Practicing Kanban Using Azure Boards

Azure DevOps | 2020.2

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Practicing Kanban Using Azure Boards

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Practicing Kanban Using Azure Boards

Course Introduction

Accentient

- A leader in ALM, DevOps, and Scrum knowledge
- Helped thousands of teams and individuals understand and implement Azure DevOps/VSTS/TFS and Scrum successfully
- Has a close working relationship with Microsoft
- Course creator and steward for Scrum.org
- Has trainers that are Microsoft MVPs, Professional Scrum Developers, Professional Scrum Trainers, and authors

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Course Creator: Richard Hundhausen

- President of Accentient
- Author of software development books
- First Microsoft TFS/ALM/DevOps MVP
- Professional Scrum Developer
- Professional Scrum Trainer
- Co-creator of Nexus scaled Scrum Fx
- richard@accentient.com
- @rhundhausen

http://bit.ly/1eL0t4C

PSD PST

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Prerequisites

- Familiar with software development lifecycle
- Familiar with team based development
- Familiar with Kanban
- Familiar with Azure DevOps/VSTS/TFS

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Kanban Team Formation

5 MIN

- Form into teams of five (5) members or less
- Make sure experts aren't all on the same team …
  - Kanban/Agile experts
  - Azure Boards experts
  - Architecture/design experts
  - Programming experts
  - Testing experts
- Co-locate your team
- Name your team

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Introductions

- Name
- Title/Role
- Development Experience
- Kanban/Scrum/Agile Experience
- Azure DevOps/VSTS/TFS experience
- Expectations

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Course Overview

- This course shows you how to configure and use Azure Boards to effectively practice Kanban and achieve flow
  - Kanban theory, principles, and practices
  - Defining workflow
  - Visualizing work
  - Limiting work in progress (WIP)
  - Actively managing WIP
  - Inspecting, adapting, and improving flow

Course Backlog

1. Introduction to Kanban
   - Theory, principles, and practices
   - Support for different types of work
2. Visualizing the Workflow
   - Defining the workflow
   - Setting up and using the Kanban board
3. Limiting Work in Progress (WIP)
   - Setting up and using WIP limits
   - Experimenting with WIP limits
4. Managing for Flow
   - Flow-based metrics and analytics
   - Inspecting, adapting, and improving flow

Our Azure DevOps Services Environment

- We will be using a shared instance of Azure DevOps Services
- Each team will …
  - Be collocated (if possible)
  - Have its own team project
  - Collaborate on all work in this class
- Each team member will …
  - Need a Microsoft Account

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Our Case Study: Fabrikam Fiber

All hands-on activities will focus on a fictitious company named *Fabrikam Fiber*, and its two teams: a support (red) and a product development (green) team.

Working as a team, in a shared instance of Azure DevOps Services you will see how Azure Boards can support Kanban and help a team achieve flow

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Schedule and Logistics

- Lunch
  - Flexible (we'll try for 11:30 to noon)
- Breaks
  - Mid-morning and mid-afternoon
- Labs
  - All labs are breaks too!

Collaborating as a Team

- There are many opportunities for collaboration in this course
  - Some tasks, however, must be performed by *one* team member
- All tasks will be marked with an appropriate icon …

The team can self-organize and execute the task however they decide
Only the "leader" should execute this task
Only the "followers" (not the leader) should execute this task
Everyone on the team should execute this task
Everyone on the team should execute this task (working in pairs)

Practicing Kanban
Using Azure Boards

Module 2

Visualizing the Workflow

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Module Backlog

- The Kanban Board
- Defining the Workflow
  - Mapping in Azure Boards
- Making Policies Explicit
  - Definition of "Done"
  - Classes of Service
  - Configuring in Azure Boards
- Lab

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Visualizing the Workflow

Kanban Core Practice

- Teams have a high-level routine for producing features or improvements

Take an item from the backlog → Specify work → Implement it → Validate it → Deliver it

- For teams with formal methods, complex procedures, or who follow standards (governance and compliance), they may have multiple steps within each step

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The Kanban Board

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The Kanban Board

- Knowledge work is invisible, therefore it's necessary to visualize the workflow using a Kanban board
- The board can visualize the work as well as the workflow

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The Kanban Board vs. the Backlog

- A Kanban board turns a linear backlog into an interactive, two-dimensional board, providing a visual flow of work
- As work progresses from idea to completion, a team updates the items on the board
- This visualization makes transparent the current item's progress or lack of progress

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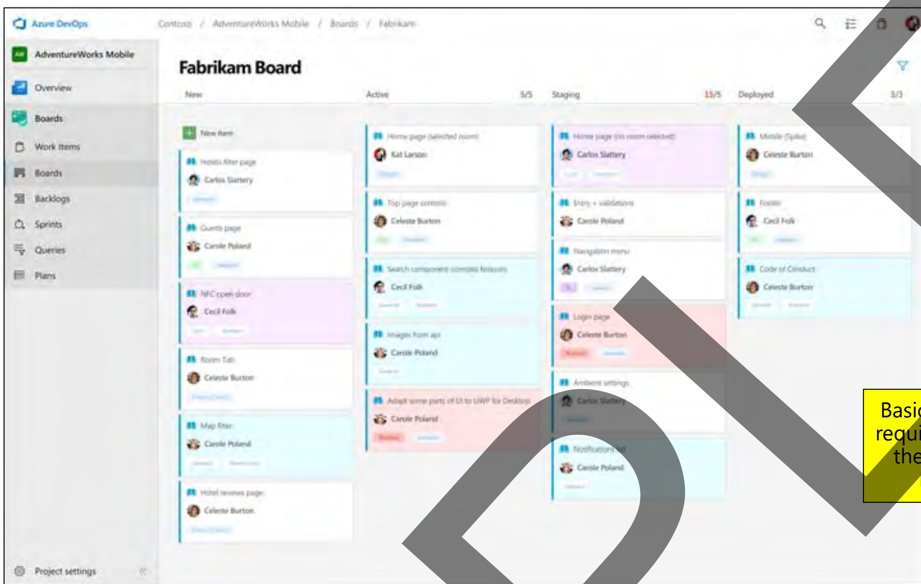
The Azure Boards Kanban Board



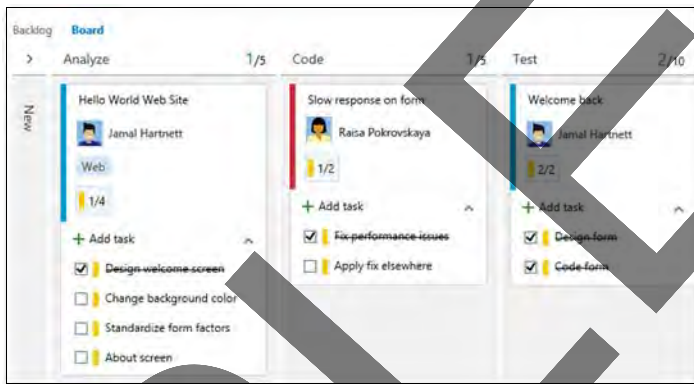
Basic access is required to use the Kanban Board

A Kanban Board is not a Taskboard

- Kanban boards track requirements, are sprint-independent, and provide a cumulative flow chart for monitoring progress
  - Kanban boards track requirement work item types (product backlog items and user stories) as well as bugs
- Taskboards are associated with a sprint and are typically used by Scrum teams
  - Taskboards track *task* work items

A Kanban Board Can Contain Task Checklists

- Task checklists provide an easy and visual way to track the work details of an item on the board
- Tasks can be …
  - Created directly from the Kanban board
  - Reordered and/or reparented via drag and drop
  - Marked as done by simply checking the box



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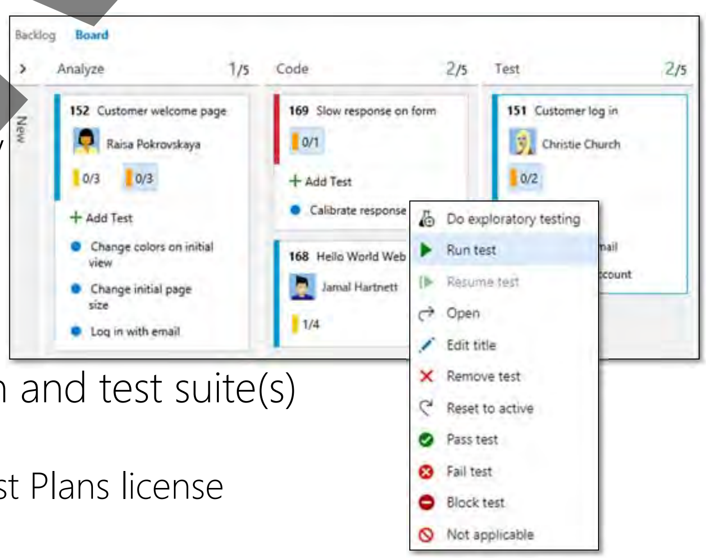
A Kanban Board Can Contain Inline Tests

- Similar to task checklists, you can quickly define inline tests, or a set of manual tests, for an item on the board
- Inline tests can …
  - Be run from the board
  - Have their outcome updated
- Behind the scenes, a test plan and test suite(s) are automatically created
  - Users do not need a Basic + Test Plans license



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Defining the Workflow

Step 1: Choose the Right Workflow

- Prefer continuous, collaborative workflows
  - These are ones that involve orderly cooperative activities by multiple people or teams
- Don't create a Kanban board for a process with no clear flow of work or ordered activities
  - Examples: Processes that require immediate decision-making, have sudden scenario changes, or require a creative effort with lots of subjectivity

Step 2: Map Each Step

- As a team, identify and understand each step
  - Maybe start by defining the users/players
- Pay attention to *when* a work item changes hands
  - This will define the board columns
- Identify any (potential) bottlenecks
  - These could be steps where there is a great possibility of a delay, lack of people (resources), or some other risk to flow

- Tip: Don't try to improve, optimize, or perfect the process at this point. That will come later.

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Tip: Include Only the Steps That Your Team Does

- Leave out the steps that occur *before* items reach your team
  - Examples: high-level planning, budgeting, specifications
- Leave out the steps that take place *after* items are delivered
  - Examples: training, support, marketing

- Visualizing workflow may make transparent the need to combine teams (or split them)

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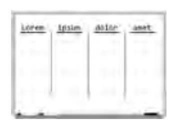
Tip: Combine Steps as Needed

- If two sequential steps are usually performed by the same person, combine them
  - Example: Writing code + writing unit tests + leading a code review may become a single "Implement" step
- Once work is flowing smoothly, revisit these steps to see if quality and/or throughput can be improved by splitting

Step 3: Create the Columns

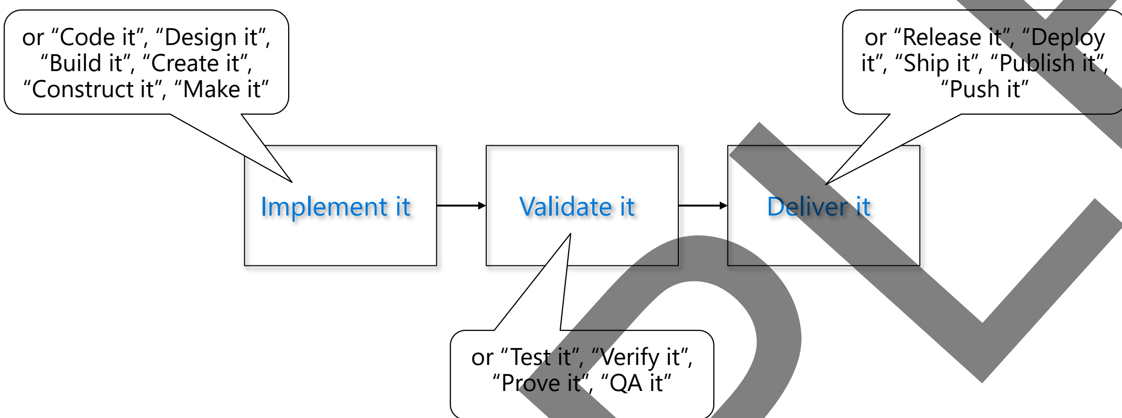


- Create the columns that your team has identified using simple, agreed-upon names
  - The first (leftmost) column is typically a *backlog* or *queue*
  - The next column is where the workflow starts (e.g. "Analyze")
  - The rightmost column is where the workflow ends (e.g. "Done")
- You can have as many (or as few) columns as is necessary

Backlog	Analyze	Develop	Test	Done

Tip: Keep it simple

- Although you want to start with what you do now, if you have any doubts, consider these fairly common steps ...



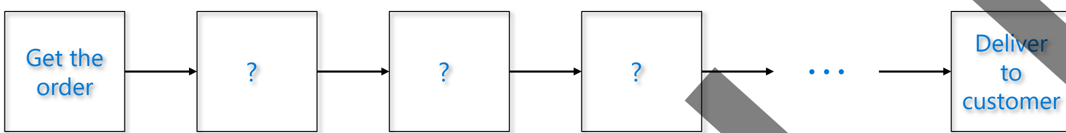
Tip: Things to Avoid

- Too many columns
- Columns that are dependent on an individual
- Columns for "blocked" items
- Not having a clear starting and finishing column
- Using the first (leftmost) column for WIP

What would your workflow look like?

5 MIN

As a team, define *your* workflow for creating a pizza …



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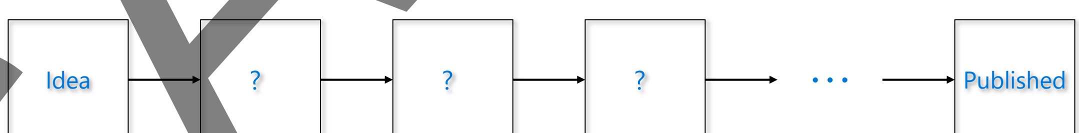
What would your workflow look like?

5 MIN

As a team, define *your* workflow for writing a blog post …



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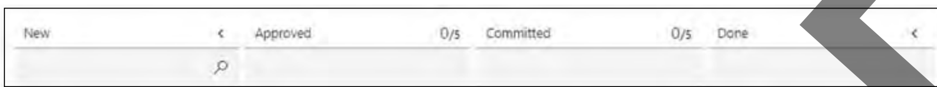
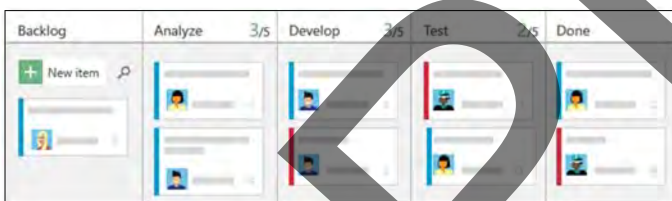
Mapping Your Team's Flow in Azure Boards

- By default, the Kanban board displays one column for each state



  - The actual columns vary based on the project's process
  - Your team's workflow stages will most likely be different
- After identifying the stages of the workflow process, they can be mapped to the Kanban board as columns



Making Policies Explicit

Make Policies Explicit

Kanban Core Practice

- Explicit policies are a way of articulating and defining a process that goes beyond the basic workflow definition
  - Making workflow and policies transparent enables the team to tune their process using experiments
- Examples
  - WIP limits
  - Capacity allocation and balancing
  - Definition of "Done"
- Note: Different classes of service may have different policies

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Policies: Examples

- WIP limits
- Capacity allocation and balancing
- Definition of "Done"
- Replenishment policies (for selecting new work when capacity is available)
- Classes of service (a.k.a. swimlanes)

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Definition of "Done"

- Teams should record the processes and standards they agree to follow and make them readily accessible
  - This is called a definition of "Done"
- Each WIP column can have its own definition of "Done"
  - Before a work item is moved from that column, its definition of "Done" must be met (a.k.a. "pull criteria")

Definition of "Done" Examples

Before work starts on a new user story

- ✓ Customer needs are understood
- ✓ Acceptance criteria adequately defined
- ✓ Dependencies have been identified
- ✓ Feature has been sized

Dev complete, ready for testing

- ✓ Code complete, commented, and styled according to our standards
- ✓ Code pair programmed or peer reviewed
- ✓ Code builds without errors or warnings
- ✓ Passes unit and system tests.
- ✓ Related tasks closed (remaining hours set to zero)

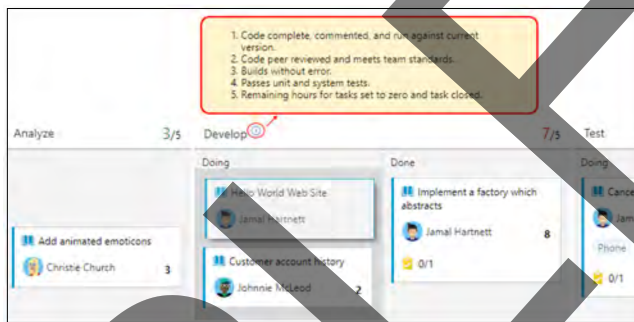
Testing complete, ready for release

- ✓ Acceptance tests are written and pass
- ✓ Regression tests are green
- ✓ No known failures
- ✓ Sufficient exploratory testing has been performed
- ✓ Release note has been written

Backlog	User Story Preparation		User Story Development		User Story Testing		Released
	In Progress	Done	In Progress	Done	In Progress	Done	

Configure Definition of “Done” in Azure Boards

- Definition of “done” criteria can be specified for each column
  - Markdown is supported
  - Cannot be specified on non WIP (leftmost or rightmost) columns
- At any time, team members can check that they have met the criteria by selecting the information tooltip info icon



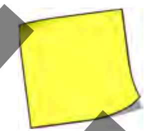
Visit http://bit.ly/2Nwvz2W for more information

Classes of Service

- Categories of work items that may warrant different policies for selection and processing based on different criteria
- Four widely-recognized class-of-service types:

Standard	The baseline class of service
Expedite	Very high urgency
Fixed Date	Date-driven, with a potential rapid/steep change in cost of delay
Intangible	Low current urgency but likely to change significantly in the future

Standard Class of Service



- A normal work item that represents a customer ask
  - This could be a Product Backlog Item (PBI) or user story
- This class has no timelines
  - Consider a FIFO (First In, First Out) principle for this class of service

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Expedite Class of Service

- The highest priority of work
  - The workflow of this class of service should not be interrupted
  - <u>Examples</u>: Live site incidents, outages, data breaches
- This class of service can break current WIP because it has precedence
- <u>Note</u>: Using an expedite lane generates *flow debt* and lowers predictability

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Fixed Date Class of Service

- A normal work item that has a deadline
  - This could be a Product Backlog Item (PBI) or user story that must be completed by a defined date
- These work items can flow in parallel with standard class of service work

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Intangible Class of Service

- Useful but negligible (not urgent) work items
  - Examples: Infrastructure upgrades, UI improvements, data optimizations, technical debt payoffs
- Intangible class of service items may become urgent
  - Especially if they are ignored for a long period of time (e.g. technical debt, upgrades)

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What classes of service does your team offer?

5 MIN

Expedite? Fixed date? Intangible? Other?

About what percentage of work fit into these classes?

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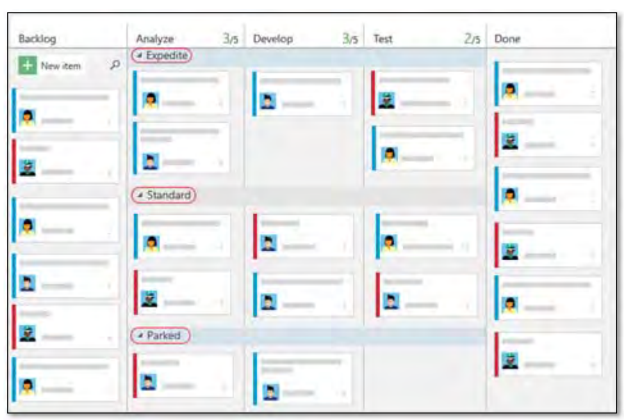
Configure Swimlanes in Azure Boards

- Add swimlanes to support different classes of service
  - Add swimlanes to support other dimensions as well (e.g. *Parked*)
  - The default lane can be renamed
- Team members can drag items into a swimlane as well as reorder them within the lane
  - Focus can be given to a single swimlane by collapsing the others



Visit http://bit.ly/2Swi0Bb for more information

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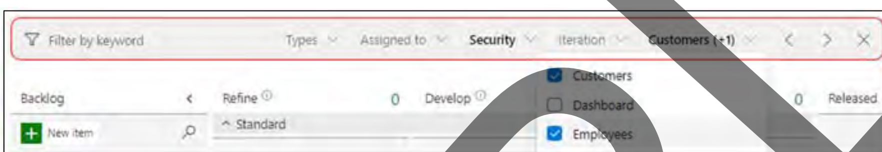
Filtering the Kanban Board

- For some teams and projects, a large number of work items can crowd the Kanban board
- Filters allow you to choose what work items are displayed
  - Keyword, work item types, assigned to, tags, iteration, areas, and parent work items



Visit http://bit.ly/2IHc0pR for more information

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Kanban Board Keyboard Shortcuts

n	Add new item
c	Add new child item
home	Select first item
enter	Open item
ctrl+shift+f	Filter results
ctrl+up	Move item up
ctrl+down	Move item down
ctrl+left	Move item left
ctrl+right	Move item right
ctrl+home	Move item to top of column
ctrl+end	Move item to bottom of column
ctrl+shift+up	Move item to swimlane above
ctrl+shift+down	Move item to swimlane below
f2	Rename item
e	Show/hide empty fields
o	Expand all swimlanes
u	Collapse all swimlanes
shift+pageup	Select first/next swimlane above
shift+pagedown	Select last/next swimlane below

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Module Retrospective

What have we learned in this module?

- A Kanban board is a tool to visualize a workflow
  - Ideally the workflow allows multiple people/teams to collaborate
- Have a clear flow of work before configuring the board
- Make workflow and policies transparent to enable the team to tune their process using experiments
  - Add Definition of "Done" to the columns
  - Use swimlanes to supports different levels of service

Lab

30 Minutes

In this lab you will define and visualize a workflow.

- Review the default Kanban board
- Customize the Kanban board
- Implement a definition of "done"
- Implement an *expedite* class of service

Lab 2: Visualizing the Workflow

Practicing Kanban Using Azure Boards

LAB OVERVIEW

In this lab your team will use define and visualize your workflow using Azure Boards.

Estimated time to complete this lab: **30 minutes**

Task Execution

As this is a team-based training course, there are a number of opportunities for team members to learn to collaborate more effectively. Unfortunately, there is a possibility for team members to accidentally impede, block, or otherwise cause unintentional conflicts. To minimize the possibility of conflicts, critical tasks in this course have been marked with an icon indicating who on the team should execute the task:

- The team can self-organize and execute the task however they decide
- Only the “leader” should execute this task
- Only the “followers” (not the leader) should execute this task
- Everyone on the team should execute this task
- Everyone on the team should execute this task (working in pairs)

Tip: Look for the “leader” tasks and ensure that they are only performed once per team. Also, ensure that the “follower” tasks are only performed by everyone else (not the leader).

Teams of One

If you are working by yourself and not on a team, make sure to perform all of the “leader” tasks, and none of the “follower” tasks. This scenario is common for students learning remotely.

EXERCISE 1 – REVIEW THE DEFAULT KANBAN BOARD

Task: Review the Default Kanban Board or

In this task each team member, or pair of team members, will review the default Kanban board.

1. Navigate to the **Green** team's **Backlog** on the **Boards** hub.

   This page shows you a one-dimensional list of work items. A team can use this view to quickly plan and prioritize its work, but it's more difficult to see work items by workflow state.

2. Click **View as Board**.

   This takes you to the Kanban board, which a team can use to view and update work status, especially when employing Kanban methods.

   For more information on backlogs and boards, visit http://bit.ly/2VrXXWJ.

   What are the current *columns*? ____

3. Collapse the leftmost **New** column by clicking its **<** icon.

   This column typically represents items that have newly arrived in the backlog. Those items may not be that interesting to the team throughout the day.

4. Collapse the rightmost **Done** column by clicking its **<** icon.

   You should now see only the two columns (*Approved* and *Committed*) at this point. Collapsing the outermost columns is a nice feature when a team has a complicated workflow with many steps.

5. Expand the **New** column so you can see the work items.

6. Click the Filter icon at the top.

7. Filter by the keyword **customer**.

   How many cards (work items) are displayed now? ____

8. Click the **Customer search** work item to open it.

   What is the work item *ID*? (Hint: It's in the upper left of the work item window) ________________

   You can also filter by work item ID to quickly find the card you are looking for.

9. Close the work item window.

10. Change the keyword filter to **security**.

    How many cards (work items) are displayed now? ____

    These work items contain a *Security* tag. Tags are displayed by default on the Kanban board.

11. Clear the keyword filter.

12. In the **Tags** filter dropdown, select **Security**.

    Do you see the *Security* tagged cards (work items) again? ____________________________________

    You can also filter by work item types, assignment, iteration, area, and parent work item.

13. Clear all filters.

    You can easily do this by clicking *X* to the right to clear and dismiss the filter.

Task: Assign Work Items to Team Members

In this task your team will collaborate and assign an equal number of cards (work items) to each team member using the *Live Update* feature to avoid having to constantly refresh the page as information changes.

1. Ensure that each team member can see all **New** work items.

   If necessary, unhide the *New* column and remove any filters.

2. Click the icon at the top to enter full screen mode.

   This will maximize the board allowing you to see as many work items as possible. When you are done, you can click the icon to return to normal screen mode.

3. As a team, split the work items as evenly as possible between the team members or pairs of team members.

   Which work item IDs are yours? ____

4. Click the icon and verify that the **Live updates** option is **on**.

   This feature will automatically refresh your Kanban board when changes occur. As one team member updates the board, other team members will see those updates in real time as they occur without having to press F5 to refresh the browser.

5. Click on one of *your* work items.

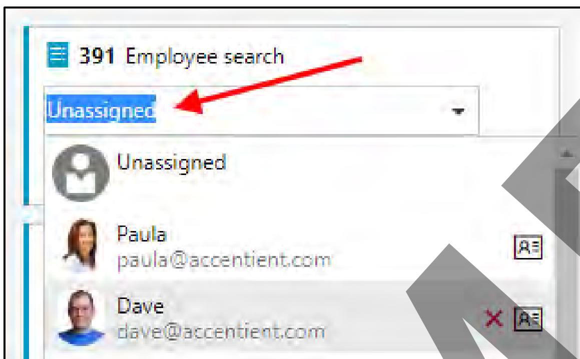
6. In the work item window, click **Unassigned** and select your name.

   If your name is not in the dropdown, you may have to search for it first. It should subsequently appear in the dropdown.

7. Click **Save & Close**.

   You should now see your name and avatar on that work item.

8. For your next work item, click on the **Unassigned** directly on the card and select your name.



Note: You may have to expand the card first to see the *Unassigned* value.

9. Repeat the above steps until you've assigned all of *your* cards to yourself.

10. Verify that all of the cards have been assigned to your team members.

Task: Size Each Work Item or

In this task each team member, or pair of team members, will assign a story point value to each of their work items.

Note: Sizing items in Kanban is an optional practice. We are only doing this task to gain experience using the tool and not to suggest that a Kanban team must size/estimate their work items.

1. Click on one of *your* work items.

2. Quickly decide, on your own or with a colleague, if this is a *small*, *medium*, or *large* piece of work.

3. In the **Effort** field, enter a **2**, **5**, or **13** respectively:

   - Small = **2**
   - Medium = **5**
   - Large = **13**

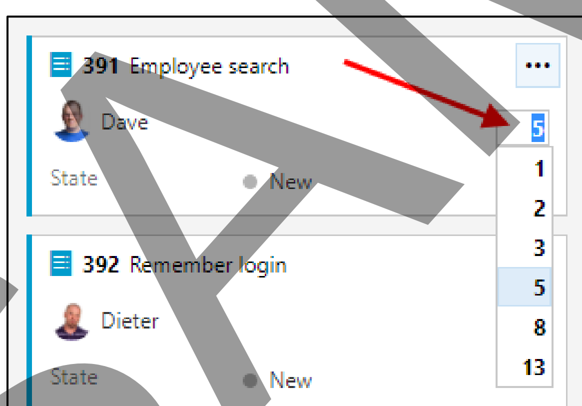
   Effort (typically story points) are a relative estimate of the amount of work required to complete a work item. Most Agile methods recommend having the entire team discuss the work and then set the estimate based on relatively-sized work that the team has previously completed.

   Try to have some variety in your estimates.

4. Click **Save & Close**.

   You should now see the size/estimate value listed on the work item.

5. For your next work item, click the hidden effort field and enter your size directly on the card.



   Note: You may have to expand the card first to find the field.

6. Repeat the above steps until you've sized all of *your* work items.

Task: Style the Cards

In this task one team member will add a coloring style based on a tag.

Note: Kanban board customization is a *team-based setting*, not an individual setting. Only one person on the team needs to make these changes and only *Team Administrators* or *Project Administrators* are allowed to configure the board.

Who will be performing this task? ____

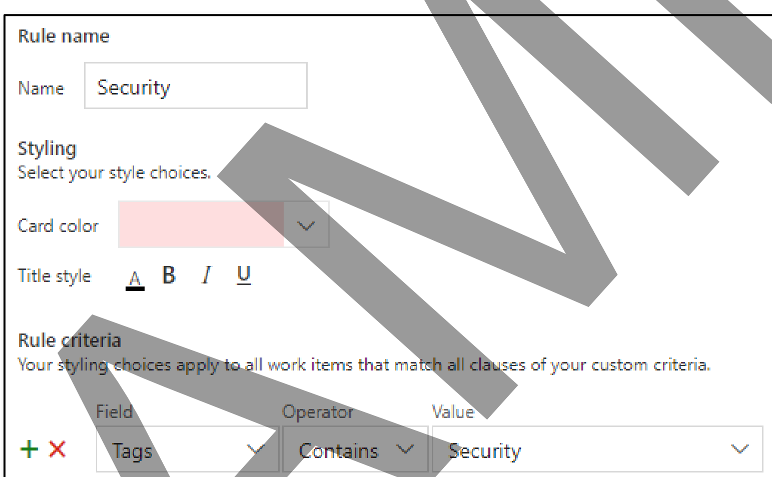
1. Click the Configure team settings icon at the top.

2. Under **General**, click **Working with bugs**, and confirm that **Bugs are not managed on backlogs and boards**.

   As our backlog does not contain any bugs, we can avoid extra board configuration steps. This setting was configured by the PowerShell script previously.

3. Under **Cards**, click **Styles** on the left and add a new **Styling rule**.

4. Name the rule **Security**, select a light red for the **Card color**, and add a criterion where **Tags** … **Contains** … **Security**.



5. Click **Tag colors** on the left and add a new **Tag color.**

6. Select the **Security** tag, a dark red color, and click **Save and close**.

7. Have everyone on the team press **F5**.

   Live update won't detect this change. Now anyone looking at the board can quickly see which items are tagged as security related. Also, we probably didn't need to configure a style *and* a tag color, but we're just having fun.

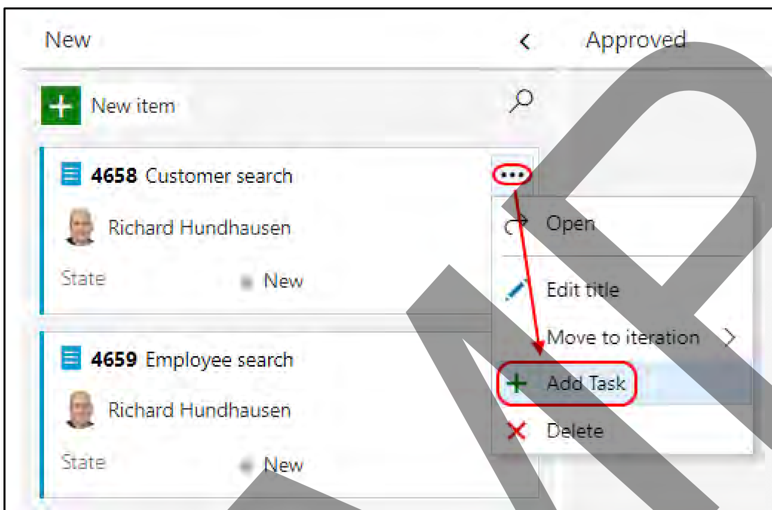
Task: Add a Task Checklist (Optional) or

In this task each team member, or pair of team members, will add a task checklist to a work item on the Kanban board.

With task checklists, your team can gain visibility into which tasks are still to be completed and those that are done per item on the board. Task checklists provide a quick and easy way to track elements of work which are important to support completing a backlog item.

Note: Using task checklists is an optional practice in Kanban.

1. On one of your work items, click the **...** (more options) menu, and select **Add Task**.

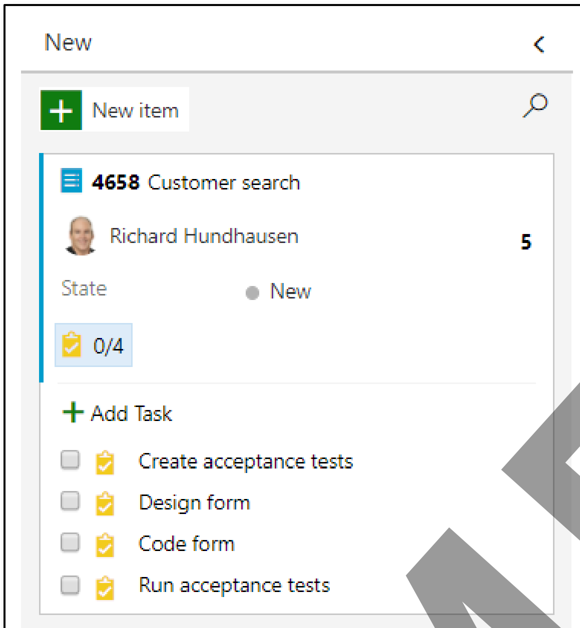


2. Add one task from this list:

- Design form
- Code form
- Create acceptance tests
- Run acceptance tests
- Create release note
- Code review

3. Repeat the above steps, adding 2-3 more tasks.

   Feel free to make up your own tasks as well. When you are done, you should see your task checklist visible on the card:



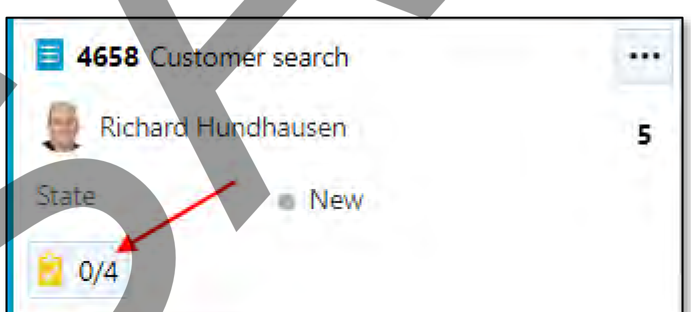
   As the card moves through the workflow, the related tasks can be checked-off. Also, new tasks can be added. For example, the acceptance testing tasks can be added once the card enters the "testing" column.

   Can tasks be *reordered* via drag and drop? ____

   Can tasks be *reparented* by dragging to a different card? ___________________________________

   Note: Users with *Stakeholder access* can't drag-and-drop tasks or reorder and reparent tasks.

4. Click the task checklist summary (e.g. 0/4) to collapse or expand the task checklist.



Task: Add an Inline Test (Optional)

In this task each team member, or pair of team members, will add an inline test case to a work item on the Kanban board.

Similar to task checklists, you can also quickly define inline *tests*, or a set of manual tests, for an item on the Kanban board. You can also run tests and update their status directly from the Kanban board.

<u>Note</u>: Using inline tests is an optional practice in Kanban.

1. Click the Configure team settings icon at the top.

2. Under **Cards**, click **Annotations**, and confirm that **Tests** are enabled.

   If tests are not enabled, have one person on your team enable the annotation. If the option is not available, have one person on your team ensure the *Test Plans* service is enabled for the project.

3. Under **Cards**, click **Tests**, and review the settings.

   By default, when a new test is created, a new test plan is created behind the scenes for the item. This capability does not require more than a *Basic* license.

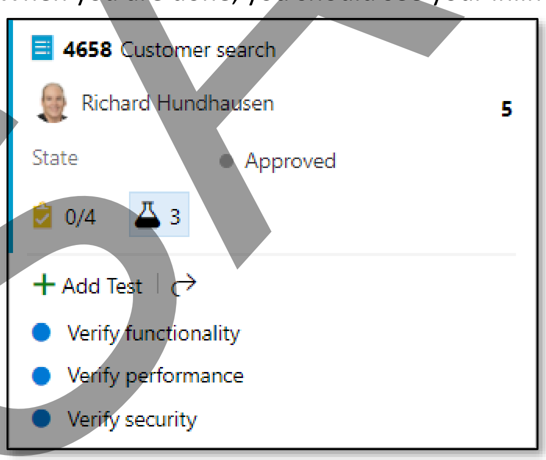
   <u>Note</u>: If the *Create new plan using area/iteration of selected card* option is not selected, have someone on your team select it.

4. Return to the Kanban board and refresh the page.

5. On one of your work items, click the **…** (more options) menu, and select **Add Test** and then create three inline tests:

   - **Verify functionality**
   - **Verify performance**
   - **Verify security**

   When you are done, you should see your inline tests visible on the card, like this:



6. Click the **Verify functionality** test.

   Test are persisted as Test Case work items behind the scenes. Here you can specify additional information, such as summary and steps (for manual tests). Test cases can also be associated with automated tests. See `http://bit.ly/38SZzAn` for more information.

7. Close the work item form.

8. Reorder the inline tests.

9. Drag a test to another card.

10. Holding the **Ctrl** key down, drag the test back to the original card.

    This will make a copy of the inline test.

    Note: Users with *Stakeholder access* can't drag-and-drop tests or reorder and reparent tests.

11. From the **…** (more options) next to Verify functionality, select **Pass test**.

    This is a quick way to show that a specific test has passed, without having to run the test. Some teams may just use these inline tests as placeholders for functionality as it gets added. Other teams may actually run the test from the Kanban board – which is beyond the scope of this class.

12. Go to the **Test Plans** page on the **Test Plans** hub.

    As you can see, test plans and test suites are created automatically for you behind the scenes. Test case management using Azure Test Plans is beyond the scope of this course.

13. Return to the **Green Team's** board in the **Boards** hub.

EXERCISE 2 – CUSTOMIZE THE KANBAN BOARD

Task: Rename Existing Kanban Columns

In this task one team member will rename the leftmost and rightmost columns.

Note: Kanban board customization is a *team-based setting*, not an individual setting. Only one person on the team needs to make these changes and only *Team Administrators* or *Project Administrators* are allowed to configure the board.

Who will be performing this task? ____

1. If necessary, navigate to the **Board** view of the **Green Team**'s backlog.

   What is the name of the *leftmost* column? *Rightmost* column? ____________________________

   By default the Kanban board will contain one column for each workflow state. The actual columns vary based on the process used to create your team project. Since we used the Scrum process, our states/columns are New, Approved, Committed, and Done.

2. Expand all the columns if necessary.

3. Make sure all work items are in the **New** column.

4. Click the **New** column heading and change it to **Backlog**.

5. Click the **Customer search** work item to open it.

   What is the *State* of this work item? ____

   The state is still *New*. Renaming the column did not rename the work item state that it maps to.

6. Close the work item.

7. Rename the rightmost **Done** column to **Released**.

   On the Green team, we're not done with our work until it's been released to production.

Task: Explore the Column and State Mappings

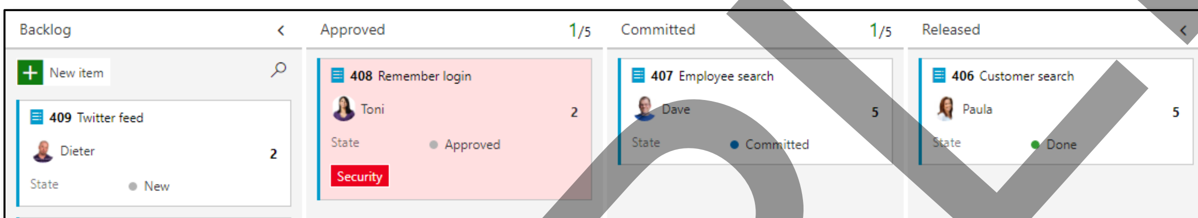
In this task your team will collaborate to explore the columns and state mapping relationships.

1. If necessary, navigate to the **Board** view of the **Green Team**'s backlog and refresh the page.

   You should see the new column names for the leftmost and rightmost columns.

2. Have someone on your team drag a work item to the **Approved** column, drag a work item to the **Committed** column, and drag a work item to the **Released** column.

   You should now have at least one work item in each column, like in this example:



3. Click **View as Backlog**.

   Because of our customization earlier, you should see both *State* and *Board Column* fields listed.

   What state is the *Approved* board column mapped to? *Committed*? ___________________________

   What *Board Column* are the *New* state work items mapped to? _____________________________

   Note: *Done* work items are removed from the backlog. They still exist as work items and can be discovered when searched or queried.

4. Return to the **Board** view.

5. Click the Configure team settings icon at the top.

6. Go to the **Board** > **Columns** page.

   Here you can see and manage the board columns. Each one is on its own tab.

7. Go to the **Approved** tab.

   Here you can see/change the name, WIP limit, split behavior, state mapping, and definition of done.

   You will be customizing these columns in an upcoming task.

8. Click **Cancel**.

9. Drag all work items back to the **Backlog** (leftmost) column.

Task: Explore Reordering Options

In this task your team will explore the two behaviors that are available when reordering work items.

Note: Kanban card reordering configuration is a *team-based setting*, not an individual setting. Only one person on the team needs to make these changes. Only Team Administrators or Project Administrators are allowed to configure the Kanban board.

1. If necessary, navigate to the **Board** view of the **Green Team**'s backlog and refresh the page.

2. Ensure that all work items are in the **Backlog** (leftmost) column.

   Write down the IDs of the first (5) work items: ____

3. Click the Configure team settings icon at the top.

4. Go to the **Board** > **Card reordering** page.

   Which reorder behavior is currently set (top or bottom)? ___________________________________

   The top choice is for *work items reorder when changing columns, and the backlog reflects the new order*. The bottom choice is for *work items to follow the backlog order when changing columns*. You can watch the animations to witness the behavior.

   Note: Cards in the rightmost Released (*Done*) column, are always ordered by *Closed Date* with the most recently closed items appearing towards the top of the column.

5. If necessary, have one person on your team select the top **Work items reorder when changing columns, and the backlog reflects the new order** option and click **Save and close**.

6. Have someone on the team make the following changes …

   - Drag the work item in 2nd position to the **Committed** column
   - Drag the work item in 3rd position to the **Approved** column
   - Drag the work item in 5th position to the **Committed** column

7. Go to the **Backlog** view and refresh the page.

   Are the first (5) work items in the same order? ____

   Because of the reordering setting, when you dragged the work item in the 5th position to the committed column, the backlog order was changed so that it is now in the 3rd position.

8. Have someone on the team return to the **Boards** view and drag all work items to the **Backlog** column, ensuring the original order.

   At this point, the IDs of the first (5) work items should match what was written down on the previous page. This will be the same on the *Boards* view and *Backlogs* view.

9. Have one person on your team click the ⚙ Configure team settings icon, go to the **Board** > **Card reordering** page, select the bottom **Work items follow the backlog order when changing columns** option, and then click **Save and close**.

10. Have someone on the team make the following changes …

    - Drag the work item in 2nd position to the **Committed** column
    - Drag the work item in 3rd position to the **Approved** column
    - Drag the work item in 5th position to the **Committed** column

11. Go to the **Backlog** view and refresh the page.

    Are the first (5) work items in the same order? ____

    Because of the reordering setting, the backlog order did not change.

    Which option do you and your team prefer? ____

12. Have someone on the team return to the **Boards** view and drag all work items to the **Backlog** column, ensuring the original order.

13. Ensure that the **Card reordering** option is set to the **Work items reorder when changing columns, and the backlog reflects the new order**.

Task: Create Additional Kanban Columns

In this task one team member will rename the remaining columns and create additional ones.

Who will be performing this task? ____

1. If necessary, navigate to the **Board** view of the **Green Team**'s backlog.

2. Rename the **Approved** column to **Develop**.

3. Rename the **Committed** column to **Test**.

4. Click the ⚙ Configure team settings icon at the top.

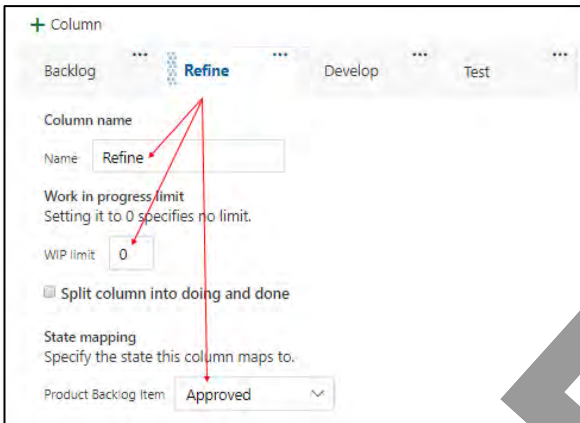
5. Go to the **Board** > **Columns** page.

   You should see the four columns: *Backlog*, *Develop*, *Test*, and *Released*.

6. With the **Backlog** tab selected, click add a new **Column**.

   This will add the column to the right of *Backlog*.

7. Name the column **Refine**, set the **WIP limit** to **0**, and select the **Approved** state for the Product Backlog Item.



8. Go to the **Develop** tab, set the **WIP limit** to **0**, and select the **Committed** state for the Product Backlog Item.

9. Go to the **Test** tab, set the **WIP limit** to **0**.

10. Click **Save and close**.

11. Have your teammates refresh their browsers and view the new Kanban columns.

EXERCISE 3 – MAKE POLICIES EXPLICIT

Task: Enter Definitions of Done (DoD)

In this task your team will collaborate and enter the definition of done for the following columns:

Refine	Develop	Test
- Customer's needs are understood - Acceptance criteria adequately defined - Dependencies have been identified - Item has been sized	- Code complete, commented, and styled according to standards - Code pair programmed or peer reviewed - Code builds without errors or warnings - Passes unit and system tests	- Acceptance tests are written and pass - Regression tests pass - No known failures - Sufficient exploratory testing has been performed
Team member:	Team member:	Team member:

1. Determine who will enter each definition of done and write their names in the table above.

2. Click the Configure team settings icon at the top.

3. Go to the **Board** > **Columns** page.

4. Go to your column (tab) and enter the respective markdown into the **Definition of done** field.

   Note: Definitions supports *markdown,* which you can learn about here: https://bit.ly/2Hat2dQ.

5. Click **Save and close**.

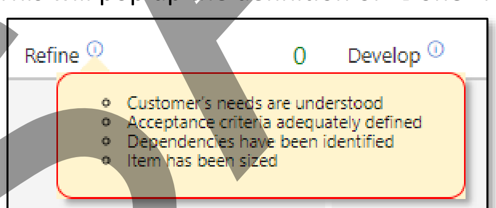
   Note: If you experience problems, have each team member make their changes one at a time.

6. Press **F5** and review the Kanban board.

   You should notice some new ⓘ tooltip icons in the *Refine*, *Develop*, and *Test* columns.

7. Click the ⓘ tooltip icon next to **Refine**.

   This will pop up the definition of "Done" for that column.



8. Review the definition of "Done" for the other columns.

   Make any necessary corrections.

EXERCISE 4 – IMPLEMENT ADDITIONAL CLASSES OF SERVICE

Task: Add Swimlanes to the Kanban Board

By adding swimlanes to the Kanban board, you can also visualize the status of work that supports different classes of service, as well as any other dimension that supports your tracking needs.

In this task your team will collaborate to add additional swimlanes to the Kanban board.

1. If necessary, navigate to the **Board** view of the **Green Team**’s backlog and refresh the page.

2. Determine which team member(s) will create the following swimlanes:

   - **Expedite**
   - **Intangible**
   - **Blocked**

3. Click the Configure team settings icon at the top and go to the **Board** > **Swimlanes** page.

   By default, all work items are displayed in a single lane, named *(Default lane)*.

4. Add a new **Swimlane**, enter the name of your swimlane, and click **Save and close**.

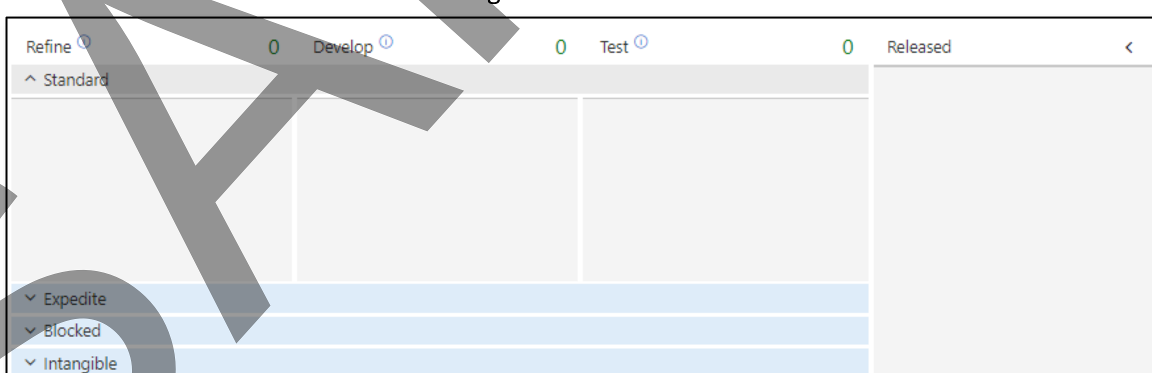
5. Repeat the above steps until your team has created all of the new swimlanes.

6. Have a team member rename the (Default lane) to **Standard** and then reorder the swimlanes in this order: **Standard**, **Expedite**, **Blocked**, **Intangible**.

7. As a team, discuss the swimlane order and make any changes.

8. Press **F5** and then collapse all swimlanes except for **Standard**.

   Your Kanban board should look something like this now:



   Intangible work is work that may not deliver immediate business value but still needs to be done (e.g. pay off technical debt, upgrade database server, documentation, etc.)