

# Calgary Power Platform User Group

Tuesday June 16, 2020



# Power BI CI/CD with Azure DevOps

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PBI Lab Inc

[pbilab.com](http://pbilab.com)





# Luca Gualtieri

CTO and Principal at PBI Lab Inc

- BI and Analytics consultant
- Power BI expert (MCP)
- Project management
- Co-founder of PBI Lab
- Passion for data

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# PBI Lab

## BI and Analytics Consulting

- Microsoft Silver Partner in Data Analytics
- Microsoft Power BI Partner
- Microsoft Power BI Training Provider

[pbilab.com](https://pbilab.com)

@pbilab



The screenshot shows the PBI Lab website. The header features the PBI Lab logo and a hamburger menu. The main banner has the text "Professional Microsoft BI Training" next to a blue 3D cube icon. Below the banner are social media icons for LinkedIn, Twitter, Facebook, and YouTube. The navigation bar includes links for Microsoft, Power BI, Products, Pricing, Solutions, Partners, Learn, and Community, along with "Sign in", "Try free", and "Buy now" buttons. The "PBI Lab" section includes a description of the company, its services, and contact information.

**PBI Lab**

PBI Lab, based in Vancouver, British Columbia, is a Business Intelligence and Analytics service provider specialized in Microsoft Power BI end-to-end implementation and corporate training. We've been working with Power BI since the beginning as a front runner in the adoption of Power BI Report Server, Power BI Service and Power BI Embedded.

Our implementation and training methodology, at its core, combines the concepts of seamless integration, value-driven solutions, and user-centric design to help you and your team tackle complex data management projects.

Our training is delivered by industry experts and is offered in virtual, live, or on-demand formats to meet your needs. PBI Lab embraces the self-service approach, providing expansive training for in-house analytics teams to maximize returns on their Power BI investment.

Our mission is to grow your business with data analytics and guide you through the journey to realize an optimized data strategy.

**CONTACT PARTNER**

**Website**  
Additional information  
+1 (206) 890-0900  
info@pbilab.com

# Session Objectives & Agenda

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- New **Power BI Deployment Pipelines (preview)** feature
- **ALM** (Application Lifecycle Management): multi-tier developing process architecture for Power BI
- **Version Control** for Power BI with Visual Studio and Azure DevOps Git
- **Azure DevOps pipelines** for Power BI workspace creation and report deployment
- Summary & **QA**

# Deployment Pipelines (preview)

# New Deployment Pipeline in the Power BI Service

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The tool is designed as a pipeline with three stages:

- Development
- Test
- Production

Requirements:

- You're a Power BI [Pro user](#)
- You belong to an organization that has Premium capacity
- You're an admin of a [new workspace experience](#)

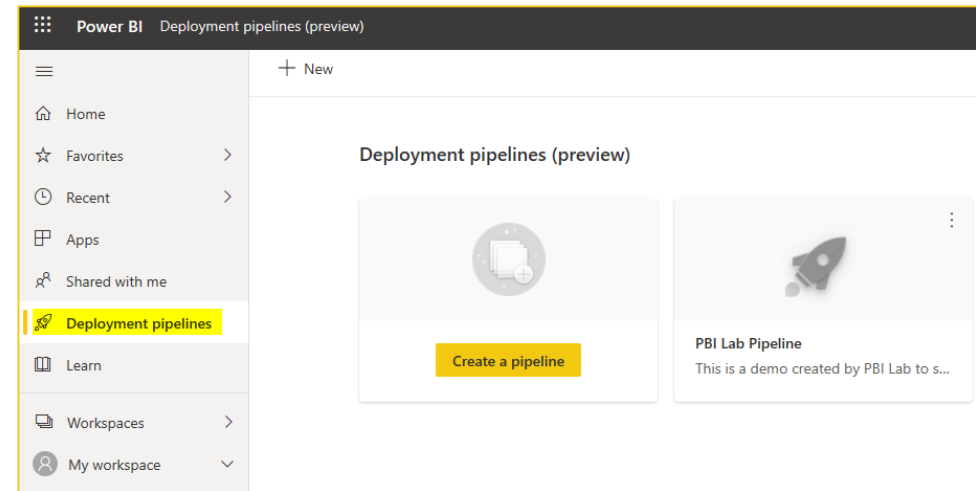
# New Deployment Pipeline in the Power BI Service

## Functionalities:

- All content deployment
- Selective deployment
- Backwards deployment
- Dataset rules
- Comparing stages

## Workspace assignment limitations:

- The workspace must be a [new workspace experience](#)
- You must be an admin of the workspace
- The workspace is not assigned to any other pipeline
- The workspace must reside on a [premium capacity](#)
- You cannot assign a workspace with [Power BI samples](#) to a pipeline stage





# Deployment Pipelines (preview)

## DEMO

# Application Lifecycle Management

# Multi-tier developing process architecture

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- **DTAP** is an acronym for **Development, Testing, Acceptance, and Production**
- This **multi-tier** developing process is very common in IT
- Power BI, which is positioned as a **self-service data analytics tooling**, does not have a standard integrated capability to apply a multi-tier architecture

# Multi-tier developing process architecture

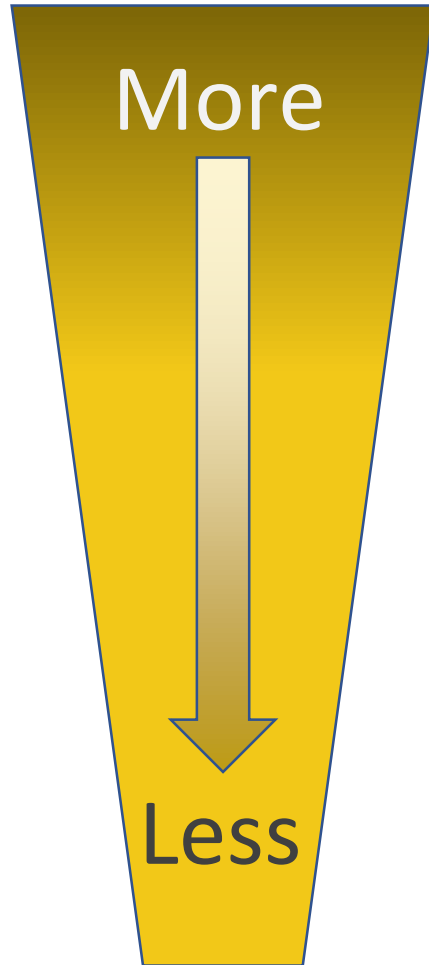
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- In some cases, the DTAP has **two additional stages** which are **Education** and **Backup**
- In this presentation we will only look at the most common four and we will **group Testing and Acceptance together**
- We will work with **three stages**: Development, Testing/Acceptance, and Production
- For simplicity we will call them **DEV**, **TST**, and **PRD**



# Environments – Purpose

Performance & Stability



## Production (PRD)

- Dedicated environment for consumers to access and engage with reports that are valid, secure and optimized

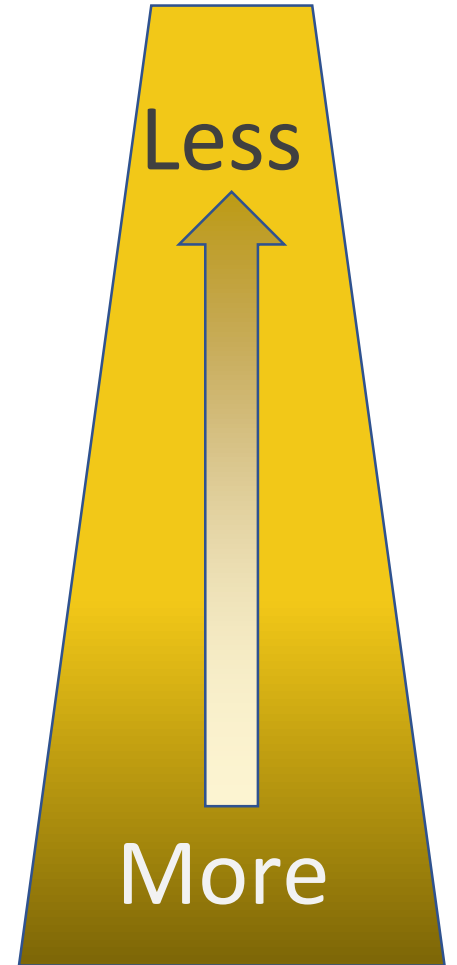
## Testing/Acceptance (TST)

- Support & Developer collaboration on design, optimization and standards review
- Acceptance by the reviewers and business owners

## Development (DEV)

- Developer's sandbox to experiment and be creative with their ideas
- Ideal spot to start employing good design, standards and conventions
- Reviewer's working with developers to validate work

Flexibility & Adaptability

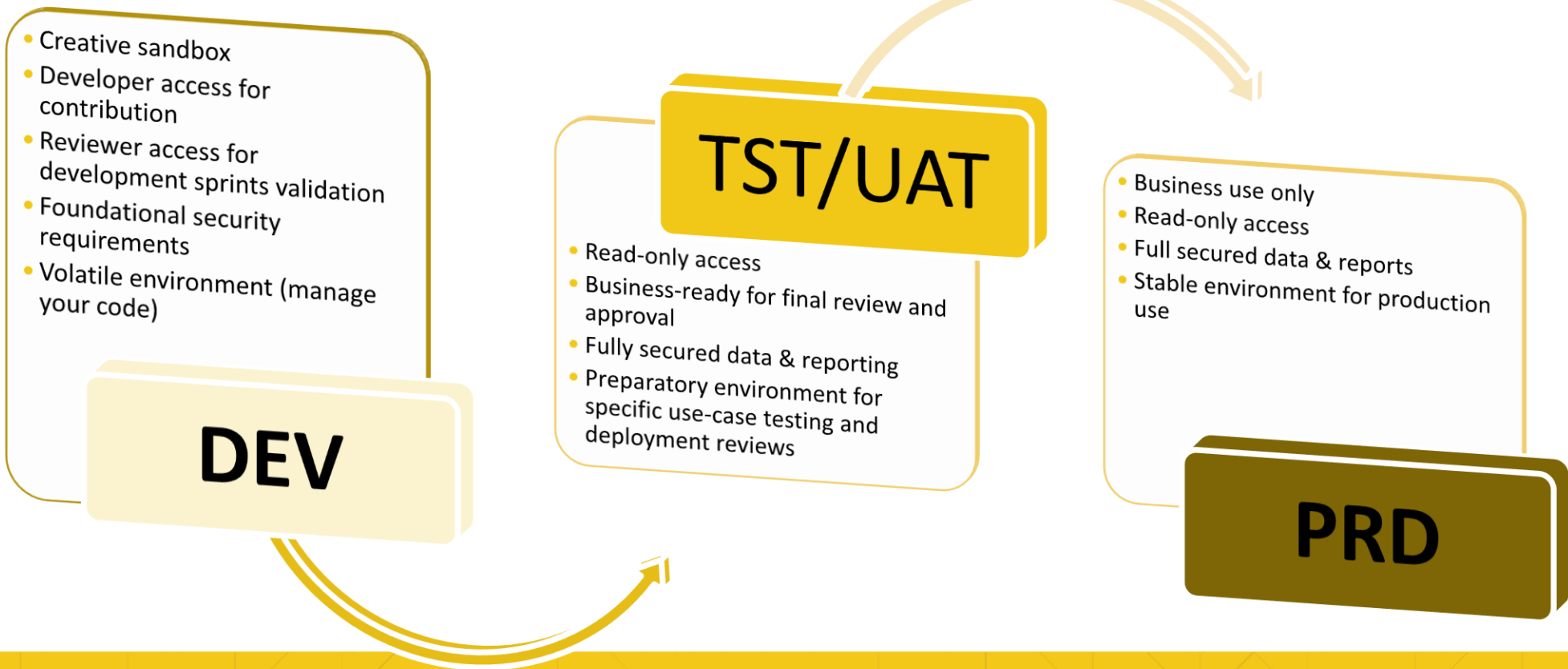


# Environments – Function

**DEV [~75%]**

**TST/UAT [~20%]**

**PRD [~5%]**



# DTAP: Development

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- We use **Power BI Desktop** to create Power BI reports and data modeling in Power BI
- Power BI Desktop is our **development authoring** environment where we can do our data wrangling, transformations, modeling and of course create our report
- We can't collaborate and share our work with Power BI Desktop: we need to **publish our reports in Power BI Service**
- We need a development environment in Power BI Service
- **DEV workspace** available to **developers** with a "Contributor" role and to **reviewers** with a "Viewer" role

# DTAP: Testing / Acceptance

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- By creating a **TST workspace** and distributing the reports to a broader audience using a **TST App**
- Only **BI Administrators** can publish reports: they can deploy reports from a DEV workspace to a TST workspace using **automation** such as running a deployment pipeline in Azure DevOps
- Power Users and Reviewers can access the **TST App for review and acceptance**

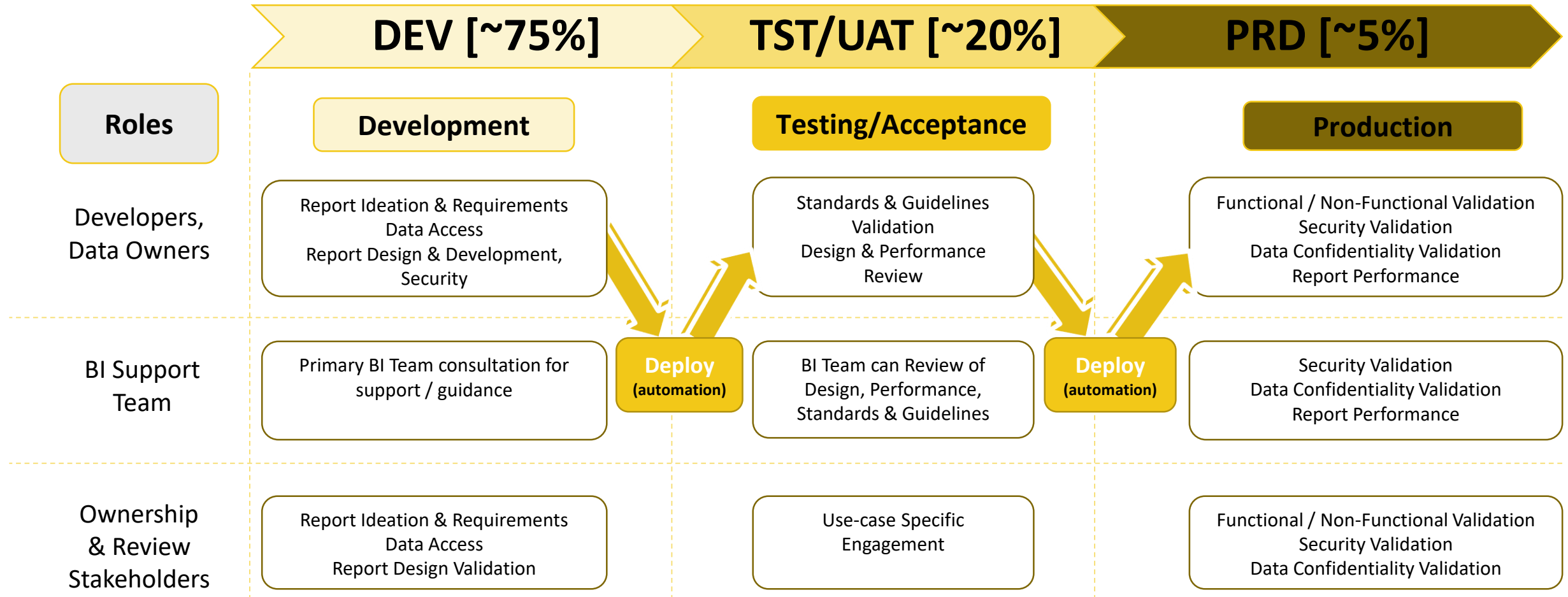


# DTA**P**: Production

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- After the testing is done and accepted by our business owners, we can push / deploy the content to a **production environment**, to be consumed by a broader audience
- We create a **PRD workspace** and distribute the reports to a broader audience on a **PRD App**
- We can do that by publishing the report to a **PRD App** and grant access to all end-users (“consumers”) with a “Viewer” role
- Only **BI Administrators** can publish reports: they can deploy reports from a DEV workspace to a TST workspace and finally to a PRD workspace using **automation** such as running a deployment pipeline in Azure DevOps

# High-Level Deployment Guide



# Summary of Environments

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- Three environments with a combination of Workspaces and Apps
  - DEVELOPMENT ENVIRONMENT:
    - ✓ DEV WORKSPACE: available to Power Users, Reviewers and BI Admins
  - TEST ENVIRONMENT:
    - ✓ TST WORKSPACE: available to BI Admins
    - ✓ TST APP: available to Power Users, Reviewers and BI Admins
  - PRODUCTION ENVIRONMENT:
    - ✓ PRD WORKSPACE: available to BI Admins
    - ✓ PRD APP: available to Power Users, Consumers and BI Admins

# Summary of Roles

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- Four roles with different permissions by environment

- ☐ Power Users:

- ✓ DEV WORKSPACE: contributors
- ✓ TST APP: viewers
- ✓ PRD APP: viewers

- ☐ Reviewers:

- ✓ DEV WORKSPACE: viewers
- ✓ TST APP: viewers

- ☐ Consumers:

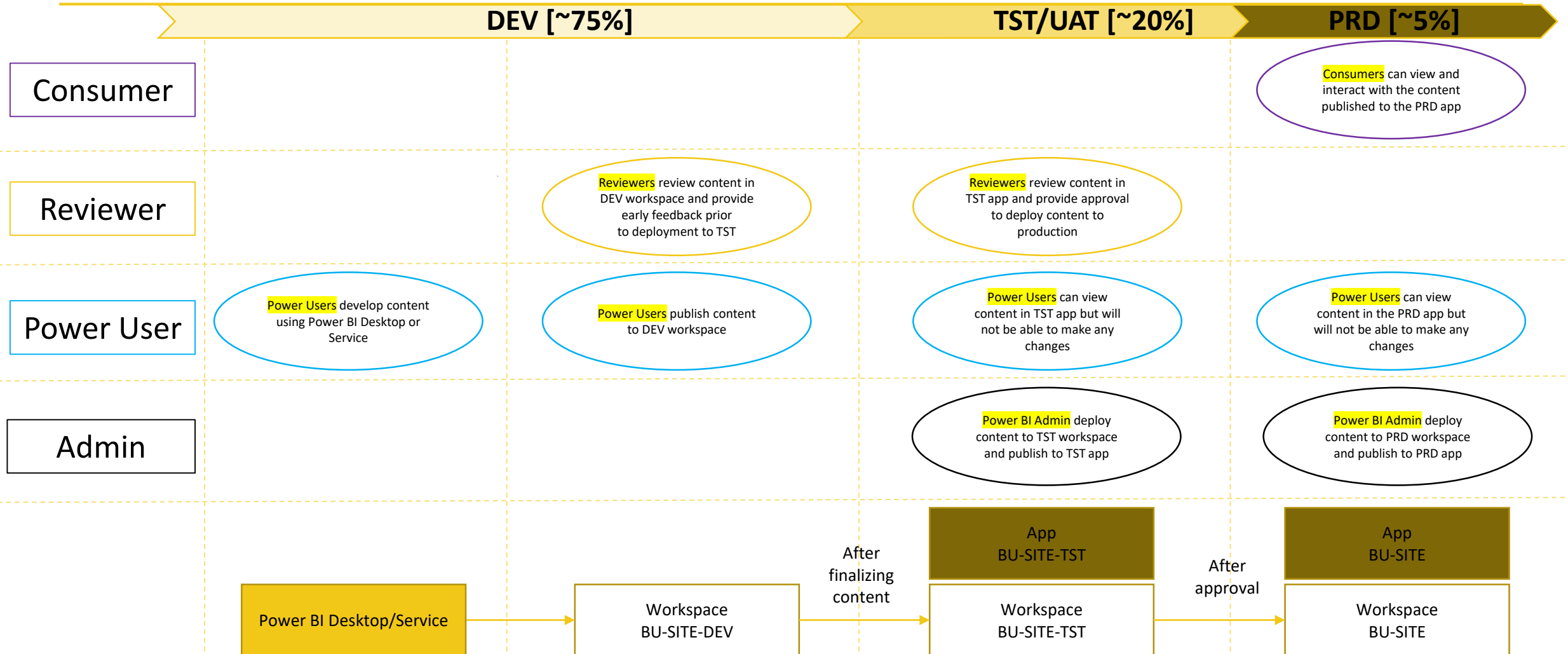
- ✓ PRD APP: viewers

- ☐ BI Admin:

- ✓ admins in all the workspaces and apps



# Workflow Overview



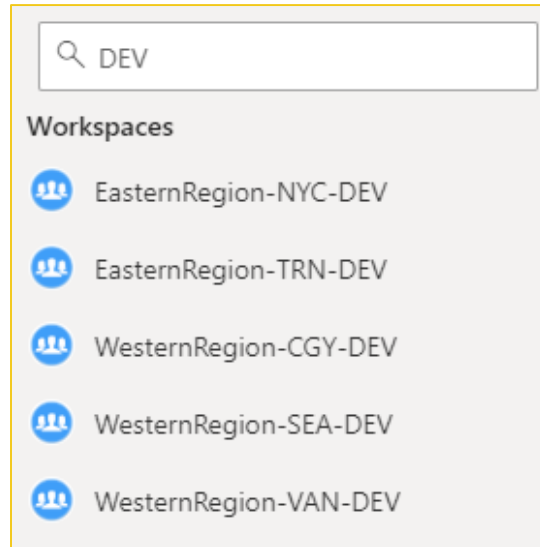
# What is a DEV Workspace

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## Space for Development and Collaboration

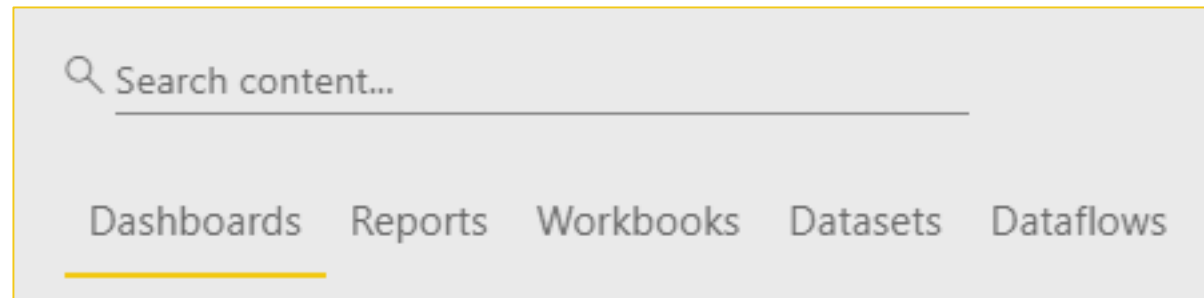
- In a **DEV** Power BI **workspace**, **Power Users** can **create** and **collaborate** on Power BI content with **Reviewers**
- A Power User, is able to contribute to his site-specific DEV workspace and in all the DEV workspaces where he has access as a Contributor (Power User)
- Power Users can submit a ticket/request to deploy the finished content the TST App for final review and UAT (User Acceptance Testing)
- Once the **content is approved in the TST App by Reviewers**, a new ticket/request is required to deploy the content to the official PRD App. The content will be available for the **Consumers** in the **PRD App**

# What is a DEV Workspace



## Workspaces are available in the Power BI Service

A Power User and/or Reviewer for a specific SITE or multiple SITES, can find the DEV workspaces available to them for contribution and collaboration in the Power BI Cloud service.



# What are TST and PRD Apps

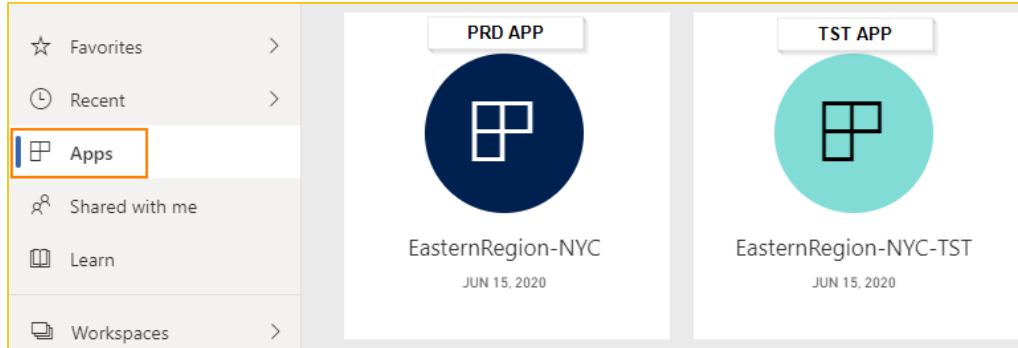
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## Spaces for Distribution, Acceptance and Consumption

- **App is for broader distribution** of content to Reviewers and Consumers
- Reviewers will review and interact with the content in TST App first to make sure everything is good for end users to consume, then they will approve to push the content to the **PRD App to be available to the Consumers**
- TST App is only for reviewing purpose. Reviewers will be able to view content in DEV workspaces in advance to provide early feedback before content is published to a TST App. All final reviews and approvals are done in the TST App
- The **PRD App is only for consumption purpose**. Consumers can view and interact but cannot change the content in the App



# What is an App



## Apps are available in the Power BI Service

As a Power User and Reviewer for a specific site or multiple sites, you will find the TEST apps available to you for reviewing and approval purpose in the Power BI Cloud service.

As a Power User and Consumer for a specific site or multiple sites, you will find the official (PROD) apps available to you for consumption purpose in the Power BI Cloud service.

# Customize an App

You can customized your App

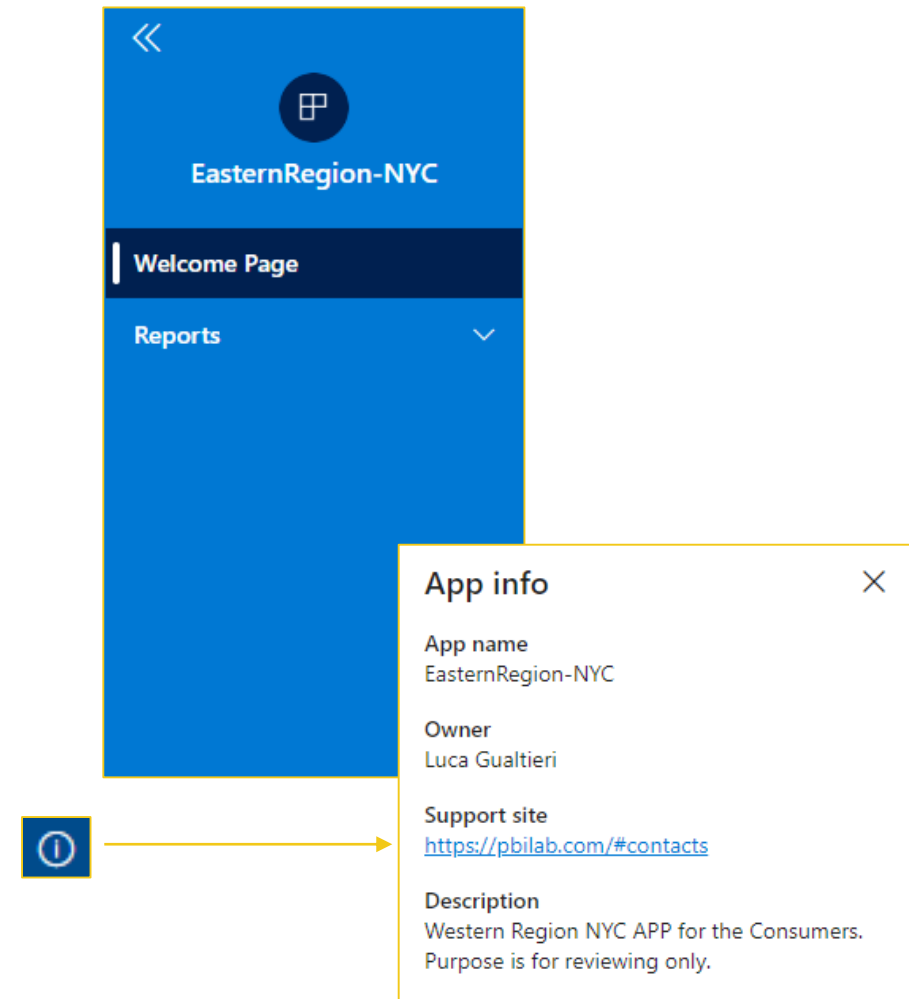
- light blue app UI for the TST App
- dark blue app UI for the PRD App

Every App has a navigation pane on the left to enrich the user experience.

You can organize your App in sections:

- you can add a welcome page with valuable links
- you can organize your reports in sections

You can add your Support info



# Workspace vs. App

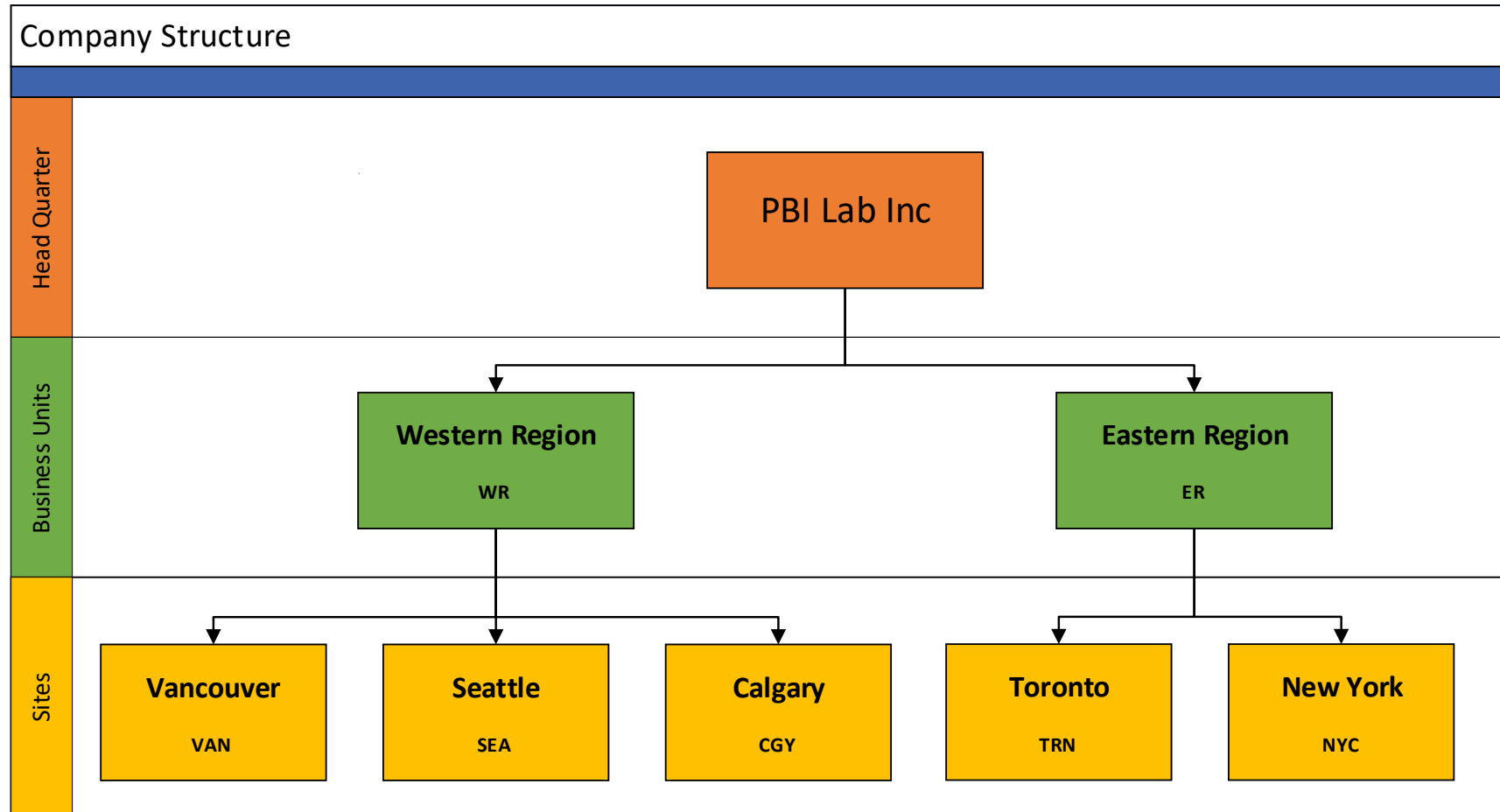
## Workspace

- Create datasets, reports, dashboards
- In the workspace, Power Users (developers) can continue to develop content and decide which reports they want to be included in the App for Consumers
- Developers have access to the datasets and schedule refresh on the datasets
- Schedule refresh requires Gateway configuration

## App

- For viewing and interacting with published content
- Consumers (users) can easily find their way around published content without getting confused by other work-in-progress items in the workspace
- Consumers can navigate through content more easily with the built-in navigation in the app
- Consumers get updates automatically in the app
- Consumers cannot modify content of the app
- Consumers do not have access to the underlying datasets

# DEMO: PBI Lab fictitious organization



# Application Lifecycle Management DEMO

# Version Control with Azure Repo



# Azure DevOps Repos

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- **Azure Repos** is a set of version control tools that you can use to manage your code
- Use **version control** to save your work and coordinate code changes across your team
- Define **permission** on your Power BI Repos is important because Power BI reports in import mode might contain sensitive data
- Define **policies** to enforce who can create branches and the naming guidelines for the branches and automatically include the right reviewers for every code change

# Azure DevOps Repos

The screenshot displays the Azure DevOps interface for the 'Power BI Operative Framework' repository. The left sidebar shows the navigation menu with 'Repos' selected. The main area shows the repository structure with folders like '.vs', 'EasternRegion-NYC', 'EasternRegion-TRN', 'PBILab-Public', 'PowerShell', 'SP-Certificate', 'WesternRegion-CGY', 'WesternRegion-SEA', 'WesternRegion-VAN', and 'Workspace-Creation-Configuration'. The 'Files' tab is active, showing a table of commits.

Name ↑	Last change	Commits
.vs	Yesterday	e3ec24eb Welcome Page Deployment Luca Gualtieri
EasternRegion-NYC	Mar 11	3c155256 Repos Structure Initialization Luca Gualtieri
EasternRegion-TRN	Mar 11	3c155256 Repos Structure Initialization Luca Gualtieri
PBILab-Public	Yesterday	e3ec24eb Welcome Page Deployment Luca Gualtieri
PowerShell	Yesterday	be72fb99 Power BI Welcome Page deployment Luca Gualtieri
SP-Certificate	Mar 12	ae201ce3 New Certificate Luca Gualtieri
WesternRegion-CGY	Mar 11	3c155256 Repos Structure Initialization Luca Gualtieri
WesternRegion-SEA	Mar 11	3c155256 Repos Structure Initialization Luca Gualtieri
WesternRegion-VAN	Mar 11	3c155256 Repos Structure Initialization Luca Gualtieri
Workspace-Creation-Configuration	May 19	8f825b96 Added Contributors to DEV workspaces and created PBILab-Public work...
MI README.md	Mar 11	c401b8da Added README.md Luca Gualtieri

# Version Control with Azure Repo

## DEMO

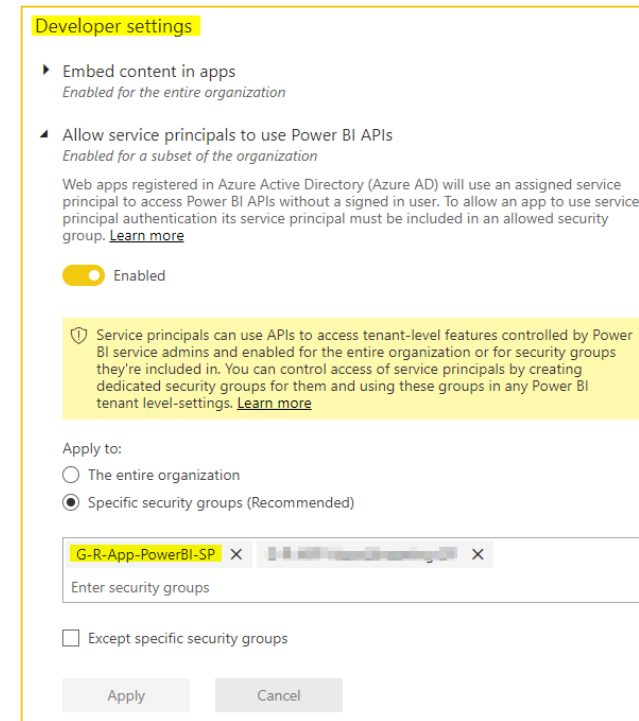
# Azure DevOps Pipeline: Workspace Creation

# Authentication for Power BI

- **Service principal** is a local representation of our AAD application for use in a specific tenant and will allow us to access resources or perform operations using Power BI API without the need for a user to sign in or have a Power BI Pro license

- Steps required:

- ☐ Create an **Azure Active Directory (AD) App**
- ☐ Assign the proper **API permissions**
- ☐ Create an **Azure AD security group**
- ☐ Enable the **Power BI service admin settings**



**Developer settings**

- ▶ Embed content in apps  
*Enabled for the entire organization*
- ▶ Allow service principals to use Power BI APIs  
*Enabled for a subset of the organization*  
Web apps registered in Azure Active Directory (Azure AD) will use an assigned service principal to access Power BI APIs without a signed in user. To allow an app to use service principal authentication its service principal must be included in an allowed security group. [Learn more](#)  
☒ Enabled

ⓘ Service principals can use APIs to access tenant-level features controlled by Power BI service admins and enabled for the entire organization or for security groups they're included in. You can control access of service principals by creating dedicated security groups for them and using these groups in any Power BI tenant level-settings. [Learn more](#)

Apply to:

- ☐ The entire organization
- ☒ Specific security groups (Recommended)

**G-R-App-PowerBI-SP** x [blurred] x

Enter security groups

☐ Except specific security groups

Apply Cancel

# Azure DevOps Pipeline

## Azure DevOps Pipeline Name: PowerBI-CreateWorkspace

The screenshot displays the configuration for an Azure DevOps pipeline named 'PowerBI-CreateWorkspace'. The interface is divided into several sections:

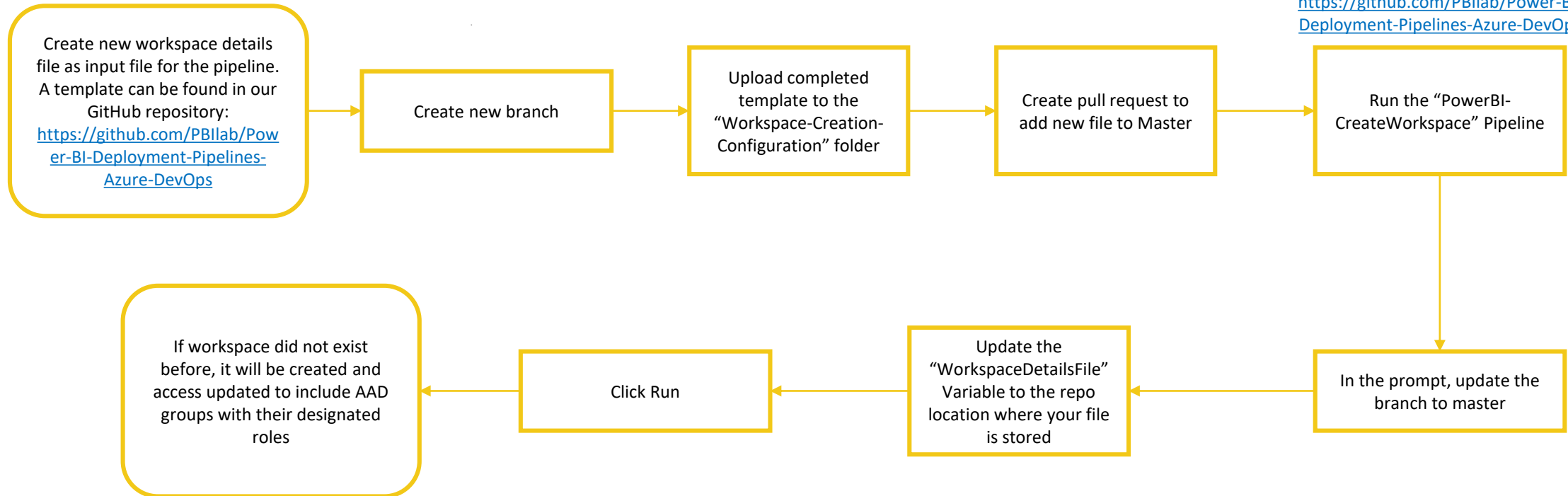
- Left Panel:** Shows the pipeline structure with 'Get sources' and 'Agent job 1'. The 'Agent job 1' section is expanded, showing a task named 'Create Workspace and add AD groups to new or existing ...' using the 'PowerShell' provider.
- Task Configuration:** The task is configured with the following details:
  - Task version:** 2.\*
  - Display name:** Create Workspace and add AD groups to new or existing workspaces
  - Type:** Inline
  - Script:** A PowerShell script is provided, including comments for connecting to Power BI and retrieving a certificate from the build system.
  - ErrorActionPreference:** Stop
- Variables Panel:** A separate window shows the 'Pipeline variables' section. It lists several predefined variables, with the following values highlighted:
  - Certificate:** \SP-Certificate\PowerBI-SP-PBILab-Certificate.pfx
  - CertificatePassword:** \*\*\*\*\*
  - CertificateThumbprint:** \*\*\*\*\*
  - ServicePrincipalAppID:** \*\*\*\*\*
  - system.collectionId:** 8474e9da-5076-4a76-b5be-7ae1992e1409
  - system.debug:** false
  - system.definitionId:** 1
  - system.teamProject:** Power BI Operative Framework
  - TenantObjectID:** \*\*\*\*\*
  - WorkspaceDetailsFile:** \Workspace-Creation-Configuration\



# Workspace Creation and Security Configuration Flow

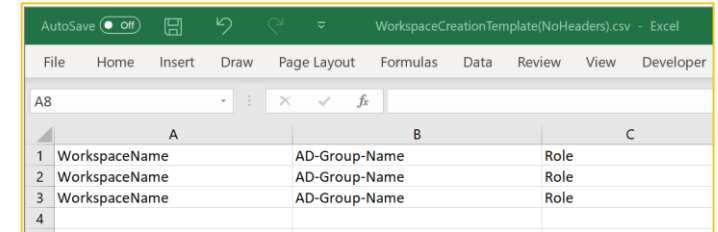
## Azure DevOps Pipeline Name: **PowerBI-CreateWorkspace**

The PowerShell code for the pipeline can be found in our GitHub repository:  
<https://github.com/PBILab/Power-BI-Deployment-Pipelines-Azure-DevOps>

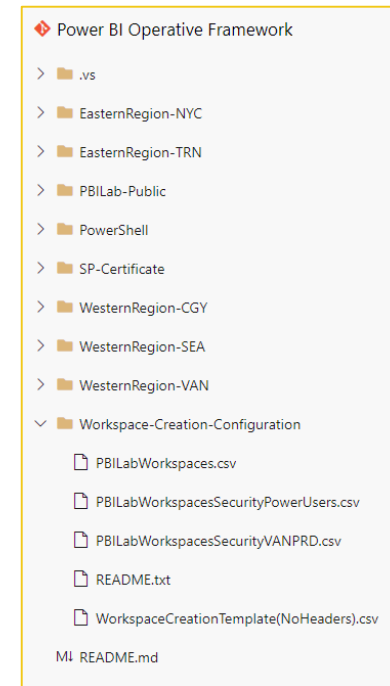


# Workspace Details Template

- Populate the template **WorkspaceCreationTemplate(NoHeaders)** with the information coming from the ticket / user request (if existing) and save as a csv; a template can be found in our GitHub repository: <https://github.com/PBILab/Power-BI-Deployment-Pipelines-Azure-DevOps>
- Content should have no headers
  - ❑ 1<sup>st</sup> column = Workspace Name
  - ❑ 2<sup>nd</sup> column = Azure Active Directory (AAD) Group Name
    - ✓ Limited to AAD only; not include individuals' emails
  - ❑ 3<sup>rd</sup> column = Workspace Role
    - ✓ As of Jun 16<sup>th</sup> 2020, roles are limited to Admin, Member and Publisher only
    - ✓ As of Jun 16<sup>th</sup> 2020, AAD groups with Viewer role must be added manually
- Save the template file using the ticket number (if existing) as a reference
  - ❑ E.g. "TicketNumber.csv"
- If the workspace creation is not related to a ticket use a meaningful name
  - ❑ E.g. "PBILabWorkspaces.csv"
- Create a new local branch off master and Sync
- Upload the completed template to the "Workspace-Creation-Configuration" folder



	A	B	C
1	WorkspaceName	AD-Group-Name	Role
2	WorkspaceName	AD-Group-Name	Role
3	WorkspaceName	AD-Group-Name	Role
4			



# Execute Azure DevOps Pipeline

- Commit the template upload
- Push the local branch to remote
- Create a pull request to add the new file template to master
- Wait for the pull request to be reviewed and approved
- Run the **PowerBI-CreateWorkspace** Pipeline: the PowerShell code can be found in our GitHub repository: <https://github.com/PBILab/Power-BI-Deployment-Pipelines-Azure-DevOps>
- Switch the Branch to master
- Update the “WorkspaceDetailsFile” Variable to the repo location where your file is stored
- Ensure that the location begins with \
- Ensure that the file name is included
- Click Run and wait for execution
- When completed check for errors and validate the existence of the workspaces in the service
- Add required Viewers manually

### Run pipeline

Select parameters below and manually run the pipeline

Agent pool  
Azure Pipelines

Agent Specification \*  
vs2017-win2016

Branch/tag  
master

Select the branch, commit, or tag

Advanced options

Variables  
1 variable defined

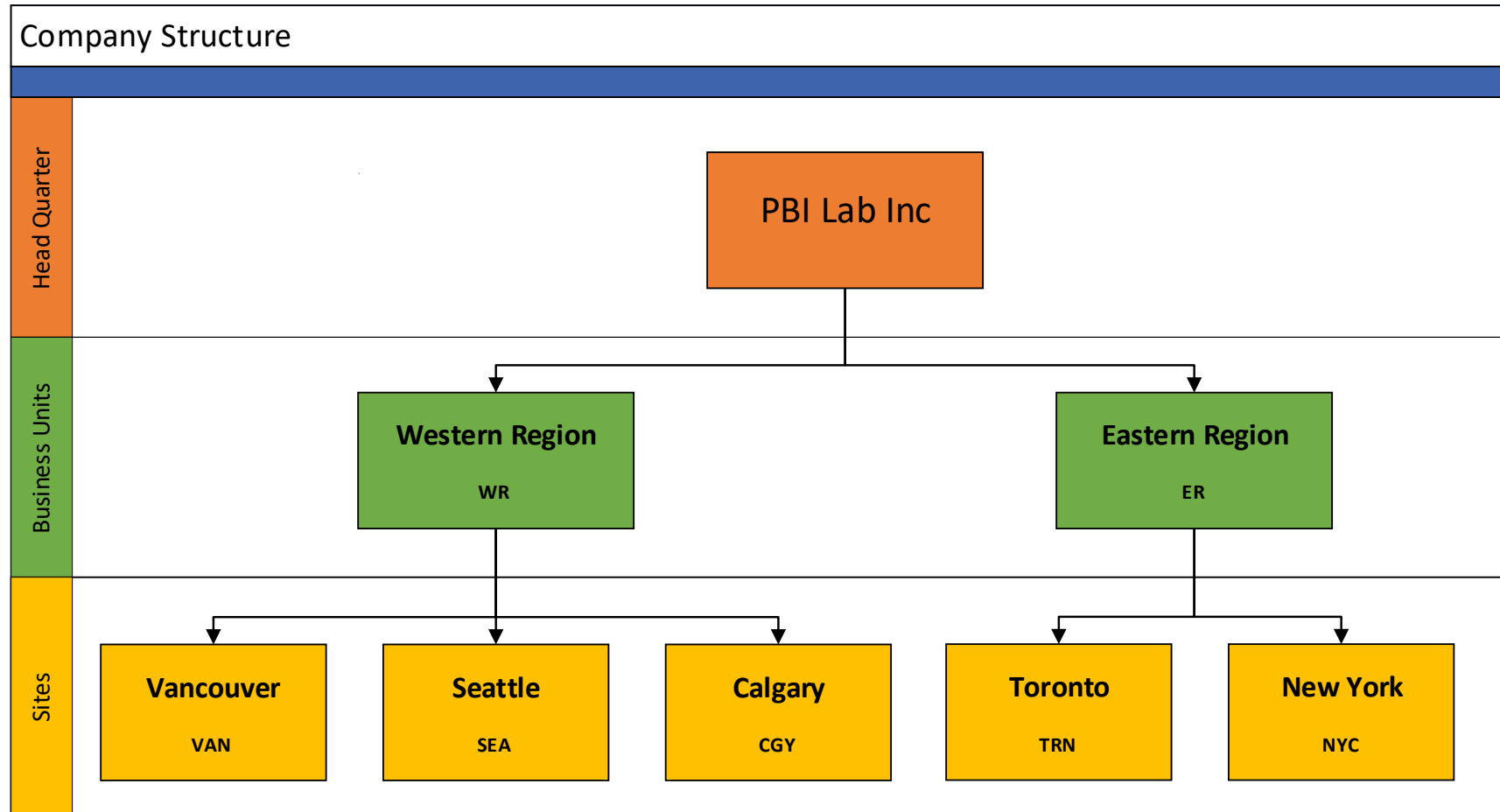
Demands  
This pipeline has no defined demands

### ← Update variable

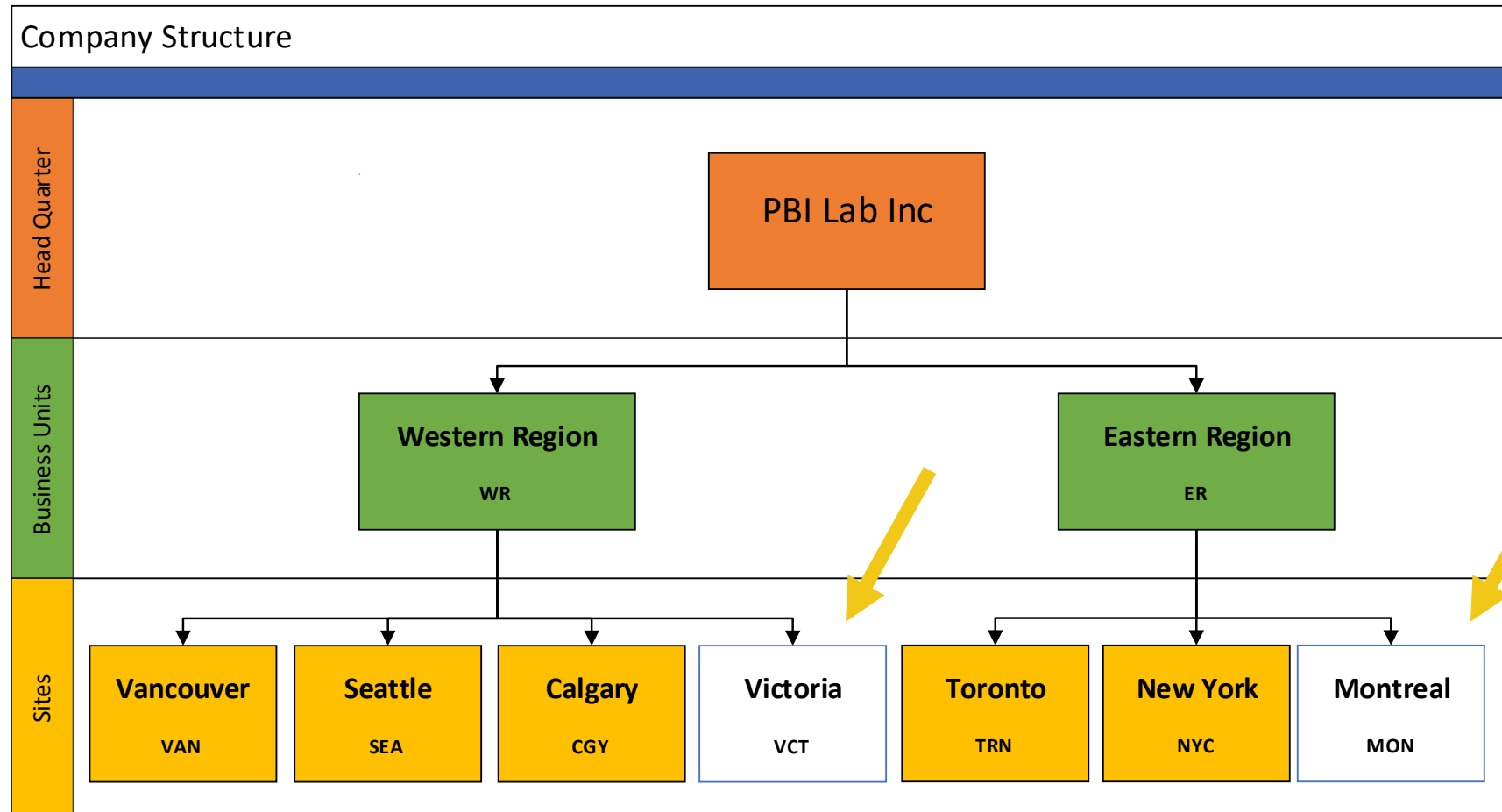
Name Required  
WorkspaceDetailsFile

Value  
\\Workspace-Creation-Configuration\\PBILabWorkspaces.csv

# DEMO: PBI Lab fictitious organization



# DEMO: PBI Lab Expansion



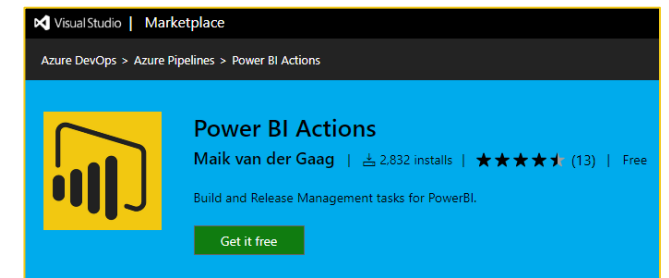
# Azure DevOps Pipeline: Workspace Creation - DEMO



# Azure DevOps Pipeline: Report Deployment

# Authentication for Power BI and Azure DevOps plugin

- We will use the same **Service principal** created to run the workspace creation pipeline
- For simplicity we will use a **plugin** called **Power BI Actions** that we can download from the Azure DevOps market place
- The same results can be achieved by writing your own pipeline



# Azure DevOps Pipeline

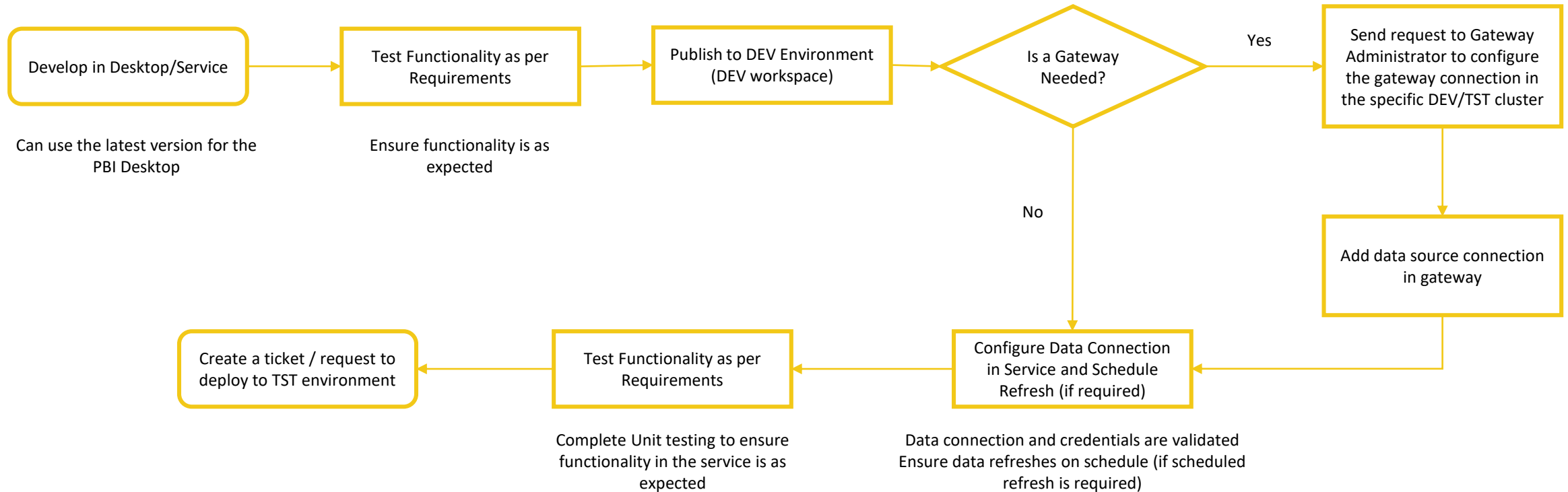
Azure DevOps Pipeline Name: **PowerBI-PublishPbixToWorkspace**

The screenshot displays the Azure DevOps Pipeline configuration for the 'PowerBI-PublishPbixToWorkspace' pipeline. The configuration is for the 'Power BI Action: Publish' task, which is part of 'Agent job 1'. The task version is set to '4.\*'. The display name is 'Power BI Action: Publish'. The authentication type is 'Service Principal'. The Power BI service connection is 'Power BI PBI Lab'. The action is 'Upload PowerBI Report'. The workspace name is '\$(WorkspaceName)' and the source file is '\$(PBIFilePath)'. The 'Overwrite Power BI File' checkbox is checked. The 'Pipeline variables' section shows 'PBIFilePath' and 'WorkspaceName' as predefined variables.

Name	Value	Settable at queue time
PBIFilePath		<input checked="" type="checkbox"/>
system.collectionId	8474e9da-5076-4a76-b5be-7ae1992e1409	
system.debug	false	
system.definitionId	2	<input type="checkbox"/>
system.teamProject	Power BI Operative Framework	
WorkspaceName		<input checked="" type="checkbox"/>

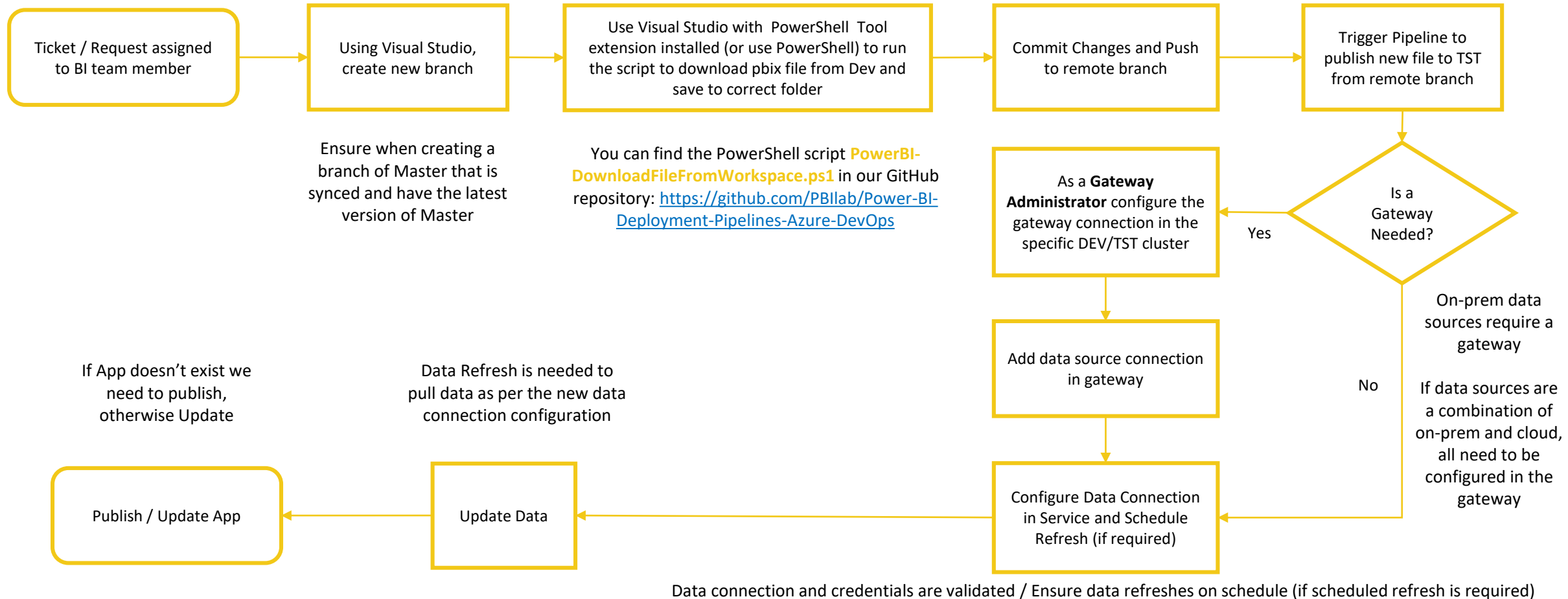
# Development and Deployment to DEV Flow

On-prem data sources require a gateway  
If data sources are a combination of on-prem and cloud, all need to be configured in the gateway



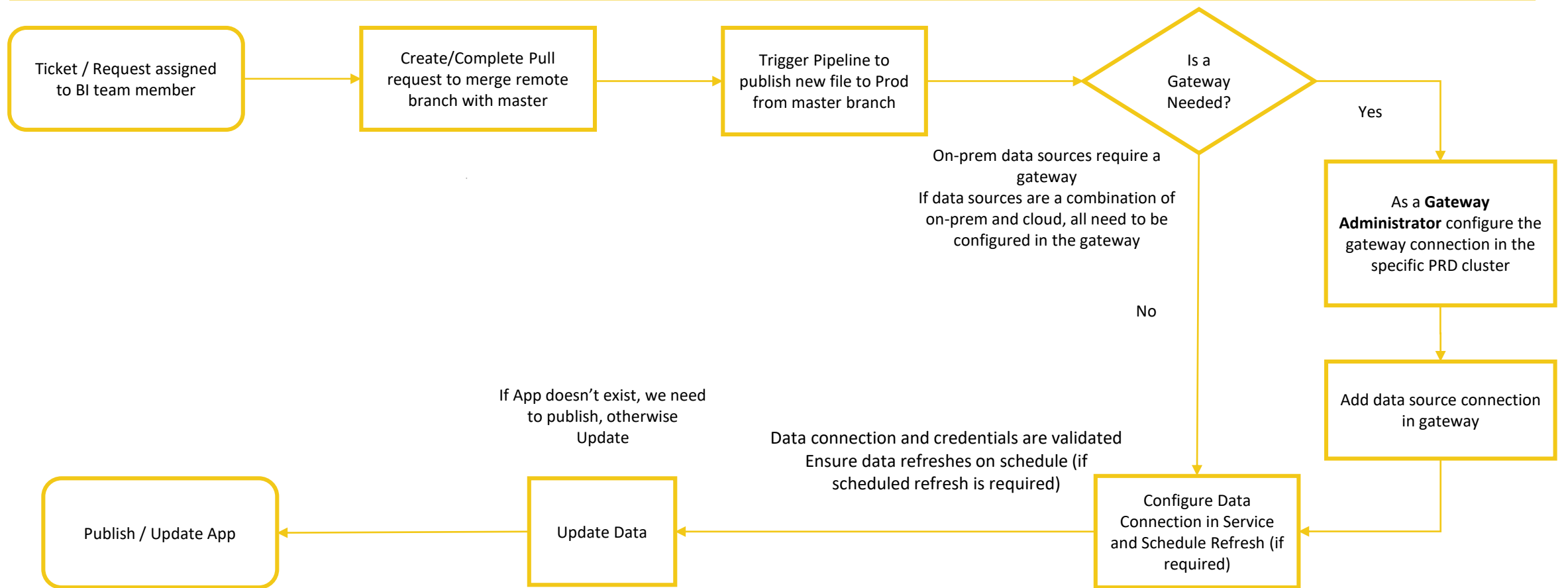
Audience: Power BI Power Users

# Development to TST Flow



Audience: Power BI Support / Gateway Administrators

# Development to PRD Flow



Audience: Power BI Support / Gateway Administrators

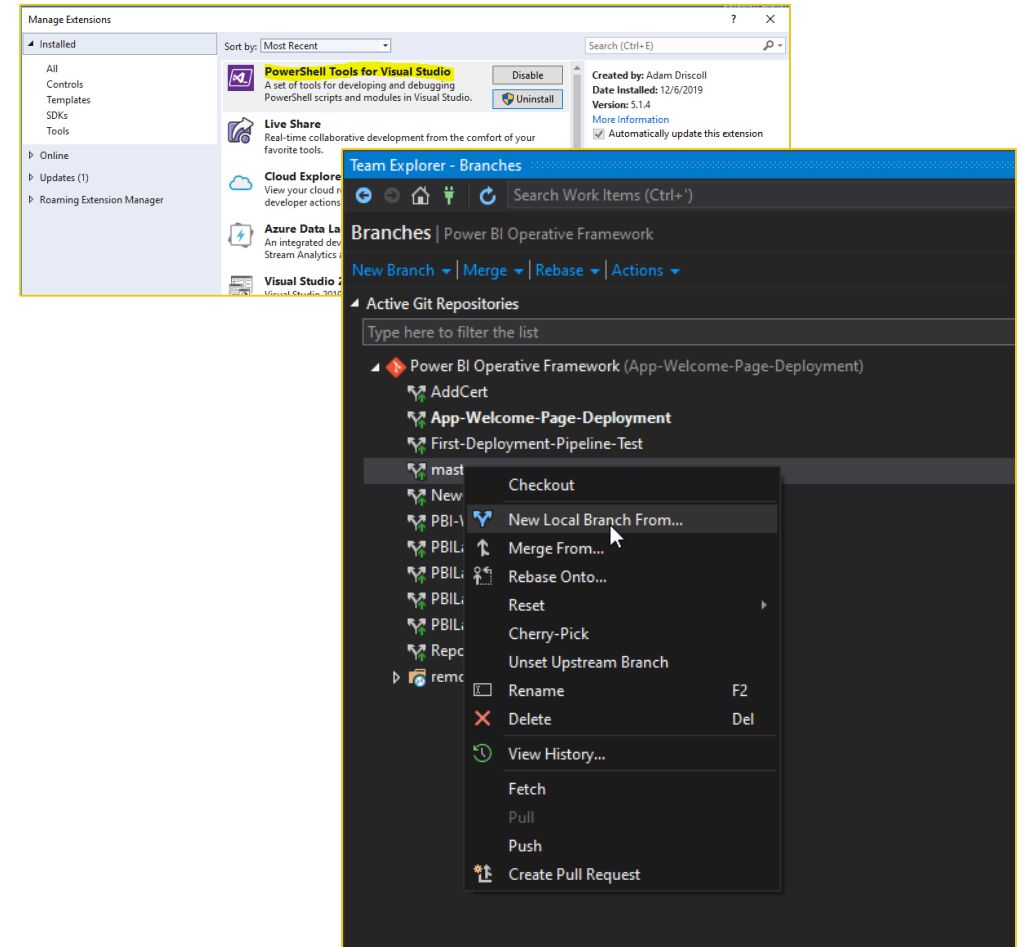
# Create Local Branch

## Prerequisite:

- PowerShell Tool extension must be installed in Visual Studio
  - ❑ *PowerShell outside Visual Studio can be used*
- .NET Framework above 4.7.0 (This only works from 4.7.1)
- Power Shell: MicrosoftPowerBIMgmt module installed
  - ❑ *Install-Module -Name MicrosoftPowerBIMgmt (Install as an Administrator)*

Using Visual Studio, create a local branch off master

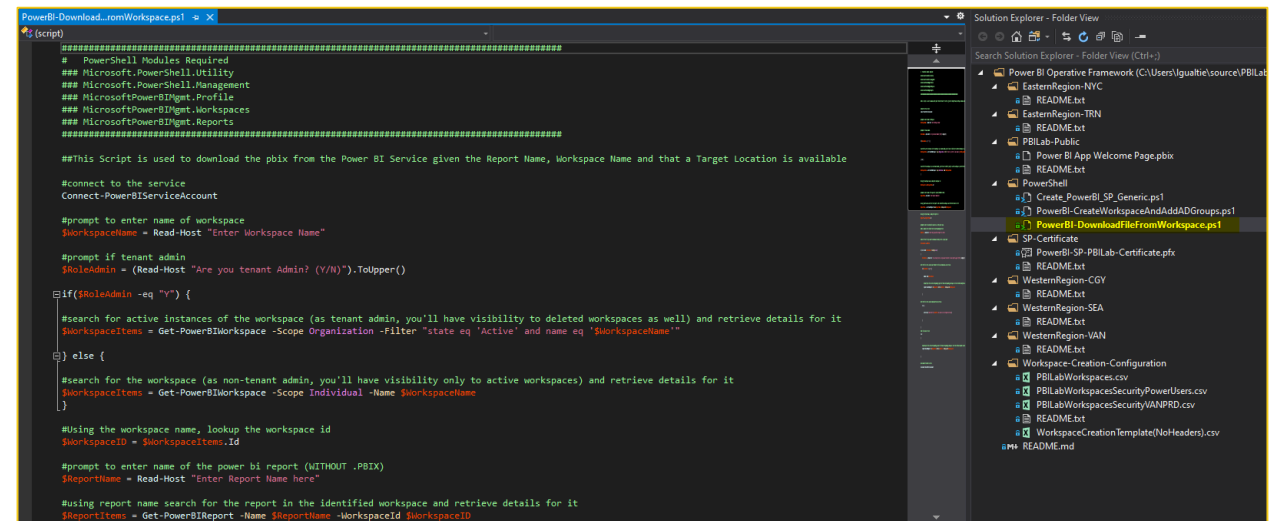
- Use the ticket / request number in the name to associate the branch





# Download pbix to Local repo

- Open the script **PowerBI-DownloadFileFromWorkspace.ps1** from the folder PowerShell
- Run in Visual Studio or PowerShell using your admin credentials
  - ❑ Only Tenant / Workspace Admins can run this
- Enter value in prompt for Workspace name where you want to download the report from
- Enter value in prompt for Report name you want to download (\*)
- Enter value in prompt for location and filename that you'd like to save to (\*)
- Downloaded file should be visible in the correct folder



The screenshot shows a Visual Studio window with a PowerShell script titled 'PowerBI-DownloadFileFromWorkspace.ps1'. The script contains comments and PowerShell commands for connecting to the Power BI service, prompting for workspace and report names, and downloading the report. The Solution Explorer on the right shows a folder structure for 'Power BI Operative Framework' with various subfolders and files, including the script being edited.

```
PowerShell Modules Required
### Microsoft.PowerShell.Utility
### Microsoft.PowerShell.Management
### Microsoft.PowerShell.Profile
### Microsoft.PowerShell.Get-Workspaces
### Microsoft.PowerShell.Get-Reports

##This Script is used to download the pbix from the Power BI Service given the Report Name, Workspace Name and that a Target Location is available

#connect to the service
Connect-PowerBIServiceAccount

#prompt to enter name of workspace
$workspaceName = Read-Host "Enter Workspace Name"

#prompt if tenant admin
$roleAdmin = (Read-Host "Are you tenant Admin? (Y/N)").ToUpper()

If($roleAdmin -eq "Y") {
    #Search for active instances of the workspace (as tenant admin, you'll have visibility to deleted workspaces as well) and retrieve details for it
    $workspaceItems = Get-PowerBIWorkspace -Scope Organization -filter "state eq 'Active' and name eq '$workspaceName'"
} else {
    #Search for the workspace (as non-tenant admin, you'll have visibility only to active workspaces) and retrieve details for it
    $workspaceItems = Get-PowerBIWorkspace -Scope Individual -Name $workspaceName
}

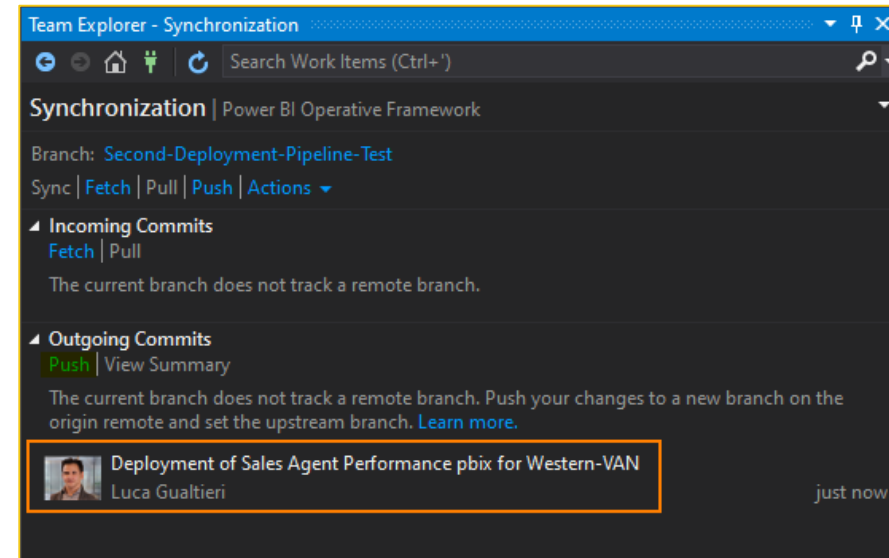
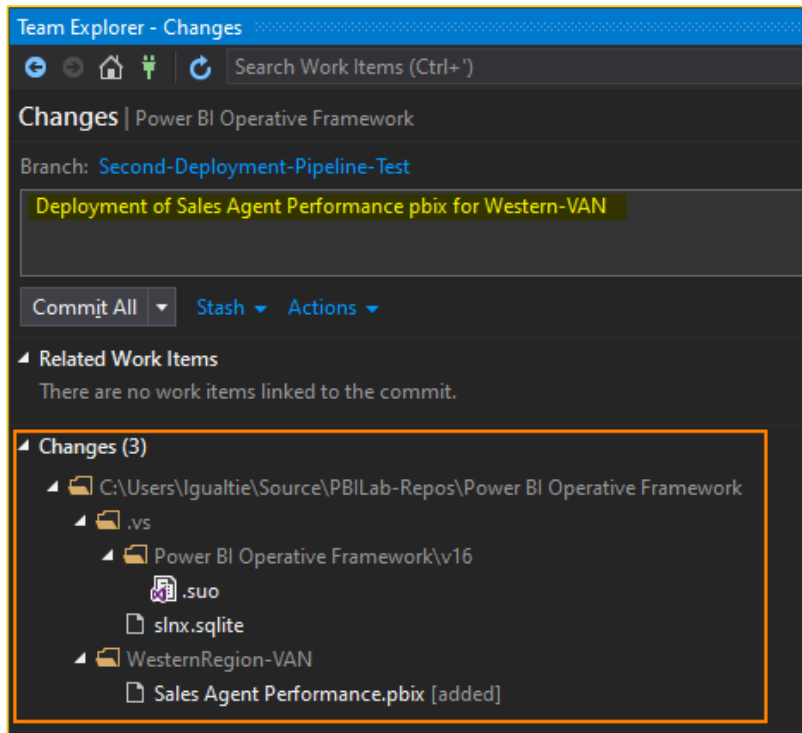
#Using the workspace name, lookup the workspace id
$workspaceID = $workspaceItems.Id

#prompt to enter name of the power bi report (WITHOUT .PBIX)
$reportName = Read-Host "Enter Report Name here"

#Using report name search for the report in the identified workspace and retrieve details for it
$reportItems = Get-PowerBIReport -Name $reportName -WorkspaceId $workspaceID
```

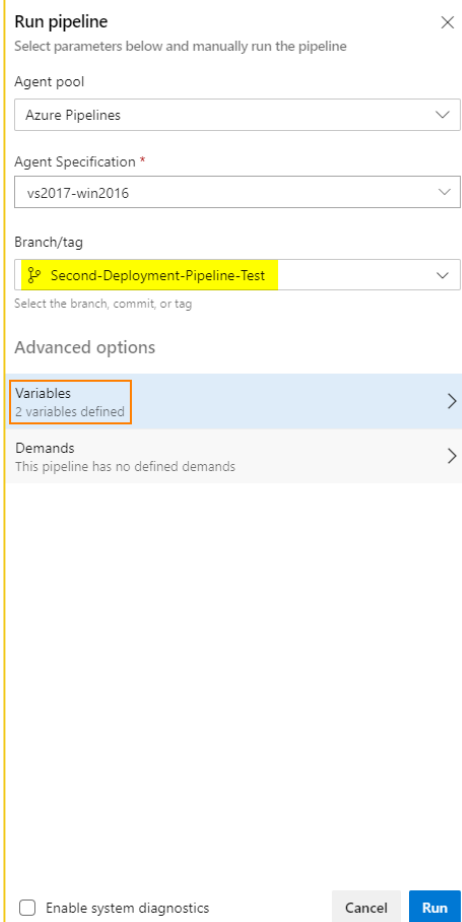
# Commit and Sync changes

- After you've downloaded the pbix file in the local branch, **Repo the changes must be pushed** to the remote branch



# Run Pipeline to Publish to TST

- Run the **PowerBI-PublishPbixToWorkspace** pipeline
- Update the branch/tag field to the remote branch you were working on
- Update the “PBIFilePath” variable to the file path where the pbix you wish to upload is stored
- Update the “WorkspaceName” variable to the workspace name where you want the file to be published in power bi service
- Click Run and wait for execution



**Run pipeline**

Select parameters below and manually run the pipeline

Agent pool  
Azure Pipelines

Agent Specification \*  
vs2017-win2016

Branch/tag  
Second-Deployment-Pipeline-Test

Select the branch, commit, or tag

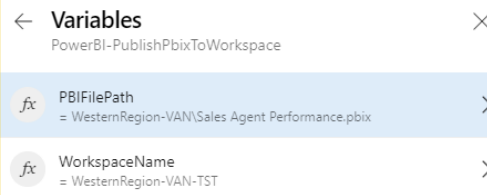
Advanced options

Variables  
2 variables defined

Demands  
This pipeline has no defined demands

☐ Enable system diagnostics

Cancel Run



**Variables**

PowerBI-PublishPbixToWorkspace

PBIFilePath  
= WesternRegion-VAN\Sales Agent Performance.pbix

WorkspaceName  
= WesternRegion-VAN-TST

# Merge with Master

- Create **Pull Request** to merge with master
  - ❑ You can create a Pull Request from the web page in Azure DevOps
  - ❑ You can create a Pull Request directly from Visual Studio and be redirected to Azure DevOps

The screenshot displays the Azure DevOps Pull Requests interface. On the left, the 'Pull requests' section shows a list of requests under the 'Mine' tab. A pull request titled 'Deployment of Sales Agent Performance pbix for Western-VAN' by Luca Gualtieri is shown, with a 'Required' status. On the right, the details of this pull request are visible, including the 'Approve' and 'Complete' buttons, and a list of reviewers. Luca Gualtieri is listed as a reviewer with a green checkmark and the word 'Approved'. Below these sections, a summary card shows the pull request title, a green 'Completed' status, the number '110', the author's name 'Luca Gualtieri', and the branch 'Second-Deployment-Pipeline-Test' being merged into 'master'.

**Pull requests**

Mine Active Completed Abandoned

Created by me 1

Deployment of Sales Agent Performance pbix for Western-VAN Required  
Luca Gualtieri request 110 into master

Approve Complete

Reviewers Add

Required

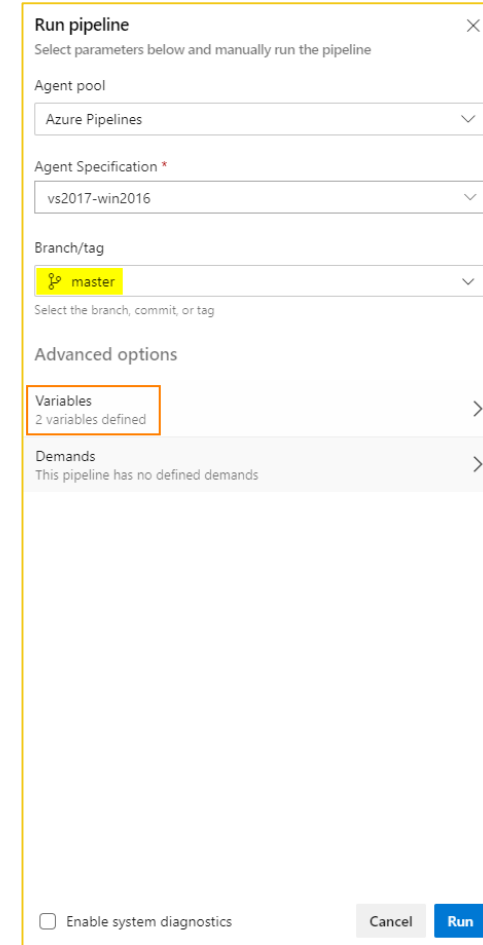
Luca Gualtieri Approved

Deployment of Sales Agent Performance pbix for Western-VAN

Completed 110 Luca Gualtieri Second-Deployment-Pipeline-Test into master

# Run Pipeline to Publish to PROD

- Once the pull request has been approved and completed, Run the “**PowerBI-PublishPbixToWorkspace**” pipeline
- Update the branch to the master branch
- Update the “PBIFilePath” variable to the file path where the pbix you wish to upload is stored (\*)
- Update the “WorkspaceName” variable to the workspace name where you want the file to be publish in power bi service (\*)
- Click Run and wait for execution



**Run pipeline** ✕

Select parameters below and manually run the pipeline

Agent pool  
Azure Pipelines ▼

Agent Specification \*  
vs2017-win2016 ▼

Branch/tag  
master ▼  
Select the branch, commit, or tag

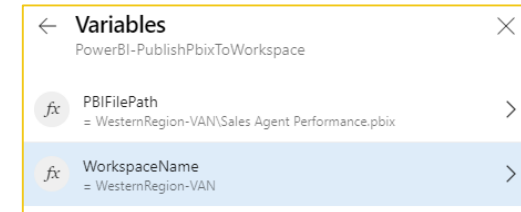
Advanced options

**Variables**  
2 variables defined >

Demands  
This pipeline has no defined demands >

☐ Enable system diagnostics

Cancel Run



← **Variables** ✕

PowerBI-PublishPbixToWorkspace

fx PBIFilePath  
= WesternRegion-VAN\Sales Agent Performance.pbix >

fx WorkspaceName  
= WesternRegion-VAN >

# Azure DevOps Pipeline: Report Deployment - DEMO

# Resources

A large audience is seated in a conference hall, facing a stage with multiple projection screens. The room has a high ceiling with recessed lighting and large windows on the right side. The audience is diverse in age and appearance, and many are looking towards the stage. The stage area is dimly lit, with the projection screens providing the main source of light.





# Connect with PBI Lab



[pbilab.com](https://pbilab.com)

@pbilab

[info@pbilab.com](mailto:info@pbilab.com)

[luca.gualtieri@pbilab.com](mailto:luca.gualtieri@pbilab.com)

# Resources (1)

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- PBI Lab GitHub Repository  
<https://github.com/PBILab/Power-BI-Deployment-Pipelines-Azure-DevOps>
- New deployment pipeline feature (preview) from Microsoft  
<https://docs.microsoft.com/en-us/power-bi/create-reports/deployment-pipelines-overview>
- Create a repo in Azure DevOps from Visual Studio  
<https://docs.microsoft.com/en-us/azure/devops/repos/git/creatingrepo?view=azure-devops&tabs=visual-studio>
- Service Principal  
<https://docs.microsoft.com/en-us/azure/active-directory/develop/app-objects-and-service-principals>

# Resources (2)

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- Power BI PowerShell Reference

<https://docs.microsoft.com/en-us/powershell/module/microsoftpowerbimgmt.admin/?view=powerbi-ps>

- Azure DevOps Repos

<https://azure.microsoft.com/en-ca/services/devops/repos/>

- Azure DevOps Repos Permissions

<https://docs.microsoft.com/en-us/azure/devops/organizations/security/permissions?view=azure-devops&tabs=preview-page>

# Resources (3)

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- Azure DevOps branch policies

<https://docs.microsoft.com/en-us/azure/devops/repos/git/branch-policies-overview?view=azure-devops>

- Power BI Actions plugin for Azure DevOps

<https://marketplace.visualstudio.com/items?itemName=maikvandergaag.maikvandergaag-power-bi-actions>

- Power BI Action plugin wiki

<https://github.com/MaikvanderGaag/msft-extensions/wiki>

# Q&A

A large audience is seated in a conference hall, facing a stage with presentation screens. The room has a high ceiling with recessed lighting and large windows on the right side. The audience is diverse in age and appearance, and many are looking towards the stage. The stage area is visible in the background, with a few people standing near the screens.