

**Scrum Training Series Part 2:
The Backlog Refinement Meeting**

by

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CLASSROOM

NARRATOR

Welcome to Part 2 of our Scrum Training Series: The Backlog Refinement Meeting. I'm Michael James. I help businesses do Scrum and related Agile practices.

We see the Scrum Flow Diagram.

While backlog refinement falls outside the officially named meetings in Scrum, everyone's discovered a need to do it.

We see the Scrum Timeline (Calendar) Diagram.

I like to do this a couple workdays before the next Sprint Planning Meeting giving the Product Owner a little time to revise priorities before commitments are made.

We see the team room door.

Let's go into a team room and see this happening. The ScrumMaster you're about to hear is played by a real life ScrumMaster named Nicole Lewis. Pay attention; I'm going to quiz you during the scene.

INT. CONFERENCE ROOM - 9:00 AM

A sign over the entire scene, or possibly at the door of the room, reads "Product Backlog Refinement Meeting, a.k.a. Backlog Grooming."

PRODUCT OWNER, TEAM, and SCRUMMASTER are in a rough circle. They face a Product Backlog, labeled "Product Backlog." The Product Backlog contains movable Product Backlog Items (PBIs), currently arranged from top to bottom, with labels: grades, attendance, event calendar, alumni archives, and scholarship awards.

NARRATOR

At the Backlog Refinement Meeting (also known as Backlog Grooming), we have a

Product Owner, a cross-functional self-organizing Scrum Development Team, and a ScrumMaster. This team has just started developing a student information system to help schools track student progress.

SCRUMMASTER

(addressing Product Owner and Team)

Hello, I'll be facilitating our *Backlog Refinement Meeting*. Within a two-hour *timebox*,

The "timebox" concept is emphasized visually. This could be done by coloring a wedge of time on a clock from 9:00 to 11:00, with a ticking kitchen timer that counts down from two hours, with the ScrumMaster's stopwatch, etc.

SCRUMMASTER (CONT'D)

we'll attempt to clarify and decompose the higher priority Product Backlog Items.

We see some sort of emphasis on the top three PBIs, perhaps a box appears around them, they glow brighter, or they wiggle, or something.

SCRUMMASTER (CONT'D)

As you'll recall from our training, any work that represents business value or consumes time and attention from the team may be worth listing in the Product Backlog. One objective of this Backlog Refinement Meeting is to create PBIs that are Independent, Negotiable, Valuable, Estimable, Small, and Testable.

MORE INFO - We see credit to Bill Wake for "INVEST" and a link to <http://xp123.com/articles/invest-in-good-stories-and-smart-tasks/>

QUIZ - INVEST

SCRUMMASTER (CONT'D)

Mr. Product Owner, since you're responsible for the *product vision* and *return on investment*

We see text "Product Vision" and "Return On Investment (ROI)" linked to the Product Owner somehow, such as with thought bubbles from the Product Owner's head, or the words appear with arrows pointing to the Product Owner. ("Product Vision" will become its own section later, so be ready to include a link to it.)

SCRUMMASTER (CONT'D)

why don't you start by telling us your current priorities?

Product Owner points vaguely toward the top three items of the Product Backlog.

PRODUCT OWNER

(smugly)

Based on my Vision for this Product, here are my top priority items: Grades, Attendance, Event Calendar, Alumni Archives, and Scholarship Awards. Oh, and I want the pages to look really good. When can you have that done?

There is a moment of silence as the development team members look at each other in complete bewilderment.

PETER

(angrily)

We have no idea! It will be done when it's done! Call us when you've finished writing the requirements!

QUIZ - MULTIPLE CHOICE - "What should the ScrumMaster say next?"

ScrumMaster points toward the top of the Product Backlog while talking.

SCRUMMASTER
[repeats "right answer"]

MORE INFO - <http://AgileManifesto.org/principles.html>

TIM TESTER disengages from the group circle, produces a cell phone, starts playing with it.

TIM TESTER
(addressing
ScrumMaster)
I'm just a tester. I don't know
anything about development. Do you
mind if I play with my phone until you
start talking about testing?

QUIZ - MULTIPLE CHOICE - "What should the ScrumMaster say next?"

SCRUMMASTER
(to TIM)
[repeats right answer]

ANDY ARCHITECT
(to TIM)
In the past I've just written code and
handed it off to another department for
testing. You have years of experience
with testing. And now we're in this
together. I'd appreciate your
expertise in this meeting.

TIM looks upset.

TIM
(to ANDY)
Dude, I don't work for you.

ANDY
(to TIM)
Yes you do, just as we work for you.
On a self organizing team we all work
for each other.

MORE INFO - Scrum Reference Card section "Team Self-Organization."

TIM

OK.

TIM puts phone away, rejoins group circle.

ScrumMaster points at the clock (or kitchen timer, or her stopwatch, or whatever we wind up using).

SCRUMMASTER

Since this meeting is timeboxed, I suggest focusing on the top item for now: Grades.

The Grades PBI is visually highlighted. Product Owner nods. Formerly agitated team members now appear relieved.

SCRUMMASTER (CONT'D)

I propose using estimation cards to get a better cross section of opinions about the effort to get that PBI into potentially-shippable form.

This particular team likes to make estimation a game using four cards per person, with T-shirt sizes of S, M, L, and XXXXL. [DESIGNERS: please contact me for card face images.] The ScrumMaster distributes them so that each team member has all four cards to choose from.

MORE INFO - display link <http://blogs.collab.net/agile/2007/08/23/estimation-game/>

Each team member then chooses one card and waits for the others to choose. Then each team member reveals the chosen card to everyone else. In this case we see the estimates are a random assortment of all four choices.

Upon seeing the choices don't match, the team members and Product Owner look anxious. The ScrumMaster remains calm.

SCRUMMASTER

Let's hear the reasoning behind these guesses.

ALLYSON holds up an estimation card with an "S." (Look at that S-card go!)

ALLYSON

I picked Small because displaying the grades to students is just a few lines of code.

CARLA holds up an estimation card with an "XXXXL."

CARLA

I picked Extra Large because I can't imagine how we'd start testing such a vague requirement.

TIM holds up an estimation card with an "L."

TIM

I picked Large because I thought the requirement was to allow teachers to update grades, not just display them.

Product Owner looks completely surprised. As the Product Owner talks, we see the Grades PBI growing bigger and bigger like The Incredible Hulk.

PRODUCT OWNER

Actually, I what I really want is teachers to be able to update grades, students to be able to view them online, and report cards sent to parents each semester.

Team looks worried about the size of the 'Grades' PBI.

PRODUCT OWNER (CONT'D)

(no longer looking
smug)

Now I realize I'll need your help refining the Grades Product Backlog Item.

QUIZ - MULTIPLE CHOICE

Question: "Why does the Grades PBI need additional refinement?"

Wrong answer: "It's not Independent, Negotiable, or Valuable."

Right answer: "It's not Estimable, Small, or Testable."

END OF QUIZ

The ScrumMaster gestures toward the now-bloated 'Grades' PBI.

SCRUMMASTER

The team seems to feel the Grades PBI is actually an *epic*, which can be split into several distinct *user stories*. This is one of the purposes of this Backlog Refinement Meeting.

It turns out most people don't use most features of most products. Even the features they do use can be split into more valuable and less valuable parts.

ScrumMaster's words are accompanied by a "too big vs. right size" animation. [DESIGNERS: contact me for ideas on this.]

SCRUMMASTER (CONT'D)

A well-formed PBI toward the top of the backlog is no bigger than a quarter of a Sprint, and ideally smaller than that.

ScrumMaster introduces a pair of scissors. [DESIGNERS: please place great visual emphasis on the scissors.]

SCRUMMASTER (CONT'D)

Maybe we can split the Grades epic into more valuable parts to get smaller user stories.

PETER

(looking worried)

Generating the report cards will be really hard because it depends on the unreliable third-party PDF libraries.

PRODUCT OWNER

I'm willing to put Report Cards on the bottom of the backlog, for now, if we can at least allow teachers to update grades online. They tend to lose their paper records before it's time to turn them in.

Product Owner splits off the Report Cards PBI from the bloated Grades PBI (epic) and puts it at the bottom of the Product Backlog. The Grades PBI shrinks a little, but is still too big. [DESIGNERS: Talk to me about ideas for visually depicting splitting epics into stories.]

SCRUMMASTER

It's often useful to identify who, what, and why in a Product Backlog Item. For example,

ScrumMaster writes onto a new PBI, extracted from the bloated "Grades" PBI (epic), while speaking.

SCRUMMASTER (CONT'D)

View Grades: As a student I can see my grades online so that ...

PRODUCT OWNER

so I don't have to wait until I get to school to know whether I'm passing.

ScrumMaster finishes writing the PBI with what the Product Owner said.

PETER

OK, I understand that one now. It has the who, the what, and the why.

We see visual emphasis on "who," (the student) "what," (see my grades online) and "why" (I don't have to wait...).

PETER (CONT'D)

It's somewhat *Independent*, and it represents distinct *business Value*.

We see "INVEST" again: "Independent, Negotiable, Valuable, Estimable, Small, and Testable."

CARLA

If we work together it may be *Small* enough to get into potentially shippable form in a couple days.

TIM

At first glance it seems *Testable*.

SCRUMMASTER

We'll leave room to add some acceptance criteria.

ScrumMaster writes the header "Acceptance Criteria / DONE:" in the middle of the PBI (after the story text which already reads "As a student I can see my grades online so that I don't have to wait until I get to school to know whether I'm passing."). She leaves the bottom half of the PBI blank for now.

MORE INFO - <http://blogs.collab.net/agile/2008/10/14/suggested-topics-for-definition-of-done-discussion/>

PRODUCT OWNER

What about Update Grades? As a teacher, I can update grades online so I no longer depend on administrators to do it for me.

The ScrumMaster extracts the Update Grades story from the bloated Grades epic, which shrinks slightly.

SCRUMMASTER

(addressing PO)

Is this more or less important than View Grades?

PRODUCT OWNER

Prioritize? I want all these features at once!

Laughter.

PETER

And I want a pony.

We see a thought bubble from PETER with a fantasy image of a pony, perhaps gift wrapped and/or under a Christmas tree.

QUIZ - MULTIPLE CHOICE

Question: "Do most people use most features of most software products?"

Wrong answer: "Yes. Success depends on pushing hard to get everything done."

Right answer: "No. Many people wish the 20% of features they actually use the most had been properly tested."

END QUIZ

QUIZ - MULTIPLE CHOICE

Question: In effective Scrum, how are priorities represented in the Product Backlog?

Wrong answer: PBIs are grouped into buckets P1, P2, P3, etc.

Right answer: Items on top are more important than items on the bottom. No two items can be exactly the same priority, especially at the top.

END QUIZ

MORE INFO - "Product Backlog" section of Scrum Reference Card.

As Product Owner speaks, we see him arrange the Product Backlog so that View Grades is on top, and Update Grades is next.

PRODUCT OWNER

(a little grumpy)

I suppose View Grades has the most business value. If we didn't finish Update Grades, school administrators could still use the legacy system to update the grades. I wouldn't be very happy about that though.

SCRUMMASTER

(to Product Owner)

Feel free to re-prioritize the Product Backlog at any time.

PETER

We're not committing to do the work in this sequence?

SCRUMMASTER

No commitments are made in the Backlog Refinement Meeting. Later, when we get to the Sprint Planning Meeting

Flash back to intro module Scrum Flow diagram.

SCRUMMASTER (CONT'D)
you'll decide how much work to take on
within one Sprint.

Return to scene.

QUIZ - MULTIPLE CHOICE

Question: Who is ultimately responsible for prioritizing the
Product Backlog Items?

Wrong answer: The ScrumMaster.

Right answer: The Product Owner

Wrong answer: The Development Team.

Wrong answer: External stakeholders.

Wrong answer: No one. It is done by majority vote.

END QUIZ

MORE INFO - "Roles" section of Scrum Reference Card.

TIM picks up his estimation cards.

TIM
Let's try estimating the View Grades
PBI.

PRODUCT OWNER
[reads text of "View Grades" PBI]

Each developer picks a card, as before, waiting until the others
have picked before showing their choices. This time Developer
#1 picks "M" (medium) while the others pick "S" (small).

ANDY
(impatiently)
It's just a few lines of code.

CARLA

I agree it's small. The UI design is simple.

ALLYSON

Since this item doesn't alter the database, both the technical risk and the testing effort are low.

TIM

I disagree. I picked medium because the previous semesters' grades are kept on a different legacy system.

Other developers look worried.

ANDY

Oh yeah, I forgot. Does this have to work for previous semesters, or just the current semester?

PRODUCT OWNER

I hadn't thought about it until you asked. I'm really interested in the current semester. We won't need the previous semesters until later on.

Developers look relieved.

The ScrumMaster splits the "View Grades" PBI into two: "View Grades, Current Semester" and "View Grades, Previous Semesters."

The Product Owner inserts "View Grades, Previous Semesters" toward the bottom of the Product Backlog, just above "Report Cards." "View Grades, Current Semester" remains at the top of the Product Backlog.

QUIZ -- MULTIPLE CHOICE

Question: "What is the main objective of the Backlog Refinement Meeting?"

Wrong answer: "To get precise estimates." If the user chooses this answer, display MORE INFO - "When Is Scrum Appropriate" section of Scrum Reference Card.

Wrong answer: "To get a better understanding of upcoming work and combine it to form larger PBIs."

Right answer: "To get a better understanding of upcoming work and split it to form smaller PBIs."

Wrong answer: "To get a better understanding of upcoming work and create a monolithic, detailed design document."

END QUIZ

MORE INFO - "Backlog Refinement Meeting" section of Scrum Reference Card.

ScrumMaster points at the top PBI.

SCRUMMASTER

Revote?

Development Team votes again. This time Developer #4 picks L (large) while the others pick S (small). They hold up their cards simultaneously.

ALLYSON

Looks like I'm the outlier this time.
I just realized what a pain it will be
to get the table display working on
Ethernet Exploiter 6.

Development team looks horrified.

ANDY

EE 6??? I thought we only had to
support FingerFly now!

PRODUCT OWNER

That's correct. The district has banned the use of Ethernet Exploiter, especially EE 6.

CARLA

Let's make that explicit in the acceptance criteria.

ScrumMaster adds "Works on FingerFly" to the acceptance criteria of the PBI. [DESIGNERS: Contact me for PBI illustration.]

Developer #4 holds up his S card. ("Look at that S-card go!")
(Get it yet?)

ALLYSON

In that case I'm good with small.

Someone writes "S" on the PBI.

QUIZ - MULTIPLE CHOICE

Question: "What's the difference between acceptance criteria and definition of *done*?"

Wrong answer: There's no difference.

Right answer: Definition of *done* applies globally to all PBIs for a product, while acceptance criteria pertain to specific items. Acceptance criteria could also form the basis of new stories.

END QUIZ

Fast forward. Time speeds up for the remainder of the time box. Developers, Product Owner, and ScrumMaster swarm on the top of the Product Backlog, doing the same thing we've been seeing only in fast motion. The audio goes into high pitched squeaks like a tape running very fast. When the timebox runs out, there are about seven PBIs on the top with estimates and another seven on the bottom without estimates.

SCRUMMASTER

OK, I think that's enough. We've used up our two-hour timebox and I can tell

from everyone's body language we're done with this meeting.

CARLA

But we didn't refine the entire Product Backlog!

PETER

And we never will.

PRODUCT OWNER

True. But now we have a much better picture than before of what we might do the next couple Sprints.

SCRUMMASTER

Don't forget Agile approaches involve some planning. We just value responding to change more.

Flashback to the Agile Manifesto seesaw from "Introduction to Scrum" (v19 slide 8).

SCRUMMASTER (CONT'D)

I declare the Backlog Refinement Meeting over!

Developers, Product Owner, and ScrumMaster high five.

END SCENE

[Animation for the narration section is left up to the designers. The tone should probably be a little more serious than during the scene.]

NARRATOR

The Backlog Refinement Meeting is also called Product Backlog Grooming, Backlog Estimation, and even Story Time. The team should set aside a little time for this every single Sprint.

We see the Sprint timeline illustration. [DESIGNERS: get this from me if not clear.]

NARRATOR (CONT'D)

For example, if you're doing two-week Sprints, the team should take a two hour break somewhere in the middle for Product Backlog Refinement.

The purpose of the Backlog Refinement Meeting is to help the Product Owner get the top of the Product Backlog ready for the next Sprint Planning Meeting. (If you haven't groomed the Product Backlog during Sprint Execution, or if it's your very first Sprint, you'll need more time for this in your Sprint Planning Meeting.) The Product Owner cannot do this alone – the whole team's gotta help. Remember Agile means business people and technical people working together constantly. The Product Owner makes the final call about the requirements though, especially prioritization.

Backlog refinement includes estimation of effort, clarification of requirements, and decomposition of large Product Backlog Items (often called "epics") into smaller ones (such as "user stories").

We see the Running Tested Features graph.

Learning to identify the smallest possible parts of the work that still have customer value will move you away from the blue waterfall line toward the green ideal line.

We see the small truck, large epic illustration.

@@@

For more information on the Backlog Refinement Meeting, please review the Scrum Reference Card.

MORE INFO - We see an illustration of the Scrum Reference Card.

That was just one example of a Backlog Refinement Meeting. You can read more about it at these links, or even be guided through backlog refinement firsthand at one of our classes held around the world. To get coaching in Scrum, or tools such as ScrumWorks, TeamForge, or Subversion, give us a call here at CollabNet. To send feedback on this training module, email scrumwbt@collab.net or @michaeldotjames on Twitter.

The next module in this series covers the Sprint Planning Meeting.

END LESSON

NEXT LESSON - Sprint Planning Meeting