

A low-angle, upward-looking photograph of a diverse group of people in a huddle, with their hands stacked in the center. The image is tinted with a magenta/pink color. A large, solid magenta rectangle is overlaid on the upper half of the image, containing the title text in white. A smaller, solid magenta rectangle is overlaid on the lower half, containing the date and time text in white.

# **Power Automate (Flow) vs. Azure Logic Apps**

Tuesday, February 25, 2020

12 - 1 PM EST

# Peter Carson



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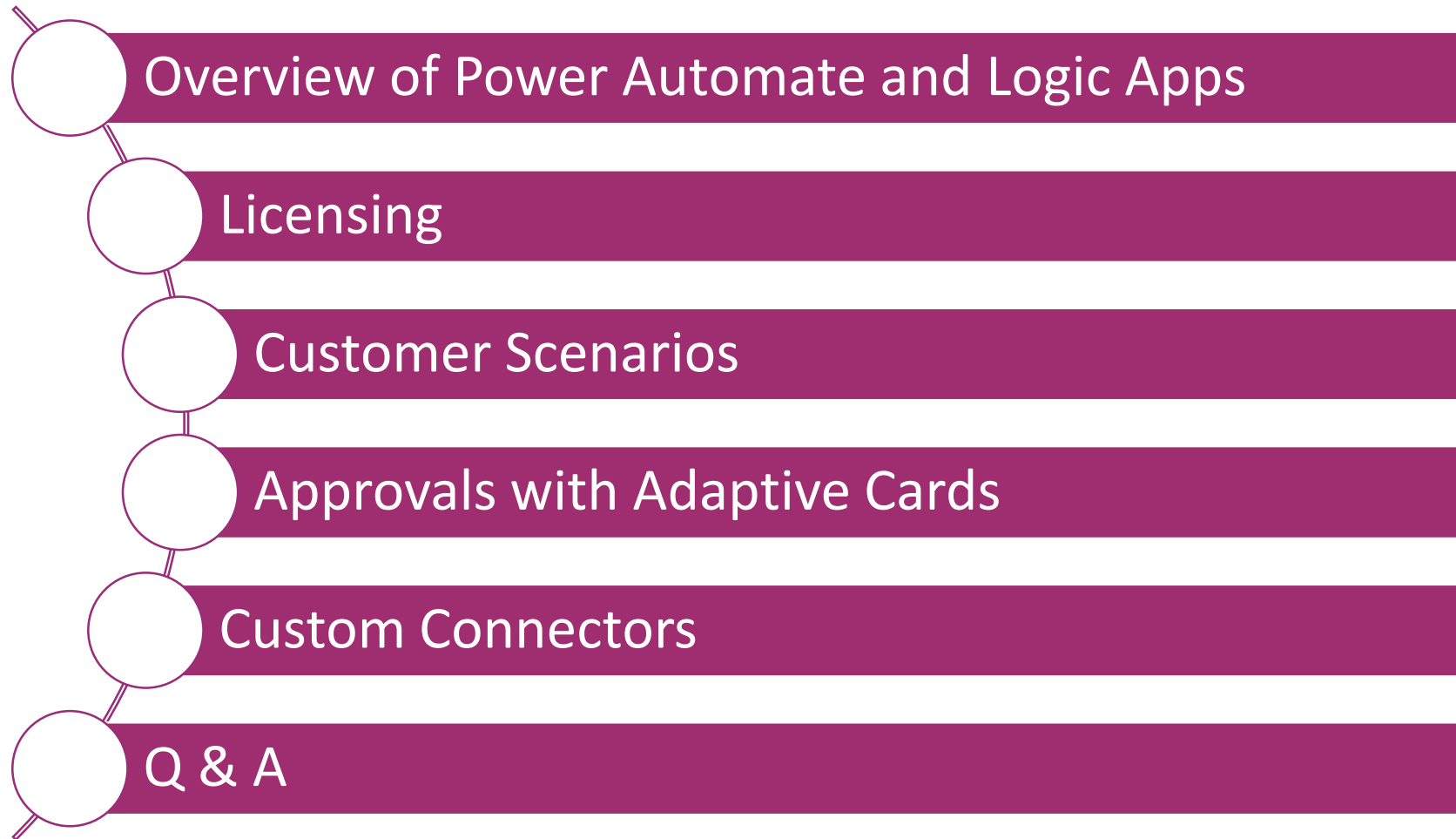
# Logan Guest

## Sales

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- p: (647) 265-8256



# Agenda



# Poll 1

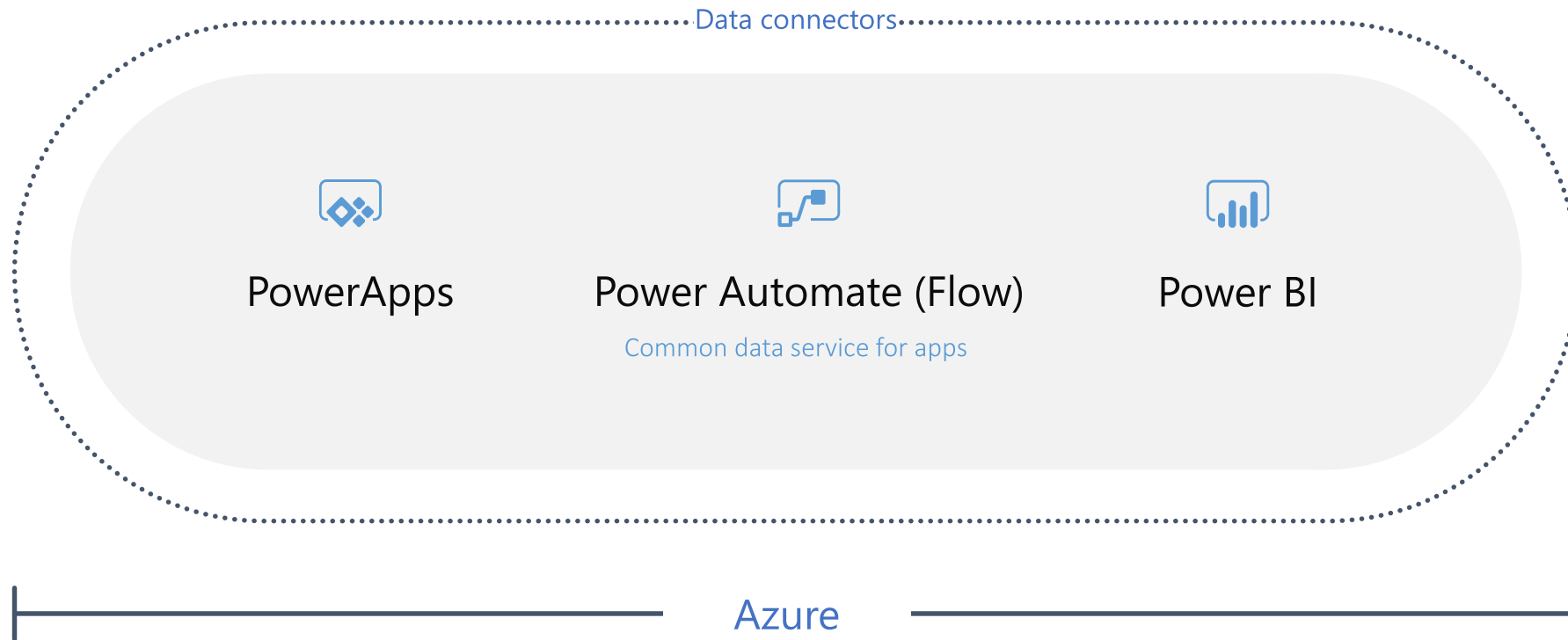
**Which of the following do you use today?**

- **Office 365**
- **Power Automate (Flow)**
- **Power Apps**
- **Azure Logic Apps**

Dynamics 365

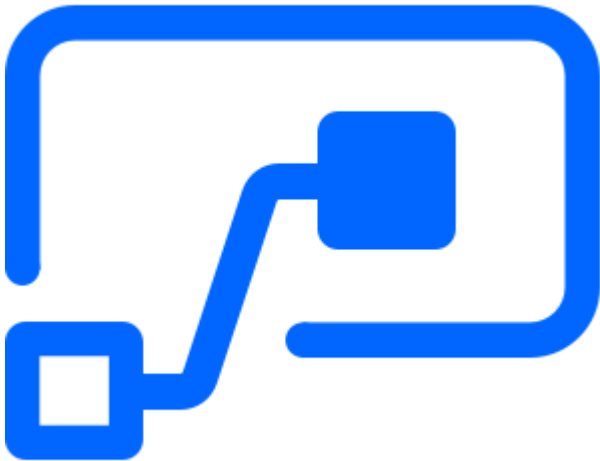
Office 365

Standalone apps



# Microsoft Power platform

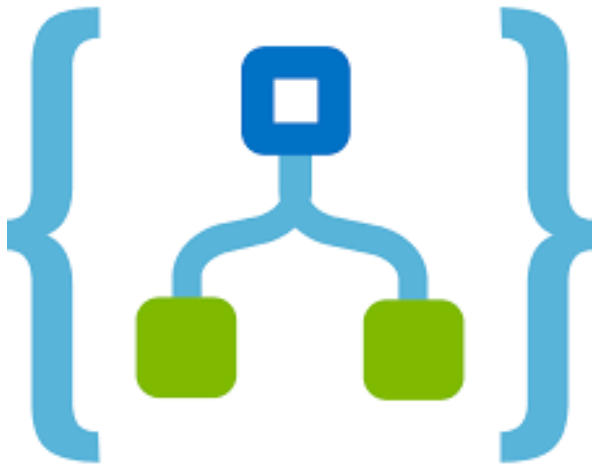
# Power Automate (Flow)



- Create automated workflows between your favorite apps and services to get notifications, synchronize files, collect data, and more
- Supports both Microsoft and third party apps
- Custom connectors can connect to any system

<https://flow.microsoft.com/en-us/>

# Azure Logic Apps



- **Platform underneath Power Automate**
- **Same designer**
- **Slightly different set of actions**
  - Simple built-in approval step
- **Visual Studio integration**

<https://azure.microsoft.com/en-ca/services/logic-apps/>



# Power Automate vs. Logic Apps

## Power Automate

- Simpler for citizen developers
- Using standard connectors leverages built-in Office 365 licensing
  - <https://us.flow.microsoft.com/en-us/connectors/>
- Premium and custom connectors need premium licensing
- <https://flow.microsoft.com/en-us/pricing/>

## Logic Apps

- Azure portal and Visual Studio can be daunting
- Uses the same connectors
- Pay per action executed can be much cheaper
- <https://azure.microsoft.com/en-us/pricing/details/logic-apps/>

# Power Automate Licensing

Plan Type	Cost
Office 365	Included with Office 365 Standard (Office 365 ) connectors only
Dynamics 365	Included with Dynamics 365 Standard and premium connectors See licensing guide
Power Apps	Covers Flows related to the Power Apps application(s)
Power Automate per user plan	\$15/user/month
Power Automate per flow plan	\$500/month for 5 Flows \$100/month for each additional Flow

# Power Automate Licensing

- SQL, Azure, and Dynamics 365 connectors are now Premium
- All custom connectors are premium
- Be aware of multiplexing
- External users need to be licensed
- <https://docs.microsoft.com/en-us/power-platform/admin/powerapps-flow-licensing-faq>
- [Microsoft Power Apps and Power Automate Licensing Guide](#)

# Logic Apps Pricing

- Pay only for what you use
- Per-action billing
- Every time a Logic App definition runs the triggers, action and connector executions are metered
- <https://azure.microsoft.com/en-ca/pricing/details/logic-apps/>

# Logic Apps Pricing

	Price per Execution
Actions	\$0.000,032
Standard Connector	\$0.000,160
Enterprise Connector	\$0.001,280

# Logic App Pricing Example

- **Teams Provisioning open source solution**
  - <https://www.extranetusermanager.com/teams-provisioning>

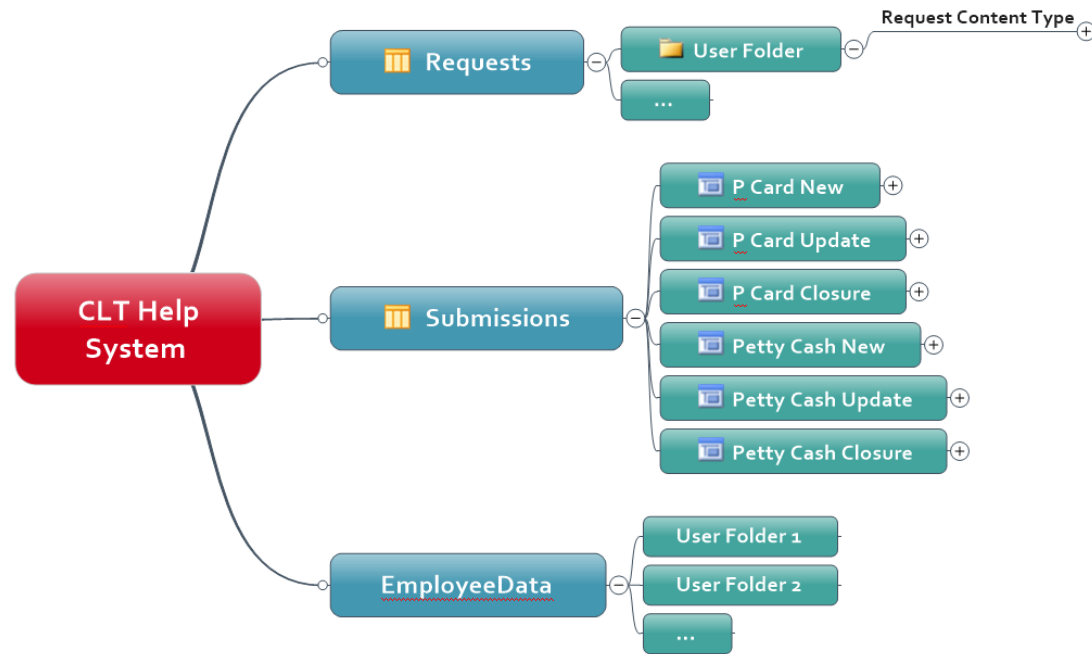
	Count	Price per Execution	Total
Actions	9	\$0.000032	\$0.000288
Standard Connector	4	\$0.00016	\$0.000640
Enterprise Connector	1	\$0.00128	\$0.001280
			\$0.002208

0.2208 cents per workflow run  
45,290 runs = \$100

# Scenario One – Community Living Toronto Flows

- <https://cltoronto.ca/>
- Finance Help System
- P-Card and Petty Cash requests and changes
- Power App form based solution
- Two stage approval workflow
- Reporting dashboard
- PowerApps form is published to SharePoint list
- Power Automate workflows only use standard connectors
- Custom connectors to AD and HRIS systems are done by a scheduled PowerShell script
- Employee folders are used to secure employee data and form submissions

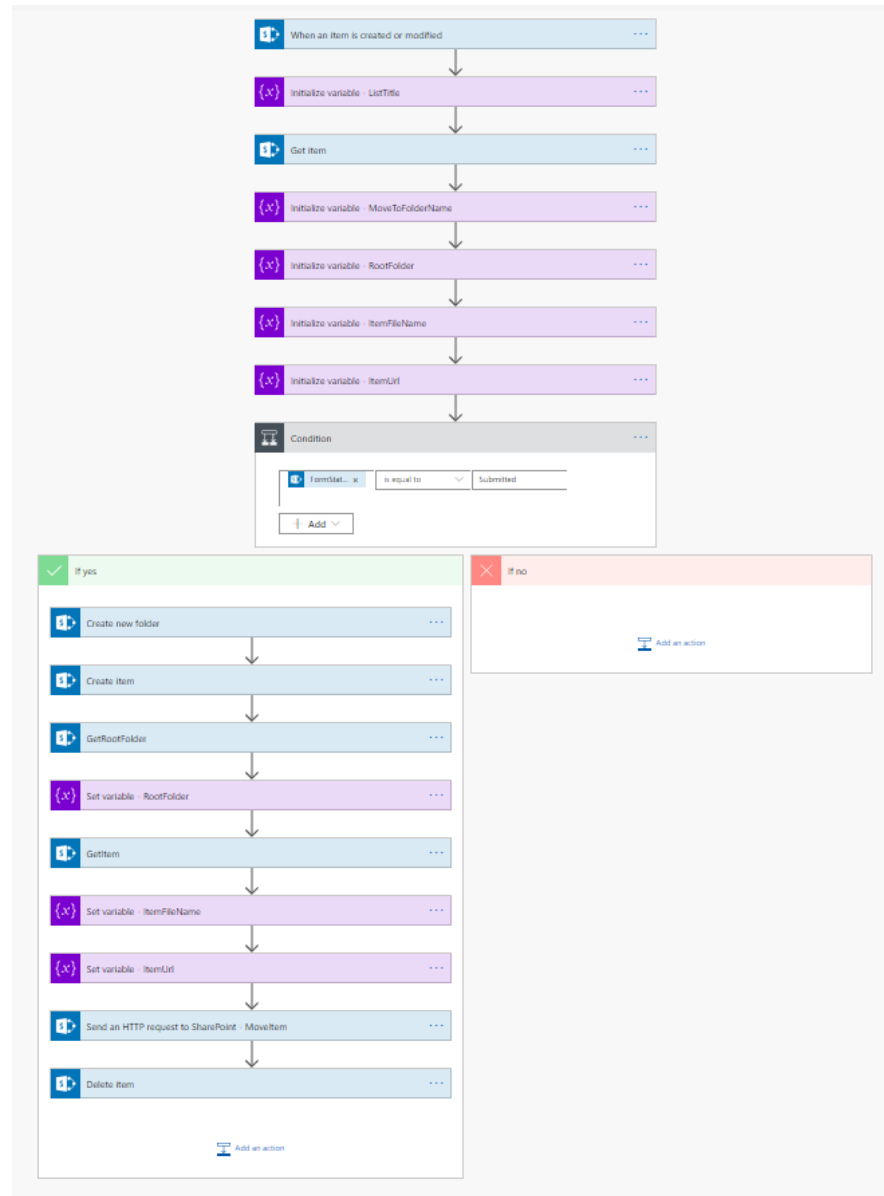
# Information Architecture



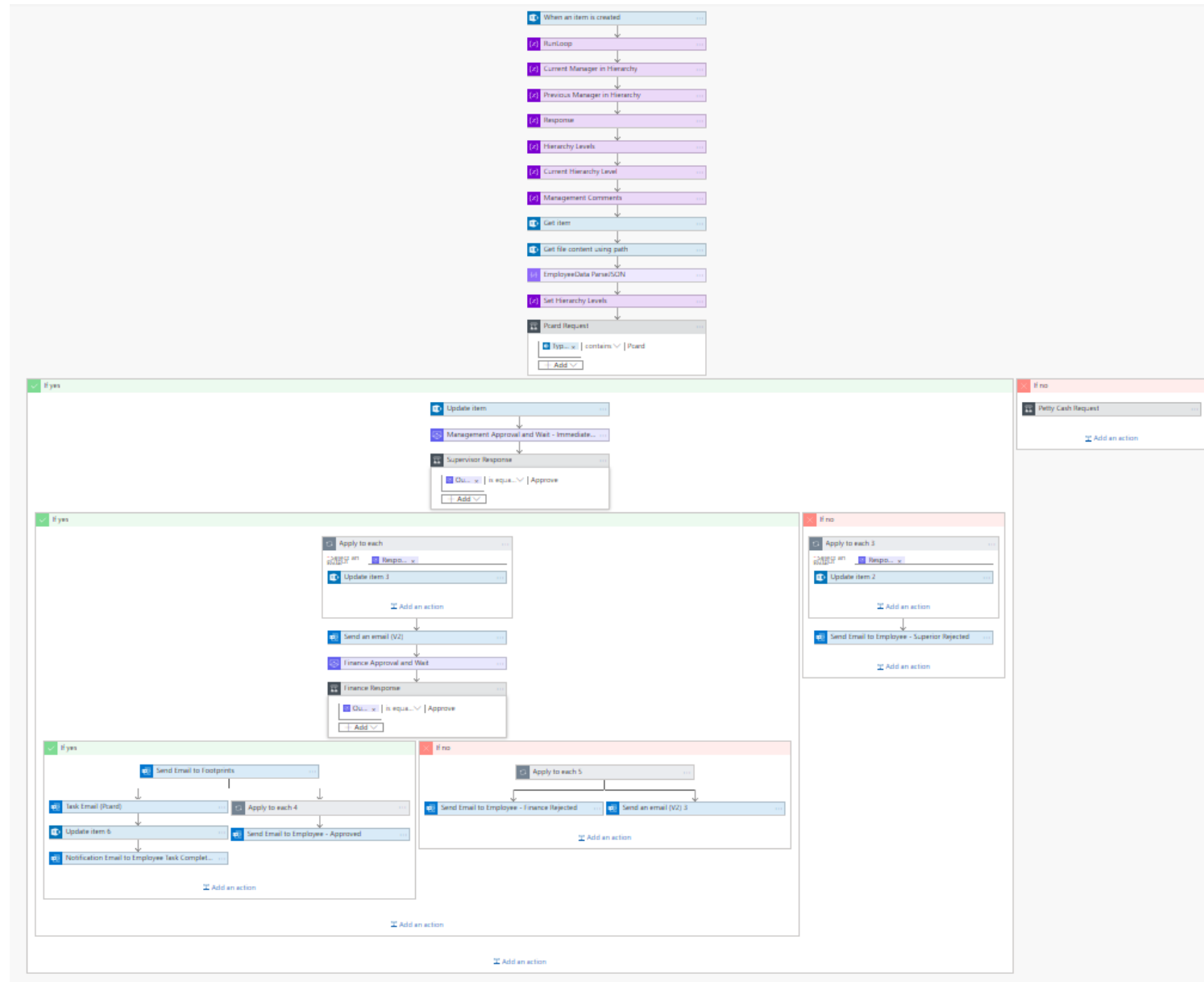
- List for Submissions
- List for Requests
  - Folder for each User
- EmployeeData Library
  - Folder for each User



# Copy Item



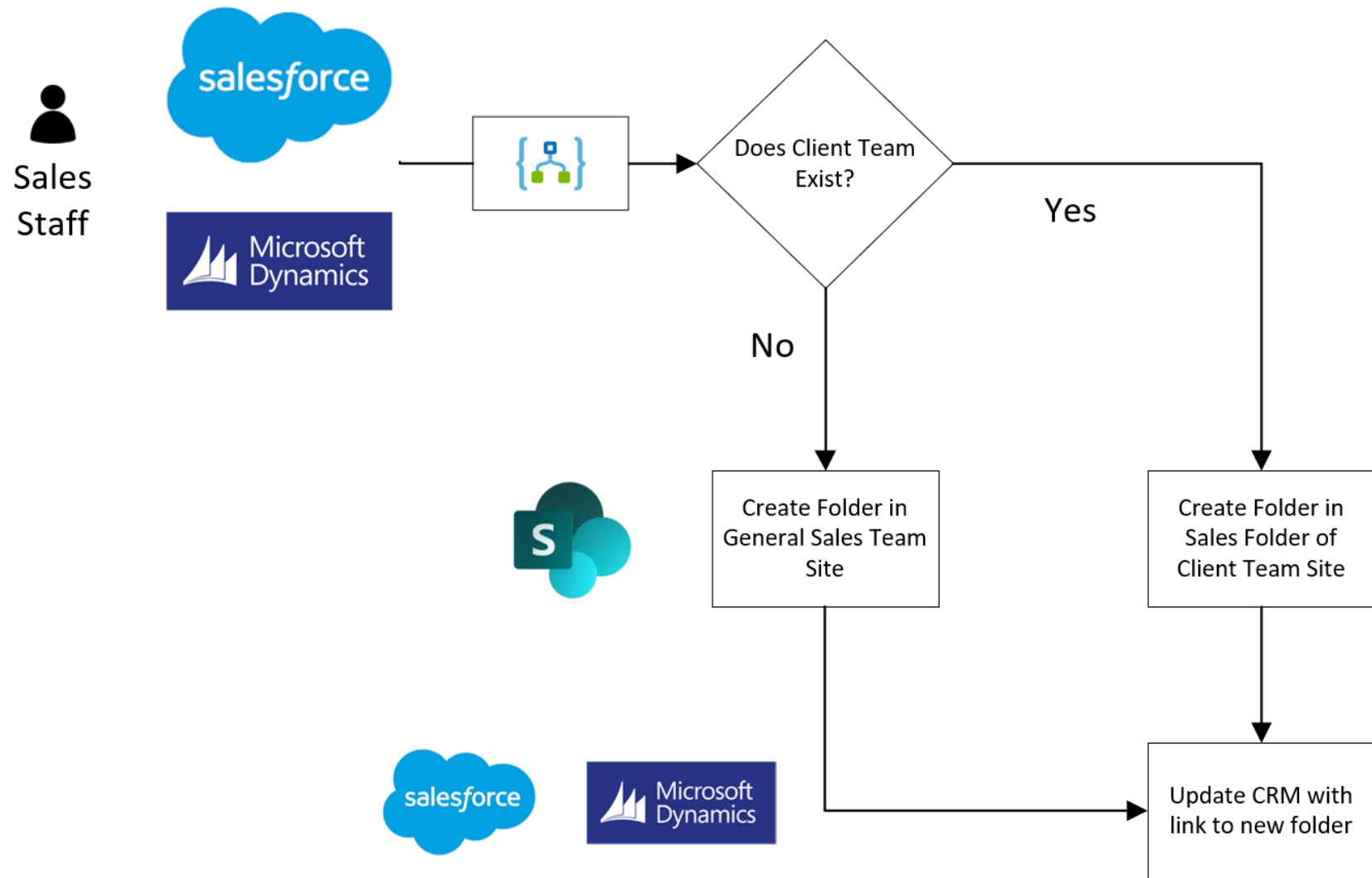
# Approval



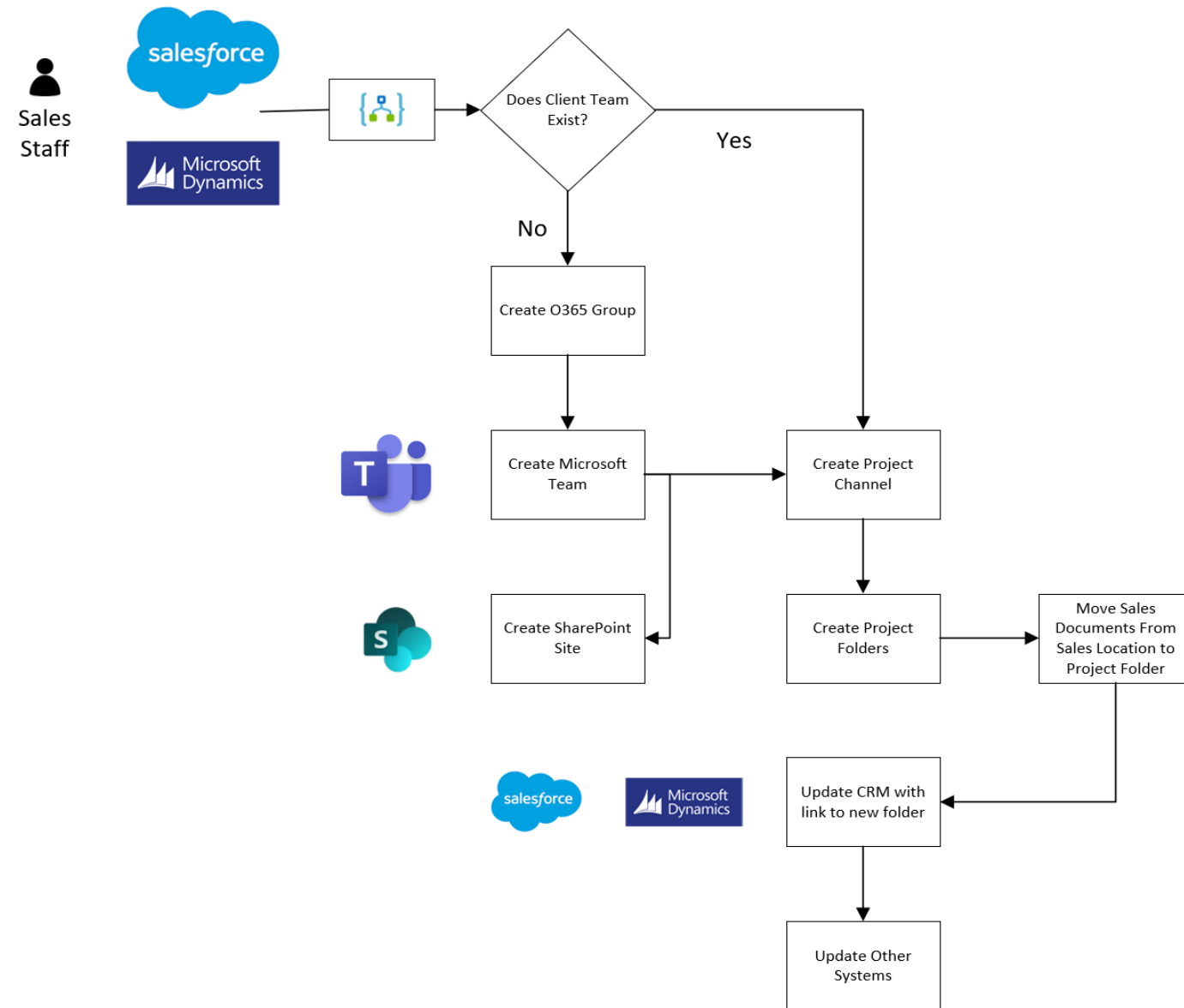
# Scenario Two – Consulting Company Teams Provisioning

- Built on EUM's Team and Site Provisioning open source solution
  - <http://eum.co/teams-provisioning>
- Governance around the request, approval, and provisioning of Microsoft Teams and SharePoint sites
- Azure Logic Apps workflow
- Premium connectors to Azure Automation and Salesforce
- Standard Azure Logic Apps approval process

# New Opportunity

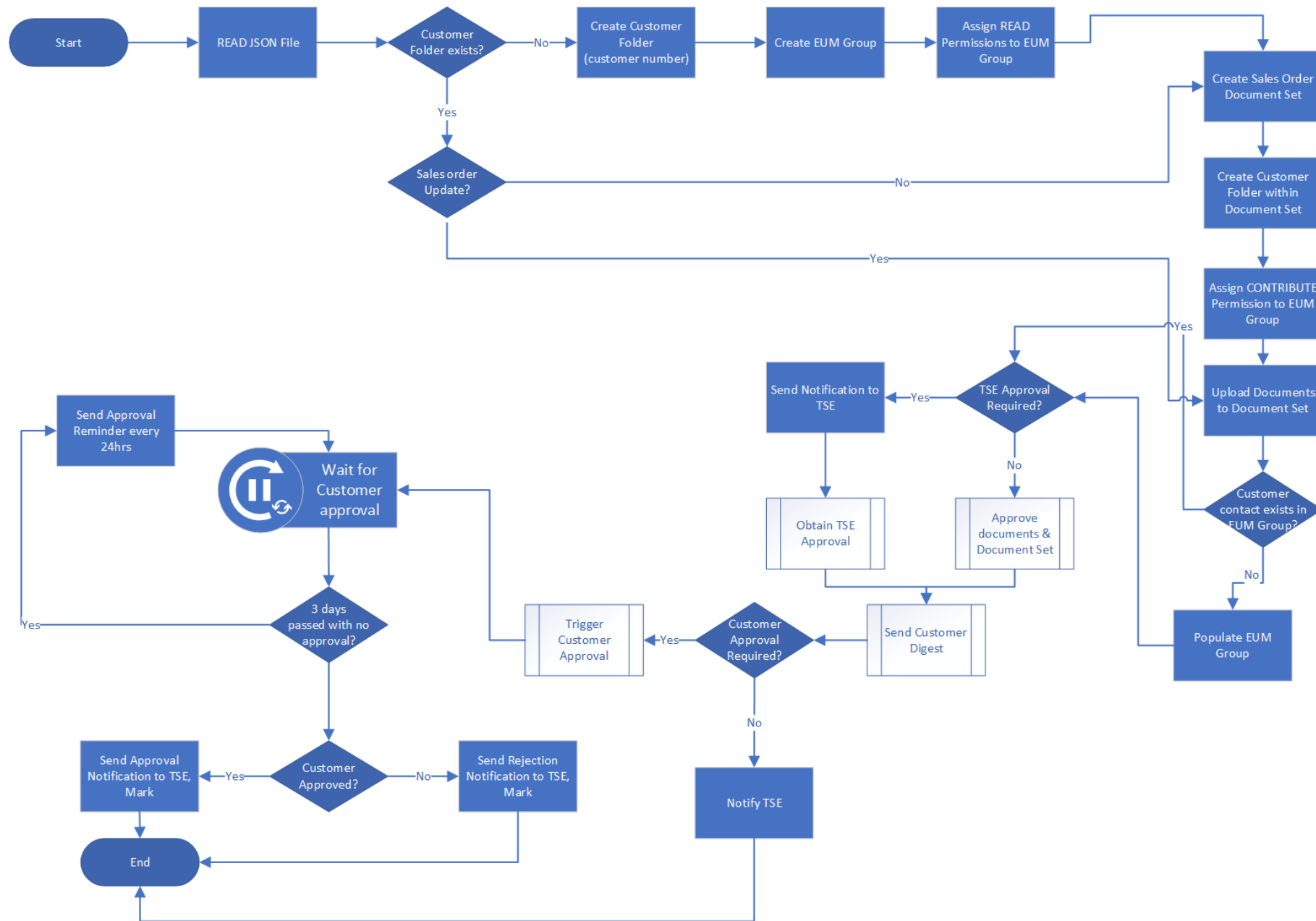


# Closed Opportunity



# Scenario Three – Engineering Extranet Drawing Approval

- Extranet for review and approval of engineering drawings
- Sales orders managed through SAP
- Drawing packages generated programmatically
- Zip package deposited in SharePoint library
- Documents extracted and approval workflow with external customer is initiated
- SAP updated to release sales order when approved
- Azure Logic Apps workflow
- Premium connectors to Azure Automation
- Custom connector to Extranet User Manager
- Adaptive Cards used to customize the approval emails



Job Order Notification: New Documents Available for Review

Customer Name: Sprint Demo

Customer Number: 7654321

Sales Order Number: 1234567

Date: 12/06/2019 16:22:14

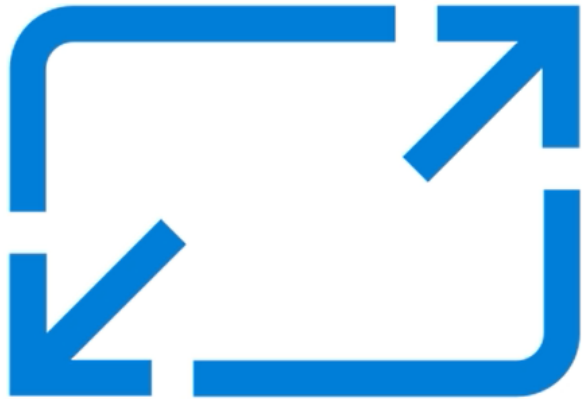
Document Folder: 1234567

Approve ▾

Reject ▾



# Approvals with Adaptive Cards



- <https://adaptivecards.io/>
- Conversation Bots
- Microsoft Teams
- Outlook Actionable Messages

## Security

- **Approvals secured using a GUID in the approval link**
  - Difficult to guess
  - Approvals can be forwarded, anyone with the link can approve
  - This is desired in this scenario
- **Approvals can also be secured with certificates**
  - Identity of user submitting is confirmed and available to the workflow
  - Restricted to who is on the approver list
  - Integrated with Azure AD

# Deployment Between Environments

## Power Automate

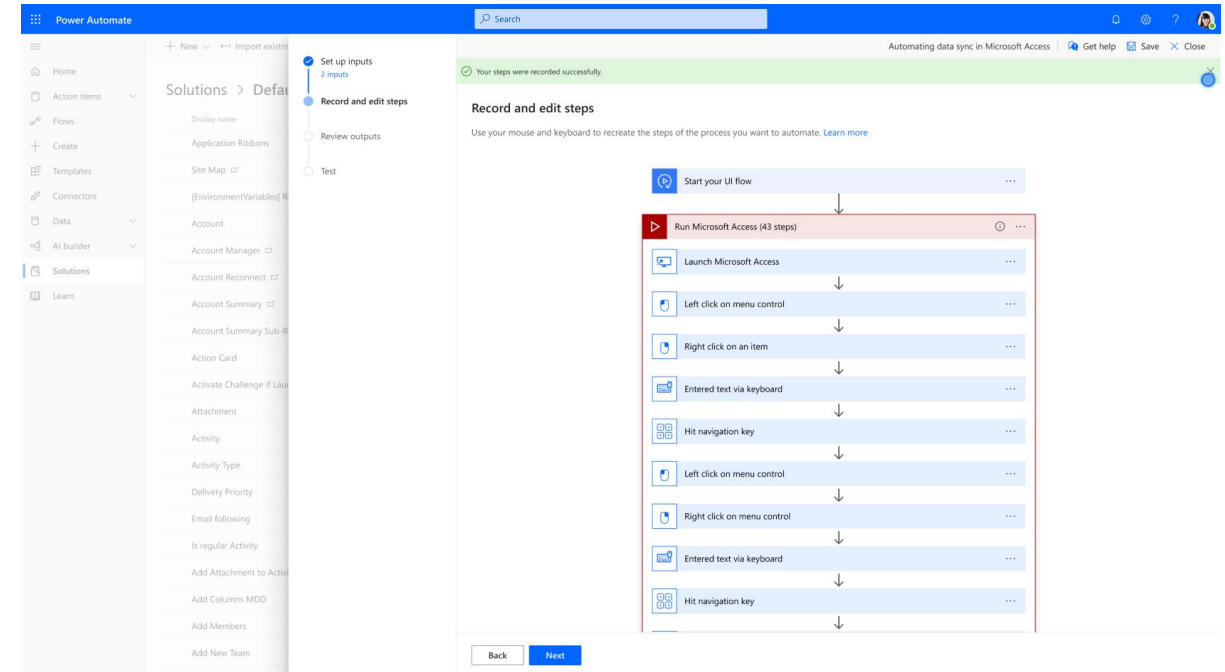
- Support for multiple environments
- Connected to Dynamics 365 environments
- Export / Import for other tenants
  - Need to fix up connections
- Solution from Denis Molodtsov - <https://github.com/Zerg00s/FlowPowerAppsMigrator>

## Logic Apps

- JSON code view can be copied and pasted
- Also need to fix up connections
- ARM templates can be used to automate deployment

# Power Automate Robotic Process Automation

- Record and play back browser steps
- Automate applications that don't have APIs
  - Microsoft Stream
- <https://flow.microsoft.com/en-us/ui-flows/>

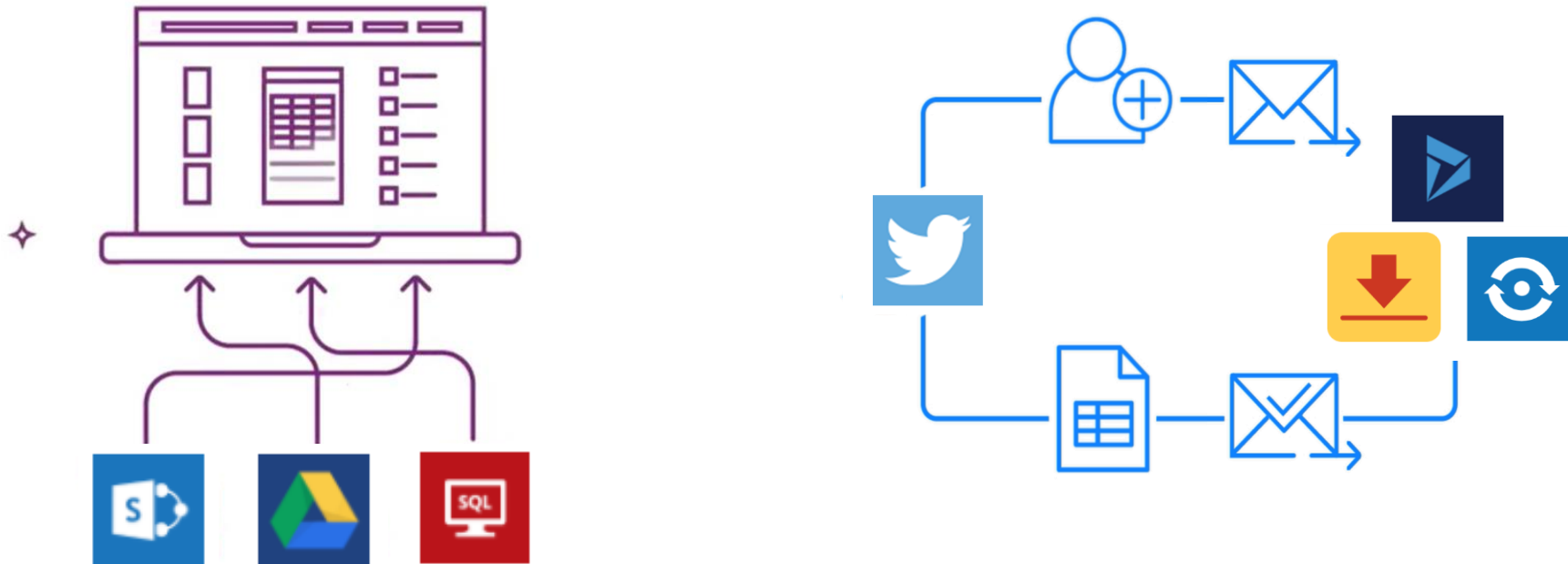


# Custom connectors

Extending the data reach



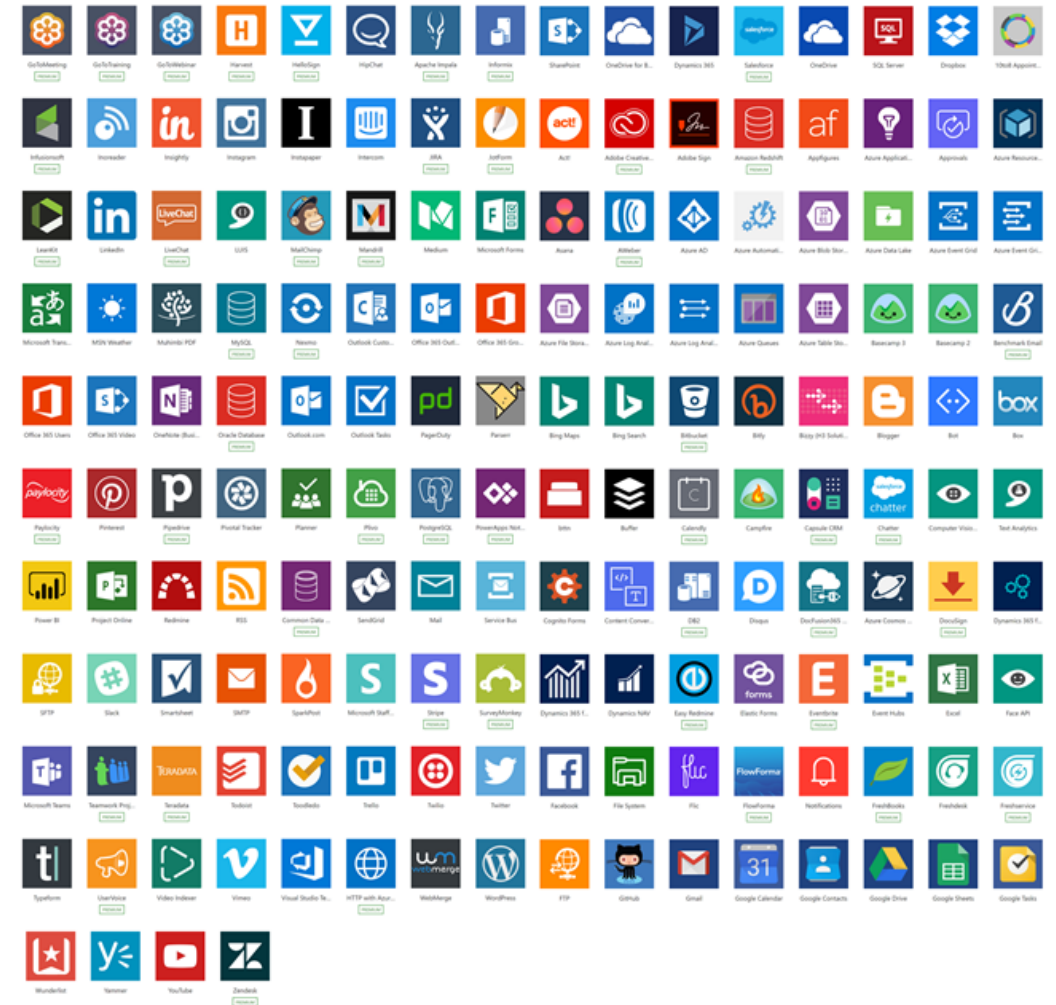
A connector is a wrapper around an “API” that allows the underlying service to talk to Power Automate, PowerApps, and Logic Apps



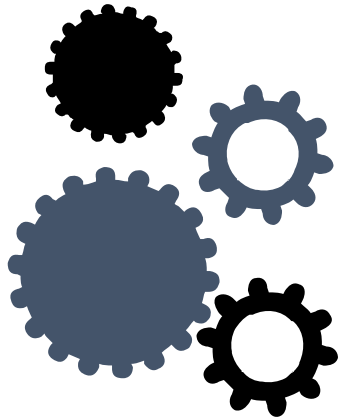
# Cloud and on-premises connectivity

- With public connectors, built-in connectivity to over 200 cloud services, files, databases, web APIs, etc.
- Seamless hybrid connectivity to on-premises systems via the On-Premises Data Gateway
- Connect to the service with your own security credentials
- With custom connectors, you can extend the reach for your organization

Hundreds of connectors today



# Why build a connector?



## Enterprise developers

Looking for connectivity to a service we don't currently support  
Need connectivity to a custom or internal service



## Partners and ISVs

Expand the number of services you integrate with  
Provide the extensibility your customers need  
Increase exposure and adoption

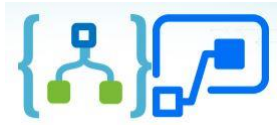
# Poll 2

**Which future topics interest you?**

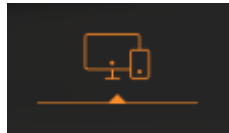
- **Forms and Flow employee self-service**
- **Power Automate Robotic Process Automation**
- **Workflow building and deploying technical deep dive**
- **Teams provisioning business case**
- **Teams provisioning business case**



# Upcoming Events



Power Automate (Flow) vs. Azure Logic Apps  
Feb 25, 2020  
Webinar



Modern Workplace Summit  
April 8, 2020  
Philadelphia  
[modernworkplacesummits.com](http://modernworkplacesummits.com)



May 19 - 21, 2020  
Las Vegas  
[www.sharepointna.com](http://www.sharepointna.com)



April 15 - 16, 2020  
Chicago  
[www.microsoft.com/en-us/ignite-the-tour/chicago](http://www.microsoft.com/en-us/ignite-the-tour/chicago)



September 21 - 25, 2020  
New Orleans  
[www.microsoft.com/en-us/ignite](http://www.microsoft.com/en-us/ignite)



June 8 - 10, 2020  
Wiesbaden, Germany  
[www.collabsummit.eu](http://www.collabsummit.eu)

# Links

- [www.extranetusermanager.com/resources/articles/developing-custom-connectors-for-the-microsoft-power-platform](http://www.extranetusermanager.com/resources/articles/developing-custom-connectors-for-the-microsoft-power-platform)
- <http://eum.co/teams-provisioning>
- <https://flow.microsoft.com>
  - <https://us.flow.microsoft.com/en-us/connectors/>
  - <https://flow.microsoft.com/en-us/pricing/>
  - <https://docs.microsoft.com/en-us/power-platform/admin/powerapps-flow-licensing-faq>
  - [Microsoft Power Apps and Power Automate Licensing Guide](#)
- <https://azure.microsoft.com/en-ca/services/logic-apps/>
  - <https://azure.microsoft.com/en-us/pricing/details/logic-apps/>



# Thank you!

## Questions?

