



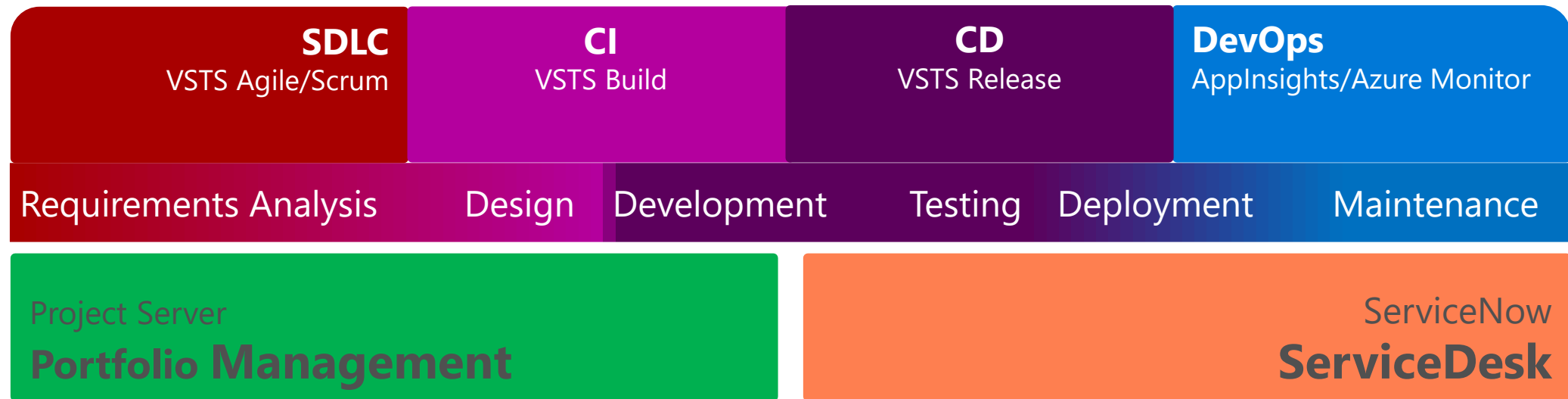
Application Lifecycle Management at Auckland Transport VSTS Branch Management Guidance

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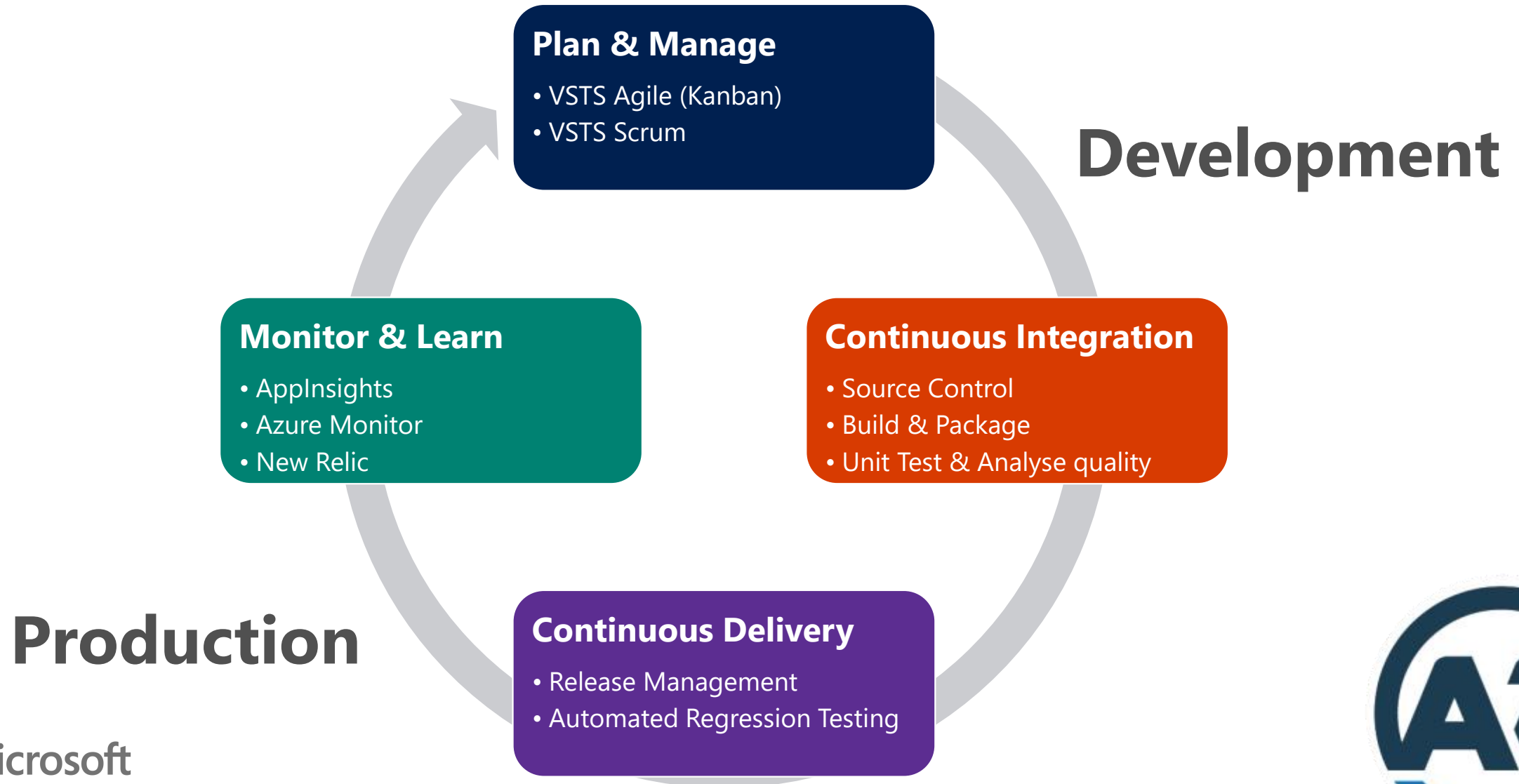


What is Application Lifecycle Management?

- Everything from birth to death of a product
- Agile methods are Auckland Transports preferred SDLC
- CI and CD tools help automate parts of the SDLC
- DevOps focus on the steps to get software built and deployed



ALM at Auckland Transport



VSTS Branch Management Guidance

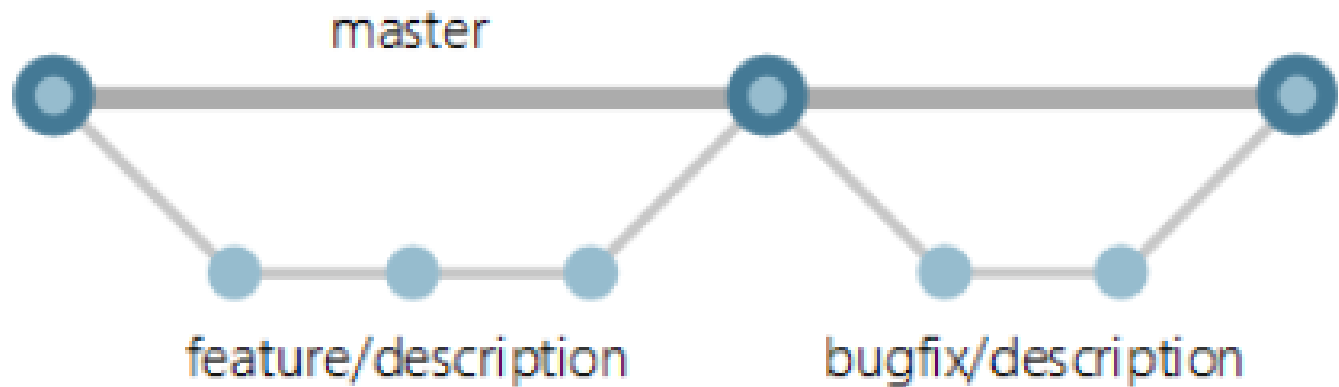
- Feature Branching Guidance
- Code Reviews with Pull Requests
- Merge Hotfixes to Master and Feature Branches
- Removing Completed Feature Branches
- Leverage Branch Policies to Enforce Quality

Git vs. TFVC

- Git uses a distributed model
- TFVC leverages a centralised model
- Either system works for small projects
- However recommend leveraging Git
 - Scales better for multiple team members
 - More flexible feature branching
 - Microsoft has adopted and even purchased Github

Feature Branching Guidance

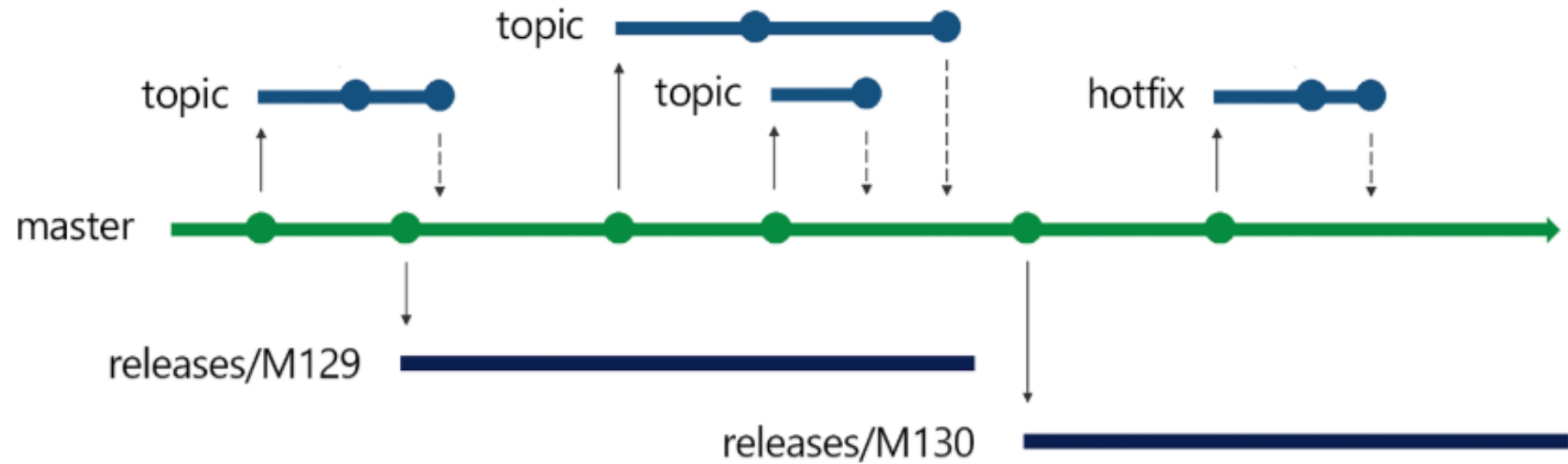
- Teams are free to adopt approaches that best suit (please document)
- Simple Git Branching
 - Easiest approach
 - Recommended for small teams and projects
 - Branches leveraged
 - "master"
 - "features/feature-name"
 - "hotfix/description"



Feature Branching Guidance

- Release Flow Branching

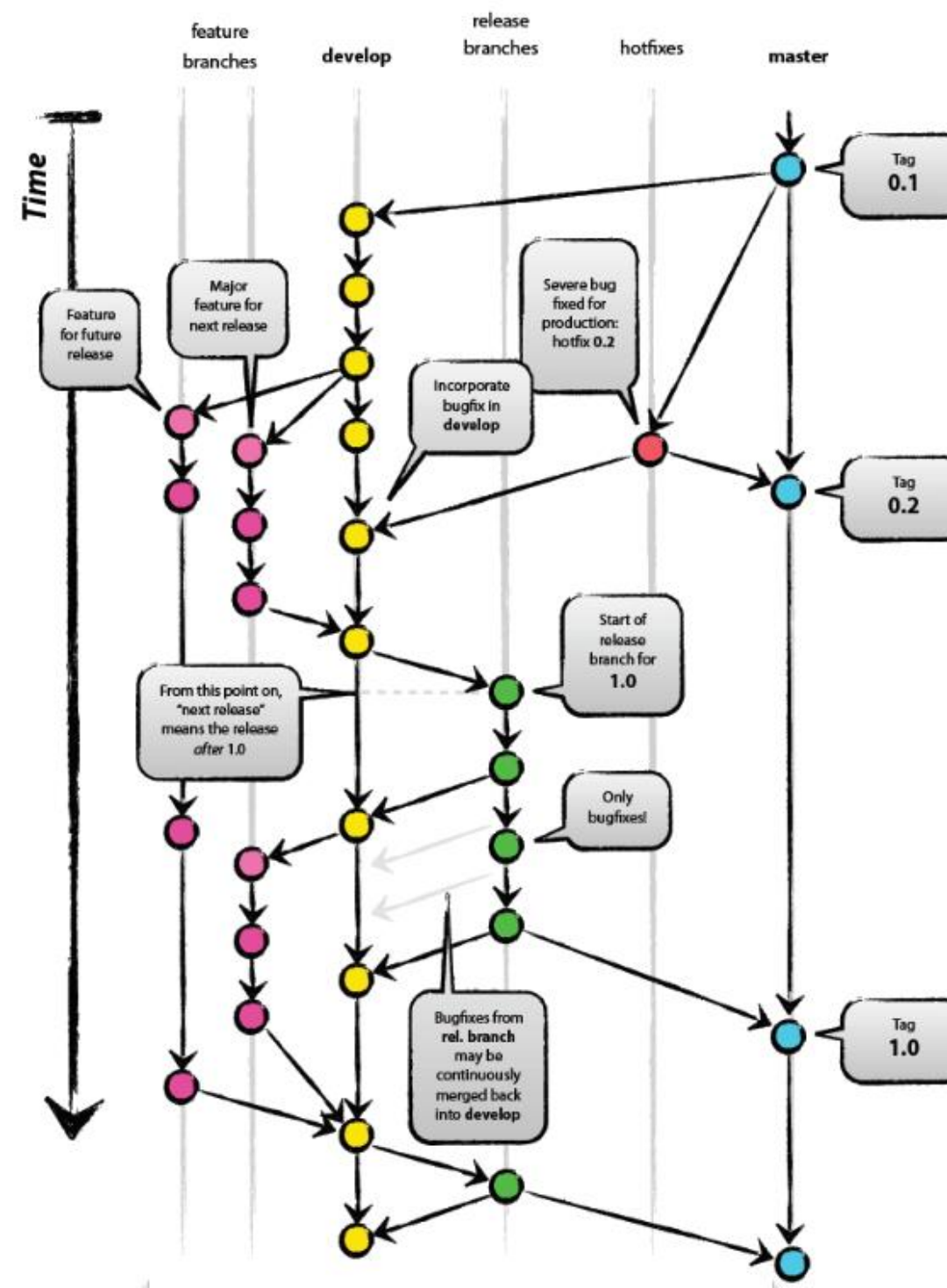
- Microsoft teams branch strategy [release flow](#)
- Recommended for bigger teams, complex delivery and longer programs of work
- Branches leveraged
 - "master"
 - "releases/release"
 - "topics/topic"
 - "hotfix/description"



Feature Branching Guidance

- **Gitflow Branching**

- Not recommended for AT projects unless teams have specific requirements
- Branches leveraged
 - master
 - develop
 - features/feature-name
 - releases/release-X.X
 - hotfix/description



Code Reviews with Pull Requests

- Reviewers
 - Browse code changes
 - Leave comments
 - Vote on the changes
- Accepting Merge
 - Complete linked work items
 - Delete <branch name> after merging
 - Squash changes when merging

The screenshot shows the 'New Pull Request' page in Azure DevOps for the 'FabrikamFiber' project. The interface includes a top navigation bar with tabs for 'Files', 'Commits', 'Pushes', 'Branches', 'Tags', and 'Pull Requests'. Below the navigation bar, the 'New Pull Request' form is displayed. It features a 'Source' dropdown set to 'ReadMeFix' and a 'Target' dropdown set to 'master'. The 'Title' field contains the text 'Add ReadMe.txt to project'. The 'Description' field contains the text 'Added a draft of a ReadMe.txt to the project'. Below the description field is a 'Markdown supported.' notice. A rich text editor toolbar is visible, followed by the text 'Added a draft of a ReadMe.txt to the project'. The 'Reviewers' section shows a list of reviewers, including '[FabrikamFiber]\FabrikamFiber Team' and 'Jamal Hartnett', with a search bar to add more reviewers. The 'Work Items' section has a search bar labeled 'Search work items by ID or title'. At the bottom, there is a message '3 ReadMe.txt missing from project' and a 'Create' button.

FabrikamFiber

Dashboards Code Work Build and Release

FabrikamFiber Files Commits Pushes Branches Tags Pull Requests

New Pull Request

ReadMeFix into master

Title *

Add ReadMe.txt to project

Description

Added a draft of a ReadMe.txt to the project

Markdown supported.

Aa B I Link Code View List List List @ #

Added a draft of a ReadMe.txt to the project

Reviewers

[FabrikamFiber]\FabrikamFiber Team X Jamal Hartnett X Search users and groups to add as reviewers

Work Items











Search work items by ID or title

3 ReadMe.txt missing from project

Create

Removing Completed Feature Branches

- Worlds most annoying thing is a sea of feature branches
- Use the [VSTS comparison features](#) to find stale branches

Branches					
				<input type="text" value="Search all branches"/>	
Mine All Stale					
Branch	Commit	Author	Authored Date	Behind Ahead	
 SQLite	7398712e	 Vamsi TP	15-06-2017	<u>2307</u>	<u>2</u>
 Sprint2	10880d40	 Vamsi TP	07-07-2017	<u>1898</u>	0
 Sprint3	12d89b93	 sanjaydebnath	21-07-2017	<u>1683</u>	0
 Sprint4	7c03057e	 Sanjay Debnath	04-08-2017	<u>1436</u>	0

Leverage Branch Policies to Enforce Quality

- Require a minimum number of reviewers
- Check for linked work items
- Check for comment resolution
- Enforce a merge strategy
- Build validation
- Automatically include code reviewers

 Policies for: FabrikamFiber > FabrikamFiber > master

 Save changes  Discard changes

Protect this branch

- Setting a Required policy will enforce the use of pull requests when updating the branch
- Setting a Required policy will prevent branch deletion
- Manage permissions for this branch on the [Security page](#)

☐ Require a minimum number of reviewers

Require approval from a specified number of reviewers on pull requests.

☐ Check for linked work items

Encourage traceability by checking for linked work items on pull requests.

☐ Check for comment resolution


Check to see that all comments have been resolved on pull requests.

☐ Enforce a merge strategy

Require a specific type of merge when pull requests are completed.


Build validation

Validate code by pre-merging and building pull request changes

 Add build policy

Require approval from external services

Require third party services to post successful status to complete pull requests.

 Add service

Lab: Version Controlling with Git using VSTS

Wrap Up & Questions



Microsoft





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