

# Lifecycle Mastery: Managing Power Platform Assets in the Age of Agents

Get the labs

<https://aka.ms/PPCC25-ALM>

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Power CAT  
Microsoft

## Get the labs

<https://aka.ms/PPCC25-ALM>

# Agenda

Lab	Time	Topic
Presentation	9:00 AM	Solutions and DevOps 101
<a href="#">Lab 1</a>	9:20 AM	Setup and configure
<a href="#">Lab 2</a>	9:40 AM	Building Power Platform Solutions
<b>Coffee</b>	<b>10:00 AM</b>	<b>Coffee break</b>
<a href="#">Lab 2 (cont)</a>	10:15 AM	Building Power Platform Solutions
<b>Lunch</b>	<b>11:45 AM</b>	<b>Lunch</b>
<a href="#">Lab 3</a>	12:45 PM	Deploy
<a href="#">Lab 4</a>	2:15 PM	Lifecycle Mastery in Power Pages
Presentation	3:00 PM	Best practices & Q&A

# Solutions and DevOps 101

Show of hands:

Are you new to DevOps (ALM) in Power Platform?

Show of hands:

< 2 years experience with DevOps in Power Platform?

Show of hands:

2-5 5 years experience with DevOps in Power Platform?

Show of hands:

5-10 years with DevOps in Power Platform?

Show of hands:

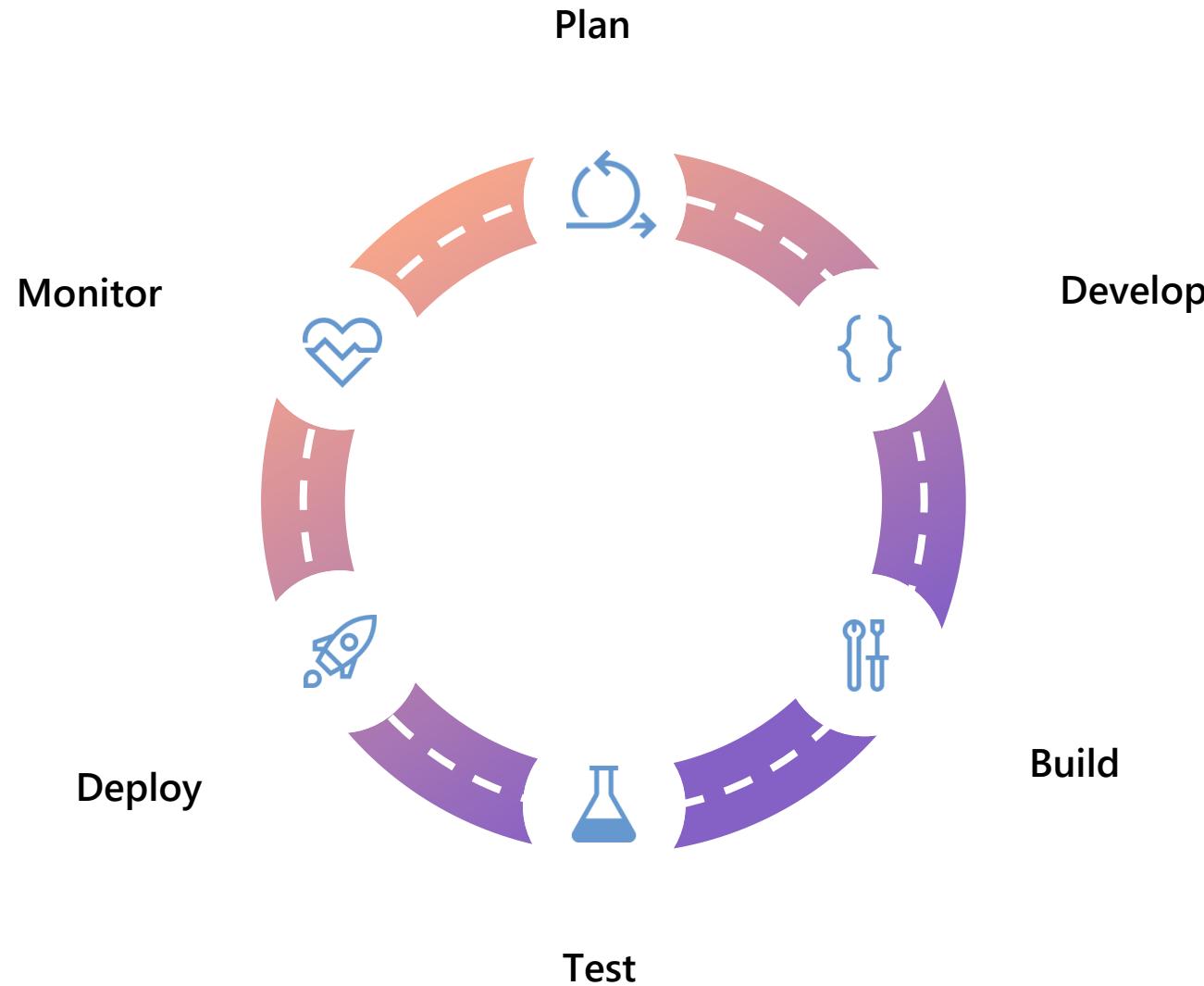
10+ years with DevOps in Power Platform?

# 3x usage

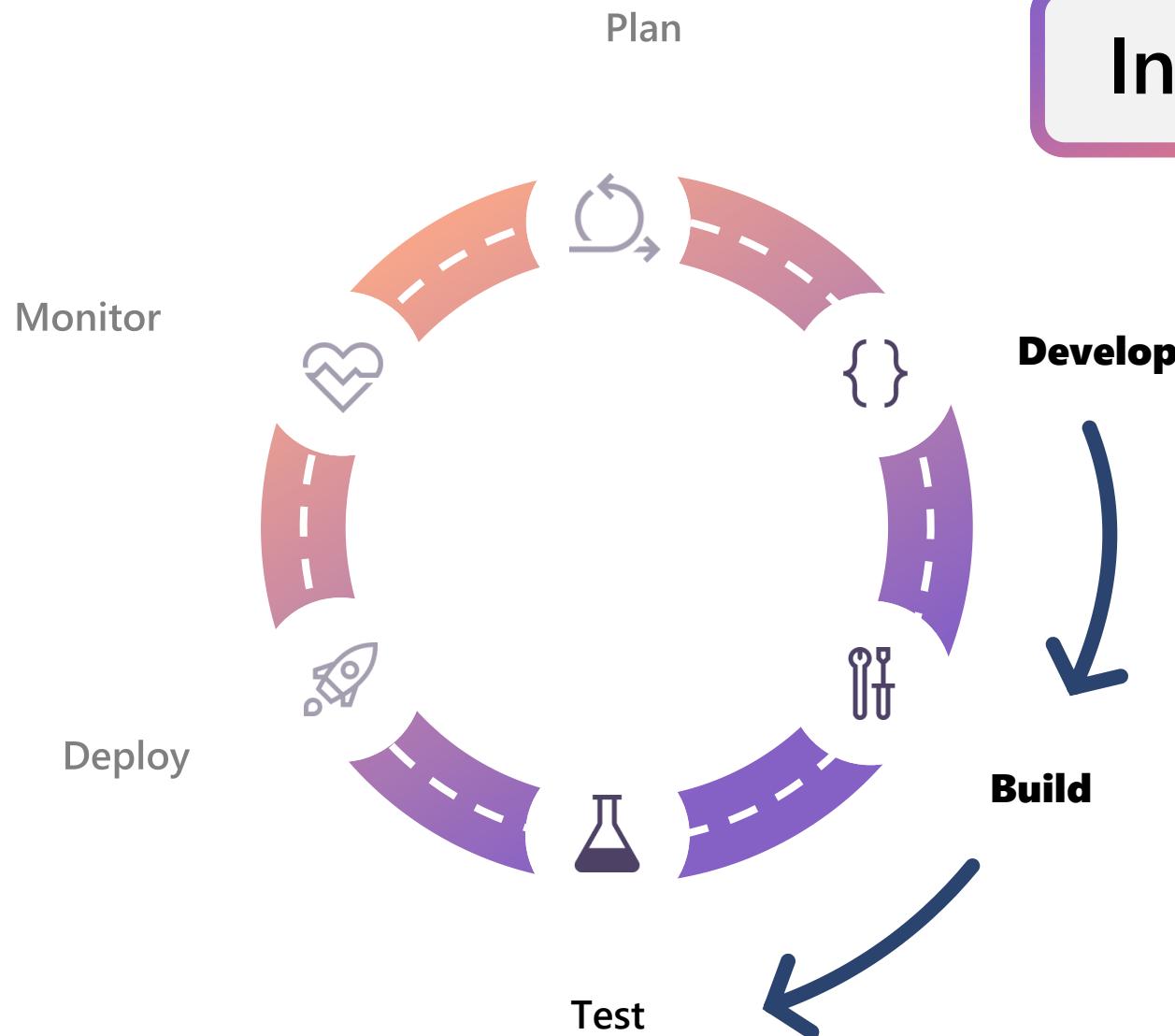
Solutions using DevOps  
(ALM) have 3x more usage  
on average

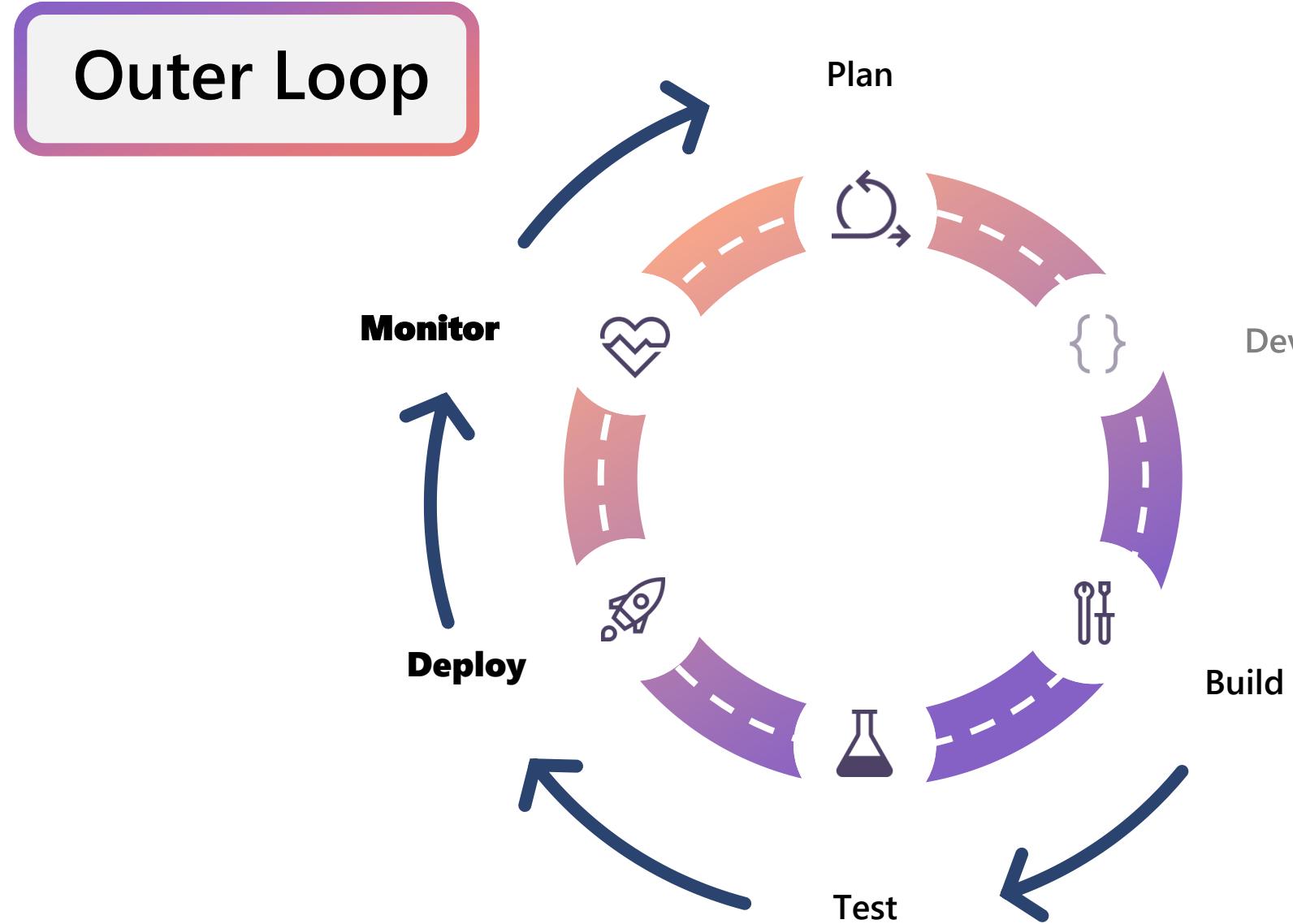
# What is DevOps? (aka ALM)

*DevOps is the union of **people**, **process**, and **products** to enable **continuous** delivery of value to end users*



# Inner Loop





# **DevOps fundamentals in Power Platform**

# Environments

## Definition:

Container to store, manage, and share your organization's business data, agents, apps, automations and other Power Platform resources.

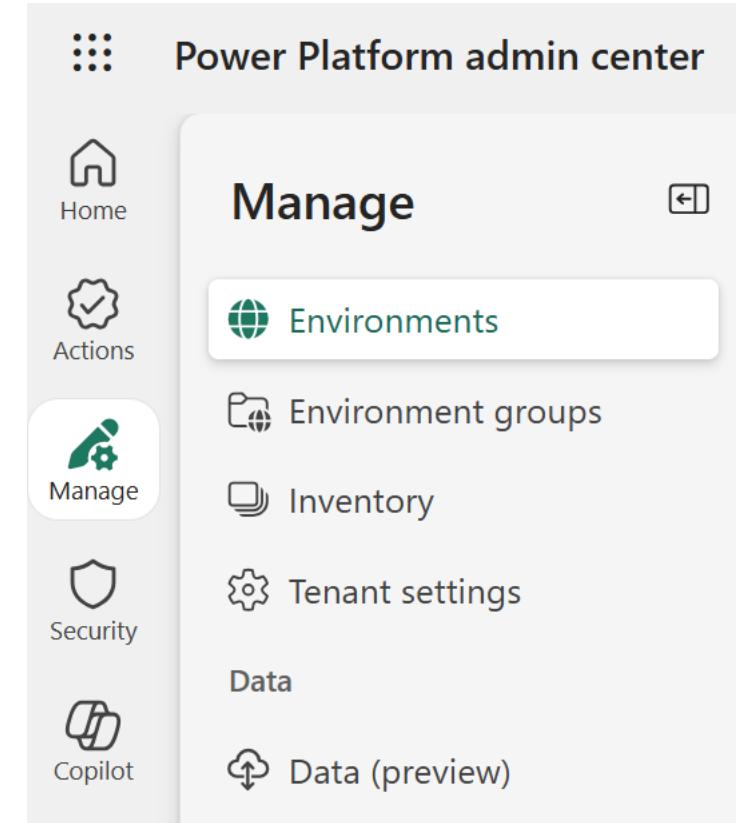
Serves as an isolation barrier to separate applications and data that might have different roles, security requirements, or target audiences.

## Key facts:

- Tied to a geographic location
- Different types of environments exist
- Can have either **zero** or **one** Dataverse database
- Every tenant has a Default environment where all makers can create.
- Environments can be grouped together to apply policies uniformly

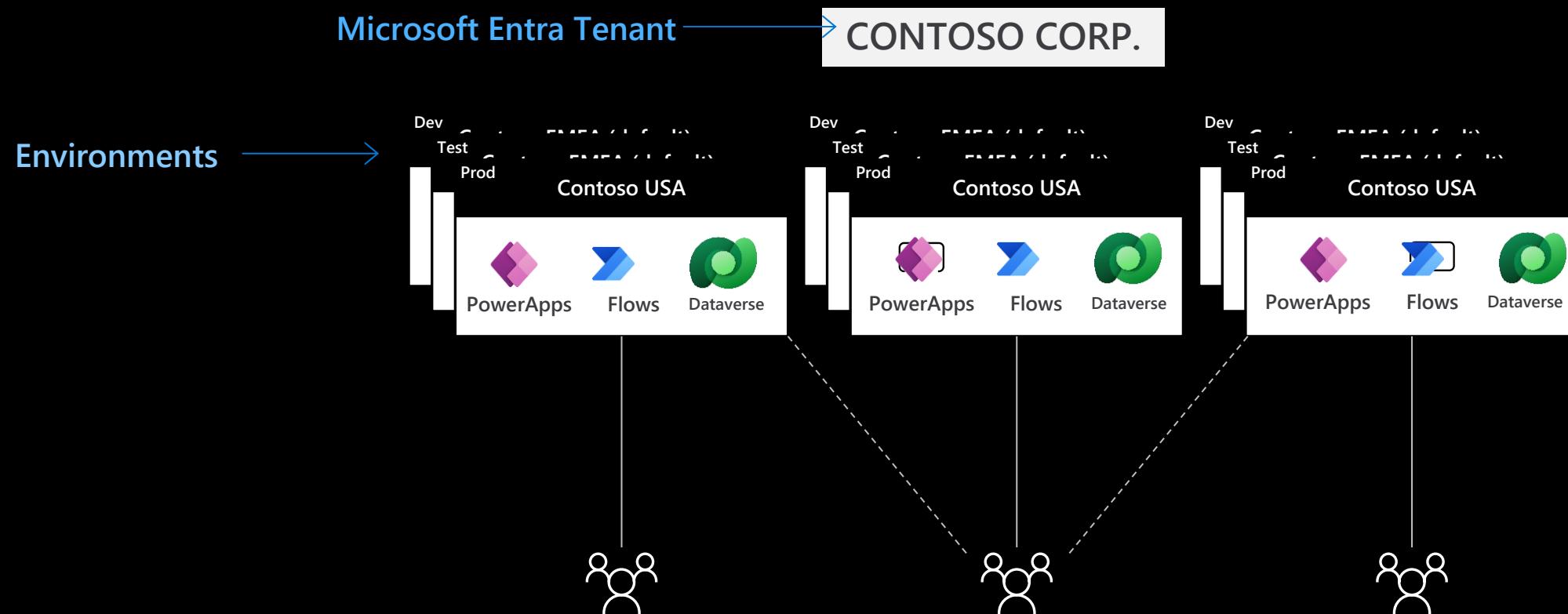
## Security tips:

- Non-default environments offer more permission controls.
- Non-default environment creation can be restricted to specific users.
- Test and production environments should use least privileged access

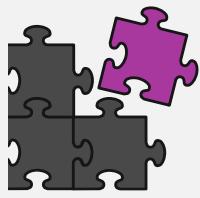


# Develop Your Environment Strategy

Environments are containers that administrators can use to manage agents, apps, automations, Pages, and other assets; along with permissions to use the resources

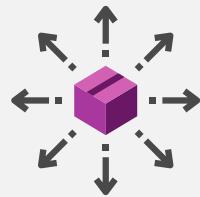


# What is a solution?



A **Solution** is a **group** of one or more **related objects** that make up an “**application**”

A solution **publisher** defines **ownership** of the objects within a solution



**Solutions** allow **distribution** of applications across environments

# What goes into a solution?

Data	User Interface	Analytics	Process / Code	AI	Security	System Settings
<ul style="list-style-type: none"><li>• Tables</li><li>• Columns</li><li>• Relationships</li><li>• Choices</li><li>• Connectors</li></ul>	<ul style="list-style-type: none"><li>• App</li><li>• Forms</li><li>• Views</li><li>• Command bar</li><li>• Controls</li><li>• Pages</li></ul>	<ul style="list-style-type: none"><li>• Dashboards</li><li>• Reports</li><li>• Charts</li></ul>	<ul style="list-style-type: none"><li>• Workflows</li><li>• Plugins<ul style="list-style-type: none"><li>• Assemblies</li><li>• Plugin Steps</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Agents</li><li>• AI models</li></ul>	<ul style="list-style-type: none"><li>• Security Roles</li><li>• Column Level Security Profiles</li></ul>	<ul style="list-style-type: none"><li>• Formatting Options</li><li>• Other System Settings</li></ul>

**Solutions contain your customizations of anything in Power Platform, but not business data.**

# What are unmanaged and managed solutions?



Unmanaged Solution

Only for **development** of the solution

Collection of references to objects

Can be exported as unmanaged or managed



Managed Solution

Only for **deployment** of a solution

Sealed “binary”

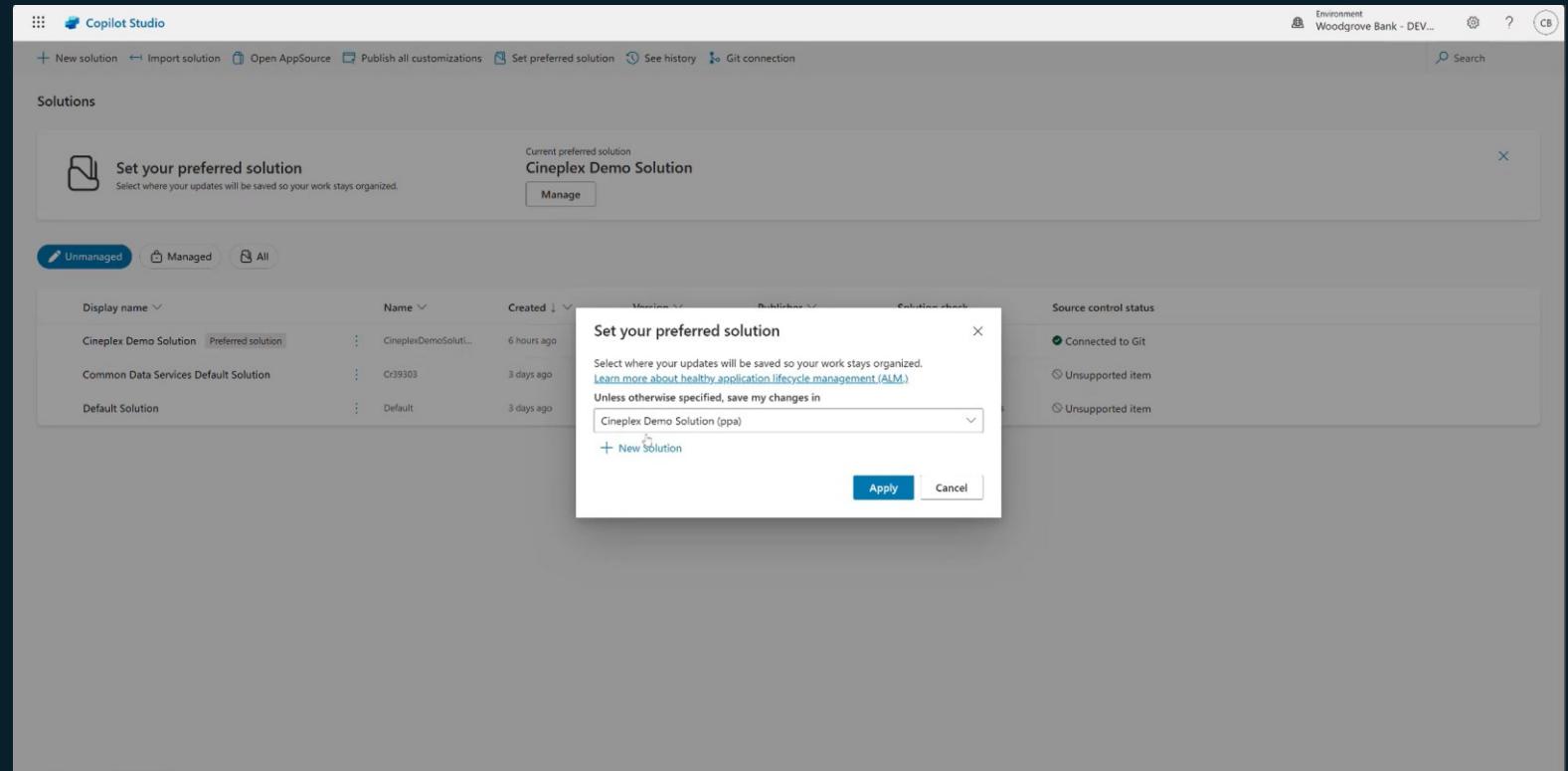
Components can't be added or removed

Cannot be exported

# Preferred Solution

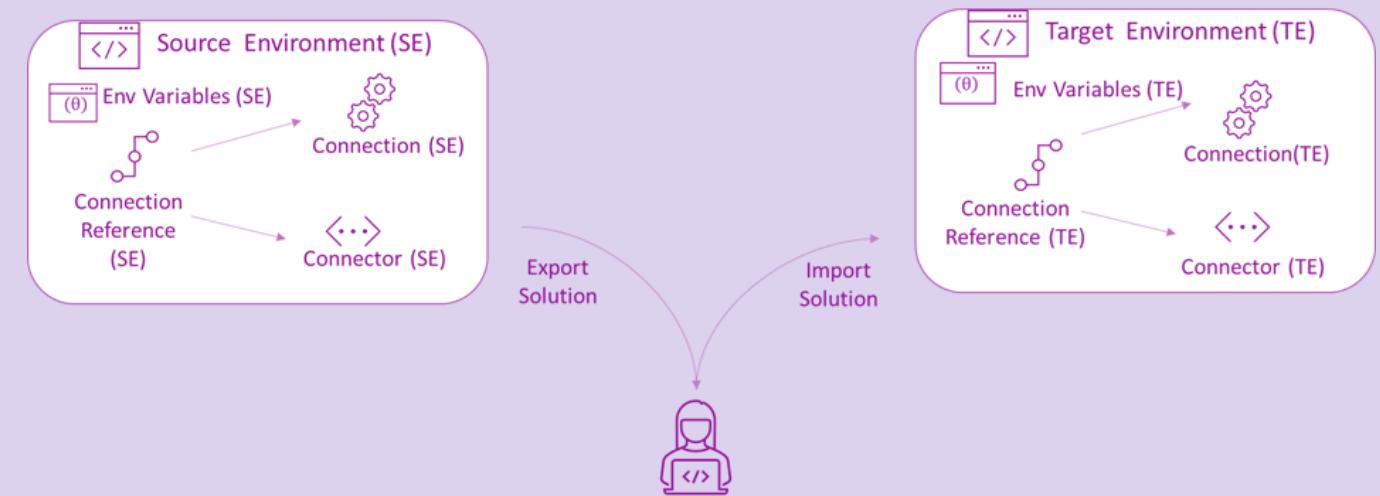
Highly recommended

- Starts every maker with “healthy” ALM
- Organizes customizations automatically
- Works across all maker portals

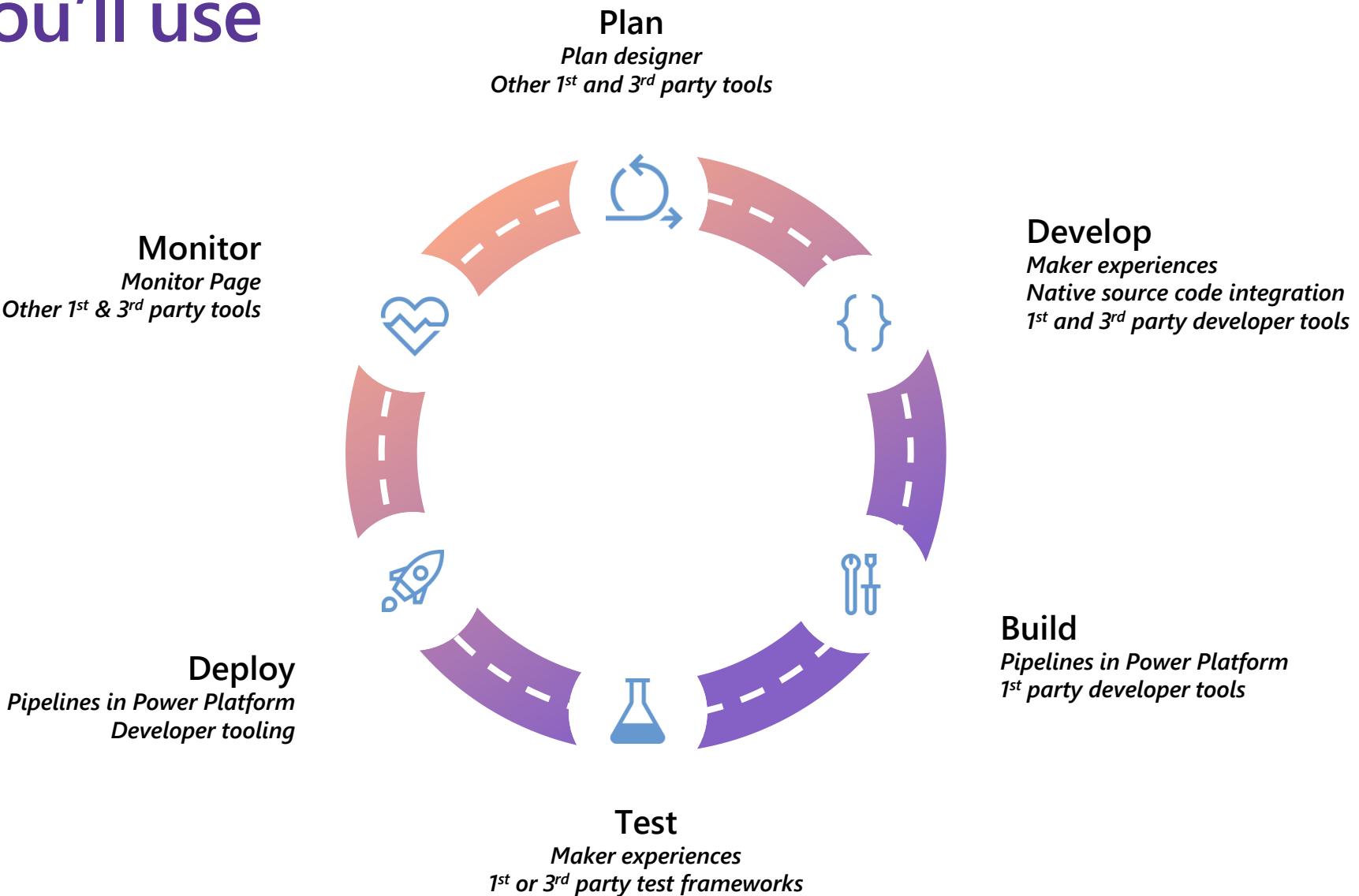


# Environment variables and connection references

- Environment variables allow you to transport application configuration data with solutions and optionally manipulate the values in your Application Lifecycle Management (ALM) pipeline.
- Connection references ensure that connections can participate in ALM by removing hard-coded identifiers within components and allowing new connections to be associated as you migrate solutions across environments.



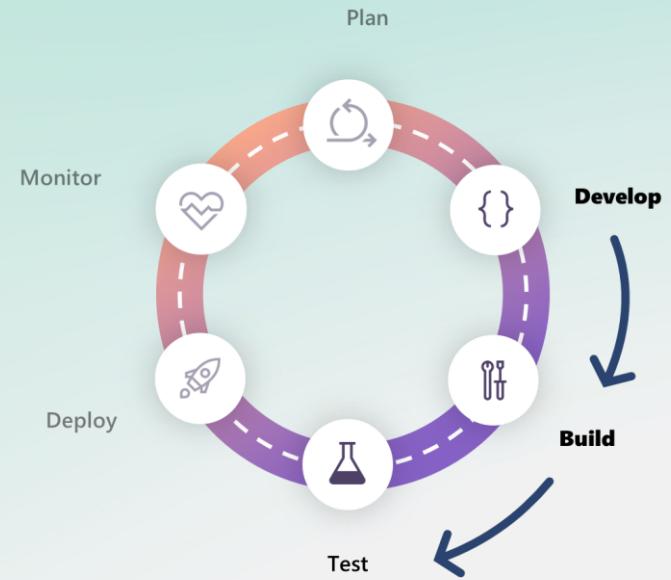
# Tools you'll use



# Lab 1: Setup and Configure

# Lab 2: Building Power Platform Solutions

# The inner loop



# Why source Code matters?

## 6. Assembly



Code:

```
MOV AX, 0      ; sum = 0
MOV CX, 1      ; i = 1
LOOP_START:
ADD AX, CX    ; sum += i
INC CX
```

## 2. Python



Code:

```
sum(range(1, 11))
```

## 4. F# (Functional)



Code:

```
let sum = [1..10] |> List.sum
```

## 1. Copilot



Prompt:

*"Calculate the sum of numbers from 1 to 10"*



```
1 int sum = 0;
2 for(int i = 1; i <= 10; i++)
3     sum += i;
```

## 3. C# (Object-Oriented)



Code:

```
1 class Calculator {
2     public int Sum(int start, int end) {
3         int sum = 0;
4         for (int i = start; i <= end; i++)
5             sum += i;
6         return sum;
7     }
8 }
```

# Solution is the Source Code

The screenshot shows the Microsoft Power Apps Solutions page. On the left, there's a navigation sidebar with icons for Home, Create, Learn, Plans, Apps, AI hub, Tables, Flows, and a Solutions section which is currently selected and highlighted with a red arrow. At the top right, there's a search bar, a notification bell, settings gear, and a help question mark icon. The main header includes 'Power Apps', a search bar, and environment information 'Environment Marcel - dev'. Below the header, there are several buttons: '+ New solution', 'Import solution', 'Open AppSource', 'Publish all customizations', 'Set preferred solution', 'See history', 'Connect to Git' (which is highlighted with a red box), and a three-dot menu. A yellow banner at the top indicates '1 environment variable need to be updated.' The main area is titled 'Solutions' and shows a card for the 'Current preferred solution' named 'solutionsample' with a 'Manage' button. It also features cards for 'Deployment' and 'Create plan from a solution'. Below these are tabs for 'Unmanaged' (selected), 'Managed', and 'All'. The main table lists solutions with columns for Display name, Name, Created, Version, Publisher, and Solution check. The first solution listed is 'test ALM - canvas component'. The 'solutionsample' solution is marked as 'Preferred solution'. The 'Source control status' column on the right shows 'Connected to Git' for the first two solutions and 'Unsupported item' for the last two. A red box highlights the 'Connect to Git' button in the top right and the 'Source control status' row for the last two solutions.

Display name	Name	Created	Version	Publisher	Solution check	Source control status
test ALM - canvas component	testALMcanvasco...	1 month ago	1.0.0.1	marcelbf	Results as of 2:05 PM, 9/...	Connected to Git
solutionsample	solutionsample	3 months ago	1.0.0.0	Contoso	Hasn't been run	Connected to Git
Contoso Real Estate	ContosoRealEstate	4 months ago	1.0.0.2	Contoso	Hasn't been run	Unsupported item
ALM	ALM	4 months ago	1.0.0.3	marcelbf	Results expired. Run che...	Unsupported item
Common Data Services Default Solution	Cr573af	7 months ago	1.0.0.0	CDS Default Publ...	Hasn't been run	
Default Solution	Default	7 months ago	1.0	Default Publisher...	Not supported for analy...	

# Working with solution files (.zip)

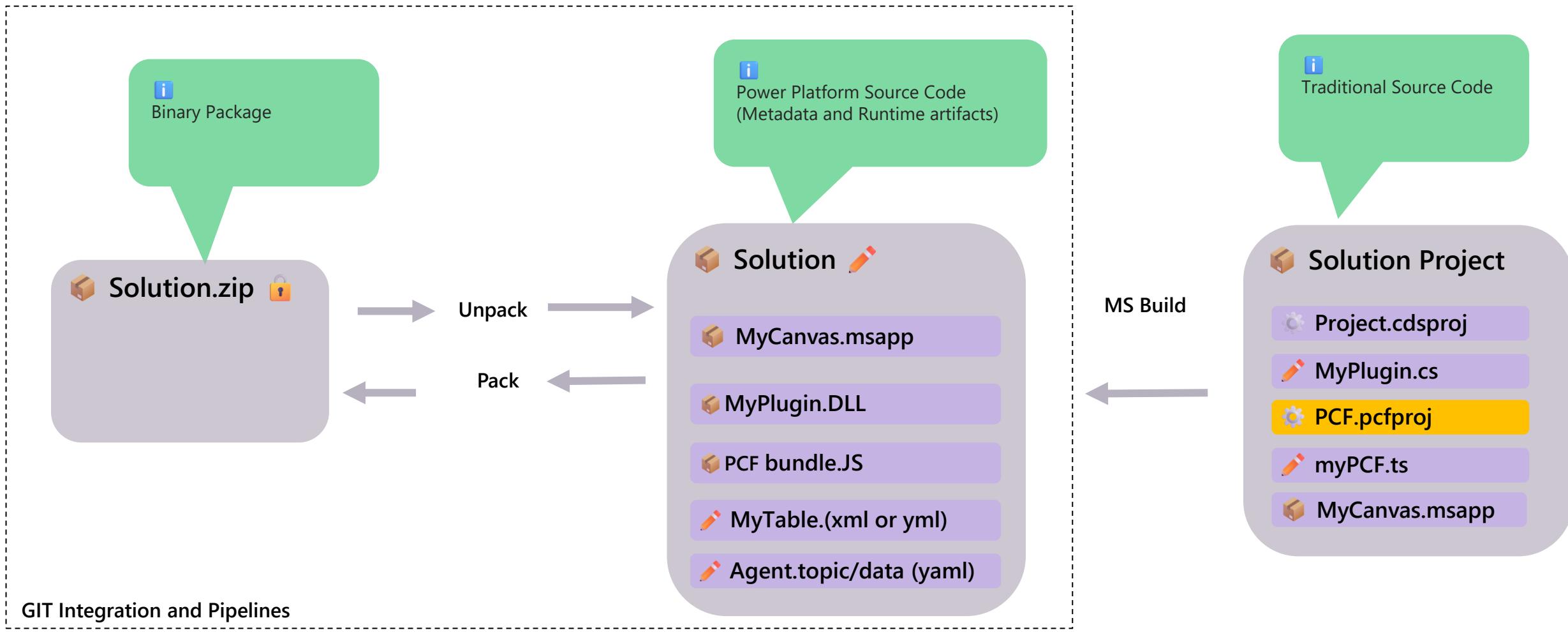
## LAB 2 - Task 1

estimated time: 5 min

## Expected outcome

- Your solution is imported in your environment
- Your Dev environment is connected to your repository
- Your solution is committed to your source control.
- You can see the unpacked solution in your repository

# Solutions Source Code



# Working with source code

LAB 2 - Task 2  
step 1 and 2.

estimated time: 10 min

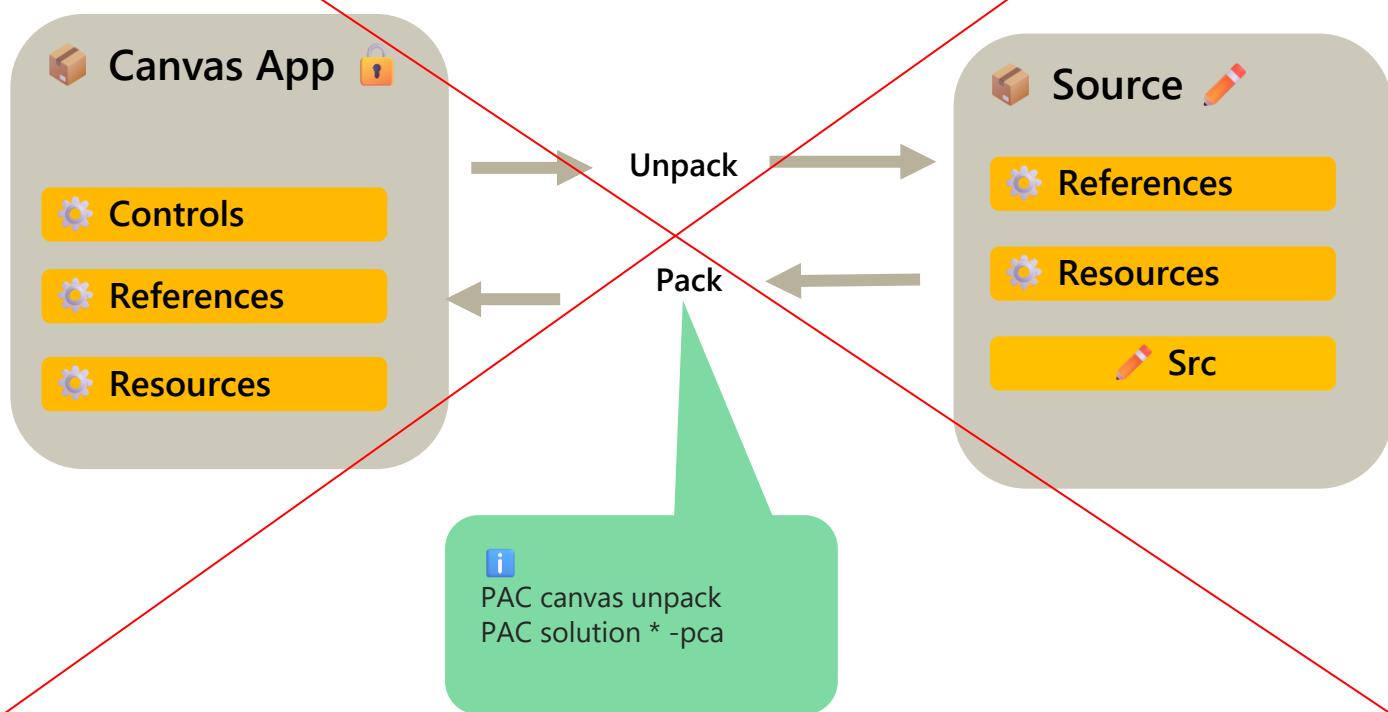
**Coffee Break 15 min**

# Agenda

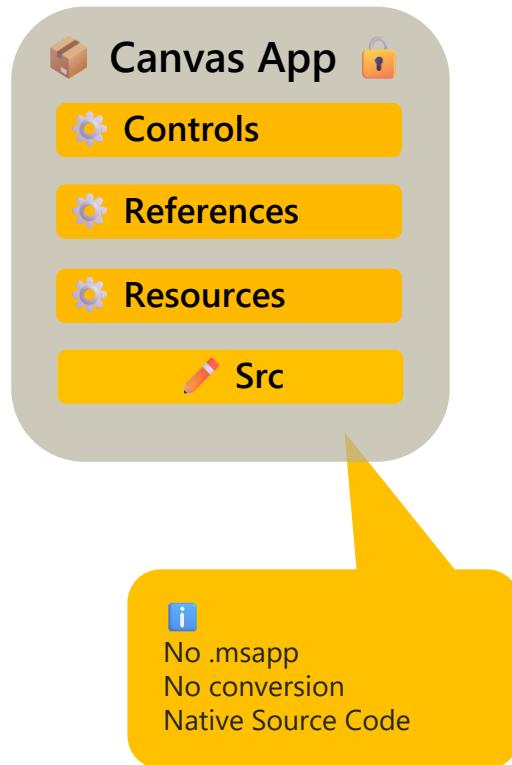
Lab	Time	Topic
Presentation	9:00 AM	Solutions and DevOps 101
<a href="#">Lab 1</a>	9:20 AM	Setup and configure
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Presentation	3:00 PM	Best practices & Q&A

# How to Source Control

## With PAC CLI (fx.yaml)



## With Dataverse GIT Integration (pa.yaml)



# Working with source code

## LAB 2 - Task 2

estimated time: 10 min

## Expected outcome

- You know how to commit in maker portal.
- You can find your source code repository in Azure DevOps
- You know how to get updates from your repository to your environment.
- You understand how to handle conflicts

# Changes (in maker portal)

The screenshot shows the Power Apps maker portal interface. The left sidebar has a 'Source control' section selected. The main content area is titled 'Source control' and contains a message about committing changes to Git. It shows a 'Current branch' of 'dev' with one change listed under 'Changes (1)'. The table details the change: Display name 'mf\_mycanvasapp\_f7ae1', Name 'mf\_mycanvasapp\_f7ae1', Object 'Canvas App', Git Operation 'Update', Changed by '# Marcel Ferreira', and Changed on '9/25/2025 3:03:23 pm'.

Display name	Name	Object	Git Operation	Changed by ↓	Changed on ↓
mf_mycanvasapp_f7ae1	mf_mycanvasapp_f7ae1	Canvas App	Update	# Marcel Ferreira	9/25/2025 3:03:23 pm

## Changes (in the git repo) - Reverse sync

The screenshot shows the Power Apps maker portal interface after a reverse sync operation. A red box highlights the 'Accept Incoming Changes' button in the top navigation bar. A green success message says 'Update Successful.' Below it, a red error message states 'You have active conflicts. Resolve them before committing or pulling changes.' The 'Source control' section shows a conflict for the 'Display name' of 'mf\_mycanvasapp\_f7ae1'. The table lists the conflict: Display name 'mf\_mycanvasapp\_f7ae1', Name 'mf\_mycanvasapp\_f7ae1', Object 'Canvas App', Changed by '# Marcel Ferreira', and Changed on '9/25/2025 3:01:19 pm'.

Display name	Name	Object	Changed by ↓	Changed on ↓
mf_mycanvasapp_f7ae1	mf_mycanvasapp_f7ae1	Canvas App	# Marcel Ferreira	9/25/2025 3:01:19 pm

Working as a Team in multiple environments

Branching

# Main branch is protected



Main branch represents production and can only be merged via PR after deployment

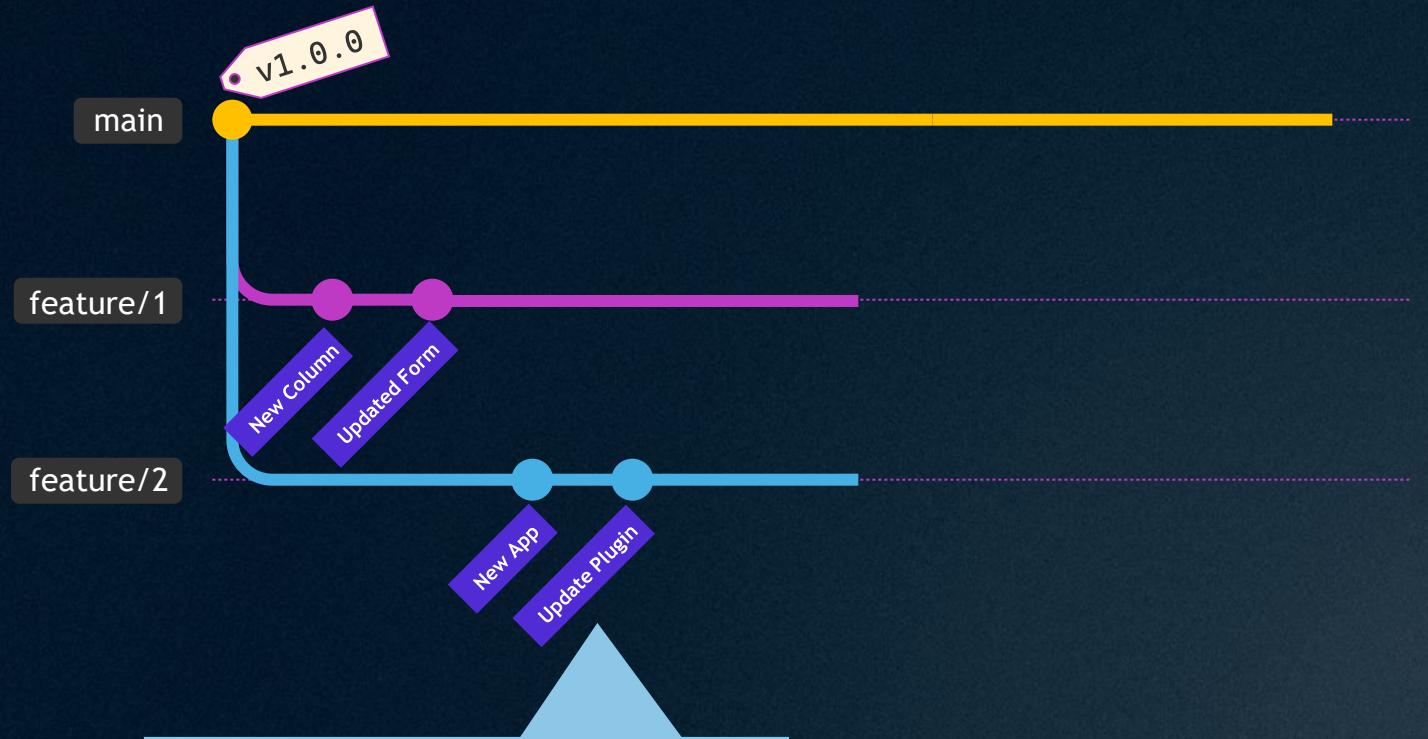
Tags represent the released version

# Feature 1 branch and environment



Feature 1 Development  
starts on a branch of  
main

# Feature 2 Branch and Environment



Feature 2 will likely be released after feature 1

Feature 2 development starts in parallel on a branch of main in a **NEW ENVIRONMENT**

# Hotfix created

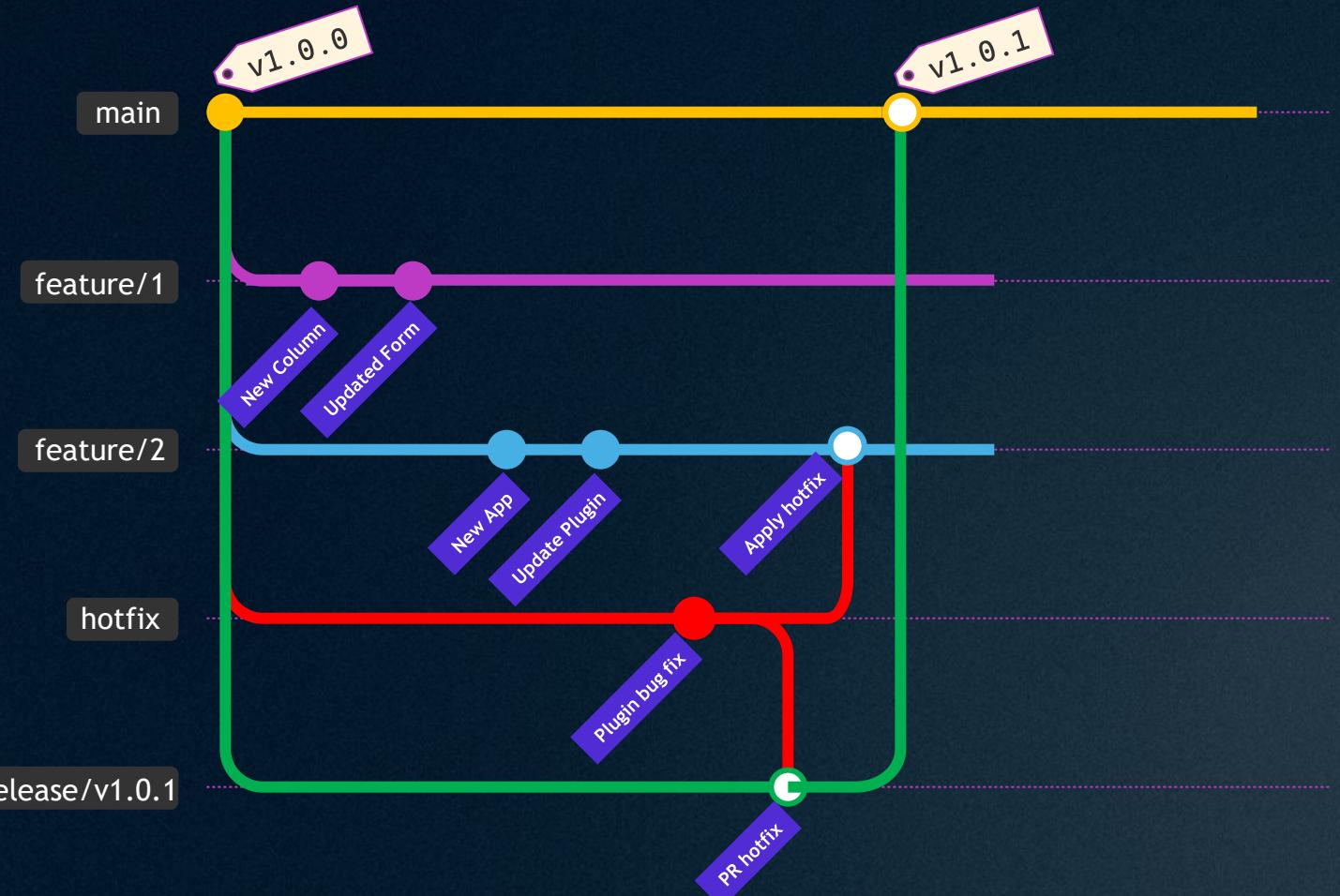


A bug is discovered in production, and a hotfix is created in a branch of main in a **NEW ENVIRONMENT**

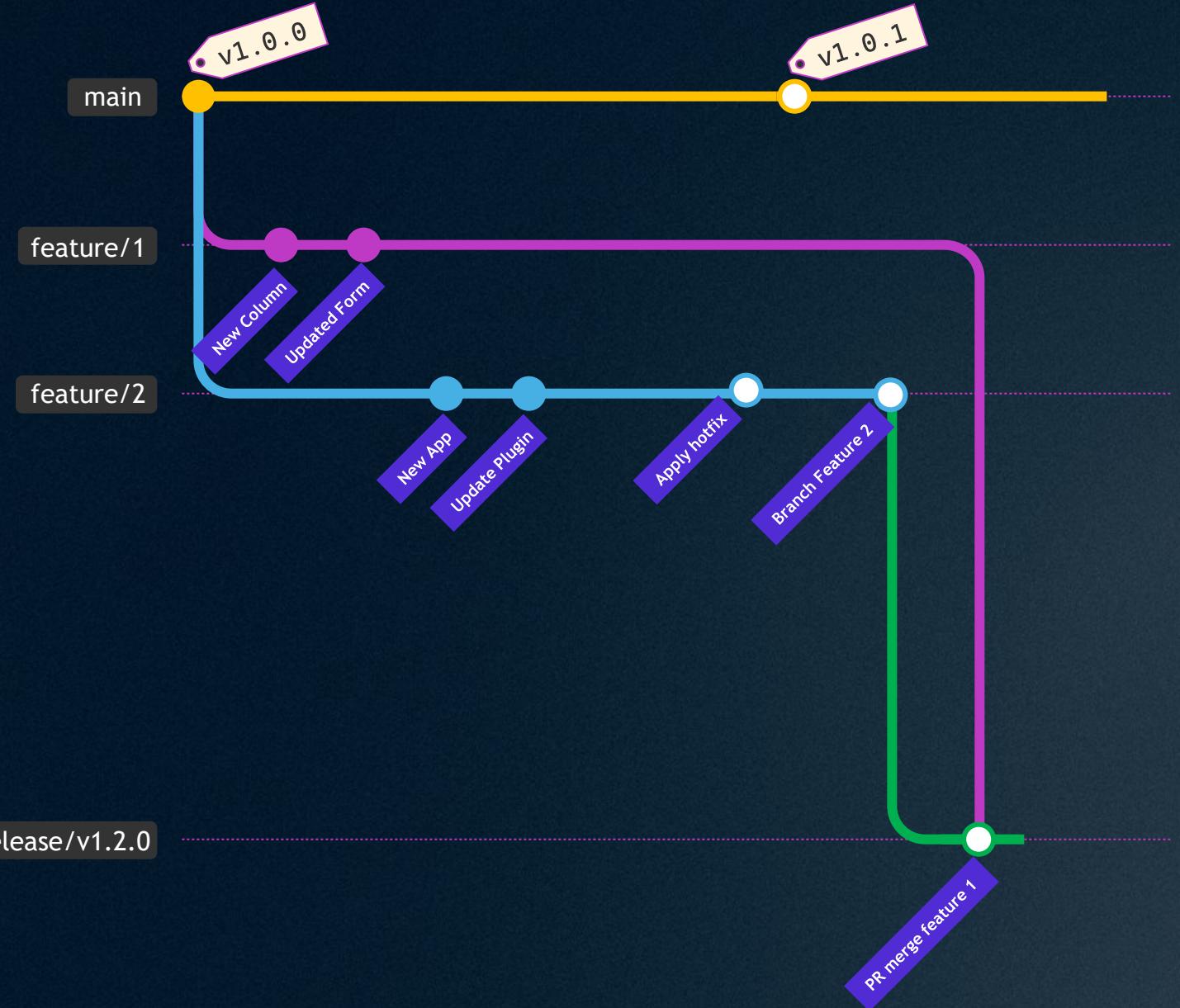
# Hotfix Released and merged

A Release branch and NEW ENVIRONMENT is created, and the hotfix is merged in, and deployed. The hot fix is merged back into feature 2 because it effects the same code.

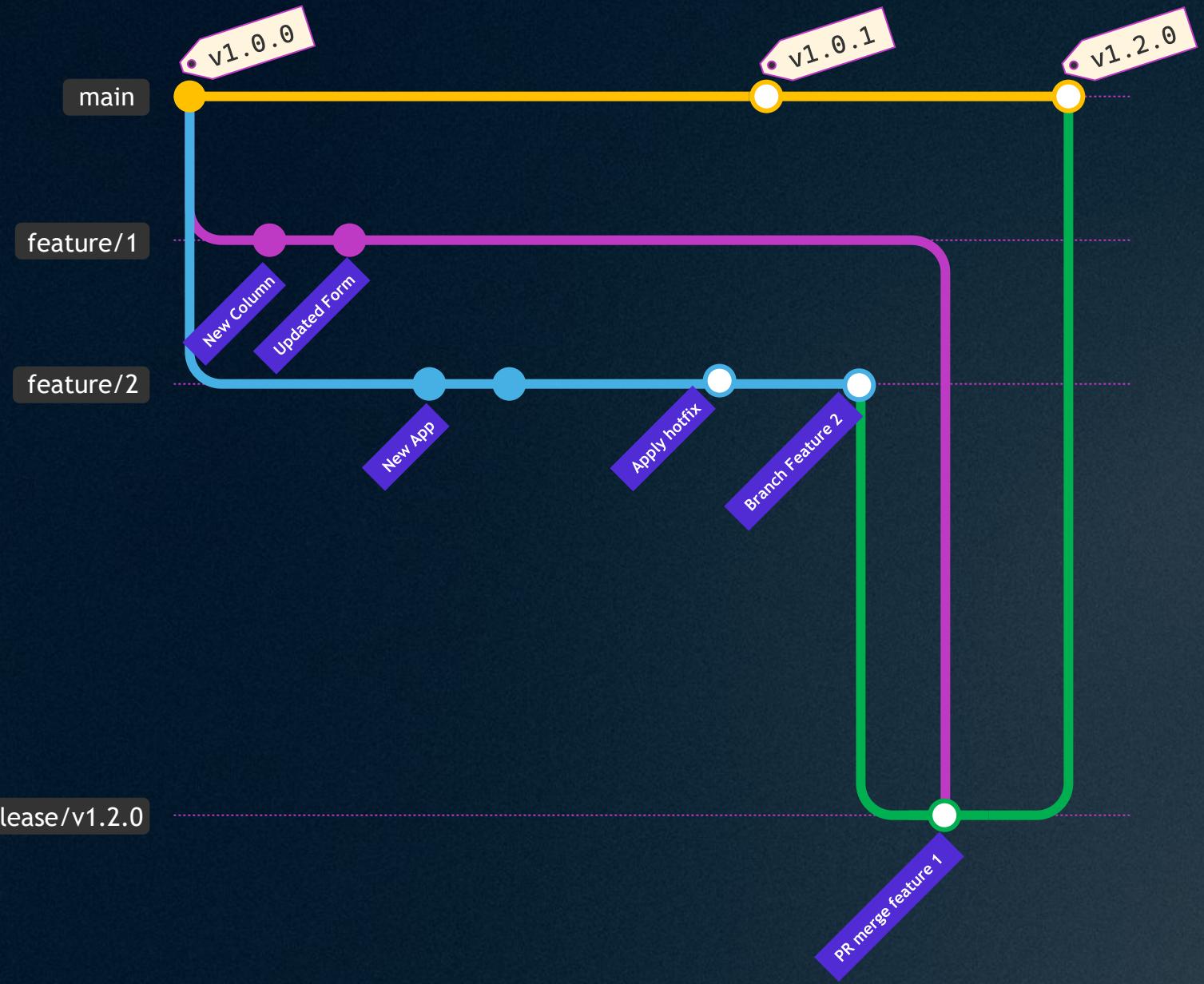
Version 1.0.1 hotfix is released and merged to main



# Branch for release



# Deploy V2



# Branching and merge

## Lab 2 - Task 3

estimated time: 20 min

## Expected outcome

- Understand the 1:1 environment to branch relationship
- Created a hotfix environment / branch
- Created the hotfix in an isolated environment
- Merged the hotfix branch in your main branch to apply the hotfix.

# Agents

## LAB 4

estimated time: 20 min

## Expected outcome

- You have created a Copilot Studio Agent within a solution.
- Agents follow same source control patterns as apps (and other solution components)
- You ~~can~~ should include agents in your ALM practices.
- You can see metadata and runtime in your Source Control.

# Added Copilot Studio agent with Dataverse knowledge source

[Browse F](#)

10d98861 ODL\_User 1926290 committed 2m ago

Files Details

Parent 1 → This commit

Filter

data

/PP/ContosoRealEstate/botcomponents/contoso\_propertyFinderAssistant.gpt.default/data

↑

odl\_user\_1926290

:

PP/ContosoRealEstate

botcomponent\_dvtableresearch...

botcomponent\_dvtable... +

botcomponents

contoso\_propertyFinderAssi...

botcomponent.yml +

data +

:

contoso\_propertyFinderAssi...

botcomponent.yml +

data +

contoso\_propertyFinderAssi...

botcomponent.yml +

data +

contoso\_propertyFinderAssi...

```
1 kind: GptComponentMetadata
2 instructions: |-
3   - Assist real estate agents in finding suitable properties based on their requirements.
4   - Prompt users to describe the property they are seeking, including location, type, and other relevant details.
5   - Ask follow-up questions to clarify specific features such as number of bedrooms, bathrooms, amenities, and preferred neighborhood.
6   - Request the user's budget to narrow down property options.
7   - Provide suggestions or listings that match the described criteria and budget.
8   - Maintain a professional and helpful tone throughout all interactions.
9   - Do not provide legal, financial, or health advice.
10  - Only respond in English and do not switch languages.
11  - Avoid repeating information in consecutive messages.
12  - Do not answer unrelated questions or generate creative content.
13  - Decline requests that are harmful, offensive, or violate regulations.
14 gptCapabilities: {}
15 conversationStarters:
16   - title: Find a property
17   | text: I'm looking for a property in New York with 3 bedrooms and a garden.
18
19   - title: Set a budget
20   | text: My budget is $500,000. What options do I have?
21
22   - title: Describe features
23   | text: I need a property with a pool and close to schools.
24
25   - title: Request amenities
26   | text: Show me properties with a garage and modern kitchen.
27
28   - title: Location preference
29   | text: I prefer properties in downtown areas.
30
31   - title: Compare listings
32   | text: Can you compare these two properties for me?
```

# Generative Pages and Code Apps

The image displays three distinct Microsoft Power Platform components:

- Generative Pages (Left):** A screenshot of the Generative Pages interface. It shows a sidebar with "Describe your page" and "Summary" sections, and a main area with a preview of a "Property Listings Gallery". A message in the preview states: "the picture is not showing, the picture is in the fields Listing of the table Image Listing". Below the preview, an "App Agent" section provides a summary of the AI's planning process. A red arrow points from this section to the "Code app" option in the Power App catalog.
- Power Pages (Middle):** A screenshot of the Power Pages interface showing a "Property Listings Gallery" page with two cards: "Charming Suburban Home with Spacious Yard" and "Modern Urban Oasis in the Heart of the City".
- Power App Catalog (Right):** A screenshot of the Power App catalog for the "Contoso" environment. It lists various app types: Agent, AI Model, App, Automation, Dashboard, Report, Security, Site, Table, and More. A red arrow points to the "Code app" entry under the "App" category.

# Pro developer



You use PAC CLI /  
VSCode / Visual Studio



build PCF



build Plugins



Build web resources



Build Code apps

- For technical content:  
<https://aka.ms/powerdev>
- Agent academy:  
<https://aka.ms/agent-academy>

🔥 Topic for Pro devs 🔥

Code Apps: Easily Make Your React App  
Enterprise Grade with Power Apps

Lunch 11:45 – 12:45

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# Lab 3: Deploy

# Power Platform Pipelines- In-Product ALM with Managed Environments

Pipelines in Power Platform offer an OOB advanced application lifecycle management (ALM) experience for Power Platform and Dynamics 365 by bringing ALM automation and continuous integration and continuous delivery (CI/CD) capabilities into the service in an approachable manner for all makers, admins, and developers.

## Pipelines

The screenshot shows the Power Platform Pipelines interface. At the top, it says "Pipelines" and "Lab Example". Below that, there's a note: "As your app advances, you'll start sharing it to be used in your organization. As it gets widely adopted, it's important to practice healthy application lifecycle management by building securely in an isolated location so the people using your app don't run into issues while you work on it. Once everything is ready, you'll move it to a more permanent place and share there. [Learn more](#)". A warning message states: "Target Environments in pipelines must be enabled as Managed Environments. [Learn more](#)".

The interface includes tabs for "Pipeline" (set to "Lab Example"), "+ Create new pipeline", "Details" (selected), and "Run history".

The "Development" stage is shown with the following details:

- Text: "Securely test and verify in isolation. After you've got everything working properly, it's time to deploy. [Learn more](#)".
- Solution version: "1.0.0.3"

An arrow points from the Development stage to the QA Stage. The QA Stage is labeled "QA Stage" and "willr - QA". It includes a note: "Deployments may be pending until an associated background process succeeds. This process is managed by your admin. [Learn more](#)". A "Go to this environment" button is also present.

An arrow points from the QA Stage to the Prod Stage. The Prod Stage is labeled "Prod Stage" and "willr - Prod". A "Deploy here" button is located at the bottom right.

# Why use pipelines in Power Platform?

- Pipelines standardize solution movement from dev to test to production, reducing manual errors and ensuring predictable outcomes
- Common steps like export, import, and publish are automated, saving time and reducing operational overhead.
- They enforce environment security and approval workflows, aligning with organizational compliance requirements.
- Deployment logs and approval history provide transparency for troubleshooting and meeting audit requirements.
- Automatically stores managed and unmanaged versions of your solution for easy rollbacks– if needed.
- Included with Managed Environments

# There are TWO types of pipelines

## Platform Host

- Out of the box tenant-wide pipelines hosted under a “platform host” configuration
- These pipelines are configured by makers for **personal** use. Personal pipelines cannot be extended, nor can they be shared with other makers in the tenant

## Custom Host

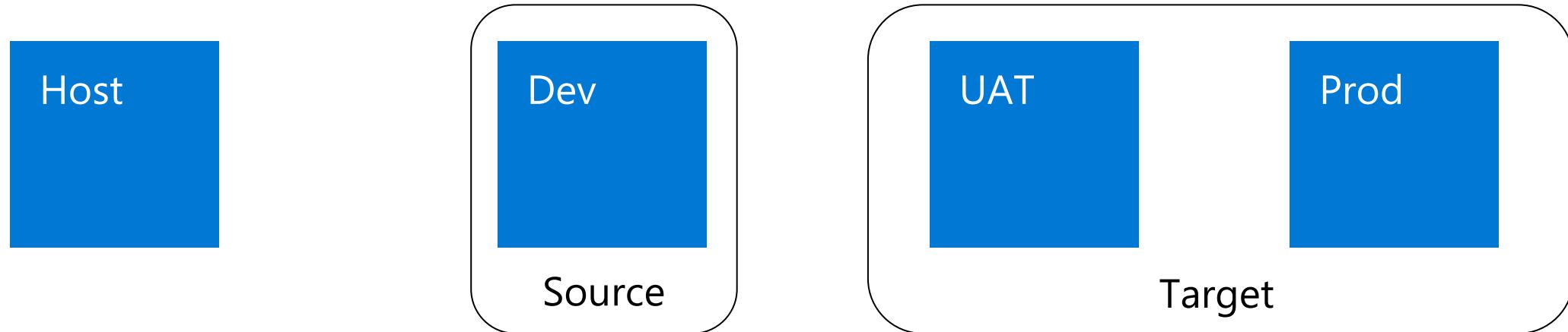
- Hosted on a “custom host” env installed and managed by admins
- Enable greater **control** as they are centrally governed by admins and shared with makers for use.
- Provide greater **visibility**, like audit where a certain solution is deployed and who initiated the request.
- Custom host pipelines also retain **backups** of solution artifacts in both Managed and Unmanaged forms.

# Create a Platform Host Personal Pipeline

Lab 3 – Task 1  
10 mins

# Custom Host Pipelines

- Requires one dedicated Custom Host environment
- Managed from **Deployment Pipelines Configuration** app
- Supports up to **seven** deployment stages
  - At least one **Source** environment (usually Dev env)
  - Up to seven **Target** environments (UAT, Staging, Pre-Prod, Prod, etc.)



# Deployment Pipeline Configurations app

Power Apps | Deployment Pipeline Configuration

Target Environments in pipelines must be enabled as Managed Environments.

Save As + New Set As Default Refresh All

Pipelines Dashboard

Active Deployment Pipelines

Name	Description	Modified	Owner
Custom Host Pipeline		10/19/2023	
[REDACTED]		6/11/2023	
[REDACTED]	Pipeline for general purpose deployments.	3/1/2024	
[REDACTED]		3/1/2024	
Lab Example	Lab Example	4/30/2023	
Lab Example (Delegated)	Lab Example (Delegated)	5/5/2025	
[REDACTED]		6/26/2023	
[REDACTED]		7/31/2023	

Run history

Total Deployments by Target Environment

CountAll (Deployment Stage Run)

Target Env 1 willr - Prod willr - QA

CountAll (Deployment Stage Run)

Target Deployment Environment ID

Run history

Deployments per day

CountAll (Deployment Stage Run)

Legend: Canceled (Purple), Failed (Orange), Succeeded (Green), Started (Blue)

The screenshot shows the Power Apps interface for the Deployment Pipeline Configuration app. The left sidebar includes links for Home, Recent, Pinned, Overview, Pipelines Dashboard, Pipeline Setup, Environments, Pipelines, Deployments, Run history, Solution artifacts, Settings, Security Teams, and Advanced Settings. The main area has a header with Save As, New, Set As Default, and Refresh All buttons, and a search bar. The Pipelines Dashboard section contains three charts: 1) A table of Active Deployment Pipelines with columns for Name, Description, Modified, and Owner. 2) A bar chart titled 'Total Deployments by Target Environment' showing two bars for 'Target Env 1' and 'willr - Prod' and 'willr - QA'. 3) A stacked area chart titled 'Run history' showing 'Deployments per day' for four categories: Canceled (purple), Failed (orange), Succeeded (green), and Started (blue). The bottom chart's Y-axis is labeled 'CountAll (Deployment Stage Run)'.

# Deployment Pipeline Configurations app

Power Apps | Deployment Pipeline Configuration Search

Target Environments in pipelines must be enabled as Managed Environments. Learn more

Home Recent Pinned Overview Pipelines Dashboard Pipeline Setup Environments Pipelines Deployments Run history Solution artifacts Settings Security Teams Advanced Settings

Run history

Deployment Pipeline	Name (Dep...	Start Time	End Time	Scheduled Time	Stage Run Status	Artifact Na...	Solution Ar...	Target Dep...	Owner
Custom Host Pipeline	Target Env 1	10/23/2025 11:...			Pre-Deploy In ...	ODTrackingT...	1.0.0.51	Target Env 1	Will Riker
Custom Host Pipeline	Target Env 1	10/19/2025 8:2...	10/19/2025 8:3...		Succeeded	ContosoReal...	1.0.0.3	Target Env 1	Will Riker
Custom Host Pipeline	Target Env 1	10/19/2025 7:4...	10/19/2025 8:2...		Canceled	ContosoReal...	1.0.0.2	Target Env 1	Will Riker
Custom Host Pipeline	Target Env 1	10/19/2025 7:3...			Validation Succ...	ContosoReal...		Target Env 1	Will Riker
Custom Host Pipeline	Target Env 1	10/19/2025 7:3...			Validation Succ...	ContosoReal...		Target Env 1	Will Riker
Lab Example (Delegated)	QA Stage	6/11/2025 1:37...	6/11/2025 1:45 ...		Succeeded	TestSolutionf...	1.0.0.2	willr - QA	Will Riker
Lab Example (Delegated)	QA Stage	5/28/2025 1:40...	5/28/2025 1:46 ...		Succeeded	TestSolutionf...	1.0.0.1	willr - QA	Will Riker
Lab Example (Delegated)	QA Stage	5/28/2025 1:39...	5/28/2025 1:39 ...		Failed	TestSolutionf...		willr - QA	Will Riker
Lab Example (Delegated)	QA Stage	5/28/2025 1:39...	5/28/2025 1:39 ...		Failed	TestSolutionf...		willr - QA	Will Riker
Lab Example	QA Stage	5/27/2025 12:0...	5/27/2025 12:3...		Succeeded	SampleSolut...	1.0.0.1	willr - QA	Will Riker
Lab Example (Delegated)	QA Stage	5/5/2025 10:24...	5/5/2025 10:28 ...		Succeeded	[REDACTED]	1.0.0.6	willr - QA	Will Riker
Lab Example	QA Stage	5/1/2025 8:29 ...	5/1/2025 8:51 PM		Succeeded	[REDACTED]	1.0.0.2	willr - QA	Will Riker

1 - 30 of 30 Page 1

# Deployment Pipeline Configurations app

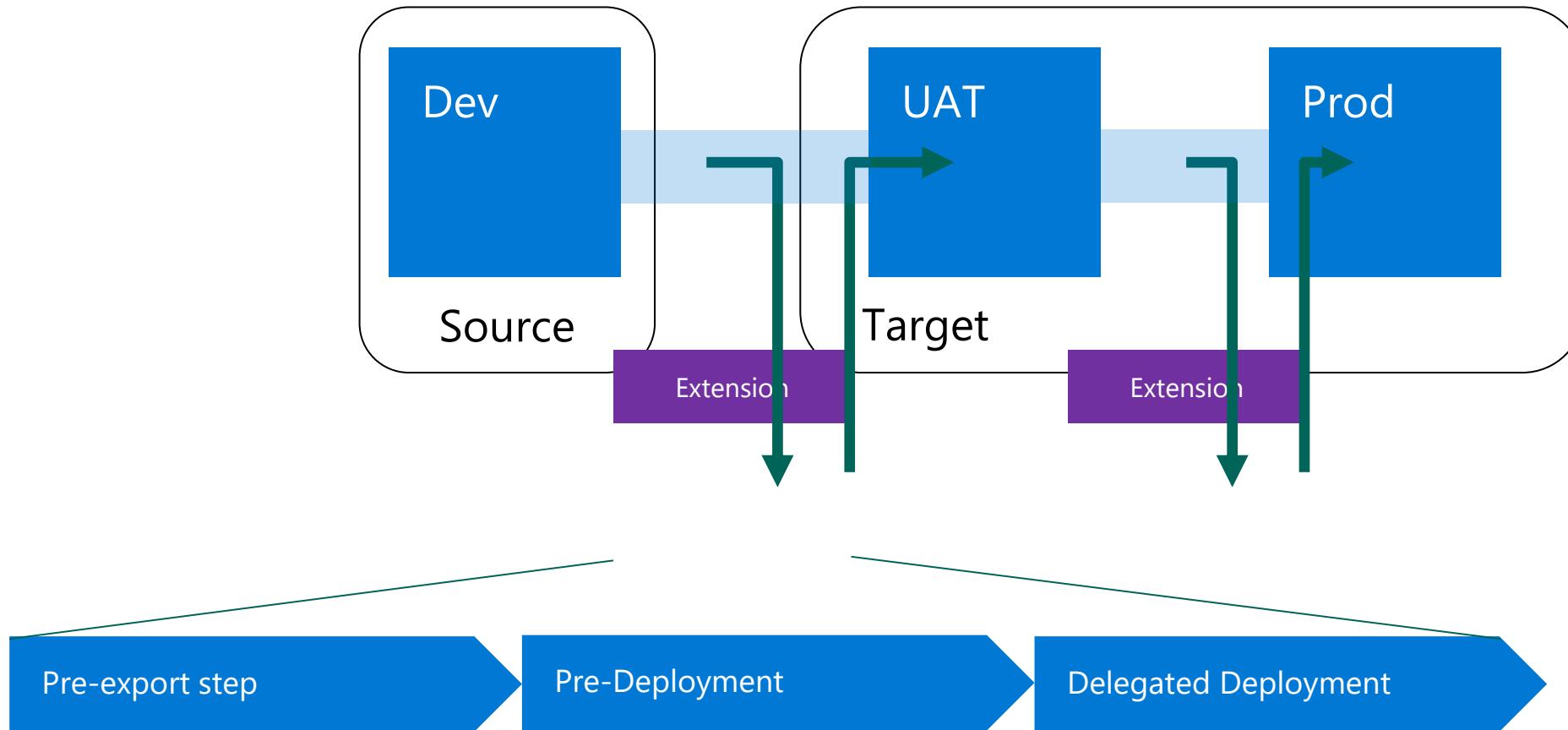
The screenshot shows the 'Active Deployment Artifacts\*' page in a web-based application. The left sidebar contains navigation links for Pipeline Setup, Environments, Pipelines, Deployments, Run history, and Solution artifacts. The 'Solution artifacts' link is currently selected. The main content area displays a table of artifacts, with a context menu open over the first row. The table columns are Name (sorted ascending), Artifact Version (sorted descending), and Generated On. The table shows four rows of data, all labeled 'ContosoRealEstate'. The context menu for the first row includes options like Home, Recent, Pinned, Overview, Pipelines Dashboard, Pipeline Setup, Environments, Pipelines, Deployments, Run history, and Solution artifacts. The right side of the screen shows the details for the selected artifact ('ContosoRealEstate'). The artifact details include:

Name	Owner	Artifact Version	Managed Artifact File	Unmanaged Artifact File	Generated On	Deployment Type
ContosoRealEstate	Will Riker (Offline)	1.0.0.3	ContosoRealEstate_1.0.0.3_managed.zip	ContosoRealEstate_1.0.0.3.zip	10/19/2025 8:23 PM	Standard

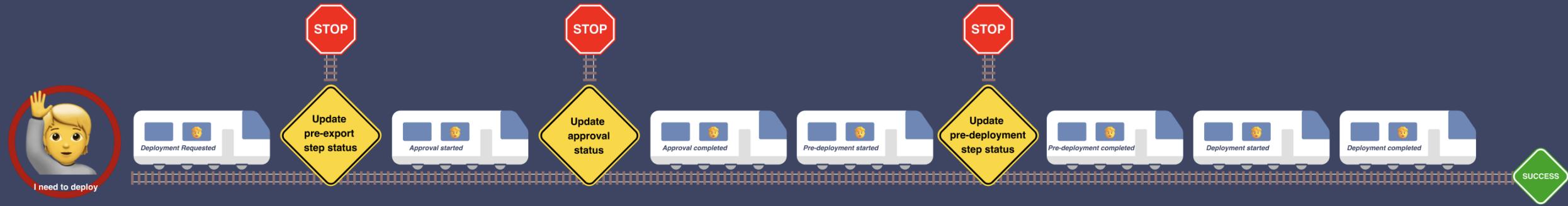
# Create a Custom Host Pipeline

**Lab 3 – Task 2**  
20 mins

# Extending the Custom Host Pipeline



# Power Platform Pipelines Extensibility

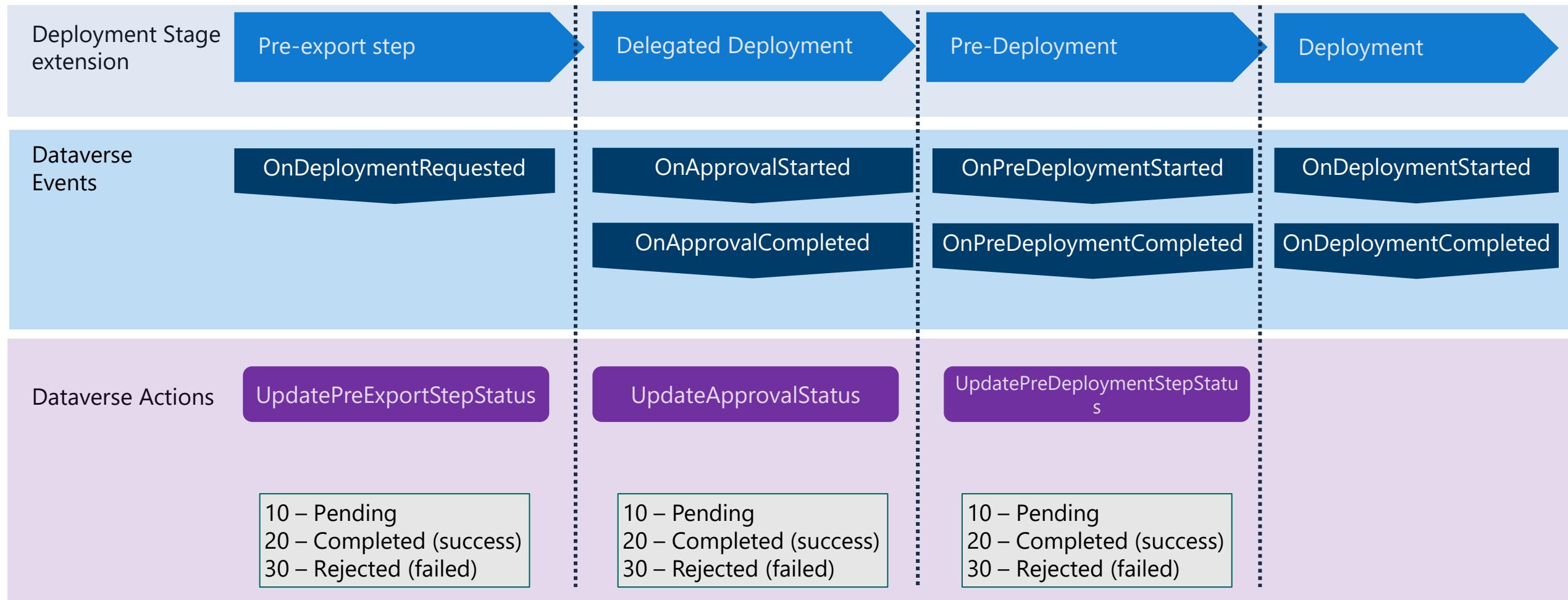


- Pipelines deployments progress through multiple predefined steps until deployment completion. Gated extensions insert custom steps into the progression where custom business logic can be executed.
- Pre-export Step Required** allows running custom validation logic when a deployment request is submitted
- Pre-deployment Step Required** provides additional flexibility to insert a custom step after a deployment is approved. For example, if a final approval is required
- Is Delegated Deployment** carries out deployments using a service principal or pipeline stage owner's identity instead of the requesting maker's.

Pre-Export Step Required	<input type="checkbox"/>
Pre-Deployment Step Required	<input type="checkbox"/>
Is Delegated Deployment	<input checked="" type="checkbox"/>
Delegated Deployment Type	Service Principal
SPN Client Id	1cac8ebd-cc38-4226-af5a-e823caaa2efd
Allow sharing requests	Yes

# Extensions

- Each of these Extension events maps to a Dataverse event



# Pipelines with Delegated Deployment

- Delegated deployments can be run as a service principal or pipeline stage owner.
- When enabled, the pipeline stage deploys as the delegate (service principal or pipeline stage owner) instead of the requesting maker.
- For deployment with Stage Owner, Configuration is more straightforward compared to service principals, but **solutions containing connection references for oAuth connections can't be deployed.**

The screenshot shows the 'Deployment Stage' configuration screen for a 'QA - Unsaved' stage. It includes fields for Name (QA), Owner (Suparna Admin (Offline)), Description (---), Deployment Pipeline (Pipeline Demo), Previous Deployment Stage (---), Target Deployment Environment ID (MOD Administrator's Environment), Pre-Export Step Required (unchecked), and Pre-Deployment Step Required (unchecked). Below this stage, another stage is partially visible with the same configuration, specifically setting the 'Delegated Deployment Type' to 'Service Principal'.

QA - Unsaved  
Deployment Stage

General Related

Name \* QA

Owner \* Suparna Admin (Offline)

Description ---

Deployment Pipeline \* Pipeline Demo

Previous Deployment Stage ---

Target Deployment Environment ID MOD Administrator's Environment

Pre-Export Step Required

Pre-Deployment Step Required

Is Delegated Deployment

Delegated Deployment Type --Select--

Is Delegated Deployment

Delegated Deployment Type Stage Owner

Is Delegated Deployment

Delegated Deployment Type Service Principal

SPN Client Id ---

Allow sharing requests ---

# Extend Pipelines (Optional)

Lab 3 – Task 3

40 mins

# Redeploy a prior version

**Lab 3 – Task 4**

5 mins

# Agenda

Lab	Time	Topic
Presentation	9:00 AM	Solutions and DevOps 101
<a href="#">Lab 1</a>	9:20 AM	Setup and configure
<a href="#">Lab 2</a>	9:40 AM	Building Power Platform Solutions
<b>Coffee</b>	<b>10:00 AM</b>	<b>Coffee break</b>
<a href="#">Lab 2 (cont)</a>	10:15 AM	Building Power Platform Solutions
<b>Lunch</b>	<b>11:45 AM</b>	<b>Lunch</b>
<a href="#">Lab 3</a>	12:45 PM	Deploy
<a href="#">Lab 4</a>	2:15 PM	Lifecycle Mastery in Power Pages
Presentation	3:00 PM	Best practices & Q&A

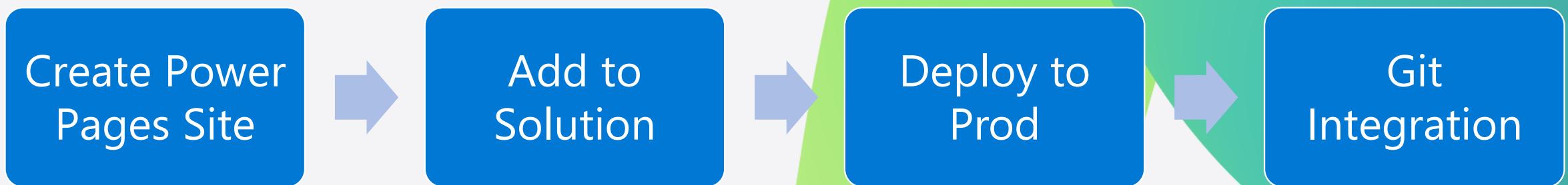
# Lab 4: Lifecycle mastery in Power Pages

# Agenda

Lab	Time	Topic
Presentation	9:00 AM	Solutions and DevOps 101
<a href="#"><u>Lab 1</u></a>	9:20 AM	Setup and configure
<a href="#"><u>Lab 2</u></a>	9:40 AM	Building Power Platform Solutions
<b>Coffee</b>	<b>10:00 AM</b>	<b>Coffee break</b>
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<a href="#"><u>Lab 4</u></a>	2:15 PM	Lifecycle Mastery in Power Pages
Presentation	3:00 PM	Best practices & Q&A

# Introduction

# Lab Overview



# DevOps Best Practices

# Agenda

Lab	Time	Topic
Presentation	9:00 AM	Solutions and DevOps 101
<a href="#"><u>Lab 1</u></a>	9:20 AM	Setup and configure
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Presentation	3:00 PM	Best practices & Q&A

# DevOps / ALM Best Practices for agents and other assets

# Is DevOps different for agents vs other Power Platform assets?

No. While there are some Copilot Studio nuances, it's important all Power Platform assets can be managed with the same tools and processes.

DevOps will evolve over time, but the battle tested practices should remain consistent.

I'm new, what's the first step I should take?

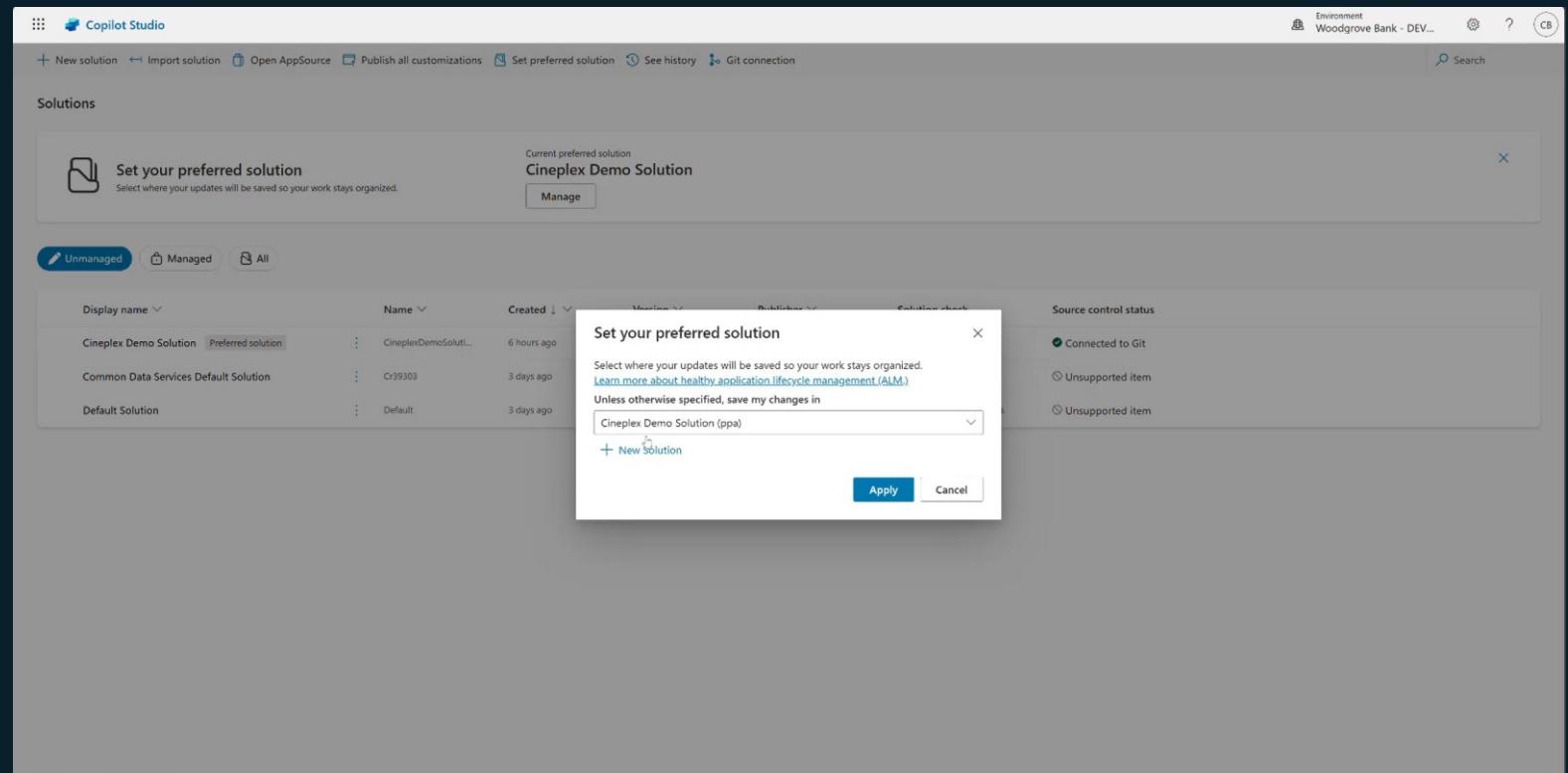
# Use preferred solutions and Pipelines in Power Platform

Why? Anyone can be successful w/o understanding underlying complexities.

*But... as you advance it's important to learn “how”  
the system works ☺*

# Set a Preferred Solution

- Avoids dependency issues downstream
- Ensures you don't deploy someone else's work inadvertently
- Essential for shared dev environments
- Per user, per environment



Use a single solution

\*unless there is good reason  
not to!

# Use a single solution publisher

Why? Publisher prefixes get stamped on everything created. They're immutable; if used improperly can cause layering issues.

A single publisher allows you to change your solution architecture later (which is common)

# Deploy with a service principal

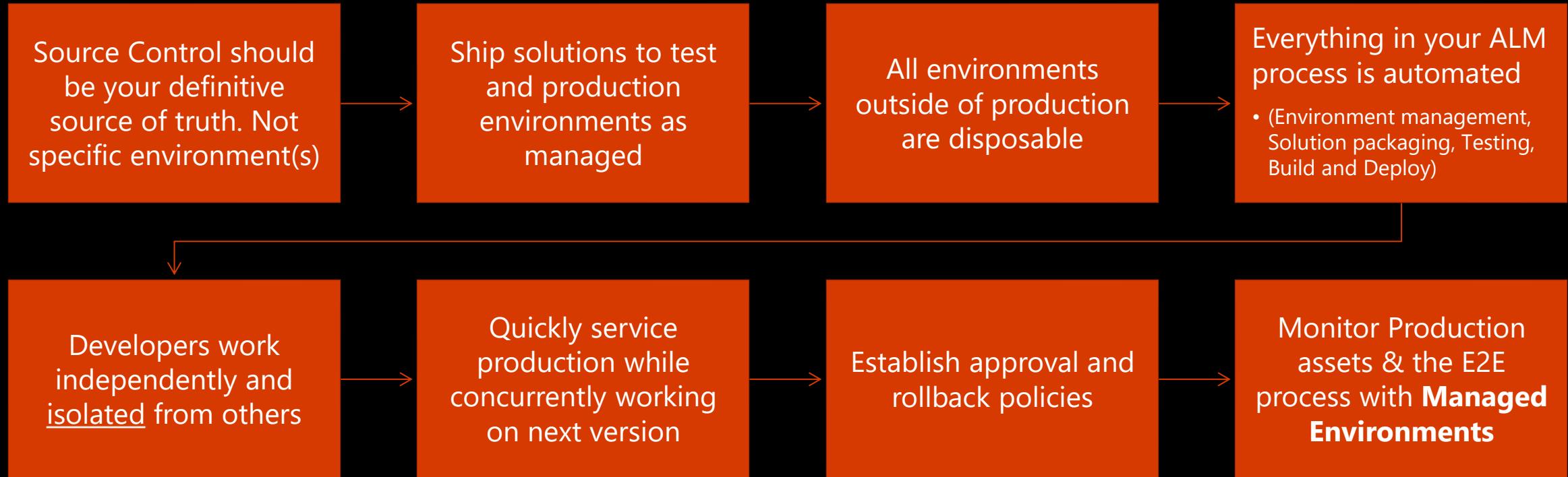
Otherwise, production environments are exposed to security risks

Use Solution Checker

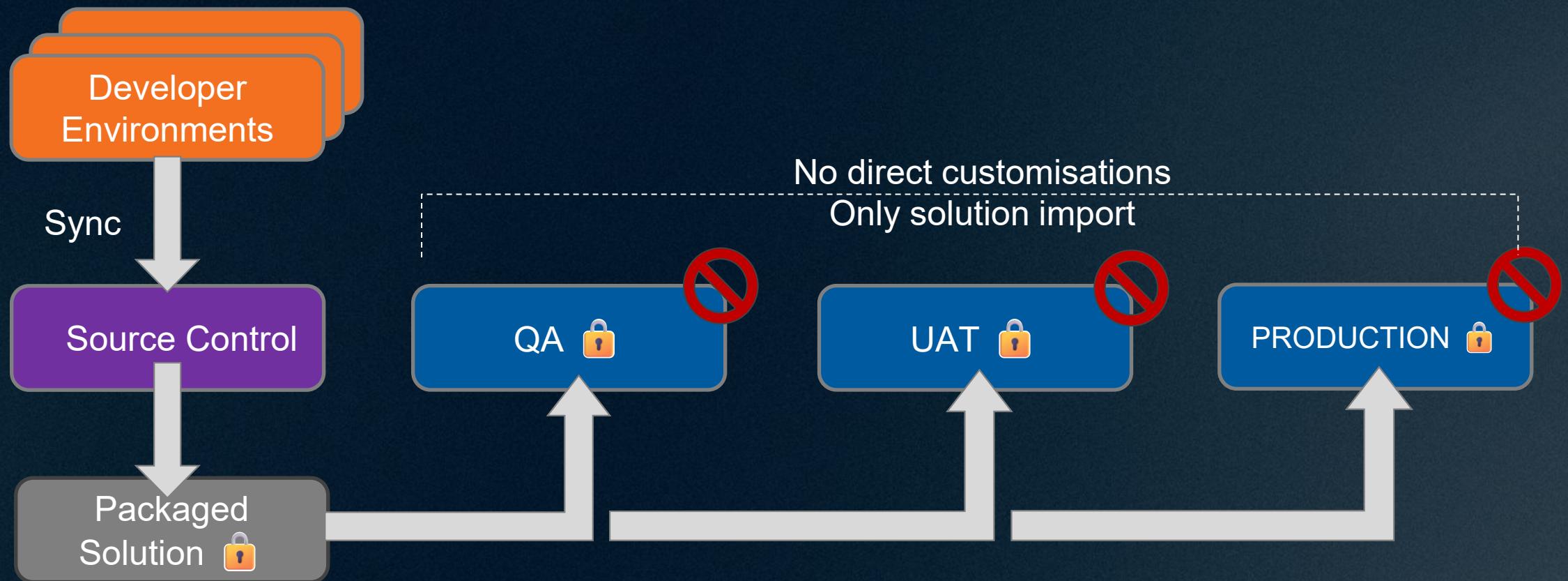
Especially when deploying code

How do I manage team development effectively?

# Healthy DevOps / ALM Overview



# Source Control is the single source of truth across time, versions, and environments



# Default pipeline for groups + rules

Generally Available

- No more manual pipeline management
- Makers are automatically onboarded to the default pipeline
- Now Generally Available

The screenshot shows the Power Platform admin center interface. On the left, there's a sidebar with various navigation options like Home, Actions, Manage, Security, Copilot, Monitor, Deployments, Licensing, Support, and Admin centers. The 'Manage' section is currently selected. In the main content area, there's a search bar at the top right. Below it, there's a button to '+ New group', a 'Environment routing' link, and a 'Refresh' button. A 'Search groups' input field is also present. The central part of the screen displays a table titled 'Environment groups'. The table has columns for 'Name ↑', 'Environments', 'Rules', 'Created on', and 'Created by'. There are several entries listed:

Name ↑	Environments	Rules	Created on	Created by
Agent_devs	7	13	Tue, Feb 18, 2025, 2:42 PM PST	Nestor Wilke
Ericsson Enterprise IT	2	0	Thu, Sep 12, 2024, 7:14 AM PDT	Isaiah Langer
Gallery	0	1	Thu, Sep 4, 2025, 11:35 AM PDT	Nestor Wilke
Governed Cit Dev Environment Group	5	7	Tue, Sep 17, 2024, 10:09 AM PDT	David Admin
Green Zone	1	2	Wed, Oct 22, 2025, 12:31 PM PDT	Isaiah Langer
Healthy ALM with Pipelines	0	3	Tue, Apr 8, 2025, 9:54 AM PDT	Anthony Sheehan
JDA - Collaboration Finance Team	1	4	Fri, Sep 13, 2024, 10:00 AM PDT	Alex Darrow
JDA - Collaboration HR Team	0	3	Thu, Sep 12, 2024, 7:14 AM PDT	Isaiah Langer

<https://aka.ms/default-pipeline>

# Monitor health of Copilot Studio agents

Public preview

- **Monitor agent health** with the agent session success rate and recent agent sessions, now available in Monitor.
- Operations, CoE are now empowered to understand the health of agents.
- Minimize detecting agent degradations with alerts.

The screenshot shows the Power Platform admin center interface. On the left, there's a sidebar with various navigation options like Home, Actions, Manage, Security, Copilot, and Monitor. The Monitor option is currently selected and highlighted in blue. The main content area is titled "Copilot Studio" and displays a table of agent health metrics. The table has columns for Name, Agent session success rate, Recent agent sessions, Environment, Managed status, and Last refreshed. There are four entries:

Name	Agent session success rate	Recent agent sessions	Environment	Managed	Last refreshed
HR Agent	↑ 100.00%	21	Monitor Production...	Yes	5 days ago
Sales Tracker Agent	→ 100.00%	15	Monitor Production...	Yes	5 days ago
Operational Health ...	↓ 90.00%	10	Monitor Production...	Yes	5 days ago
Operations Agent	↑ 33.33%	3	Monitor Production...	Yes	6 days ago

As an admin, how do I scale the process org-wide?

# Environment routing

Generally available

Routing allows administrators to automatically direct users to personal developer environments **moving their makers away from the default environment.**

- Supports Copilot Studio, Power Apps, Power Automate Cloud and Desktop, and Flow Builder
- Designed to support simple to complex organizational structures.
- Attribute-based conditions via security groups or based on user properties such as geography, or department.
- Priority-based rule evaluation

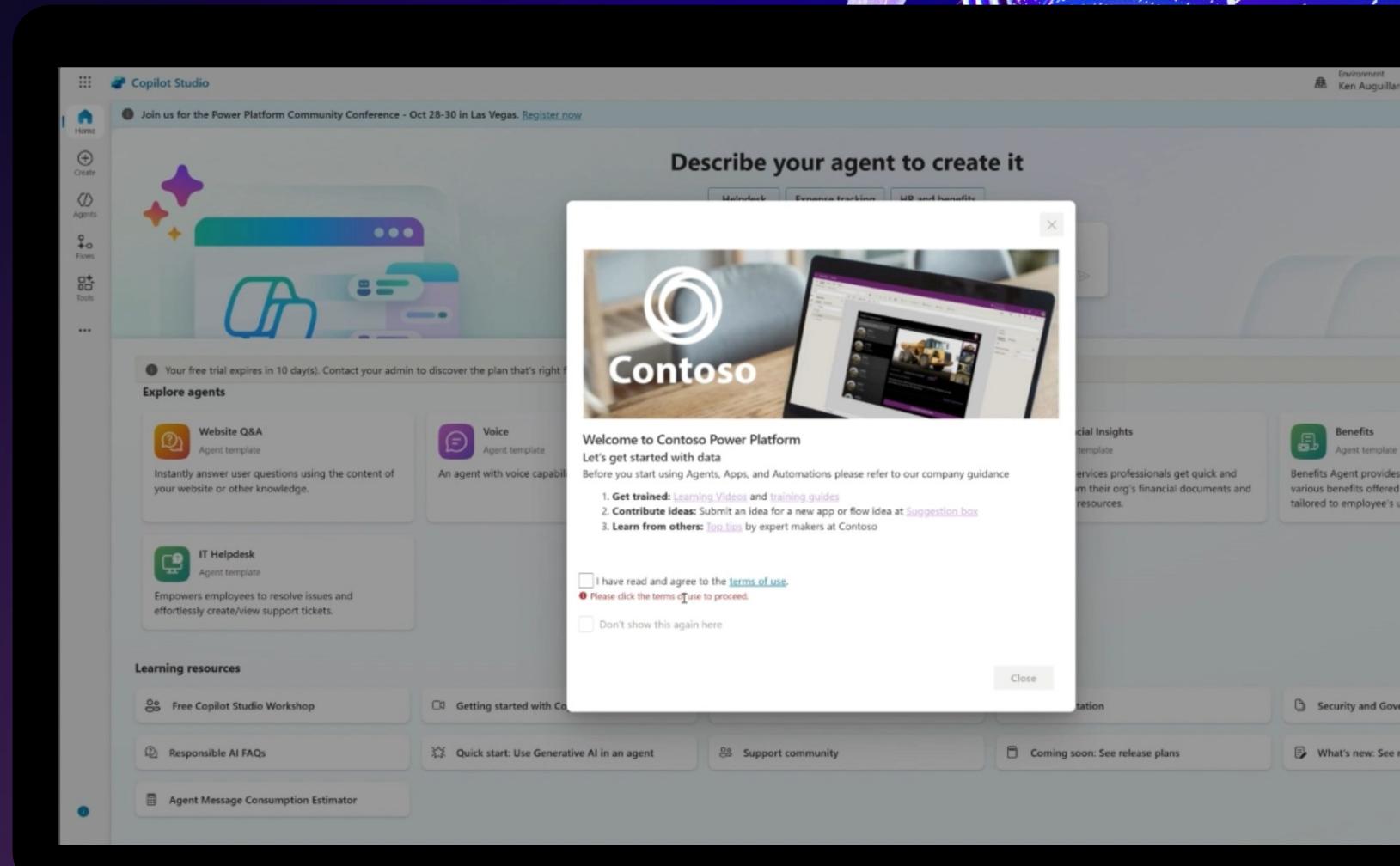
The screenshot shows the Power Platform admin center interface. On the left, there's a sidebar with various management options like Home, Actions, Manage, Security, Copilot, Monitor, Deployments, Licensing, Support, and Admin centers. The main area is titled 'Tenant settings' with a message 'Your settings have been successfully saved.' Below it, there's a table of tenant settings with columns for Name, Managed Environments, Description, Control, Enable, and Priority. To the right, there's a section titled 'Create and manage environment routing rules'. It has a checkbox group 'Turn on environment routing for' with options for Power Apps, Power Automate cloud flows, and Power Automate desktop flows, all of which are checked. Below this is a table for 'New rule' with columns for Rule Name, Priority, and Security Group. Three rules are listed: 'Green Zone - AUS' (Priority 1, Woodgrove IT), 'Green Zone - US' (Priority 2, Woodgrove HR), and 'Green Zone - Global' (Priority 3, Everyone). At the bottom right of the 'Create and manage environment routing rules' section are 'Save' and 'Cancel' buttons.

<https://aka.ms/Environmentrouting>

# Maker onboarding

Public Preview (Nov. 31<sup>st</sup>)

- Centralized onboarding experience
- Ensures **consistent communication of policies, and guidelines** across environments.
- “Read and Understood” functionality — also known as: User Consent, or Terms of Acceptance.



<https://aka.ms/makeronboarding>

# Control how resources in your tenant are shared

Generally available

- Sharing limits give admins control over how resources are shared across the tenant—helping protect sensitive data from being exposed to the wrong audience.
- Now available for Copilot Studio agents and Power Apps code apps, in addition to canvas apps and cloud flows.

The screenshot shows the Power Platform admin center interface. On the left, there's a sidebar with various management options like Home, Actions, Manage, Security, Copilot, Monitor, Deployments, Licensing, and Support. The 'Manage' section is selected. In the main area, there's a table titled 'Environments' with one row: 'Monitor Production Demo' (Type: Production, State: Ready). To the right, there's a large panel titled 'Manage sharing'. It includes sections for 'Power Apps' (with 'Exclude sharing with security groups' checked), 'Power Automate' (with 'Let people share solution-aware cloud flows' checked), and 'Copilot Studio' (with several checkboxes for granting permissions to editors and viewers). At the bottom, there's a 'Save' button and a 'Close' button.

# Default custom host for Pipelines

Generally Available

- Central Pipelines administration for the tenant
- Replaces the platform host with a custom host
- Full control over security and governance (unlike the platform host)

The screenshot shows the Power Platform admin center interface. On the left, there's a sidebar with various icons: Home, Actions, Manage, Security, Copilot, Monitor, Deploy..., Licensing, and Support. Below the sidebar, it says "Admin centers". The main area has a header "Power Platform admin center" and a search bar "Search for settings, pages, and more". On the left, under "Deployment", the "Settings" icon is highlighted. The main content area is titled "Settings" and says "Manage settings for the pipelines and deployments. [Learn more](#)". It shows a dropdown set to "Platform host". There are two sections: "Solution deployments across regions" (which allows seamless deployment across geographical regions) and "Allow makers to import shared solution deployments" (which enables makers to import shared solutions). Below these is a section titled "Use a custom pipelines host" with the sub-instruction "Provide a custom pipelines host environment ID to set a new default pipelines host for the tenant". To the right, a modal window titled "Use a custom pipelines host" provides instructions: "Provide a custom pipelines host environment ID to set a new default pipelines host for the tenant. Once set, all pipelines will be retrieved from the custom host specified below." It includes a note: "In custom hosts, users cannot create pipelines unless granted specific permissions. [Learn more](#)". A "Select default host type" section shows two options: "Platform host" (unchecked) and "Custom host" (checked), with the value "Custom host: Pipelines Host (default cus...)" selected. At the bottom right of the modal are "Save" and "Cancel" buttons.

# Default pipeline for groups + rules

Generally Available

- No more manual pipeline management
- Makers are automatically onboarded to the default pipeline
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The screenshot shows the Power Platform admin center interface. On the left, there's a sidebar with various navigation options like Home, Actions, Manage, Security, Copilot, Monitor, Deployments, Licensing, Support, and Admin centers. The 'Manage' section is currently selected. In the main content area, there's a search bar at the top right. Below it, a button for '+ New group', a 'Environment routing' link, and a 'Refresh' button. A 'Search groups' input field is also present. The main area is titled 'Environment groups' and contains a table with the following data:

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<https://aka.ms/default-pipeline>

# Q & A



Thank you

Join us Tues, Oct 28<sup>th</sup> at 2:15PM

**MS250 Lifecycle Mastery: Managing Power  
Platform Assets in the Age of Agents**