BEST answer to why it isn't time-boxed?
 - A. There are too many people attending the Scrum of Scrums. Since the number of teams represented is unknown, the time can't be constrained
 - B. Because that is what the SBOK says
 - C. It could be time-boxed if the participants want
 - D. To allow time to work out any problems or challenges presented
3. Which of the following are reasons for the Sprint Review Meeting?
 - A. Allows the team to learn lessons for process improvement
 - B. Demonstrate user stories that are done
 - C. Get stakeholders involved
 - D. Allow the Product Owner to confirm user stories are done
 - E. Identify issues with a plan to resolve them
 - A. A,B,C
 - B. D only
 - C. B,C,D,E
 - D. A and E
4. What happens to rejected deliverables?
 - A. They are removed from the Product Backlog
 - B. They are returned to the Product Backlog
 - C. They are reworked in the next Sprint for this team
 - D. They are reworked in the next Sprint for a different team
5. The Explorer-Shopper-Vacationer-Prisoner evaluation focuses on:
 - A. Good example of what doesn't work (i.e., what not to do in the next Sprint)
 - B. Lessons learned
 - C. Allows stakeholders an opportunity to register engagement
 - D. Team engagement

6. Which of the following are valid Scrum metrics?
 - A. Self-assessment
 - B. Story-point business case alignment percentage
 - C. Team velocity
 - D. Predicted vs actual
 - E. Hours per story point
 - F. Ratings from stakeholders
 - G. Done success rate
 - A. A,B,C,D,G
 - B. A,C,D,F,G
 - C. B,E,F
 - D. All of the above
7. What are Agreed Actionable Improvements?
 - A. Improvements the team has agreed to implement in the next Sprint
 - B. They are entries in the log the Scrum Master maintains for consideration by the Scrum Guidance Body
 - C. They form the basis for lessons learned
 - D. List of items the team will address to improve process and performance
8. Who, besides the Development Team, must attend the Sprint Retrospect meeting?
 - A. Scrum Master
 - B. Product Owner
 - C. Stakeholders
 - A. A only
 - B. B only
 - C. A and B
 - D. All of the above

Answer Key:

1. C
For really large projects, even a Scrum of Scrums might not be enough. C is correct.
2. D
D is correct.
3. C
C is correct.
4. B
B is correct.
5. D
D is correct.
6. B
B is correct.
7. D
D is correct.
8. A
The Scrum Master facilitates the meeting. The Product Owner MAY attend but is not required. A is correct.



Scrum Developer Certified (SDC)

Chapter 07 - Release

WORKBOOK



Chapter

Release

Lessons Covered

Ship Deliverables
Retrospect Project

Learning Objectives

- You will learn
 - The difference between handing over deliverables and release
 - Integration issues with organizational release and deployment
 - How to retrospect a project and recommend improvements
 - The concept of Minimum Functionality and its importance



Terms to Know

- Communications Plan
- Minimum Functionality
- Pilot Plan

Lesson

Ship Deliverables

Topics Discussed

*Piloting Plan
Organizational Deployment Methods
Communications Plan
Outputs*

Ship Deliverables

- The purpose of every Sprint is to produce “potentially shippable” solutions
- Based on the organization’s expectations and preferences, deliverables handed over for release to the customer depend on the release plan and customer requirements
- Many Sprints do not result in an immediate release of new functionality; the Product Owner works with the customer to determine the appropriate strategy and timeline for introduction of new deliverables

Pilot Plan

- One of the key (if optional) inputs into Ship Deliverables is a Pilot Plan
- Maps a Pilot deployment in detail
 - Scope and Objectives
 - Target User Base
 - Deployment Schedule
 - Transition Plans
 - User Preparation requirements
 - Evaluation Plan and Critical Success Factors

Organizational Deployment Methods

- Actual deployment depends on organizational methods
- Product Owner establishes a Minimum Functionality at which the customer releases a product or service.
- Integration with formal Release and Deployment processes manages risk and maximizes value
 - QA
 - Validation
 - Compliance
 - User Acceptance Testing
 - Sign-offs

Communications Plan

- Projects have a defined communications plan
- During testing, both the Product Owner and Product Sponsor facilitate communications consistent with the plan.
- Scrum does not identify a specific owner or format for the Communications Plan.
- The Scrum structure serves as a Communications Plan in how information is shared both among the Core roles and with other Stakeholders

Outputs from Ship Deliverables

- Working Deliverables Agreement
 - Customer sign-off
 - Often triggers revenue recognition
- Working Deliverables
- Product Releases
 - Release Content
 - Release Notes

Lesson

Retrospect Project

Topics Discussed

Retrospect Project Meeting

Tools and Techniques

Outputs

Conduct the Retrospect Project Meeting

- Like a Sprint Retrospect, Project Retrospect Meetings help the team improve its performance
 - Better held in an open, relaxed environment at the end of the Sprint; can be virtual if required
 - Not time-boxed
 - All Project team members attend, along with the Chief Scrum Master, Chief Product Owner and Stakeholders
 - Explore
 - Best practices
 - Process improvements
 - Process problems
 - Results in Agreed Actionable Improvements
 - Focus is on Lessons Learned for future projects

Tools & Techniques

- Similar to a Sprint Retrospect
 - ESVG
 - Speed Boat
 - Metrics and Measures
- Scrum Guidance Body ensures lessons learned are taken and integrated into the organization guidance

Outputs from Retrospect Project

- Agreed Actionable Improvements
- Assigned Action Items and Due Dates
- Proposed Non-Functional Requirements for the Prioritized Product Backlog
- Recommendations for the Scrum Guidance Body

Summary

Chapter Summary

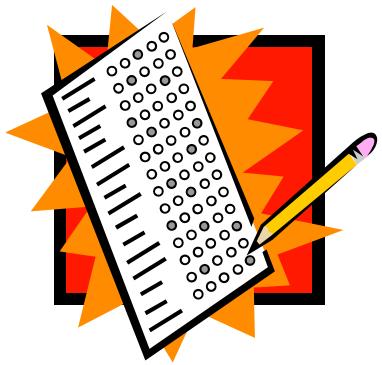
Topics Discussed

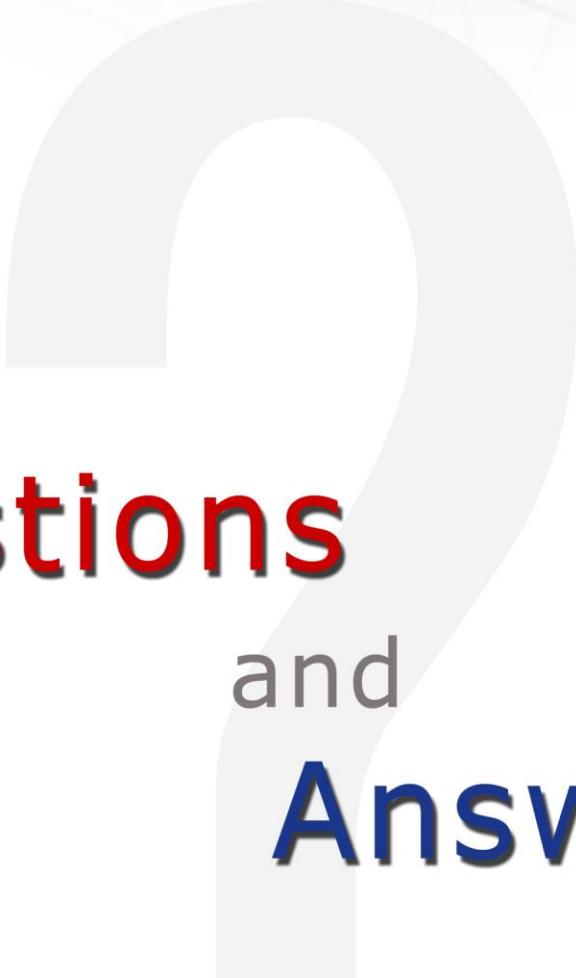
Ship Deliverables
Retrospect Project

Release Summary

- Ship Deliverables
- Retrospect Project

Chapter Quiz





Questions and Answers

Review Questions:

1. What is the purpose of a Sprint?
 - A. Complete an increment of code
 - B. Develop code to ship
 - C. Complete code that is potentially shippable
 - D. Work on the stories the team committed
2. When is code shippable?
 - A. When it's done
 - B. At the end of the Sprint
 - C. When the Product Owner says so
 - D. When the acceptance criteria for each committed story has been met
3. What is a Pilot Plan?
 - A. Another name for the Communications Plan
 - B. An optional plan that maps out how each released increment is piloted and deployed
 - C. Provides a sanity check to make sure the deliverables are targeted at the correct user base
 - D. Defines how the output from each will be used
4. Which of the following is true about deployment methods?
 - A. Based on established minimum functionality by the Product Owner
 - B. Highly dependent on organizational culture, methods and experience
 - C. Integrated with formal release and deployment processes to manage risk
 - A. All of the above
 - B. A and B
 - C. A and C
 - D. B and C
5. During testing the ____ and the ____ facilitate communications consistent with the Communications Plan.
 - A. Development Team and Scrum Master
 - B. Scrum Master and Product Owner
 - C. Core Team and Product Sponsor
 - D. Product Owner and Product Sponsor

6. What is true about the Project Retrospect?
 - A. Attended by just the core team
 - B. Attended by all project team members
 - C. Is a more formal meeting than the Sprint Retrospect
 - D. May be time-boxed, depending on the organization
7. Which of the following is true about the Project Retrospect?
 - A. The same techniques used in the Sprint Retrospect apply
 - B. The Scrum Guidance Body assures the lessons learned are incorporated into future projects
 - A. A is true
 - B. B is true
 - C. Both are true
 - D. Both are false
8. What happens to the product backlog when the project is closed?
 - A. It is never complete or closed until and unless the product(s) it represents are retired from service
 - B. It is archived as a part of project documentation
 - C. Ownership changes from the Product Owner to the Scrum Guidance Body until the next version or work increment is authorized
 - D. Nothing, once the product ships, the Product Backlog isn't needed

Answer Key:

1. C
C is correct.
2. D
D is correct.
3. A
B is correct.
4. D
D is correct.
5. D
D is correct.
6. B
Depending on the size and complexity of the project, the Project Retrospect is also attended by the Chief Product Owner and Chief Scrum Master. B is correct.
7. C
C is correct.
8. A
A is correct.