



How to ALM with Power Platform

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Agenda

- Application lifecycle Management and Power Platform
- Code first ALM: Azure DevOps
- Code first ALM: GitHub Workflows
- Citizen Developers can do ALM Too



Low Code + Azure

Empowered Devs



#30DaysOfLowCode



Zero To Hero



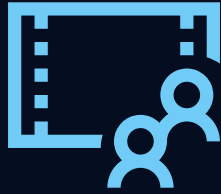
Dev Workshops



Cloud Skills



Community



Live Video



Power Apps



Power Automate



Dataverse



Azure Functions



Azure API-Mgmt



Azure DevOps



Low-Code
February

<https://aka.ms/lowcode-february>

Application Lifecycle and Power Platform



What is ALM ?

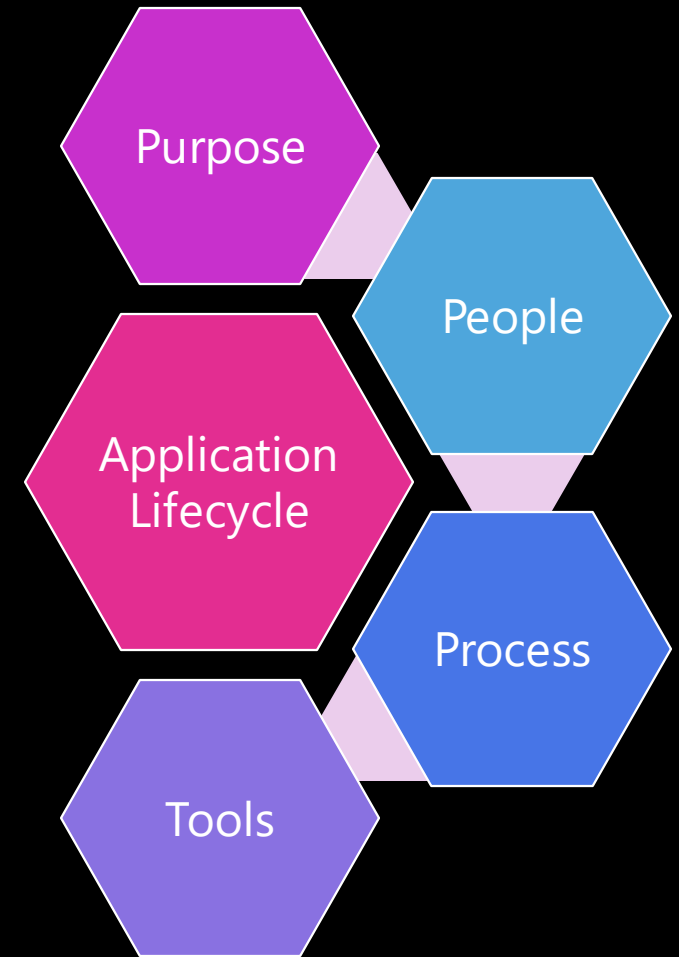
Management of an Application Lifecycle

- New Application Development
- Legacy Application Development
- Digital Transformation
- DevOps
- DevSecOps

Application Lifecycle Management is not just tools

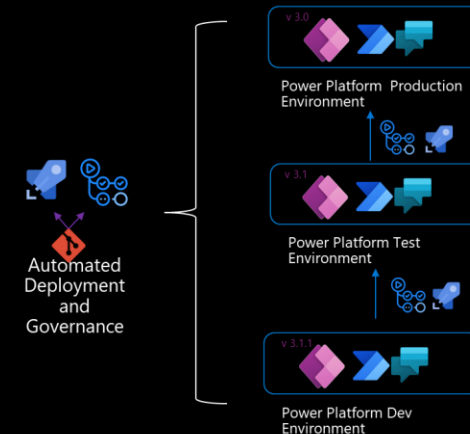
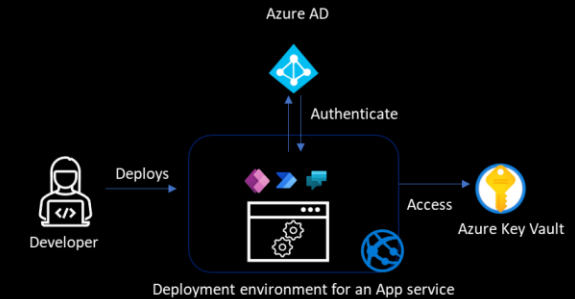
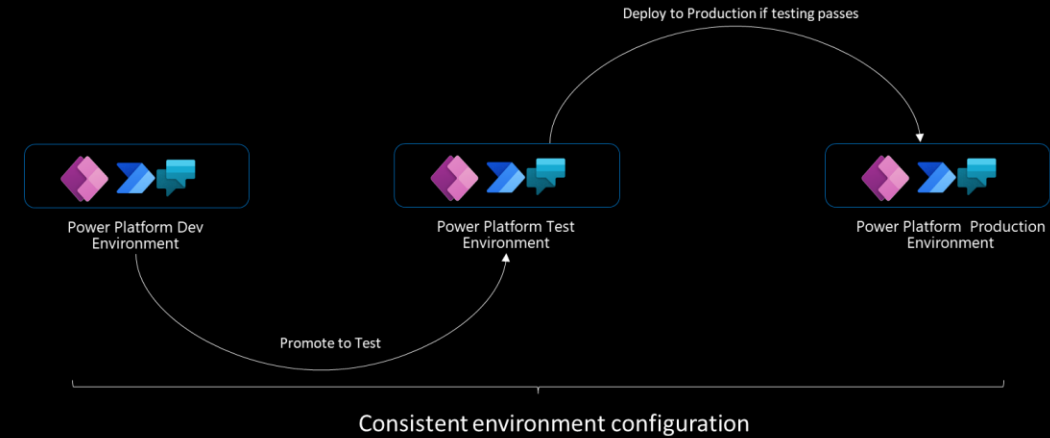
- Application Governance
- Application Development and Deployment
- Software Testing
- Operation Maintenance

Software Development Lifecycle (SDLC) only focuses on Software development, but ALM looks at the entire cycle



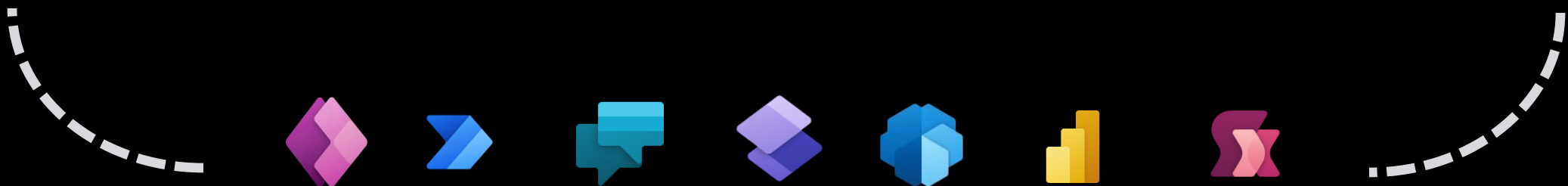
ALM with Power Platform

- Environment Management based on scope of activity (i.e., Environment Strategy)
- Power platform resources that make up an application (i.e., items in solutions)
- Deployment Management

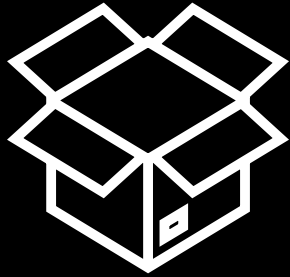


What goes into a solution?

Schema	User Interface	Analytics	Process / Code	Templates	Security	System Settings
<ul style="list-style-type: none">• Tables• Columns• Relationships• Global Choices	<ul style="list-style-type: none">• Commands• SiteMap• Forms• Table Ribbons• Web Resources	<ul style="list-style-type: none">• Dashboards• Reports• Visualizations	<ul style="list-style-type: none">• Processes<ul style="list-style-type: none">• Dialogs & Flows• Plugins<ul style="list-style-type: none">• Assemblies• Processing Steps	<ul style="list-style-type: none">• Mail merge• Email	<ul style="list-style-type: none">• Security Roles• Column Level Security Profiles	<ul style="list-style-type: none">• Formatting Options• Other System Settings



What are unmanaged and managed solutions?

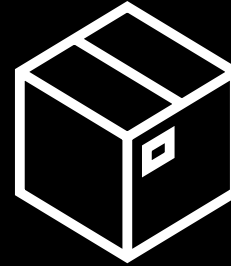


Unmanaged solution

Collection of references to components

No restrictions on what can be added, removed, or modified

Recommended only during development of the solution



Managed solution

Sealed "binary"

Components can't be added or removed

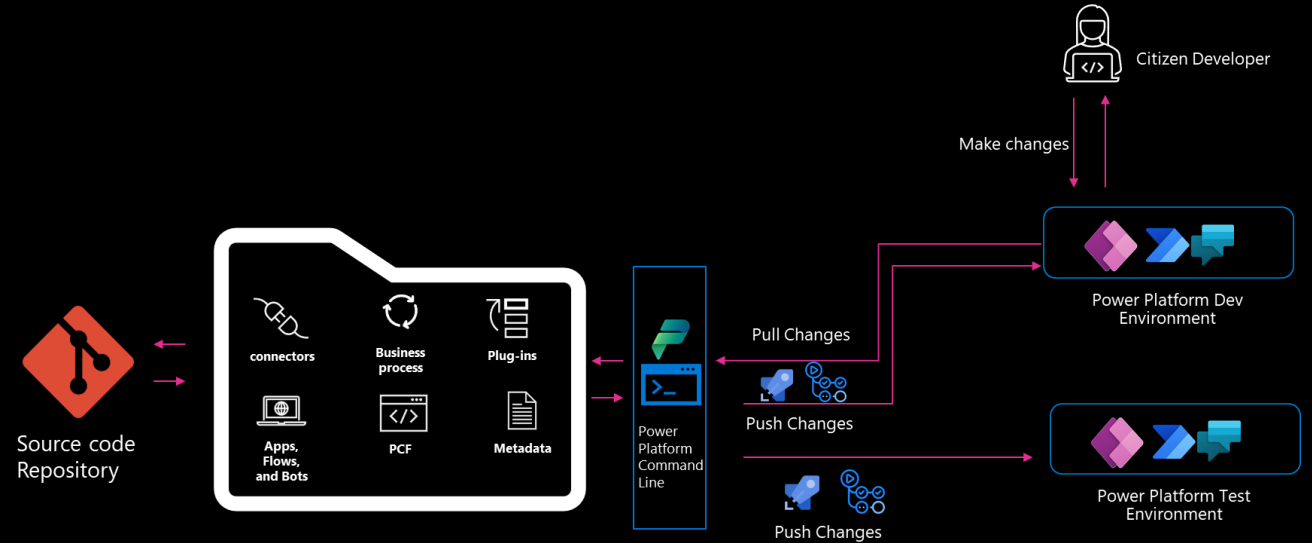
Cannot be exported

Recommended when a solution is not actively being customized*

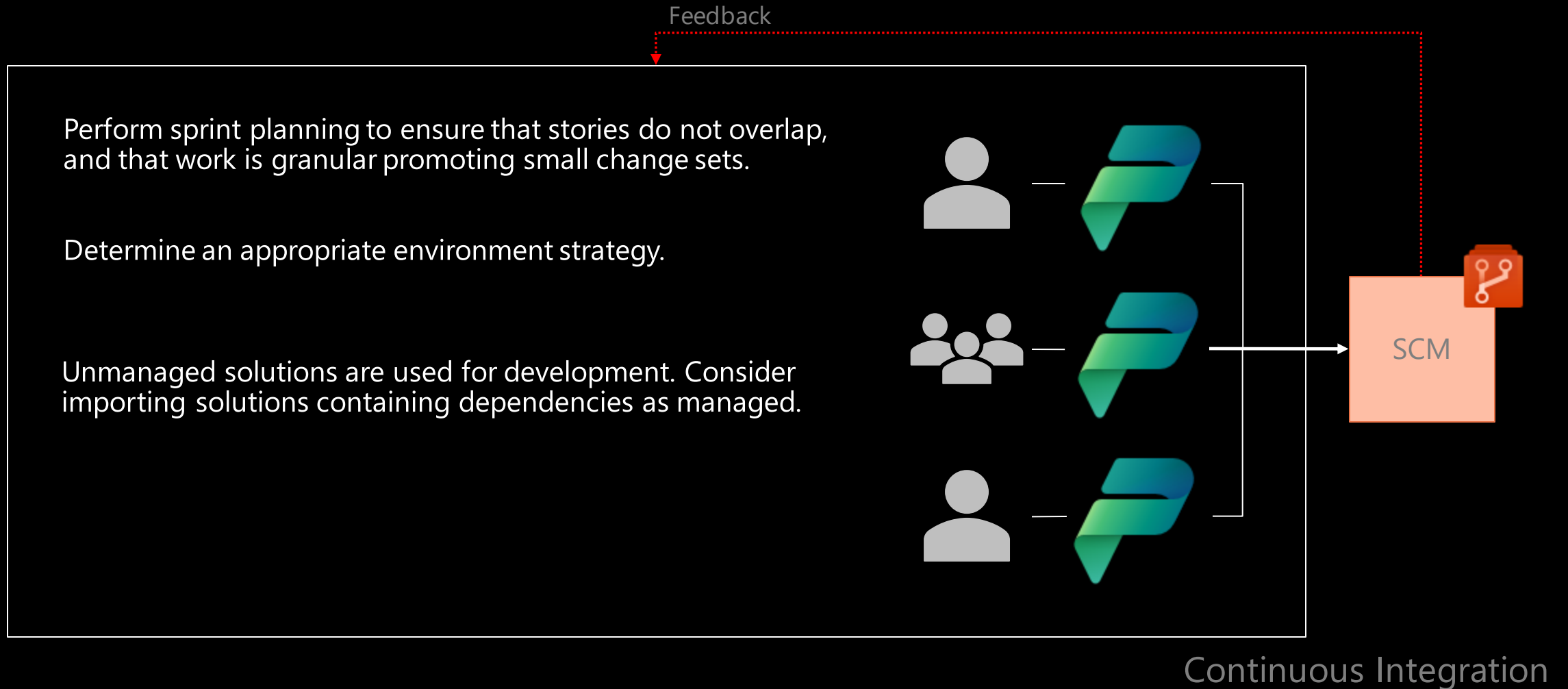
Team Development: Source Control

Two main Paths –

- Export the unmanaged solution and place it as unpacked in the source control system. The build process imports the packed solution as unmanaged into a temporary build environment, then export the solution as managed and store it as a build artifact in your source control system.
- Export the solution as unmanaged and also export the solution as managed, and place both in the source control system.

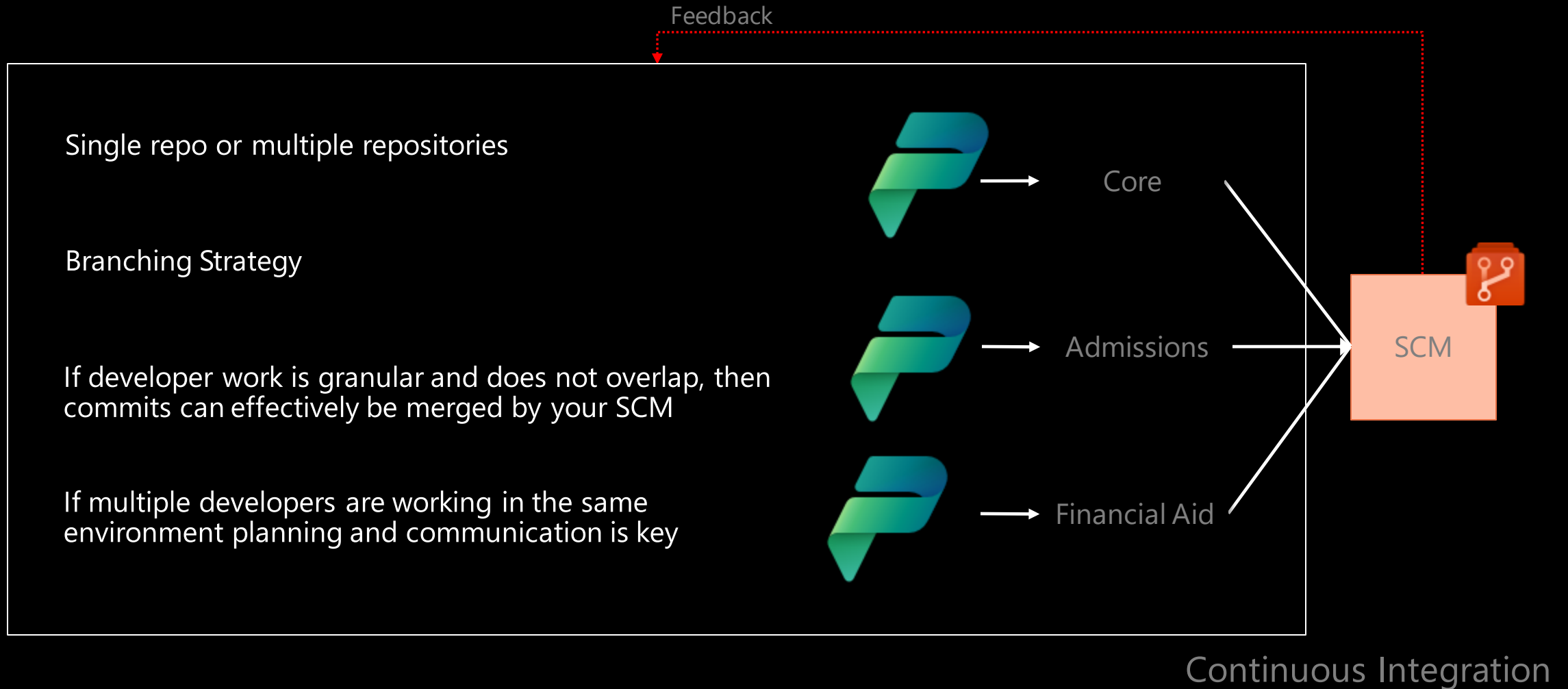


Team Development Patterns



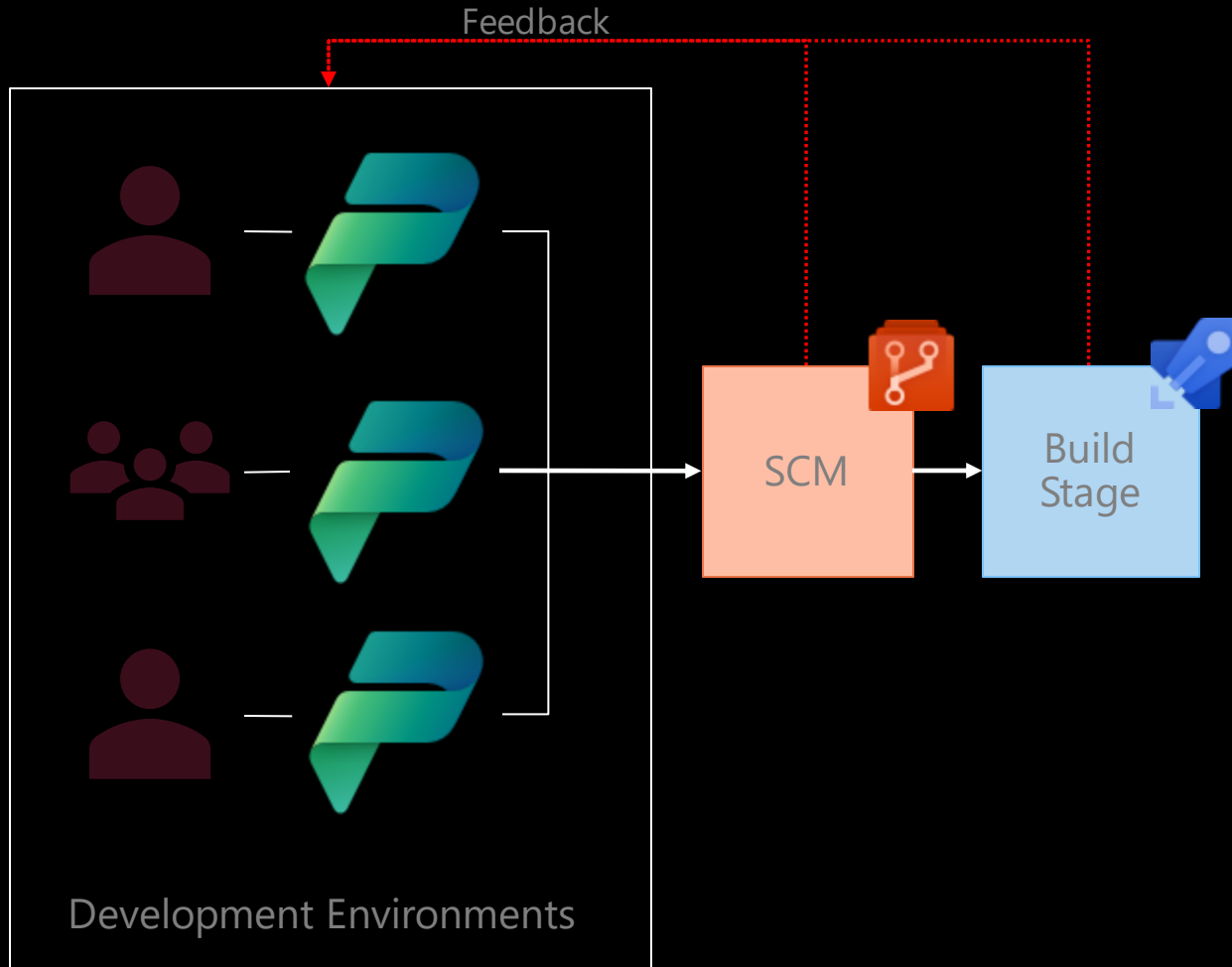
Team Development

Supporting Team Development - continued



Team Development

Build Process

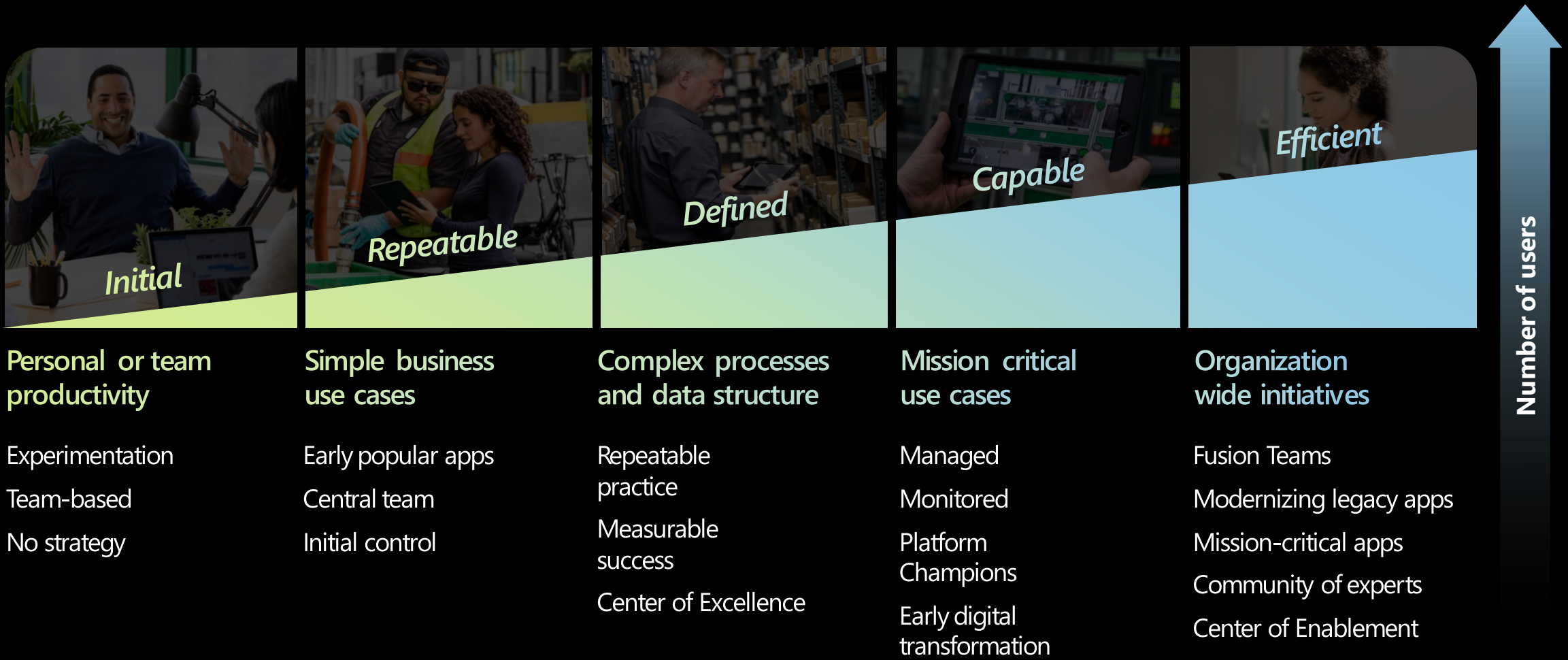


Build pipeline can be manually queued by any developer

- 1 Perform L0/L1 unit tests
- 2 Pack our solution from the repository. Generate a managed solution as needed.
- 3 Run Solution Checker on packed solution
- 4 Publish the solution as an artifact for use in release

Continuous Integration

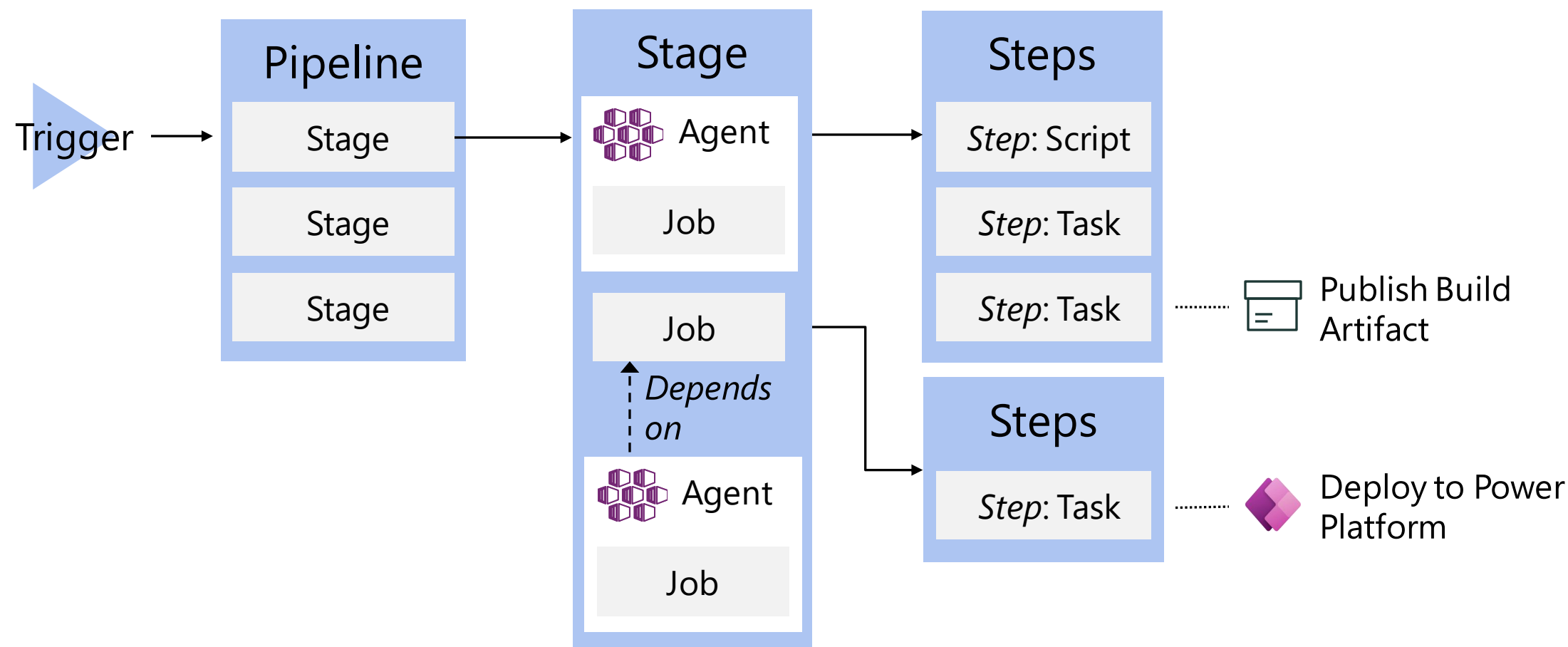
Adoption Maturity Model





Azure DevOps and Power Platform

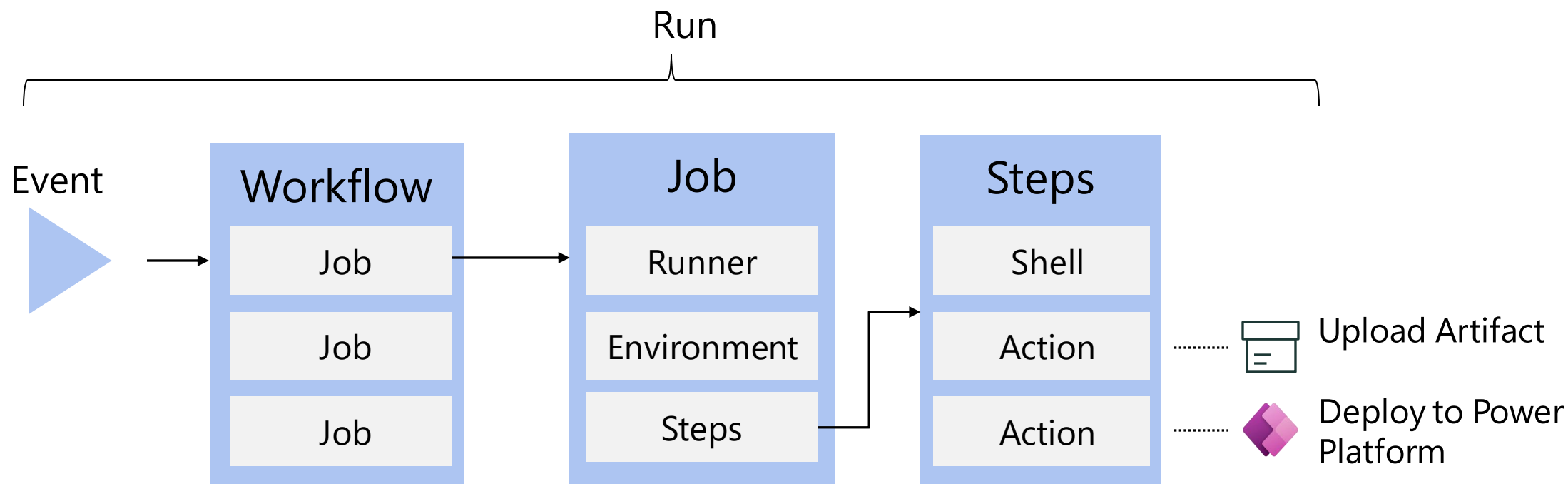
Azure Pipelines Key Concepts





GitHub and Power Platform

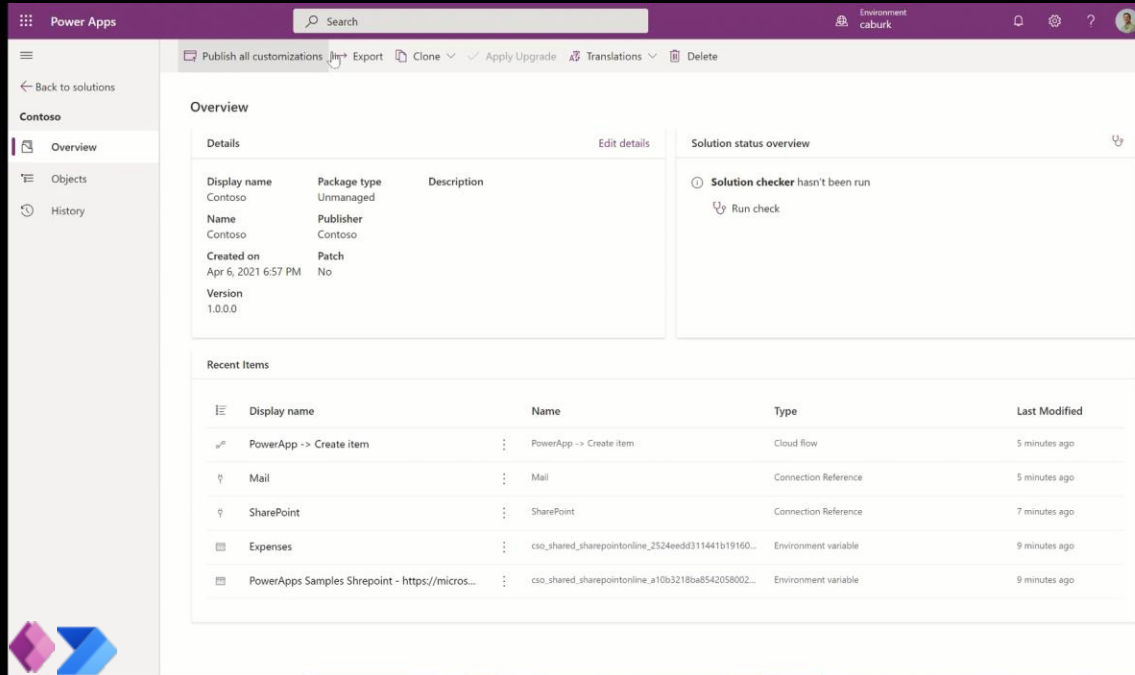
GitHub Workflows Key Concepts



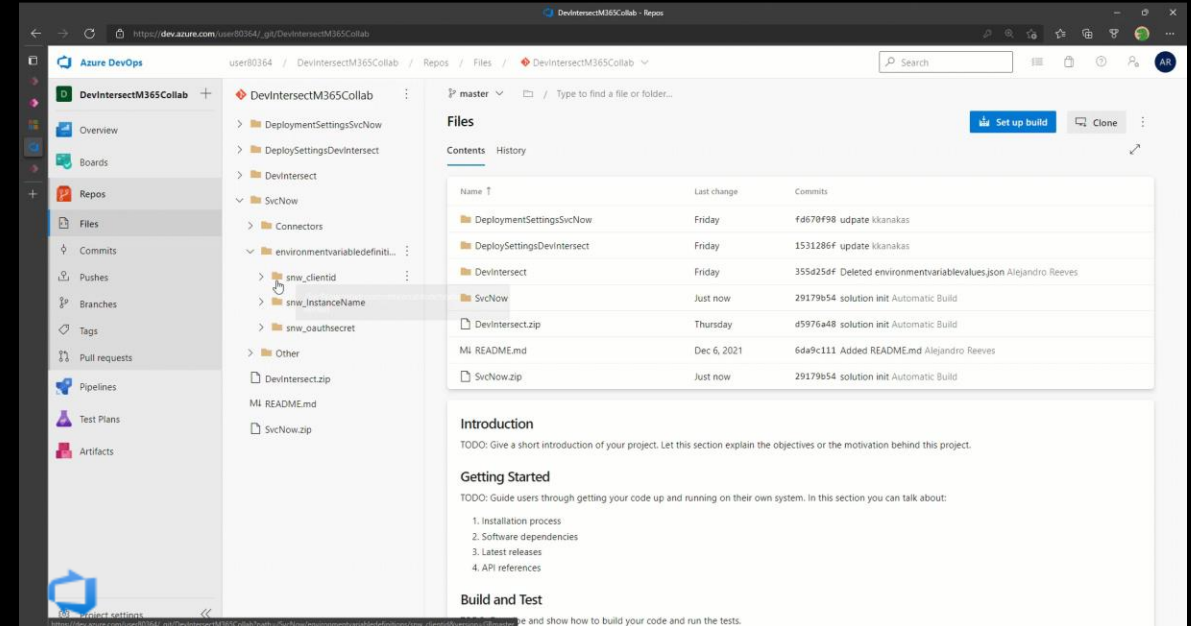


Pipelines for Power Platform

Maker and pro-dev deployments were previously dis-jointed

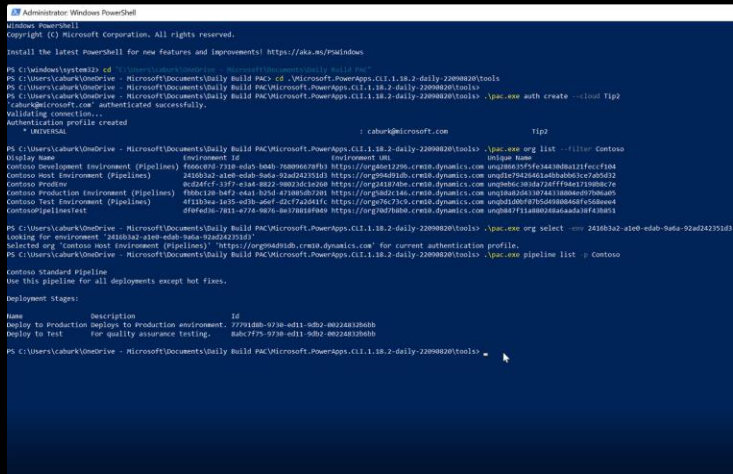
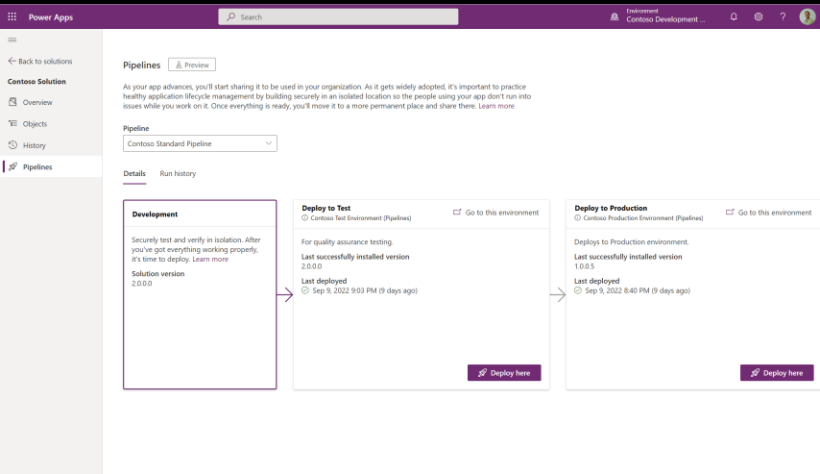
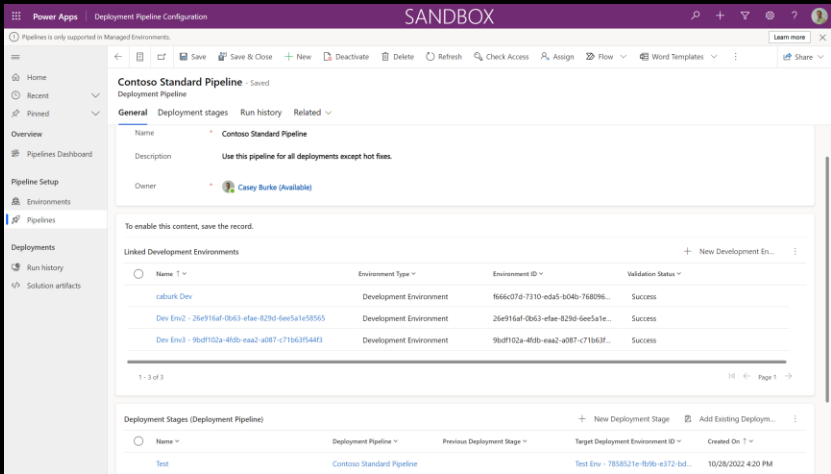


- 😊 Simple, works well for infrequent **manual** deployments
- 😊 Handles **connections** and **environment variables**
- 😞 Not automated
- 😞 Requires elevated permission in production
- 😞 No backup, versioning, audit history, lacks governance controls



- 😊 Frequent, **automated** deployments with **enterprise governance**
- 😊 **Powerful**
- 😞 **Connections** and other **deployment settings** require manual steps
- 😞 Not citizen-developer friendly
- 😞 Can be more complex to setup & maintain

Pipelines simplifies ALM for all makers



Admins

Setup Pipeline in < 2 min



Citizen devs

Initiate automated deployments

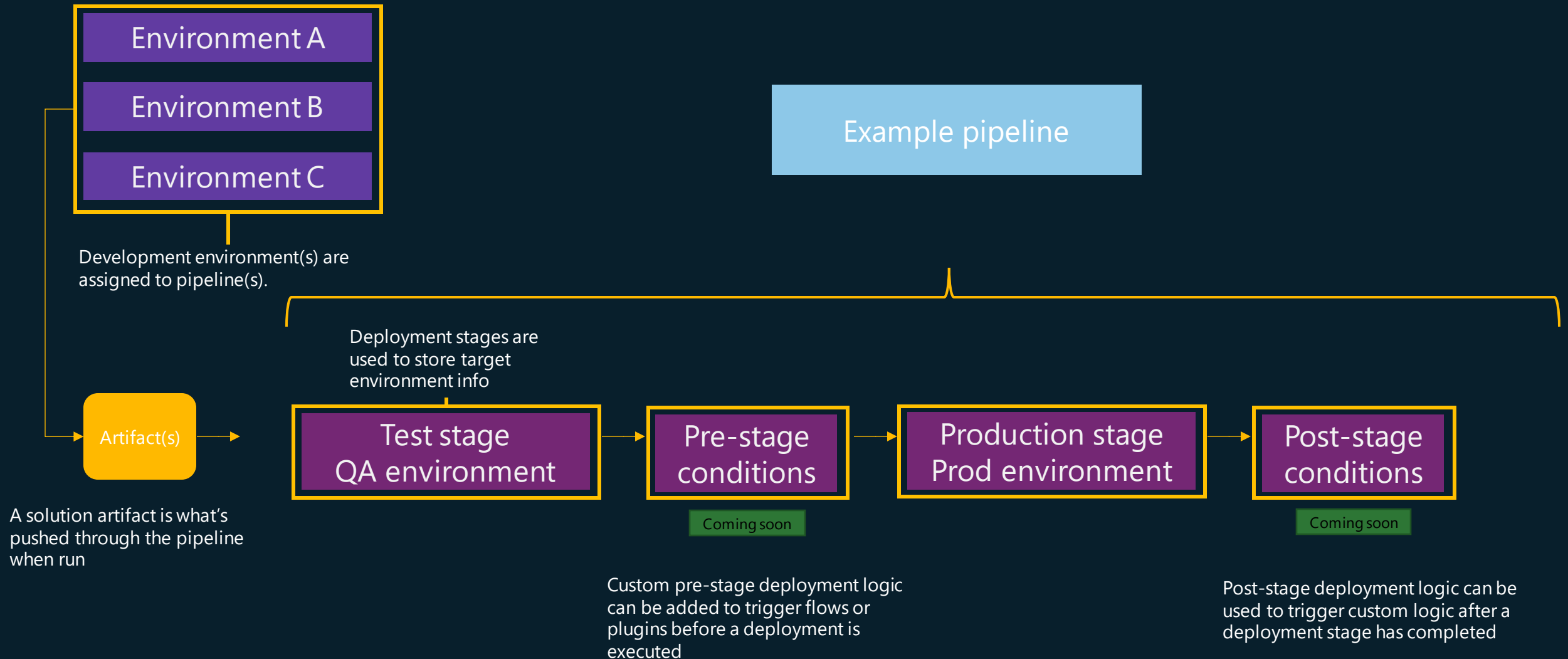


Developers

Run pipelines via CLI

Note: Model-app for Pipeline setup is temporary.

Pipelines in Power Platform key concepts



-
- Home

Recent

Pinned
- Overview
- Pipelines Dashboard
- Pipeline Setup
- Environments
- Pipelines
- Deployments
- Run history
- Solution artifacts

←

Show Chart

+ New

🗑 Delete

↕

🔄 Refresh

📊 Visualize this view

✉ Email a Link

↕

🔗 Flow

↕

📄 Run Report

↕

📄 Excel Templates

↕

⋮

Active Deployment Pipelines

Edit columns

Edit filters

Filter by keyword

Name ↑	Description	Modified On	Owner	Created On
No Rows To Show				

0 - 0 of 0

⏪

←

Page 1

→

⏩



Pipelines now in Preview

<https://aka.ms/pipelinesdocs>

Resources

Get Started

[Low-Code Application Development](https://aka.ms/AzureLCAD)
(aka.ms/AzureLCAD)

Hands on lab

- [GitHub Actions](#)
- [Azure DevOps and Power Platform](#)
- [App in a Day](#)

Webinar

- [Drive Agility with Low Code Application on Azure](#)
- [GitHub Actions Webinar](#)
- [All Power Apps Webinars](#)

Fusion teams

- [Ebook: Fusion development approach to building apps](#)
- [Transform business applications with fusion development](#)

Documentation

- [Azure DevOps](#)
- [GitHub Actions](#)
- [Platform for Power Pipelines](#)

Low Code February

- [Aka.ms/lowcode-february](https://aka.ms/lowcode-february)



Thank you





















Appendix

Icons








Icons should be primarily used as a visual aid, as a way to break up large amounts of text and content, or as a visual cue of the content that follows.

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




INDUSTRY SECTORS

											
Aeronautics	Agriculture	Architecture	Automotive	Construction	Education and research	Energy	Financial services	Healthcare	Engineering and manufacturing	Professional services, media	Sports
								-	-	-	-
Government	Retail	Technology	Media and broadcasting	Travel and transportation	Education	Law	Science	-	-	-	-





MAPS / LOCATION

							-	-	-	-	-
Globe, global, earth	Globe, global, earth	Navigation, GPS, POI, location, map	Map, location, GPS, directions, navigation	Navigation, GPS, POI, location, map	Map, location, route, quest, destination, journey	Download map, receive location	-	-	-	-	-

MONEY / FINANACE / RETAIL / CONSUMER

											
Shopping cart, store	Store, bag, shop	Money, dollar sign, cash, revenue, currency	Revenue, financial report, funds	Money, currency, coins	Bank, piggybank	Compare, balance, finance, justice	Credit card, payment, charge, debit card	Mobile payment, digital payment, e-commerce	Barcode scanner	Tag, sale, shopping	Bank

OBJECTS / TOOLS

											
Alarm clock	Hourglass, timer	Clock	Flashlight	Funnel	Calculator	Binoculars	Scissors	Camera	Battery, power, charge	Magnifying glass	Tools, screwdriver, wrench
											
Paperclip	Pushpin, thumbtack	Key	Lock	Safe	Piggybank	Bag	Ballot box, drop box	Box, archive, storage	Present, giftbox	Box, package, shipping	Briefcase, business, work, job
											
Books, reading	Book, dictionary, novel	Notebook, journal	Pencil	Paintbrush	Paint palette, color	3D, hologram	Trophy, award	Ribbon, award, reward, accomplishment	Ribbon, award, reward, accomplishment	Flag, finish line	Flags, finish line, win, race
											
Open door, entryway, opportunity	Clipboard	Megaphone, speaker, speech, announcement	Microphone	CD, music album	Headphones	Headset	Eye glasses	Bike, bicycle	Umbrella, bumbershoot	Balloon, party, celebration	Rocking chair
											
Remote control	Robotic, manufacturing, mechanical, automation	Forklift	Gears	Traffic cone, construction	Flask, chemistry, science, beaker	Maze, puzzle	Target, bullseye, aim, arrow, dartboard, darts, archery	Games, strategy, chess, poker	Musical instrument, drums	Pizza, food	Lightbulb

Presentation resources

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