



Automation in a day

Before you started - Lab Setup (prerequisite 1.1 – 1.3) office hour (60 mins)

Tasks:

- Have machine ready**
- Have tenant account ready**
- Have environment ready**
- Have software installed**

Agenda

Module		ID	Session	Timing
Part 0: Pre setup work office hour	0.5 hour	0	Environment and account check. Setup lab. Troubleshooting	60 minutes
Workshop officially starts here				
Part I: Introduction	0.5 hour	1	Introduction to RPA, Power Automate, and desktop flows	30 minutes
10 mins break				
Part II: Desktop Flows Basic	2 hours	2	Create your first Power Automate desktop flow	30 minutes
		3	Use Input & Output Parameters	30 minutes
		4	Use desktop flow in Power Automate through gateway and connection	60 minutes
60 mins lunch				
Part III: Hyper Automation Integration	1.5 hour	5	Connect to Outlook	30 minutes
		6	Integrate with AI Builder	30 minutes
		7	Integrate with Microsoft Teams	30 minutes
10 mins break				
Part IV: Add Power Automate for desktop Web and Excel in Power Automate	1.5 hours	8	Add Power Automate for desktop Web and Excel capabilities	90 minutes
10 mins break				
Part V: Advanced Topics (optional)	3.5 hours	9 10 11 12	Unattended desktop flows Error handling Monitor Desktop flow runs and manage gateway queue Identify automation opportunities and process bottlenecks using Process advisor	4 hours
10 mins break				
Part VI: Closing	0.5 hour	13	Roadmap, Licensing, Q&A, Closing and Survey © 2023 Microsoft Corporation. All rights reserved.	30 minutes

Rules and Housekeeping



Please do not share the meeting invite URL with anybody



This is an action-packed agenda, so please stay on mute



Please ask questions on the chat and be patient when waiting for a response

Lab scenario – Contoso Coffee shop company Invoice processing



A vendor of Contoso Coffee shop has delivered the order and would like to process the invoice. The vendor sent the invoice pdf file to Contoso Coffee shop by email



Power Automate monitored the inbox of Contoso Coffee shop, used AI builder to extract information from the invoice file attachment



Power Automate sent an approval request to human supervisor from Microsoft Teams to confirm the order received



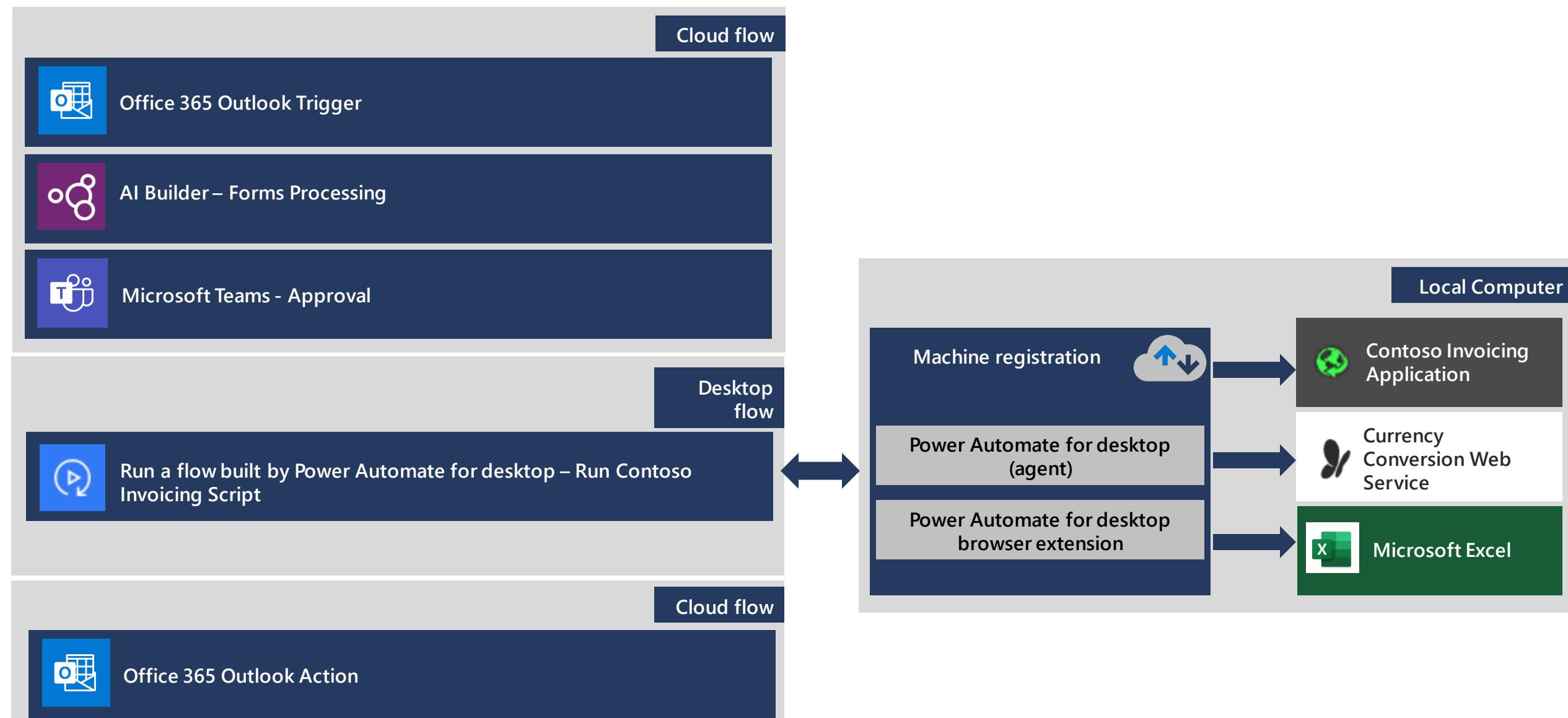
Power Automate desktop flow will open the legacy win32 application that Contoso Coffee shop using to manage invoices and fill in the invoice details

A web-based real-time currency conversion is used and an audit log is captured in Microsoft Excel



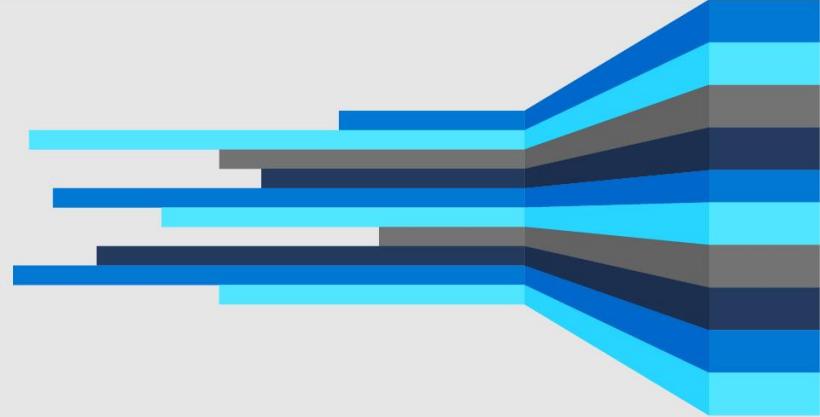
Power Automate sent an email back to the vendor to notify that the invoice has been approved

Lab scenario – Invoice processing Solution Architecture



Section 1: Introduction to RPA, Power Automate and desktop flows

Outline

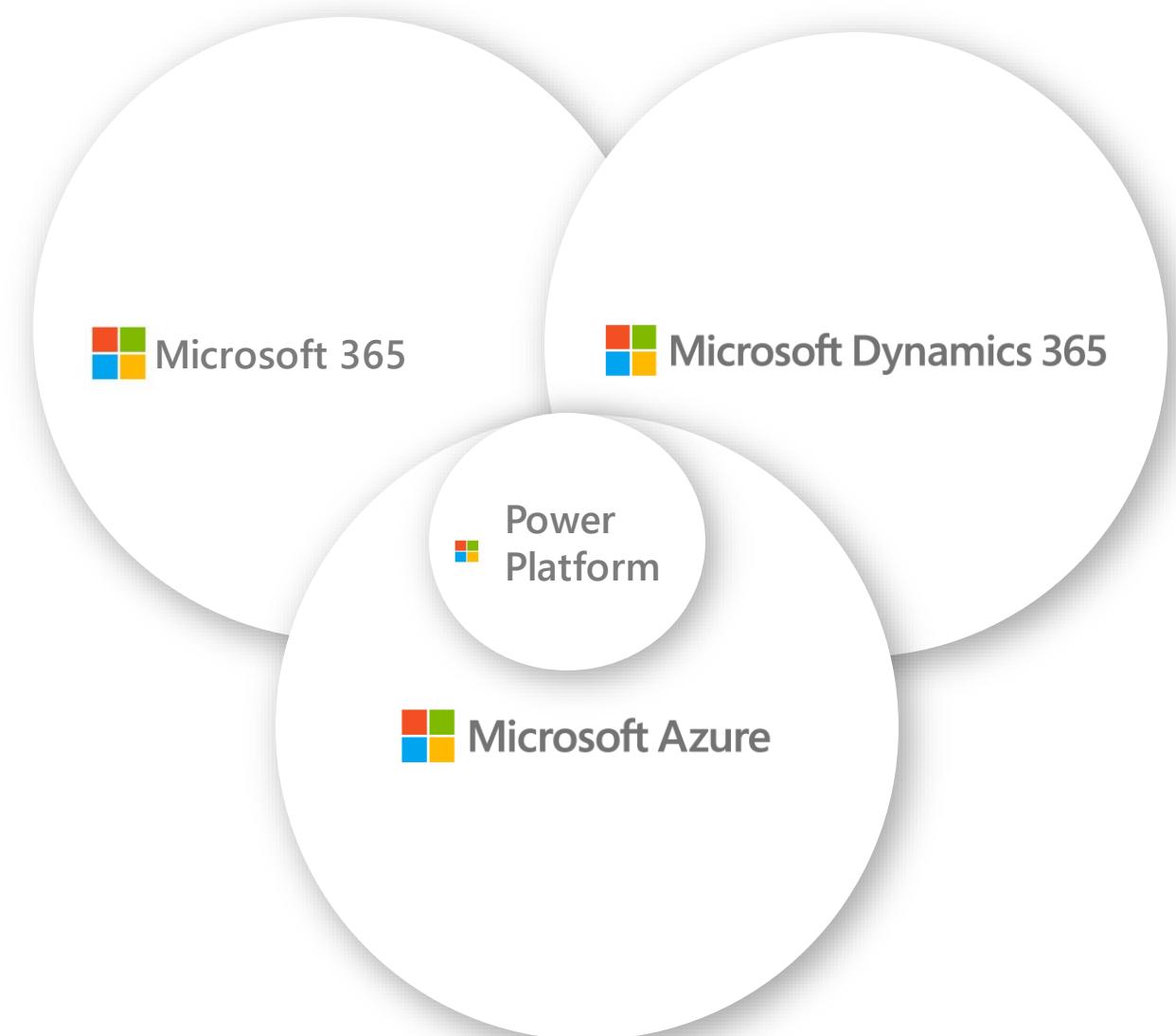
- 
-  Power Platform
 -  Power Automate
 -  Desktop flows
 -  Architecture
 -  Lab overview

Microsoft cloud

Intelligent business applications

Productivity and collaboration

Open, flexible, enterprise-grade cloud computing platform



Microsoft Power Platform

The low-code platform that spans Office 365, Azure, Dynamics 365, and standalone applications

Innovation anywhere. Unlocks value everywhere.



Power BI
Business analytics

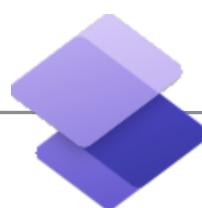
Power Apps

Application development

- Canvas Apps
- Model-driven Apps

Power Pages

Secure business websites



Power Automate

Process automation

- Cloud Flows & Teams Flows
- Business Process Flows
- Desktop Flows

Copilot Studio

Intelligent Copilots



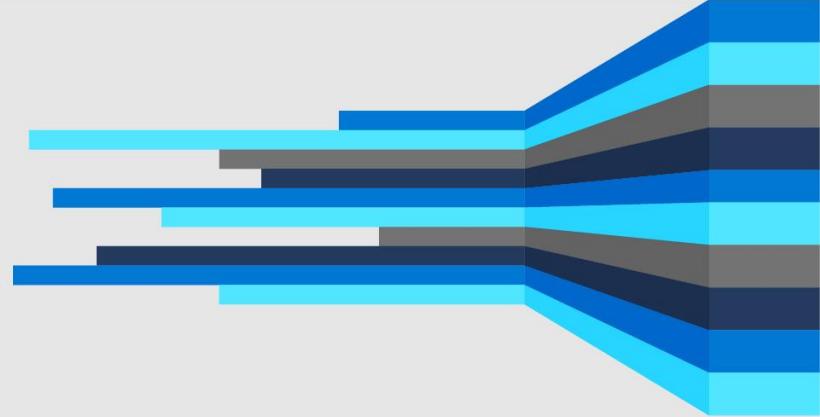
**Data
connectors**



AI Builder



Dataverse



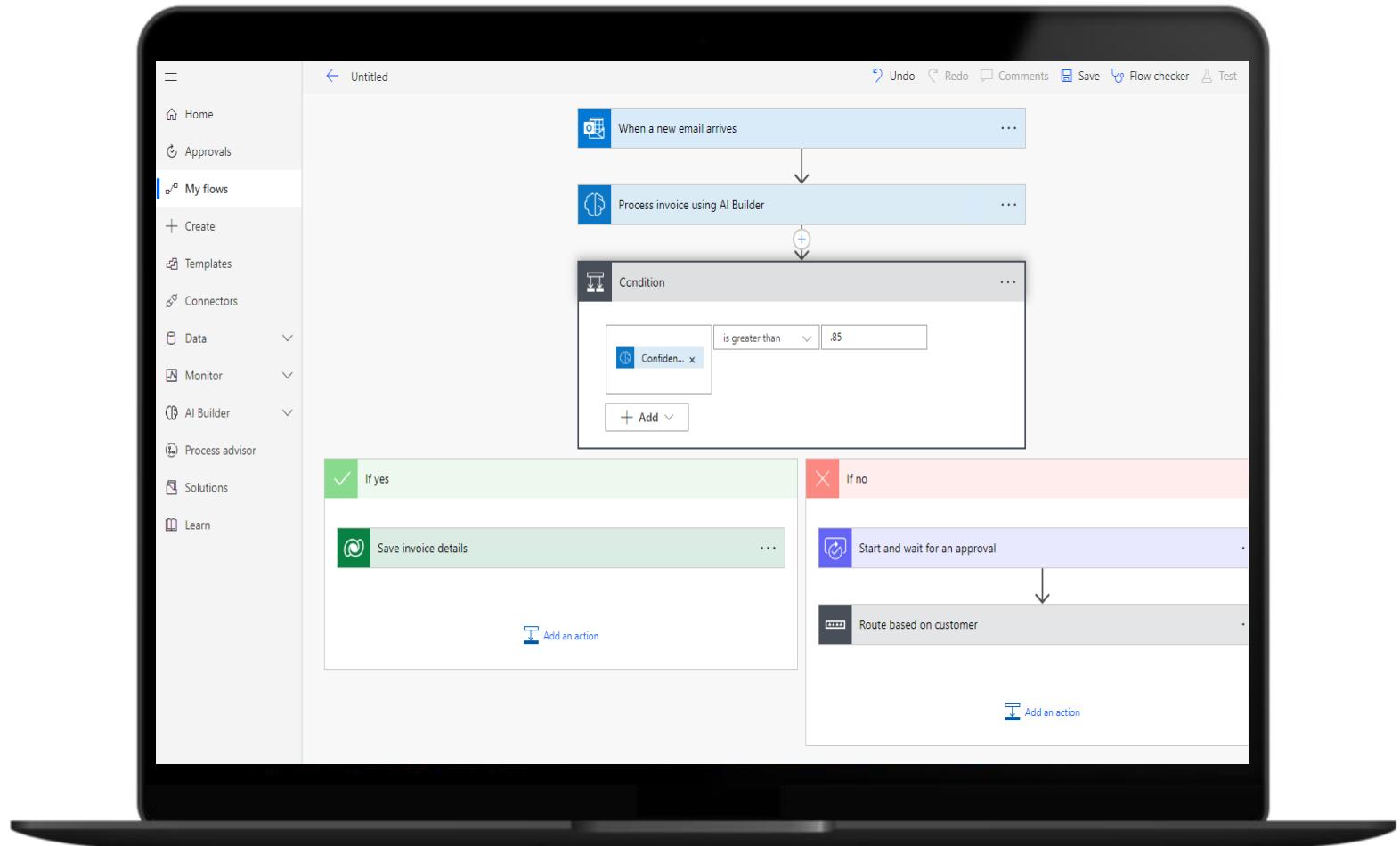
Power Automate Vision:
People should only have to focus on
tasks where they can bring unique
human value

Their potential is limitless.
But their time is not.



Microsoft Power Automate

Holistic end-to-end
intelligent automation
platform for all





Hyper Automation

Diverse interfaces

AI, cloud services (APIs), and legacy Desktop-based systems

Infusion of AI

Documents,
Forms, invoices, images, etc...

API-automation (DPA)

Cloud services and internal
API services

UI-automation (RPA)

Legacy web, windows,
terminal apps

Forms understanding
+ OCR + Digital Paper
AI builder

900+ connectors + custom
connectors in Azure

User Interface automation

Power Automate
Workflow designer and orchestrator



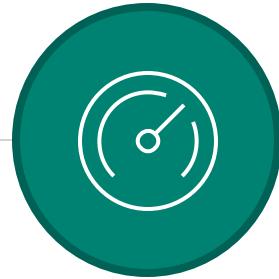
Microsoft Power Automate value pillars



**Automation
at scale**



**Seamless, secure
integration**



**Accelerated
productivity**



**Intelligent
automation**

App Connectors

Hundreds of
app connectors
(including on-prem applications)

RPA market landscape

#3 search term on Gartner.com

RPA market expected to >**\$4B by 2023**

- **UiPath** raised over \$400M since 2005
- **Automation Anywhere** raised ~\$550M in 2018
- **Blue Prism** revenue > £25 million in 2018 (>2x 2017)

RPA services market will top **\$12B in 2023**

Figure 1: Magic Quadrant for Robotic Process Automation



Recognition as Leader in 2021 Forrester Wave report

- Strong momentum for Power Automate:**

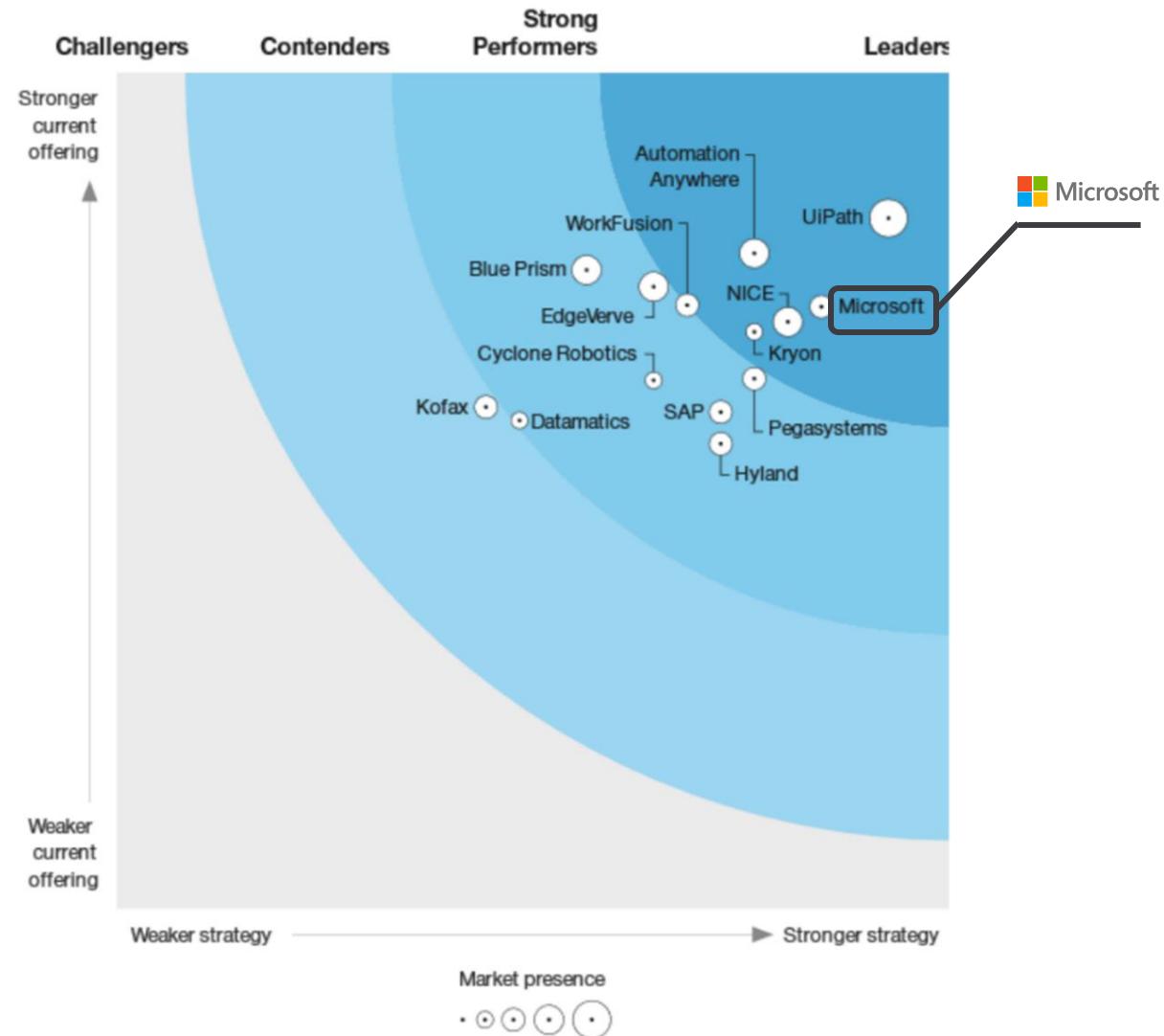
"Microsoft has caught up with the Leaders. The software giant's vision is to deliver the most comprehensive SaaS-based intelligent automation solution; Power Automate is a cloud-native, low-code automation platform that brings together UI- and API-based automation with AI."

- Customer success is achieved at no cost:**

"[Microsoft offers a] rich set of training and learning resources and community programs, complemented by a broad global partner ecosystem, helps customers succeed at every stage. Microsoft focuses on democratizing RPA by making it accessible to users with a very low entry barrier. Users can start instantly at no cost and can deploy their first automation in minutes."

- Ease of use and visual appeal:**

"Microsoft customers seeking RPA get an easy, attractive offering that fits business users, citizen developers and professional developers alike." "The design experience is rich, yet intuitive, and will please citizen and professional developers alike."

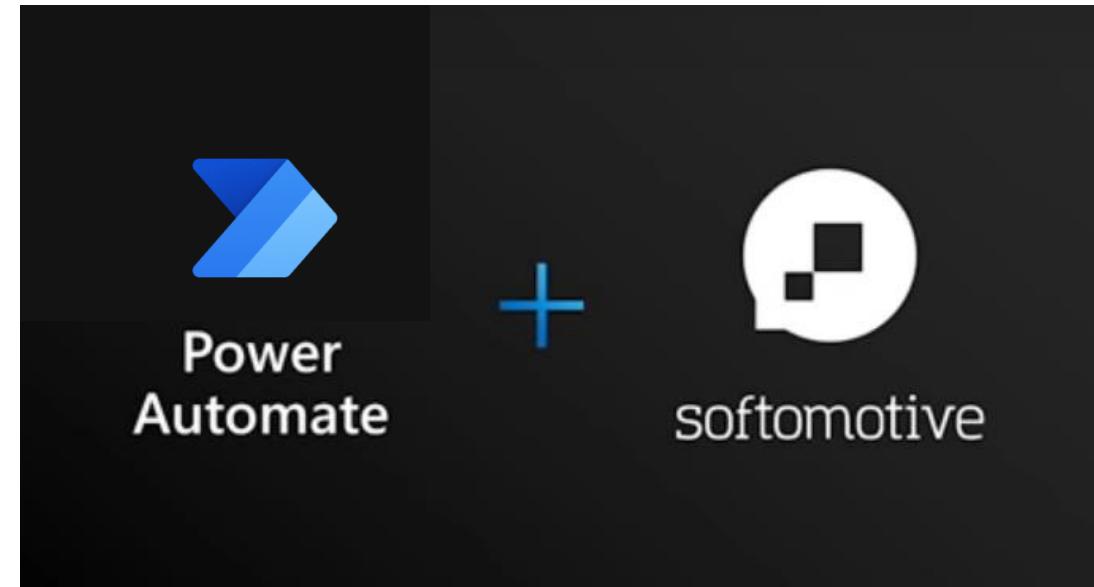


Microsoft acquired Softomotive to expand low-code robotic process automation capabilities in Microsoft Power Automate

Microsoft acquired Softomotive, a world-leading provider of robotic process automation (RPA) with over 15 years of experience and the creator of WinAutomation.

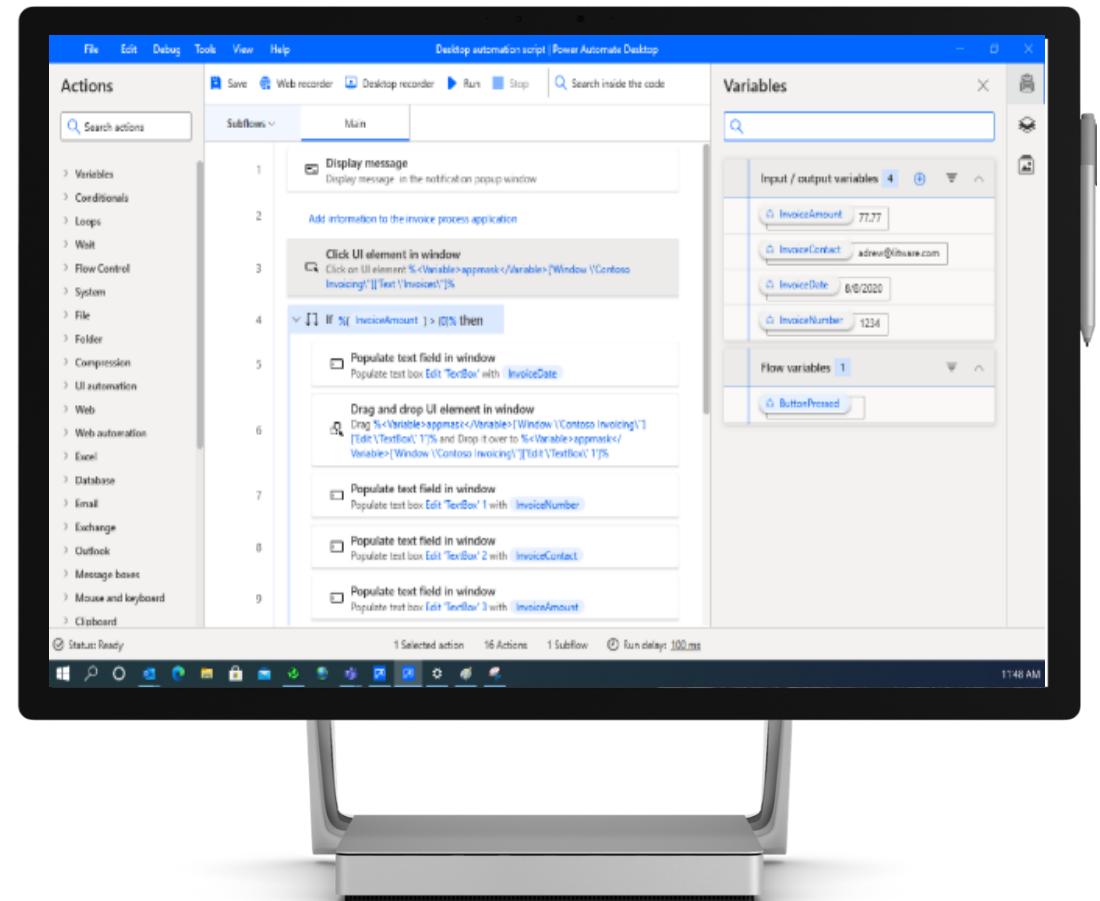
WinAutomation, expands the Microsoft Power Automate capabilities, through it's Web & UI Automation, interaction with Legacy systems and Terminals, Java applications as well as Citrix Automation.

The combination of these two products, addresses all needs in the RPA market, and drives the RPA experience to a completely different level.



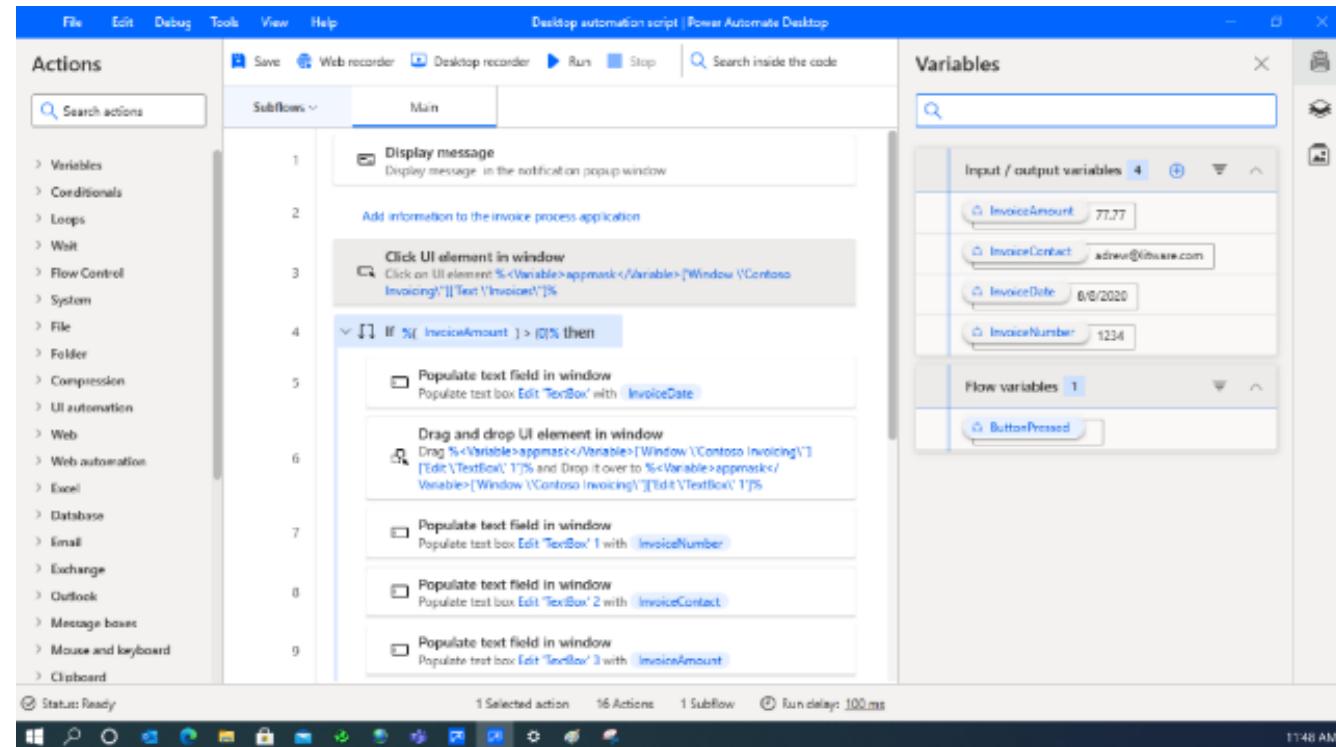
Microsoft Power Automate

Automate modern applications
Automate legacy applications



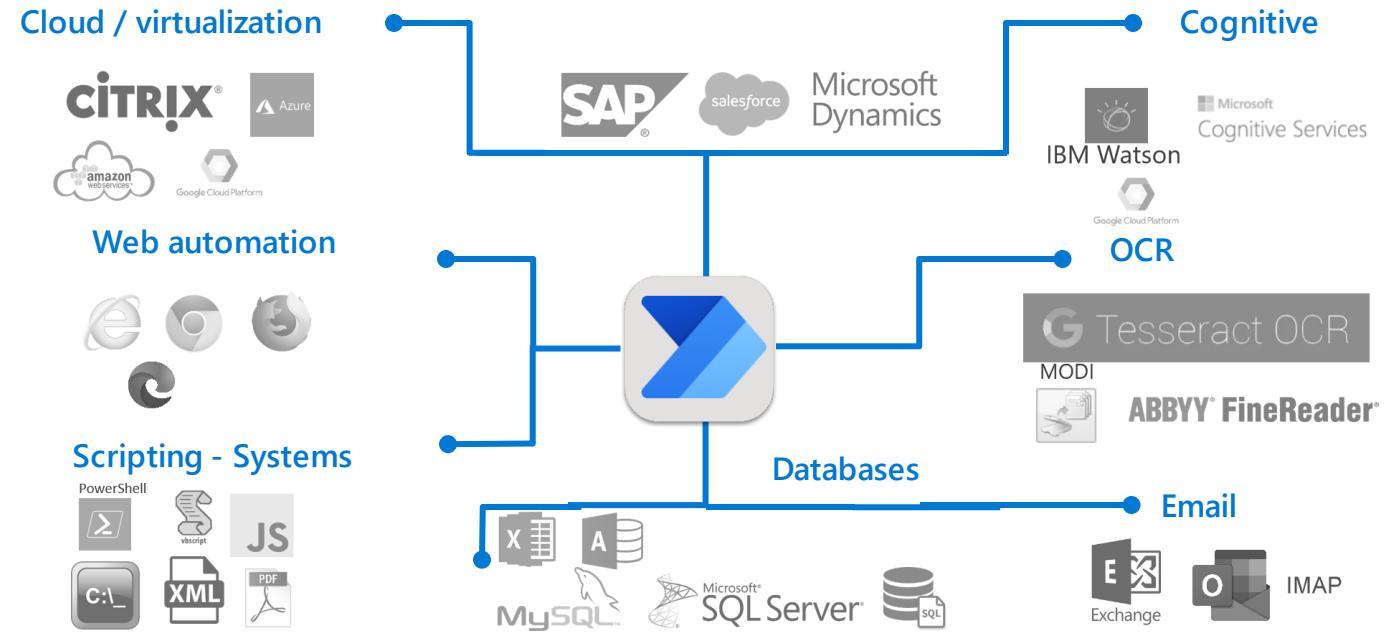
Introducing Power Automate desktop flows

- Technology and intellectual property acquired from Softomotive, now an integrated Power Automate experience.
- Ease of use - Low-code/no-code Drag & drop approach with Recorders (Desktop and Web)
- Advanced Debugging features
- Reusability of Controls, Images and Functions
- User and Process collaboration through message boxes
- Advanced Error handling features
- Support for advanced coding-scripting (*VBScript, JavaScript, Python, PowerShell, Command Line*)
- Attended and Unattended execution mode
- Concurrent process execution

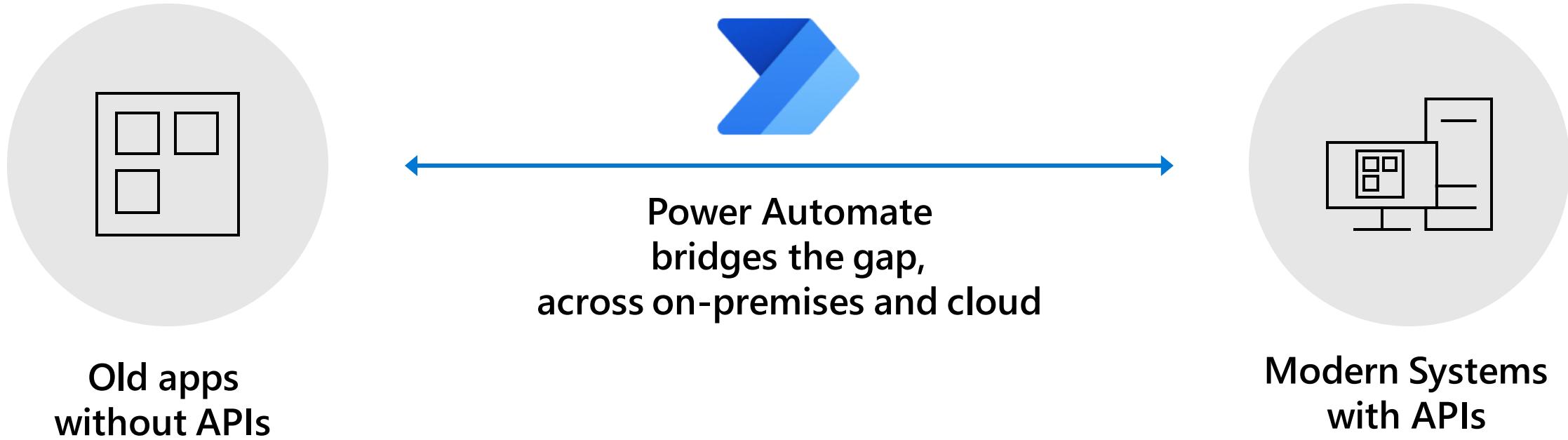


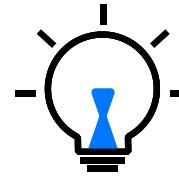
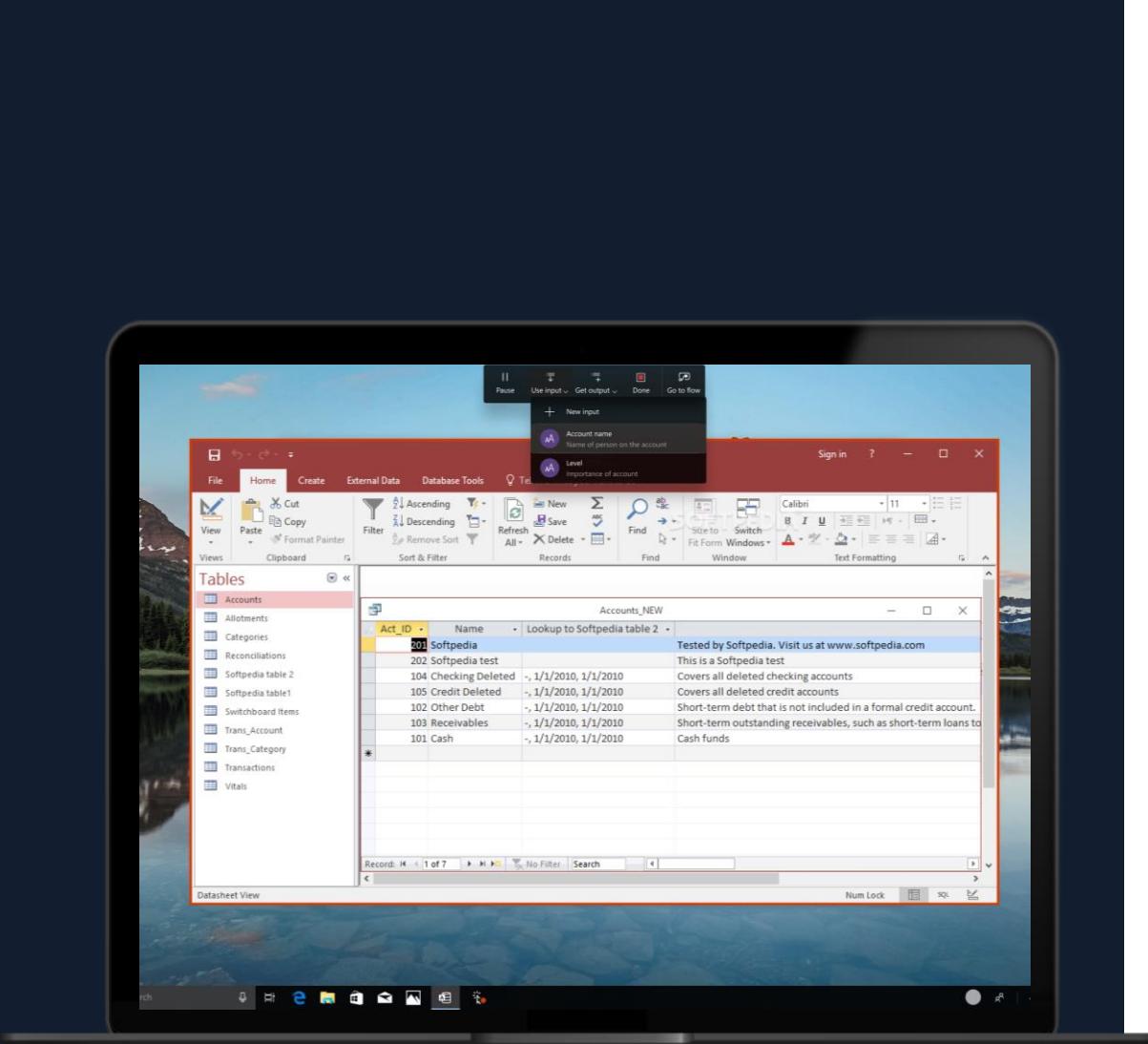
Power Automate for desktop Includes more 400 actions covering all users needs

- Web - Desktop applications
- Citrix and VDI Environments
- Cloud Automation (Microsoft Azure, Amazon AWS) and Cognitive capabilities (IBM, Google, Microsoft)
- Databases-SQL Excel
- PDF & XML
- Files, Folders and Mouse-Keyboard
- Scripting (Python, VBScript, JavaScript, PowerShell, Command Line)
- Email (IMAP, smtp, exchange, outlook)
- Computer Vision and Image recognition
- Encryption – Cryptographic actions, CyberArk support
- OCR for Structured and Unstructured data capturing and handling
- Text manipulation



Bridging automation between the old and new





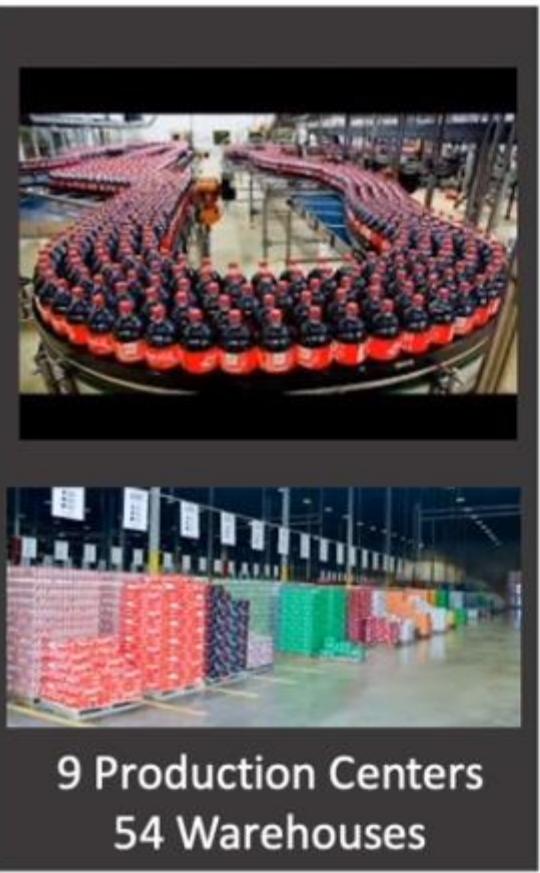
Making automation intuitive

Simple UI makes recording flows easy

Repetitive tasks can be automated by frontline workers with or without APIs.

Customer RPA use case demo

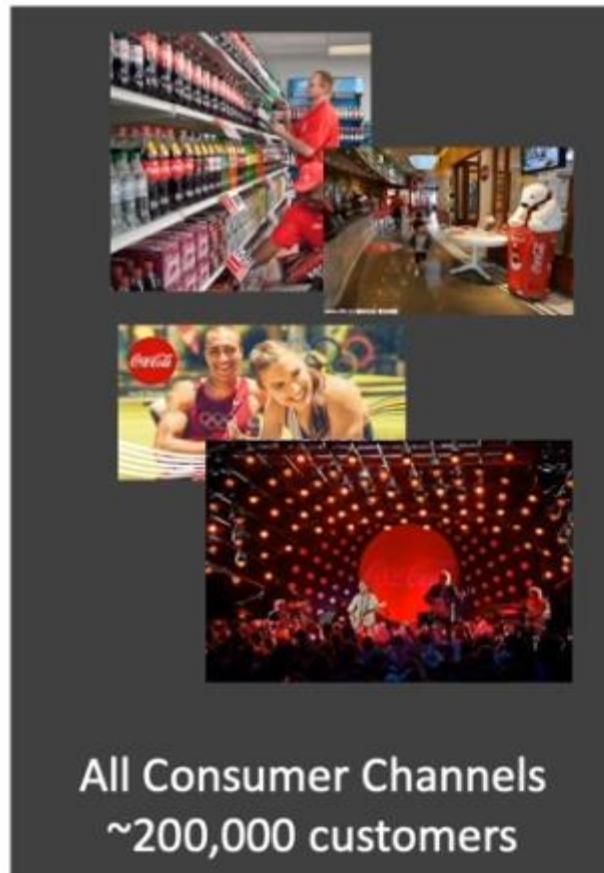
Coca-Cola United



9 Production Centers
54 Warehouses



~ 5,000 trucks
>300,000 coolers etc.



All Consumer Channels
~200,000 customers



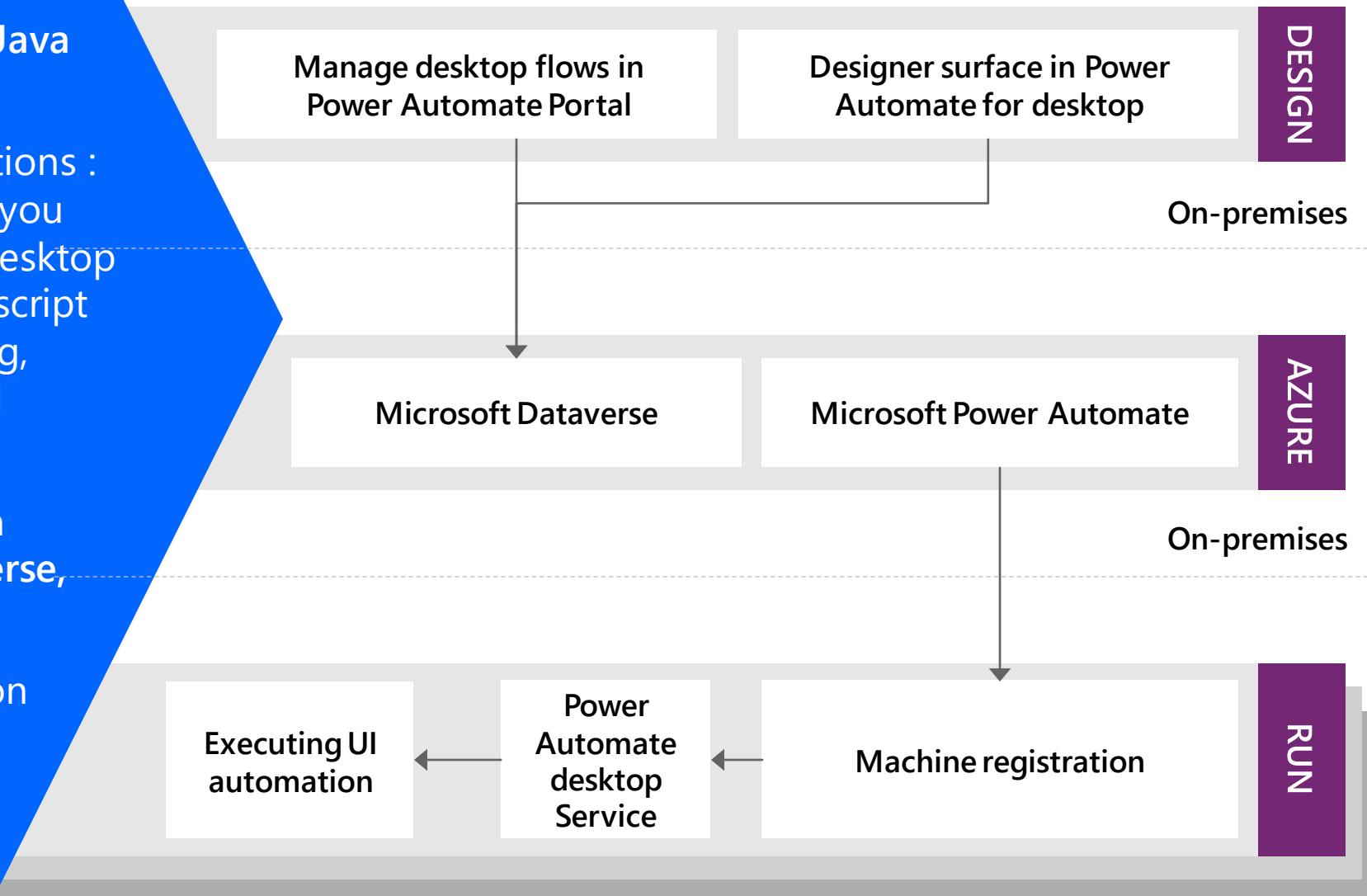
Packaging and Delivery
to Consumer

<https://aka.ms/mbas/cocacolaunited>

Power Automate Desktop Flows Basic

Desktop flow details

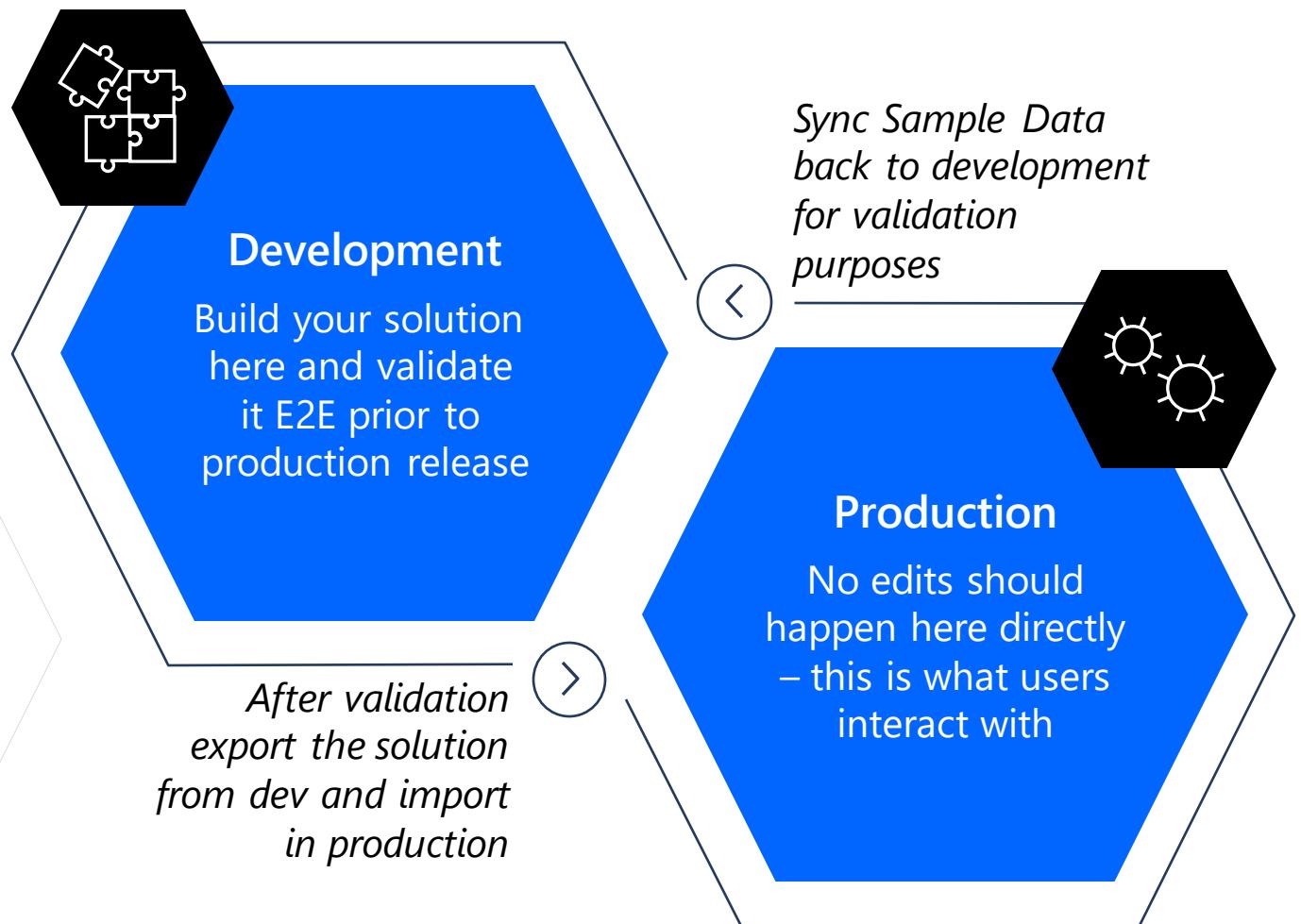
- Automate on-premises Windows, Java and Web applications.
- Windows, Java and & Web applications : With Power Automate for desktop you can get started with the intuitive Desktop or Web Recorder and extend your script with advanced cloud flow authoring, multi-layer exception handling and scripting support
- Desktop flow scripts and execution history **stored in Microsoft Dataverse, invoked by cloud flows**
- Desktop flows service enables logon and execution for **Unattended** scenarios, Machine registration provides **clustering**



Environments

Each **environment** in is a collection of components which can share lifecycle, data and administration

Changes should be tested first in a development environment before brought to production



Power Automate Environments:

Easy to create, manage, monitor



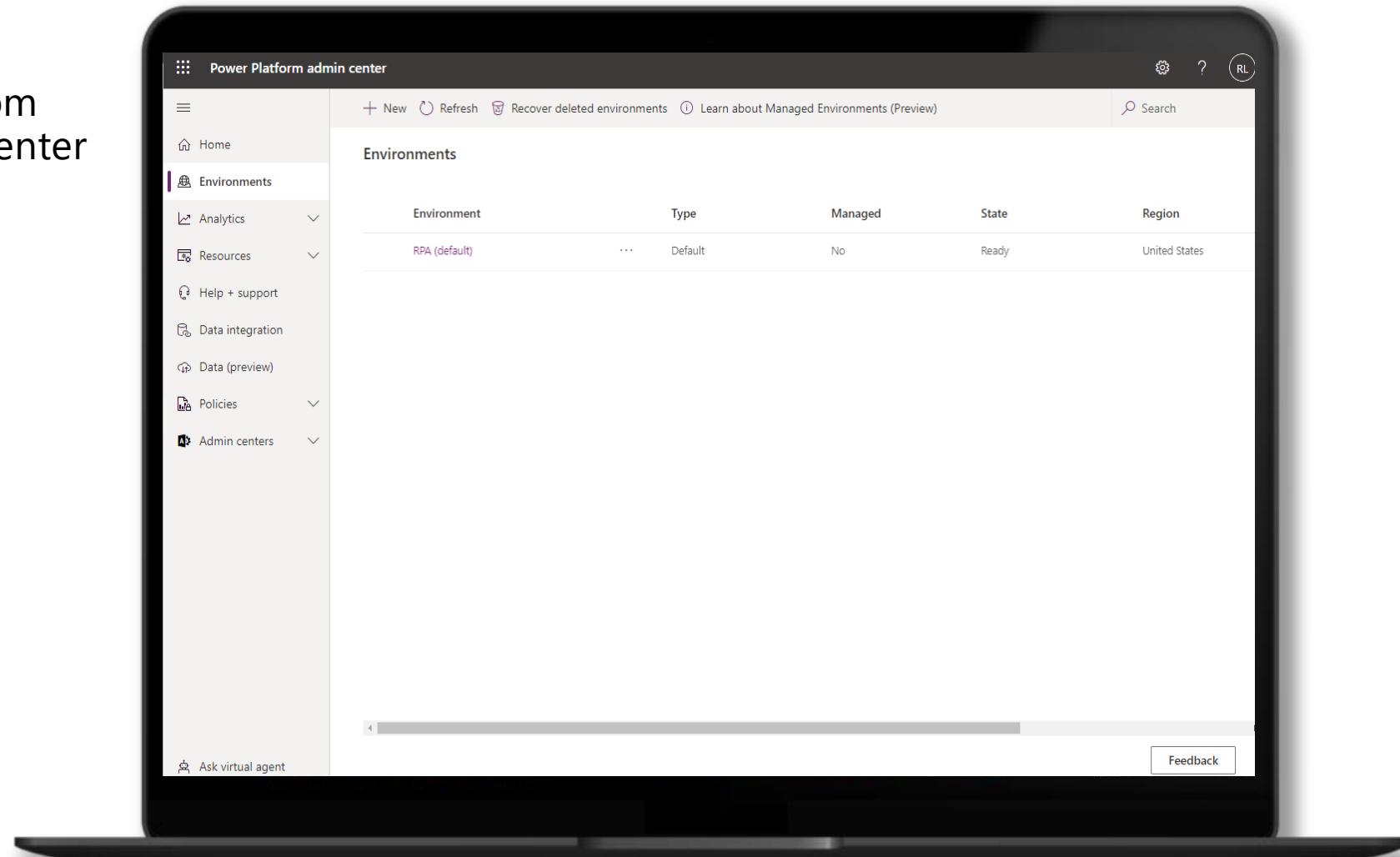
Create new environments from the Power Platform Admin Center



Select production or trial environment



Specify your region



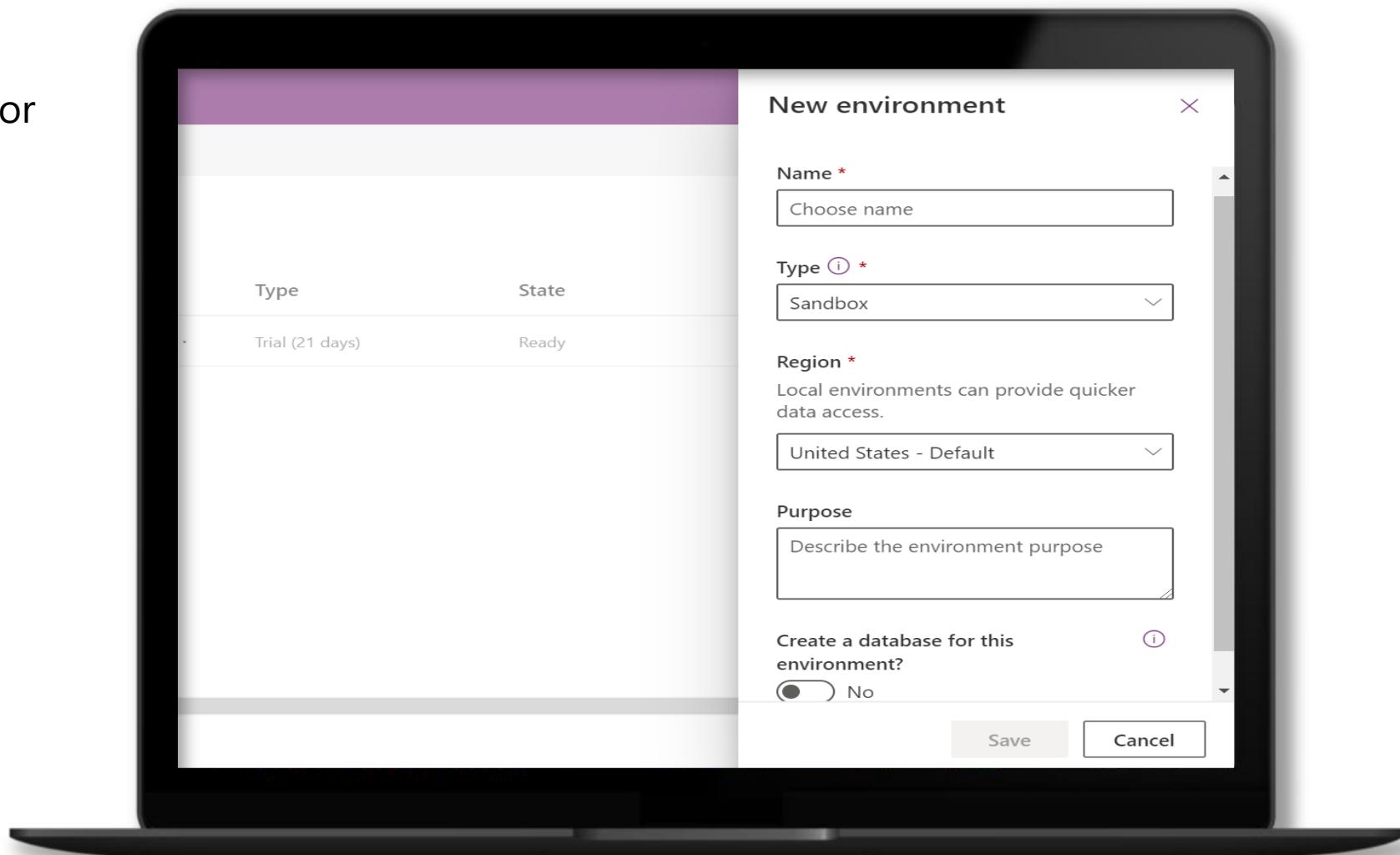
Power Automate Environments: database



Option to create a database for the environment



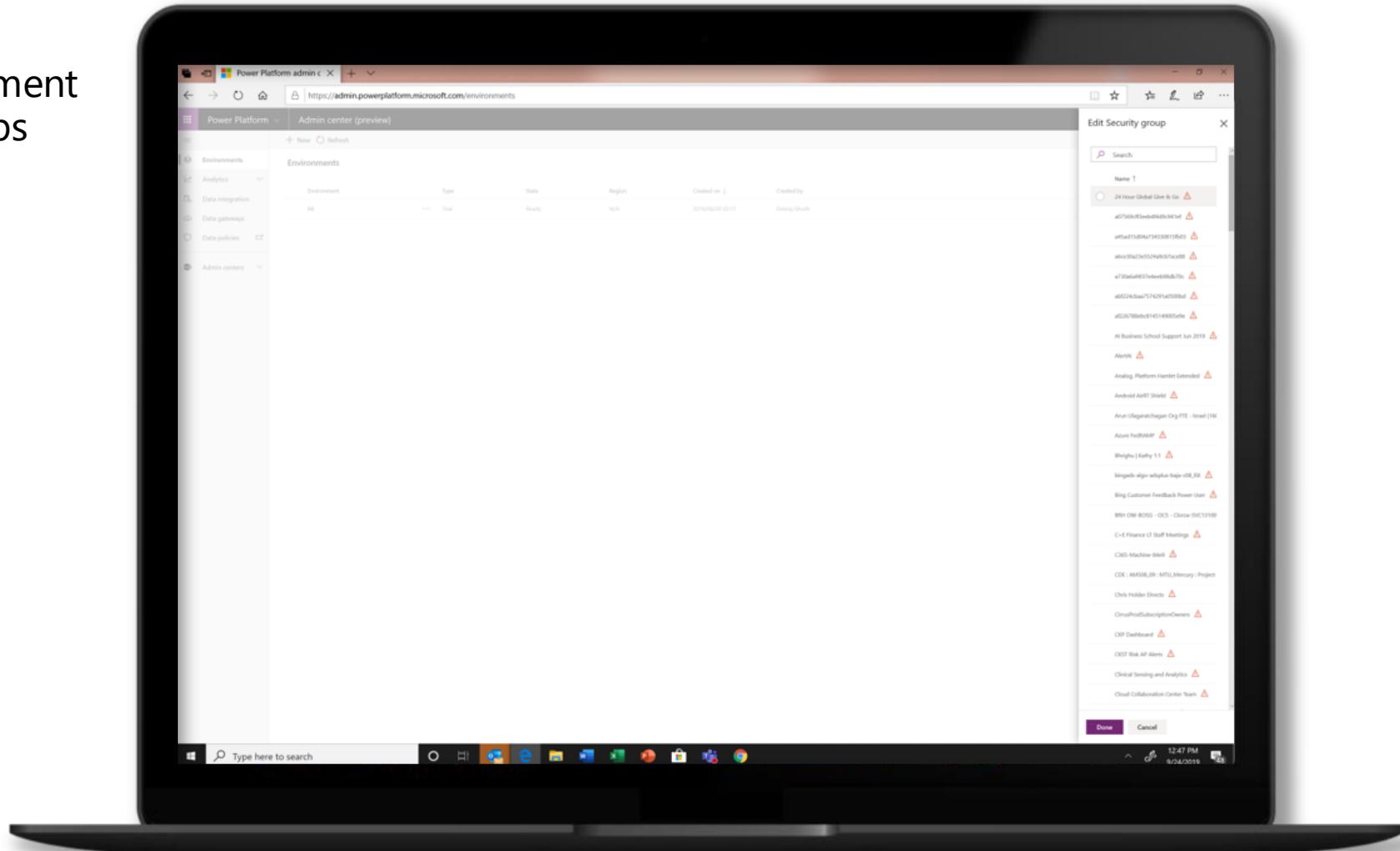
Use the Microsoft Dataverse as a data store



Power Automate Environments: Access management



Secure access to the environment by selecting which user groups can access the environment



Each **environment** is a collection of components which can share lifecycle, data and administration

Changes should be tested first in a development environment before transport to production

Solution



DEVELOPMENT

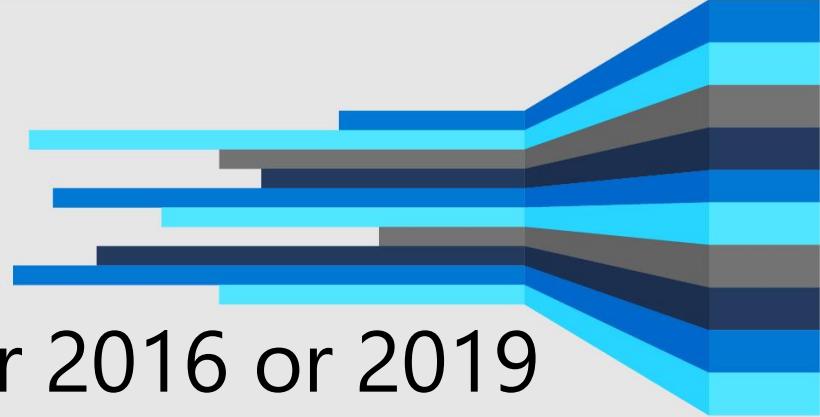
Solution



A single operation will bring all assets in production

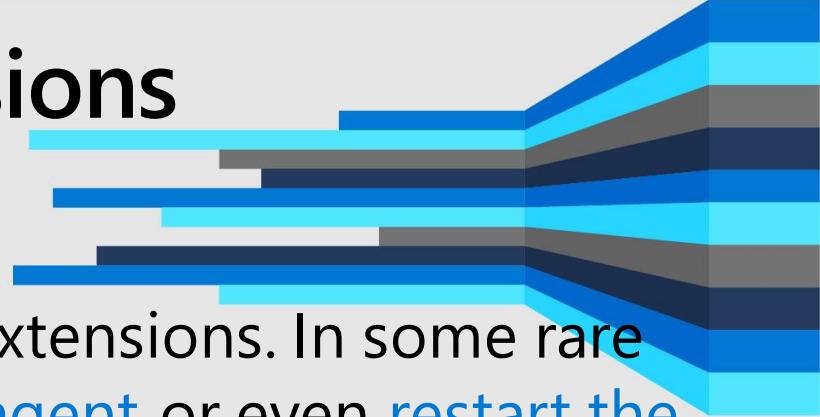
PRODUCTION

Tips & Tricks before you started



- ✓ Have a computer of Win10 or Win server 2016 or 2019 (note you cannot record through remote desktop now).
- ✓ Have .NET 4.7.2.
- ✓ Have permission to install apps on the machine.
- ✓ Have a username/password can be used to log into the machine.
- ✓ Have a browser of Edge (chromium) or Chrome installed on the machine.

Tips & Tricks: Installing Browser Extensions



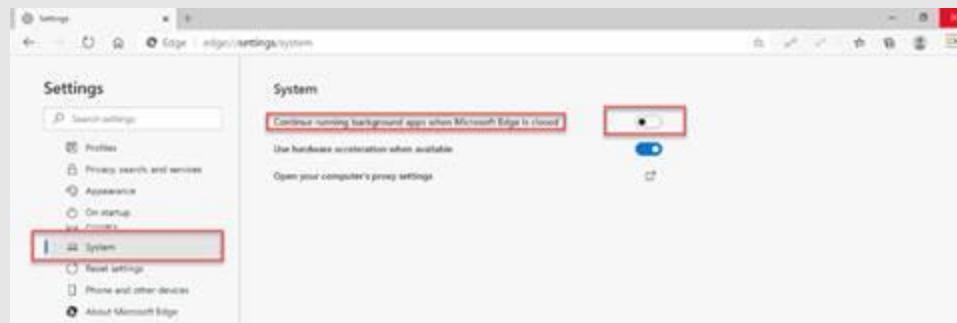
- ✓ May need to **restart browser** after installing the web extensions. In some rare cases it requires to **uninstall/reinstall the desktop flow agent** or even **restart the machine**.
- ✓ Make sure Power Automate for desktop is running (not the dark color icon in the task bar, but a white color icon).
- ✓ Double check if the web extension is **installed** and **enabled** after installing desktop flow
 - For desktop flow, you need one web extension "**Microsoft Power Automate**".
 - You don't need to uninstall then reinstall. You can upgrade directly.
- ✓ To run the desktop flow from a cloud flow, you also need machine registered and create a desktop flow connection.

Tips & Tricks: Browser & Display Settings

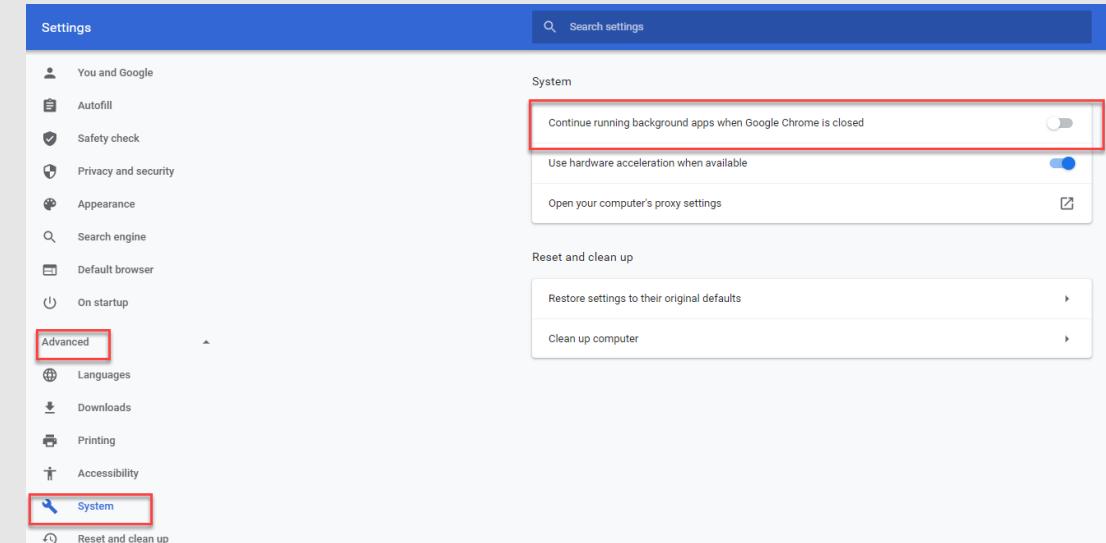
- ✓ If you're experiencing difficulties to capture controls and web elements due to misalignment, make sure your display settings are supported.
<https://support.softomotive.com/support/solutions/articles/35000137070-cannot-capture-control-orange-rectangle-in-wrong-place>

- ✓ Make your browser session management (*Continue running background apps when [browser vendor] is closed*) is switched **off**

- ✓ Microsoft Edge (Chromium)

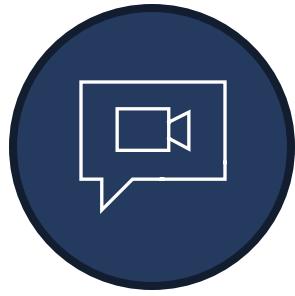


Google Chrome



Session 2: Create your first Power Automate desktop flow

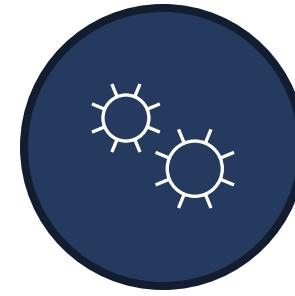
Desktop flows: Automating Apps without APIs for our Modern World



Record the Task



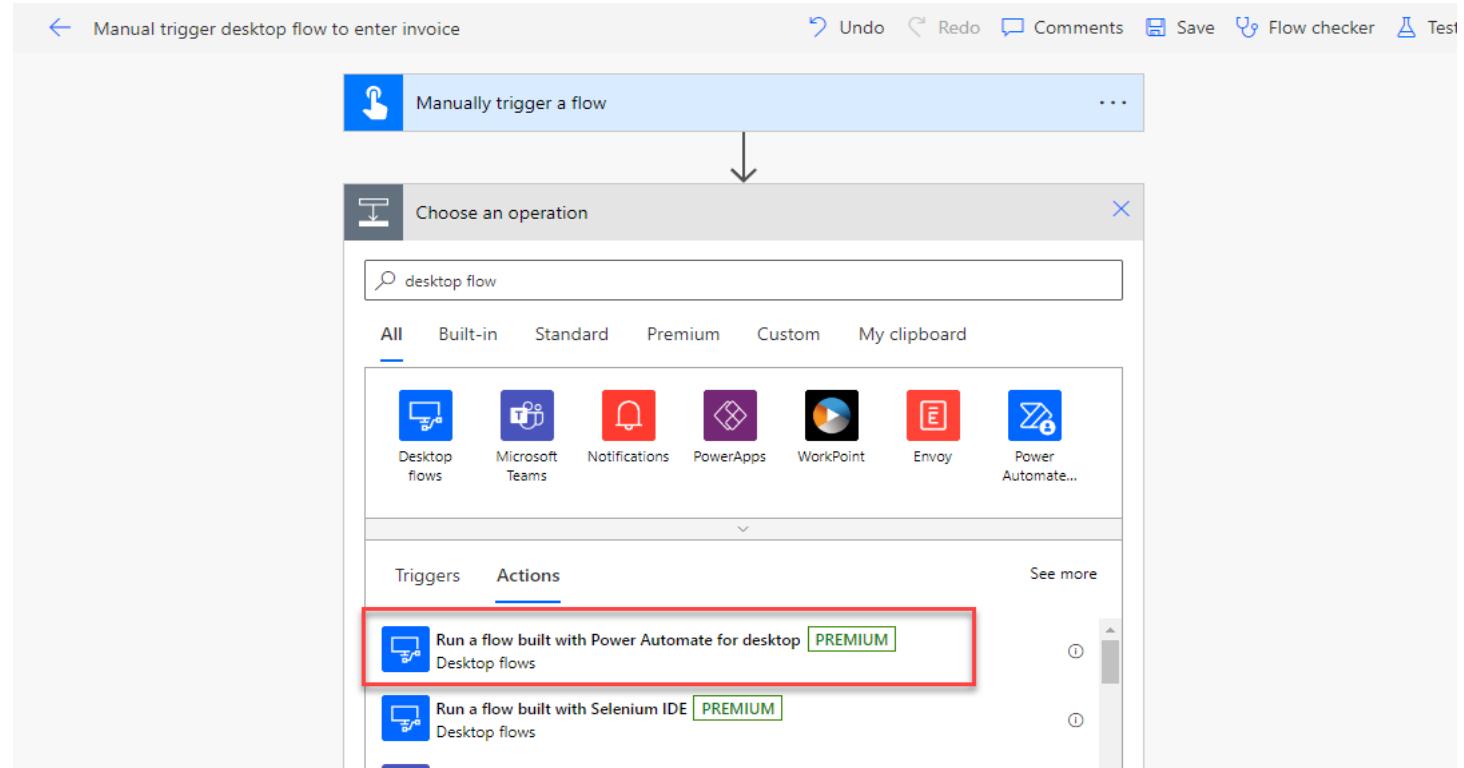
Test and Validate



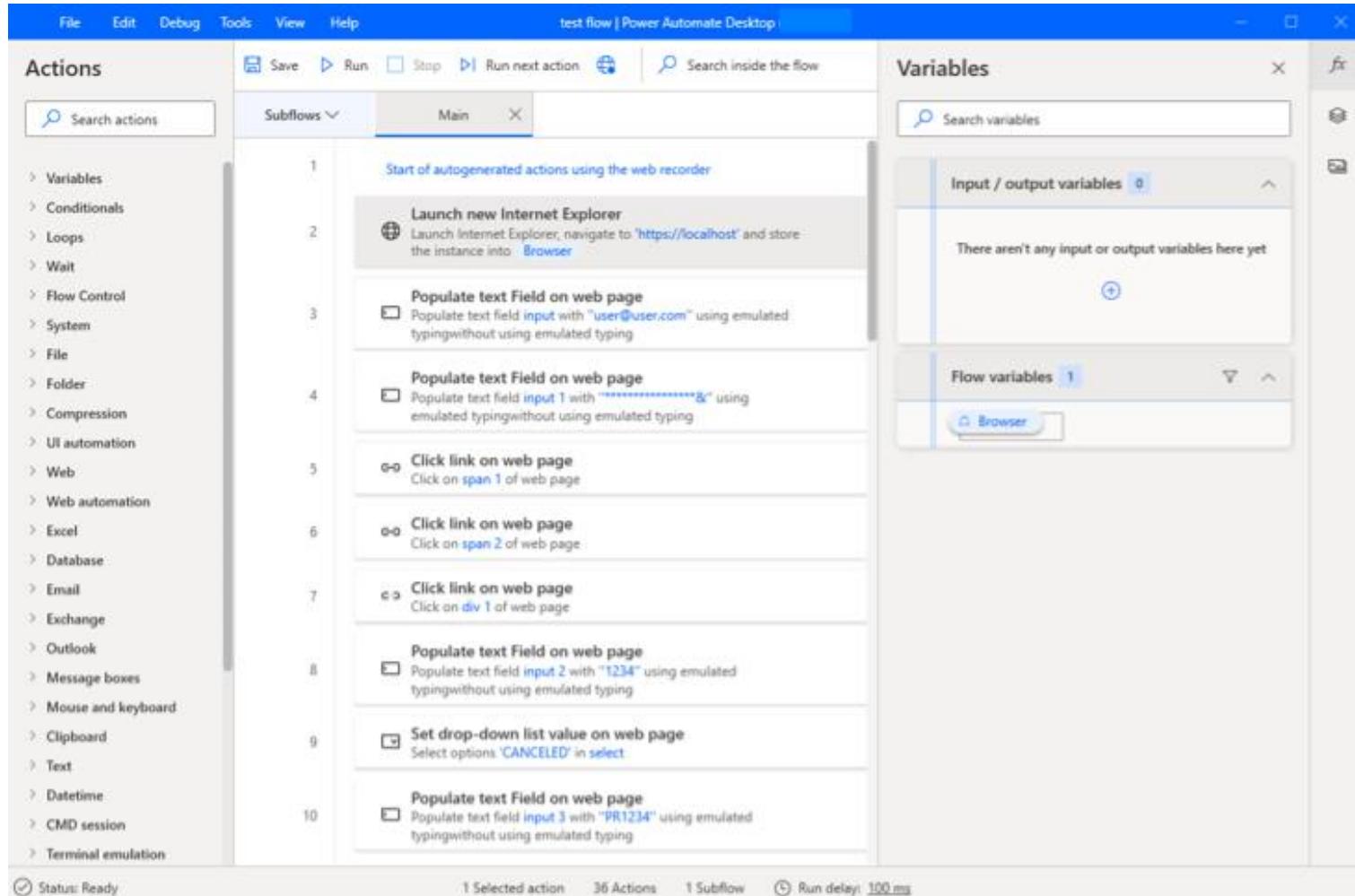
Playback to
execute the task

Expand Power Automate capabilities by using the desktop flows action to invoke Power Automate for desktop processes

- Hundreds of actions available
- Easy to run a desktop flow and pass variables
- Take RPA Processes to another level



Easy to use - Low-code/no-code approach with a Drag & Drop environment empowering the Citizen Developer



Edit recorded actions



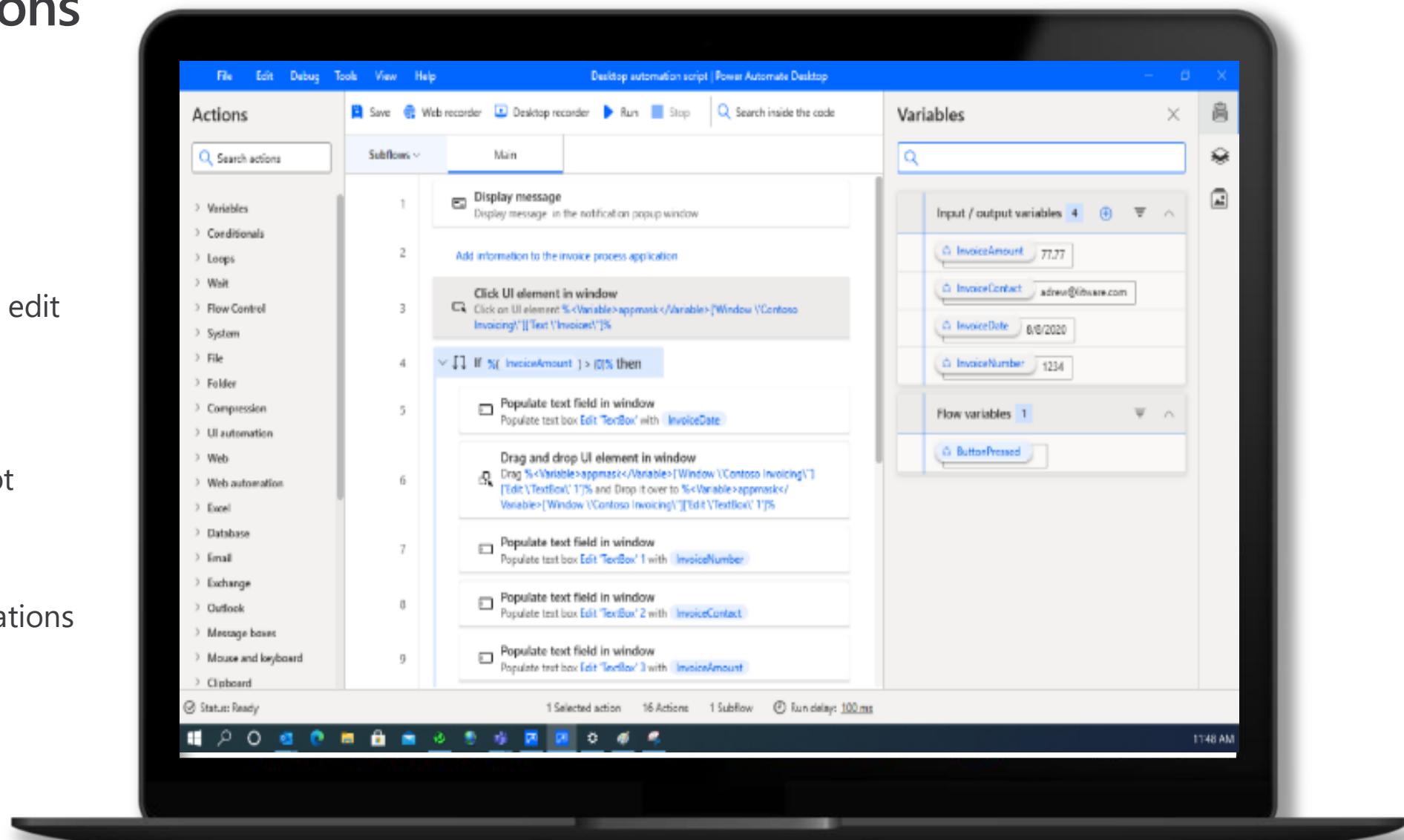
Easy to review and edit



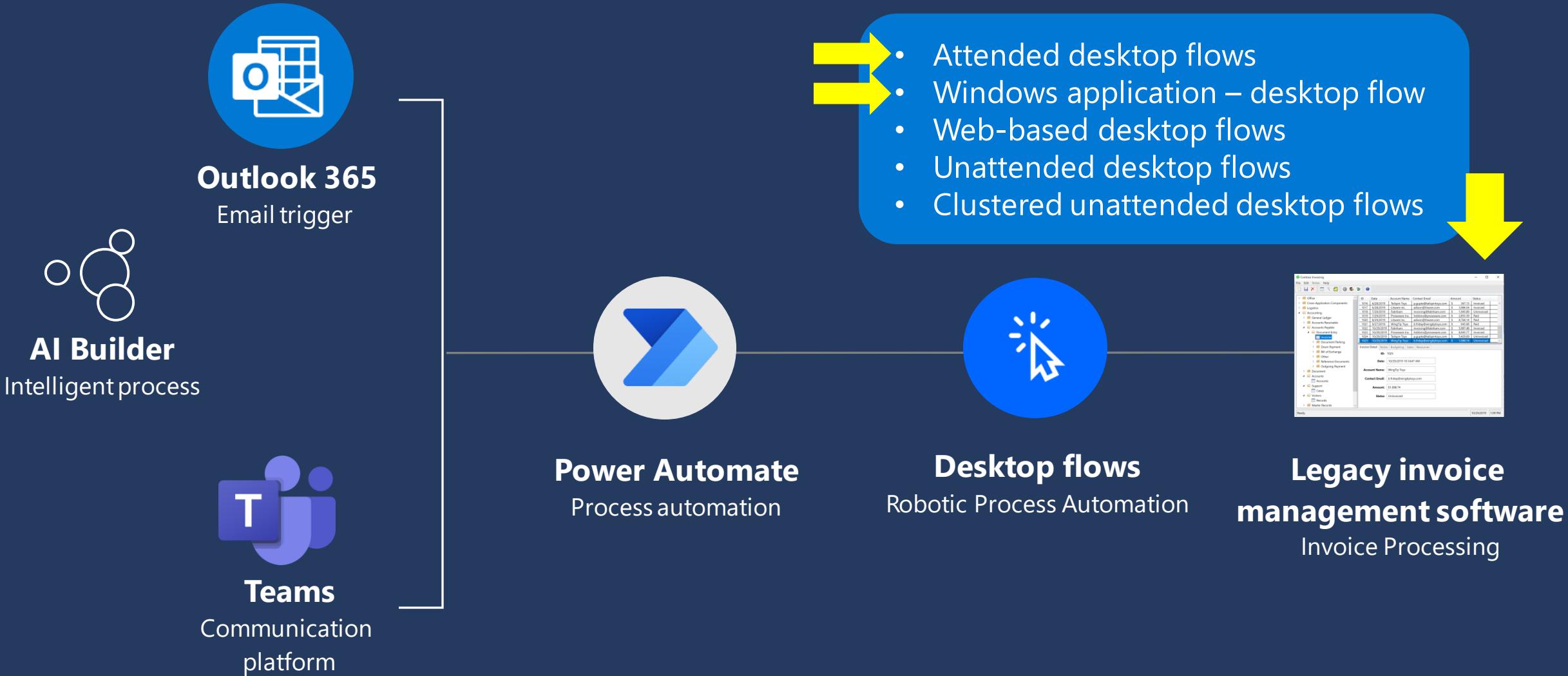
Detailed screenshot



Advance customizations
are available

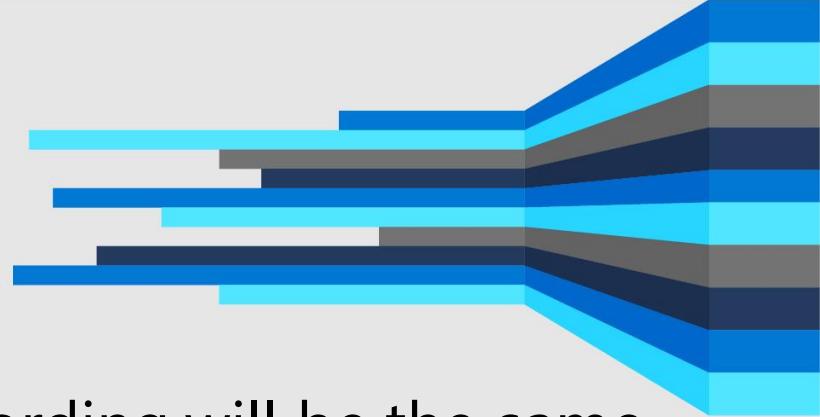


Lab 3: Create your First Power Automate desktop flow (25 minutes)



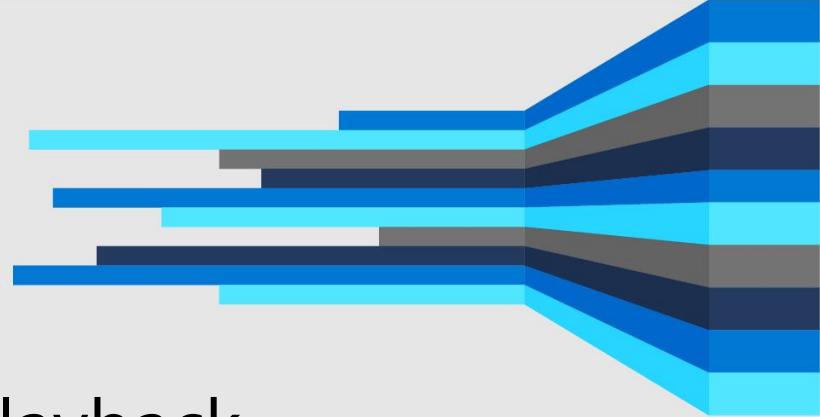
Student's demo lab 2 for creating your first desktop flow

Lab 2 Review: Tips & Tricks Recording



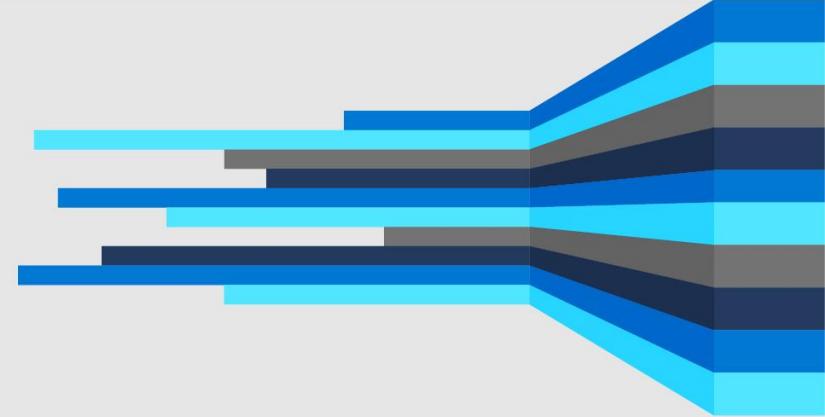
- ✓ Ensure you are using the right environment.
- ✓ Ensure that the keyboard layouts you use during recording will be the same as for playback.
- ✓ Use shortcuts instead of clicking, for instance copy paste with `ctrl + c` & `ctrl + v` instead of right click copy.
- ✓ Use “enter static text” if you are working with strings for better readability.
- ✓ When you insert text into a field that already has text inside, you should click `ctrl + A` and backspace to clear up the field first.
- ✓ Playback uses accessibility by default, can fallback to coordinate as well if you turn it on:
 - Use a standard resolution and scale setting that across your recording and playback devices.
 - Maximize the application window that you are recording.
 - Finish the recording in one monitor if possible.

Lab 2 Review: Tips & Tricks Playback



- ✓ Do not use the keyboard and mouse during playback.
- ✓ Try to adjust your app to have the same initial state as during recording time.
- ✓ Use the same keyboard and locale setting as during recording time.
- ✓ If you are using coordinate offset fallback:
 - Current coordinate-based fallback is conservative and ensures the control is same as what was recorded, including the size.
 - Use the same resolution and scale setting as recording time.
 - Maximize the app size to minimize disruption.

Lab 2 Review Tips & Tricks – Edit and optimize your desktop flow



- ✓ Adjust the wait time in the designer. By default, the script waits as long as the recording process took.
- ✓ Be default, desktop flows launches applications. You can edit the script to change if you want to launch or attach the app.
- ✓ Enable coordinate-based playback if you know your app is safe to be used in that mode.
- ✓ Add validation and error handling using advanced editor.

Session 3: Use inputs and outputs variables in desktop flows

Use Inputs to pass data in



Can be added from either web or recorder



Easy to manage



Support multiple types including sensitive text

The screenshot shows the Power Automate Desktop (Preview) interface. On the left, a sidebar lists various action categories: Variables, Conditionals, Loops, Wait, Flow Control, System, File, Folder, Compression, UI automation, Web, Web automation, Excel, Database, Email, Exchange, Outlook, Message boxes, Mouse and keyboard, Clipboard, Text, Datetime, CMD session, and Terminal emulation. The main workspace displays a sequence of numbered actions:

- 1 Start of autogenerated actions using the web recorder
- 2 Launch new Internet Explorer
Launch Internet Explorer, navigate to "<https://sprintcs.quickbase.com/db/main?2=SignIn&nexturl=https%3A%2F%2Fsprintcs.quickbase.com%2Fdb%2Fmain%3Fa%3Dmyqb&rcc=psi>" and store the instance into `Browser`
- 3 Populate text Field on web page
Populate text field `input` with "gtmtempbhole@sprint.com" using emulated typingwithout using emulated typing
- 4 Populate text Field on web page
Populate text field `input 1` with "*****8" using emulated typingwithout using emulated typing
- 5 Click link on web page
Click on `span 1` of web page
- 6 Click link on web page
Click on `span 2` of web page
- 7 Click link on web page
Click on `div 1` of web page
- 8 Populate text Field on web page
Populate text field `input 2` with "1234" using emulated typingwithout using emulated typing
- 9 Set drop-down list value on web page
Select options 'CANCELED' in `select`
- 10 Populate text Field on web page
Populate text field `input 3` with "PR1234" using emulated typing

The Variables pane on the right contains three input/output variables: `emailAddress`, `ID`, and `userName`. It also shows one flow variable named `Browser`.

Use Outputs to pass data out



Added at recording time



Easy to view and manage



Value can be reused immediately
in current or future recordings

The screenshot shows the Power Automate Desktop (Preview) application window. On the left, there's a sidebar titled "Actions" with a search bar and a list of categories: Variables, Conditionals, Loops, Wait, Flow Control, System, File, Folder, Compression, UI automation, Web, Web automation, Excel, Database, Email, Exchange, Outlook, Message boxes, Mouse and keyboard, Clipboard, Text, Datetime, CMD session, and Terminal emulation. The main area displays a recorded flow with numbered steps:

- 1 Start of autogenerated actions using the web recorder
- 2 Launch new Internet Explorer
Launch Internet Explorer, navigate to "<https://sprintscs.quickbase.com/db/main?a=SignIn&nexturl=https%3A%2F%2Fspintscs.quickbase.com%2Fdb%2Fmain%3Fa%3Dmyqb&rc=psi>" and store the instance into **Browser**
- 3 Populate text Field on web page
Populate text field **input** with "gtntempbmodel@sprint.com" using emulated typing without using emulated typing
- 4 Populate text Field on web page
Populate text field **input 1** with "*****" using emulated typing without using emulated typing
- 5 Click link on web page
Click on **span 1** of web page
- 6 Click link on web page
Click on **span 2** of web page
- 7 Click link on web page
Click on **div 1** of web page
- 8 Populate text Field on web page
Populate text field **input 2** with "1234" using emulated typing without using emulated typing
- 9 Set drop-down list value on web page
Select options 'CANCELED' in **select**
- 10 Populate text Field on web page
Populate text field **input 3** with "PR1234" using emulated typing

On the right, there's a "Variables" pane with sections for "Input / output variables" (containing **emailAddress**, **ID**, **userName**) and "Flow variables" (containing **Browser**). At the bottom, status information includes "Status: Ready", "0 Selected actions", "36 Actions", "1 Subflow", and "Run delay: 100 ms".

Why use inputs/outputs?

- to pass parameters from/to a cloud flow

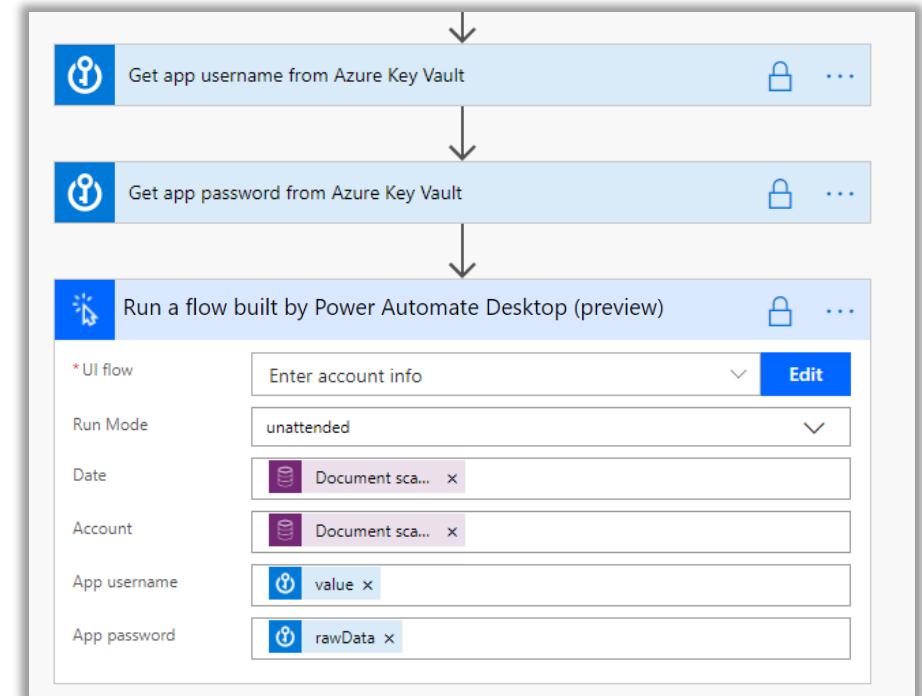
The screenshot shows the Power Automate Desktop flow editor. On the left, a list of steps is visible:

- Run application (Run application C:\Program Files (x86)\Contoso, Inc\Contoso Invoicing\Legacy\InvoicingApp.exe with arguments)
- Start of autogenerated actions using the desktop recorder
- Click UI element in window (Click on UI element Text 'Invoices')
- Click UI element in window (Click on UI element Image 'Image')
- Populate text field in window (Populate text box Edit 'TextBox' with 'WingTip Toys')
- Populate text field in window (Populate text box Edit 'TextBox' 1 with 'b.friday@wingtiptoys.com')
- Populate text field in window (Populate text box Edit 'TextBox' 2 with '\$500')
- Set drop-down list value in window (Select option(s) 'Invoiced' in Combo Box 'ComboBox')

On the right, the "Variables" pane displays two sections: "Input / output variables" and "Flow variables".

- Input / output variables:**
 - Account: WingTip Toys
 - Amount: \$500
 - Contact: b.friday@wingtiptoys.com
 - InvoiceID
- Flow variables:**
 - AppProcessId
 - AttributeValue

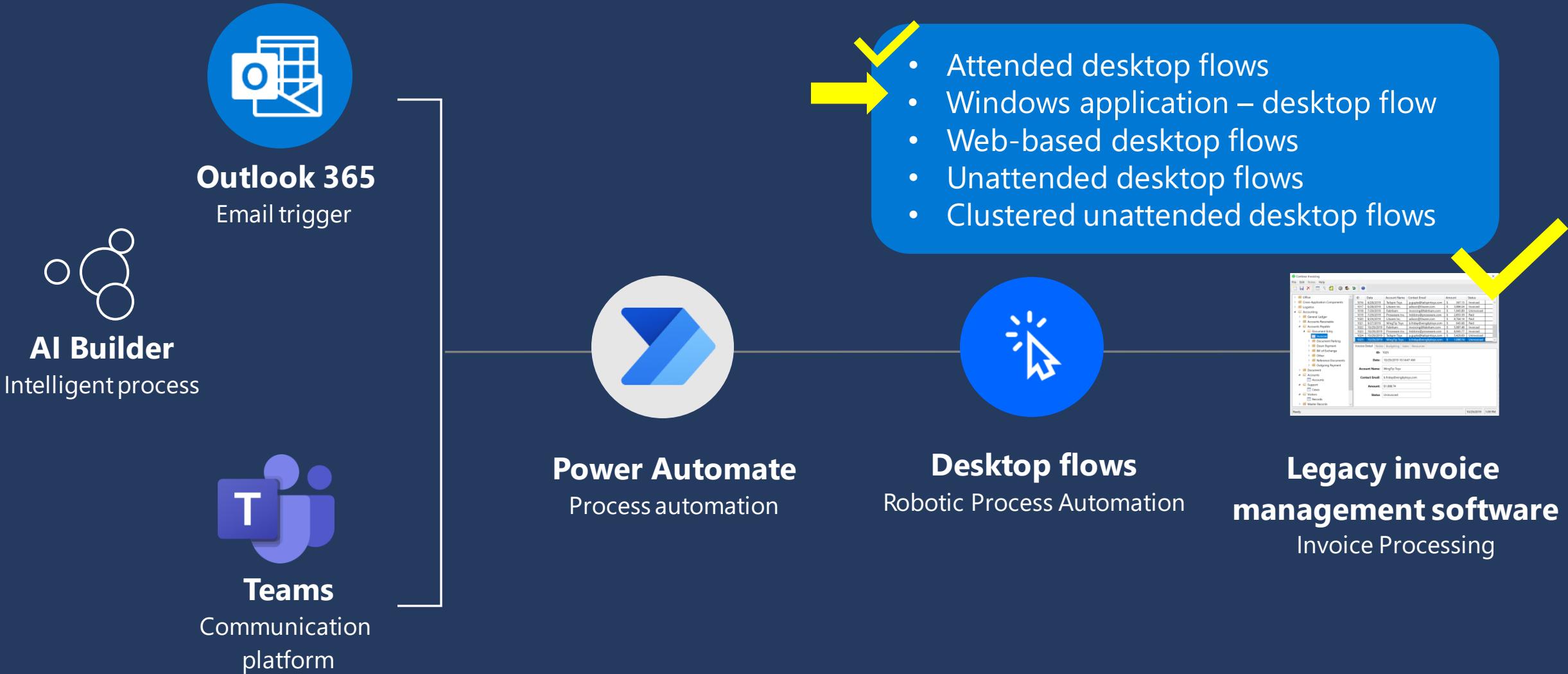
Define inputs/outputs in desktop flows



Bind them in the cloud flow that runs the desktop flow

Lab 3: Use Input and Output Parameters

(25 minutes)



Student's demo of lab 3 using input and output variables

Session 4: Use desktop flow connector in Power Automate through connection

What is a cloud flow?

- A cloud service that allow you to automate your business process

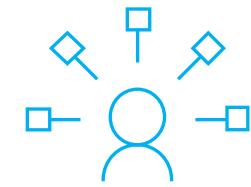
What makes a cloud flow



Trigger



Action



Conditional Logic

Trigger

Three Types of Triggers



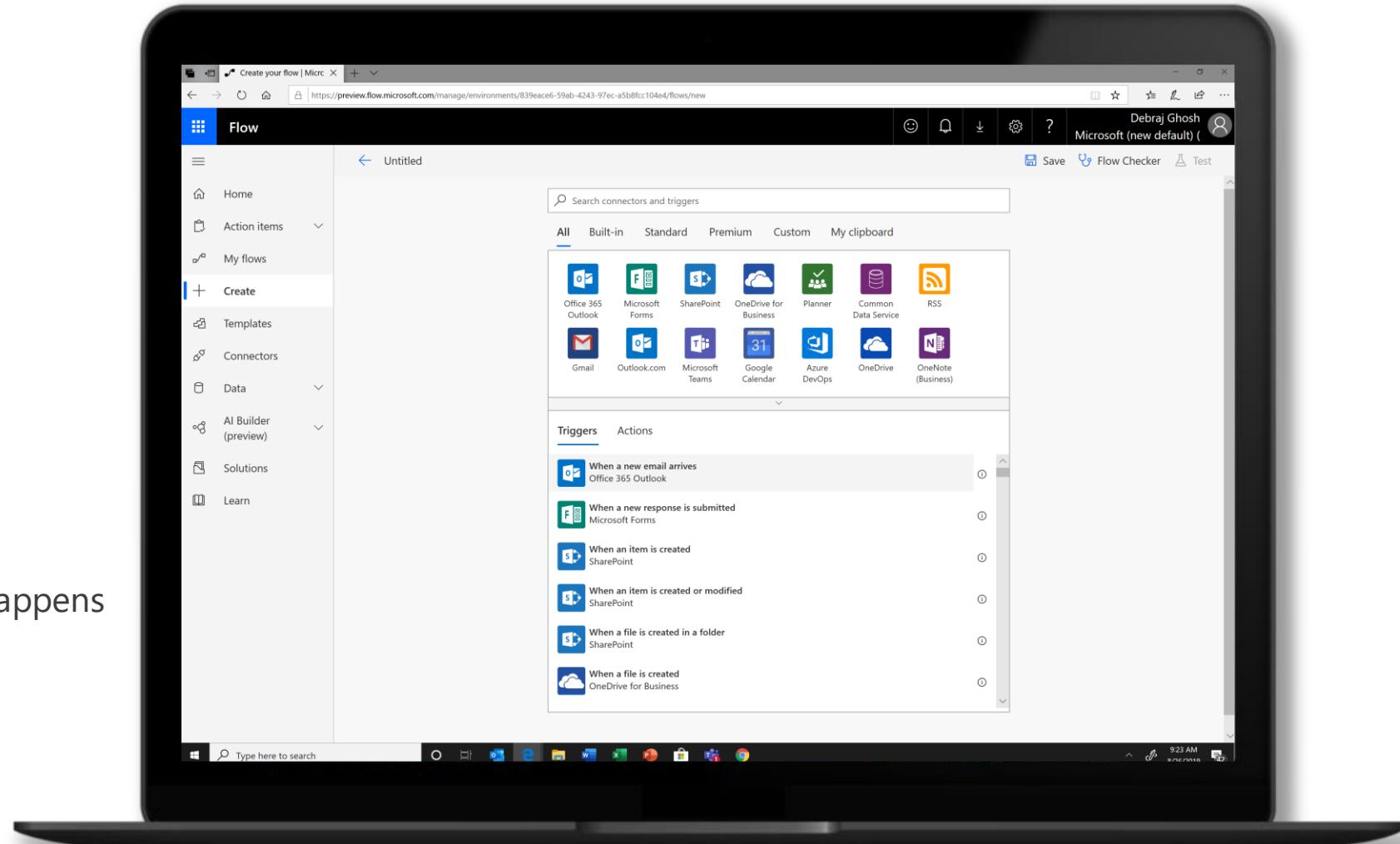
Manual Action



Run on a Schedule



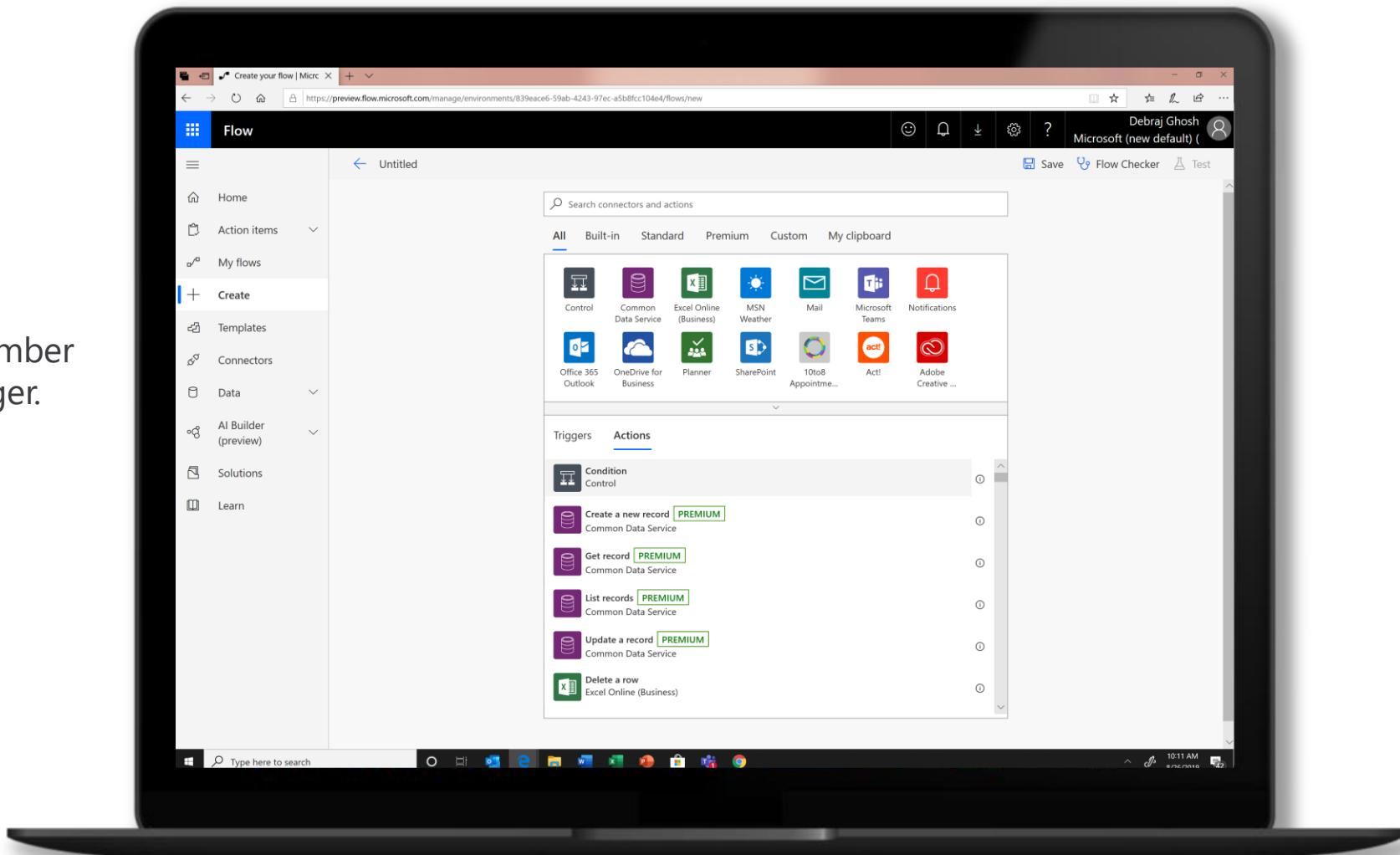
Run based on an event that happens in a cloud or on-prem service



Action



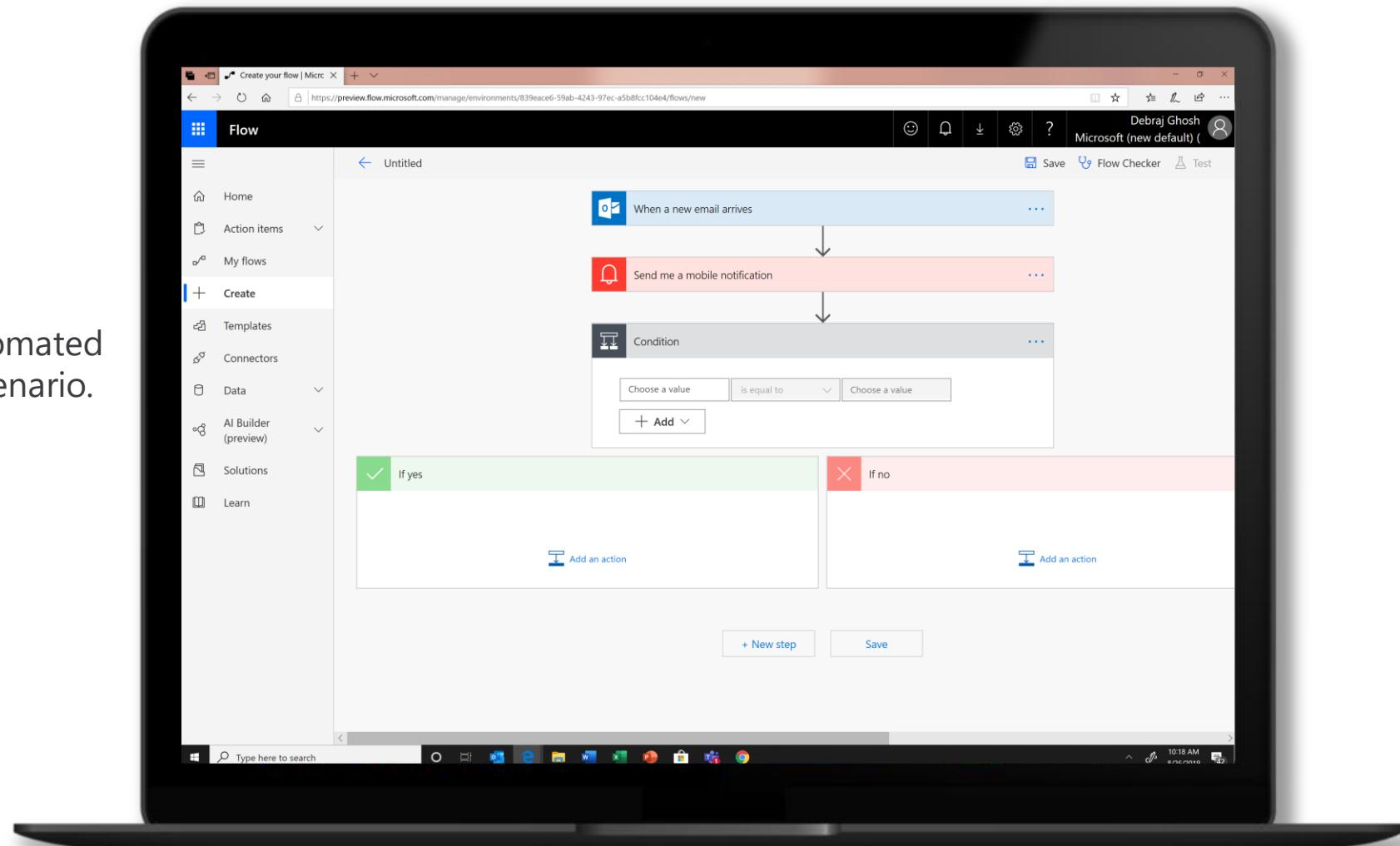
A cloud flow 'Action' is any number of steps that run after the trigger.



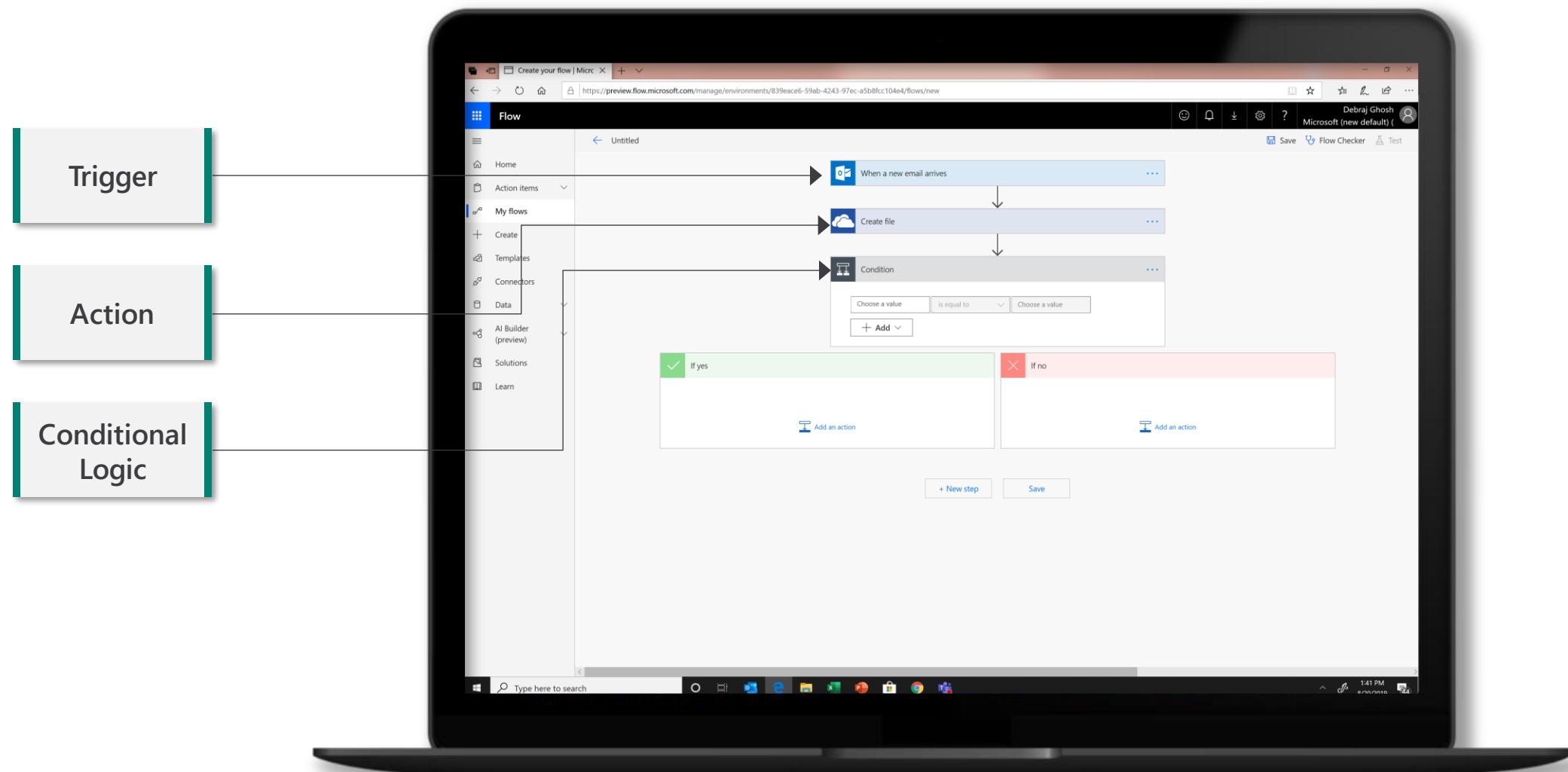
Conditional Logic



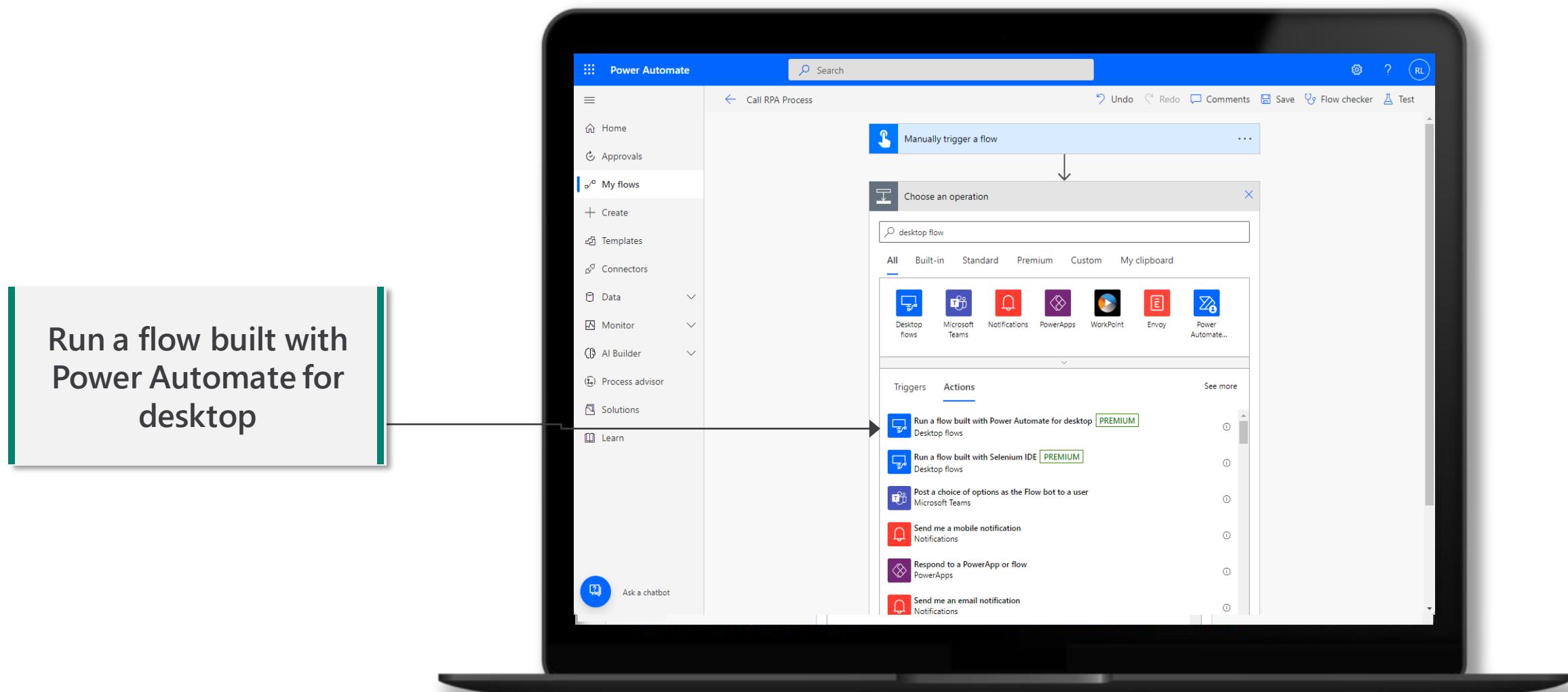
Conditional logic enables automated decisions based on a given scenario.



These building blocks make a Power Automate cloud flow



Use the desktop flows Connector to enable RPA



Machine registration



Allows cloud flow to call machines directly, without on-premises data gateways



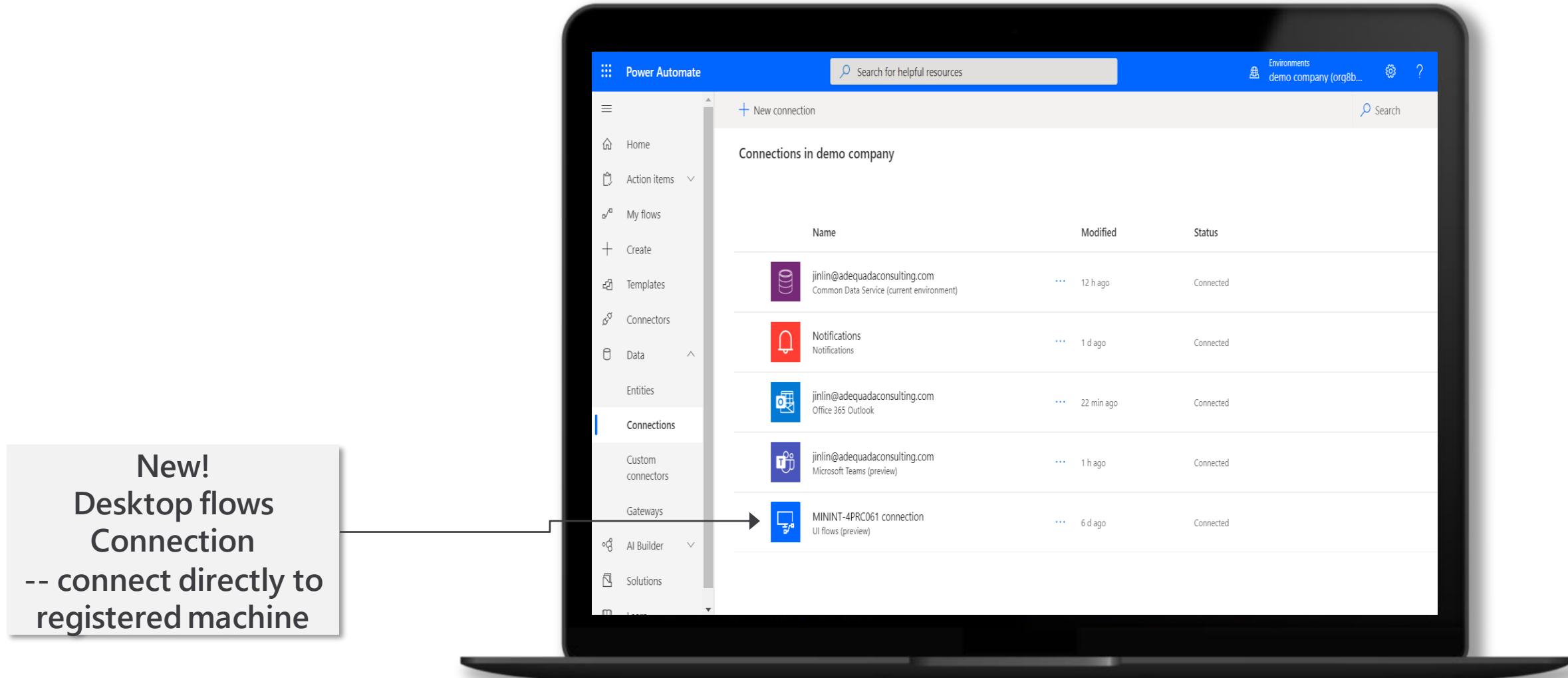
Allows cloud flows and other services to run tasks on local machine



Once registered, can be managed from the cloud

Machine name	Description	Group	Status	Flows running	Flows queued	Access	Owner
High-density device	—	—	Busy	3	2	Owner	Carlos Slattery
IBMKT-HHTB2	Very long description of a machine that is...	IBM machines group	Online	0	—	Co-owner	Allan Munger
IBMKT-HHTB24	—	IBM machines group	Busy	1	—	Co-owner	Robert Tolbert
IBMKT-HHTB3	This is a very long machine description rela...	IBM machines group	Busy	2	—	Co-owner	Henry Brill
IBMKT-HHTB5	This is a long machine description that give...	IBM machines group	Online	1	—	Co-owner	Katri Aholas
MININT-4HCA	This is a machine description	SAP machines group	Busy	1	—	Co-owner	Johnie McConnell
MININT-4HCB	This is a long machine description that give...	SAP machines group	Online	0	—	Co-owner	Elvia Atkins
MININT-4HCC	—	SAP machines group	Busy	2	—	Co-owner	Amanda Brady
MININT-4HCD	—	SAP machines group	Busy	1	—	Owner	Carole Poland
MININT-4HCS	Description of a machine named MININT-4...	—	Offline	0	3	Owner	Allan Munger
My network machine	This is a machine description	—	Busy	1	4	Co-owner	Kat Larsson
My other machine	This is a long machine description that give...	—	Available	0	5	Owner	Johnie McConnell

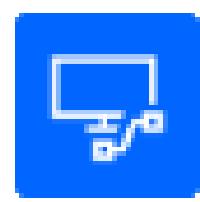
Desktop flows Connection – allow desktop flow to call registered machines directly



Integrate desktop flows into a complete E2E cloud flow



Desktop flows



Seamlessly integrate UI automation with API based automation

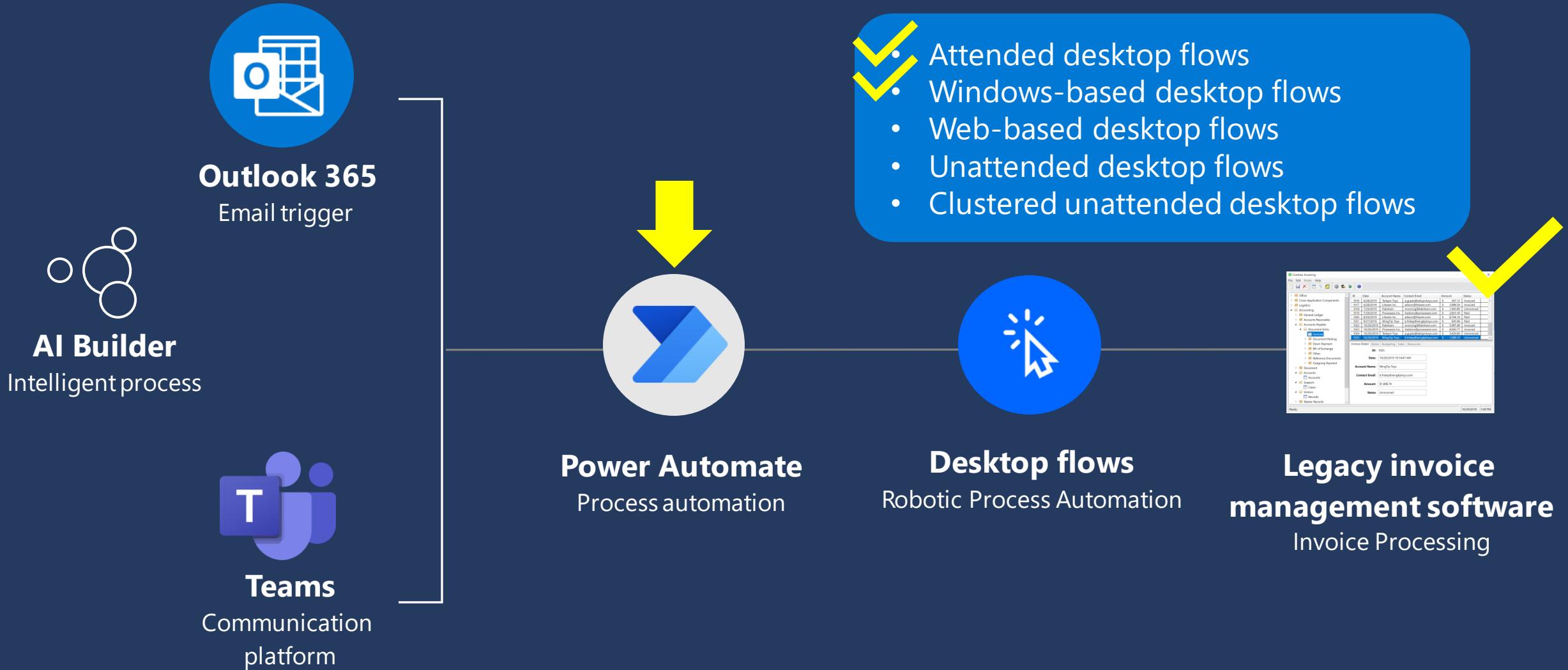
Use Desktop flows with Cloud flows

Automate with dynamic values

Record step-by-step UI actions

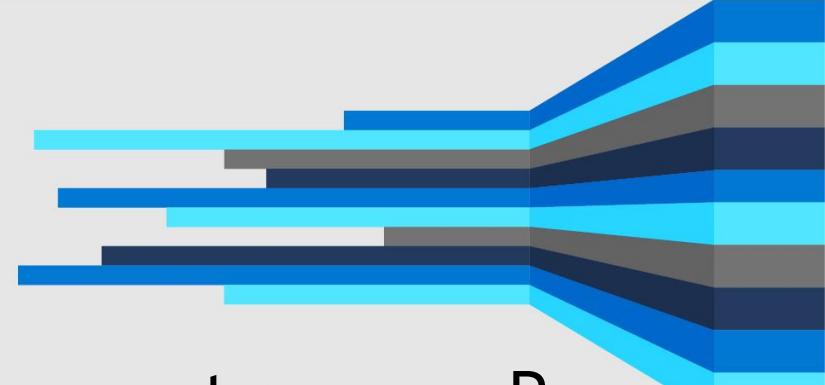
Replay and test actions

Lab 4: Integrate cloud flows (55 minutes)



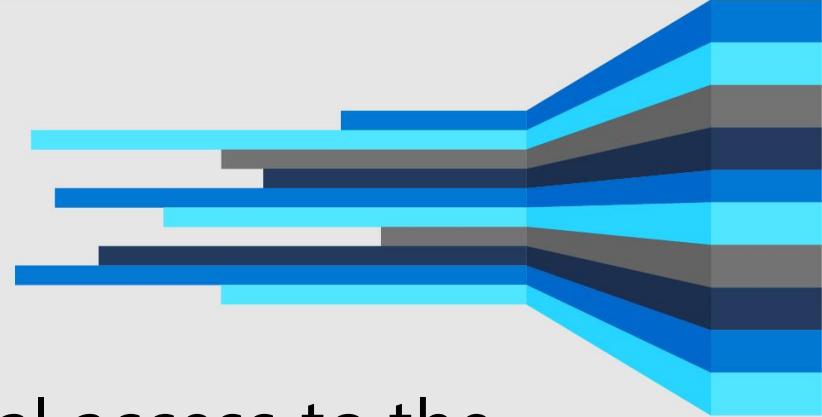
Student's demo of lab 5 using desktop flows in a cloud flow

Lab 4 review: Tips & Tricks Machine registration



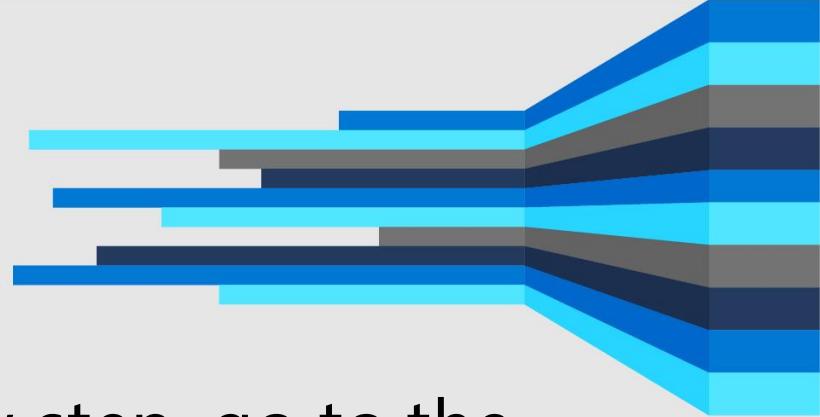
- ✓ Machine must be registered in the same environment as your Power Automate desktop flow. This is necessary to ensure data moving between the service and machine honors data sovereignty rules.
- ✓ Use the same account that you are logging into portal to setup the machine.
- ✓ If you need to switch environment, you must re-register machine.
- ✓ If you only need to switch an account, you can just log in using the new account.
- ✓ Machine will be online even if you're not logged in. You can check its status from the portal.

Lab 4 review: Tips & Tricks desktop flow Connection



- ✓ Use a user account and password that has local access to the registered machine.
- ✓ Desktop flows supports local machine accounts, Active Directory accounts for AD domain-joined machines and Azure AD accounts for Azure AD-managed machines. Microsoft Account (MSA) is not supported.
- ✓ Make sure to check that you are using the correct connection if your desktop flow did not run successfully. You can check the connection details under Data->Connection in the portal.

Lab 4 review: Tips & Tricks Monitor the cloud flow run



- ✓ If the cloud flow run failed at the desktop flow step, go to the desktop flow page to look up run history from there to see detail error messages.

Session 5: Use API Connectors in cloud flow to connect to Outlook inbox

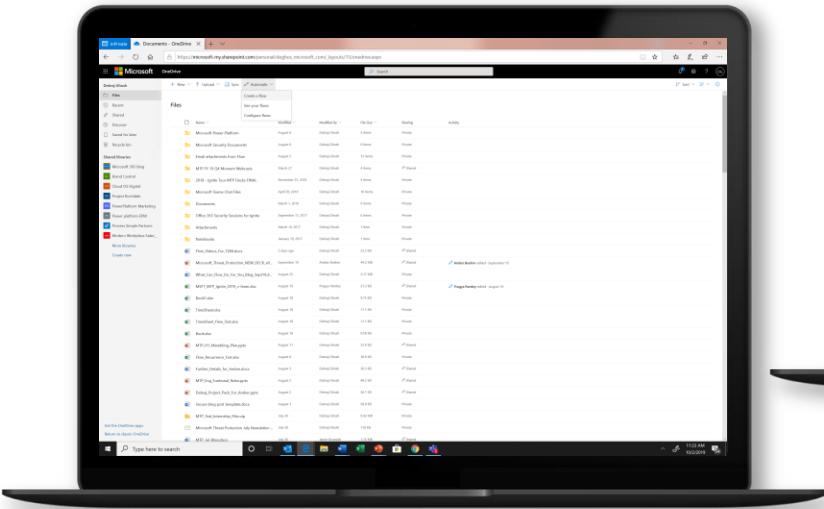
API connectors available in Power Automate



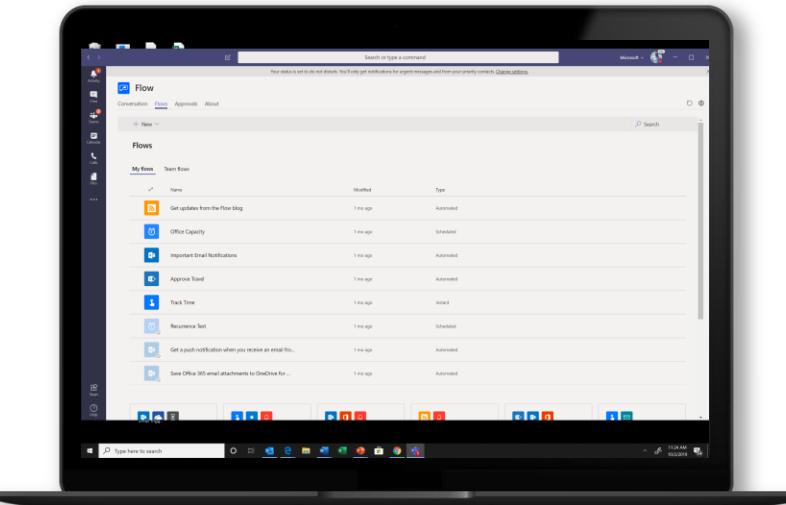
Hundreds of
app connectors
(including on-prem applications)

Native integration with widely used services

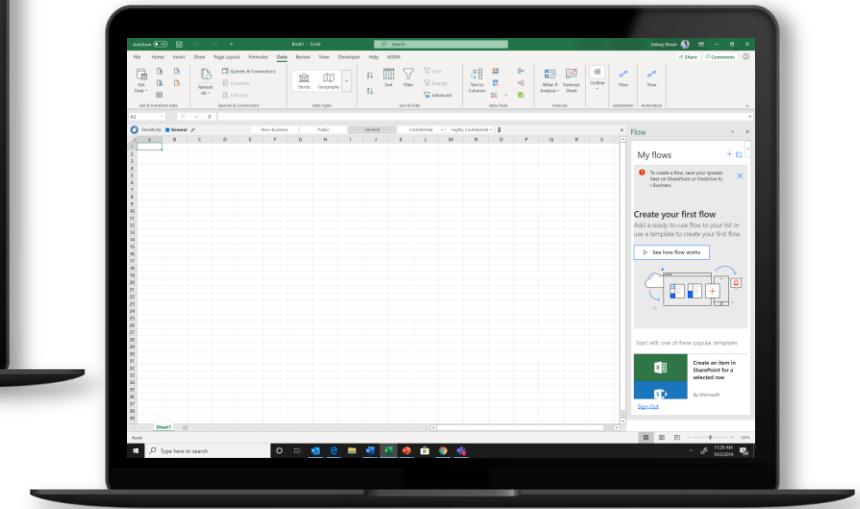
Begin automating
from your OneDrive



In-app automation
in Teams



Automate directly
from Excel

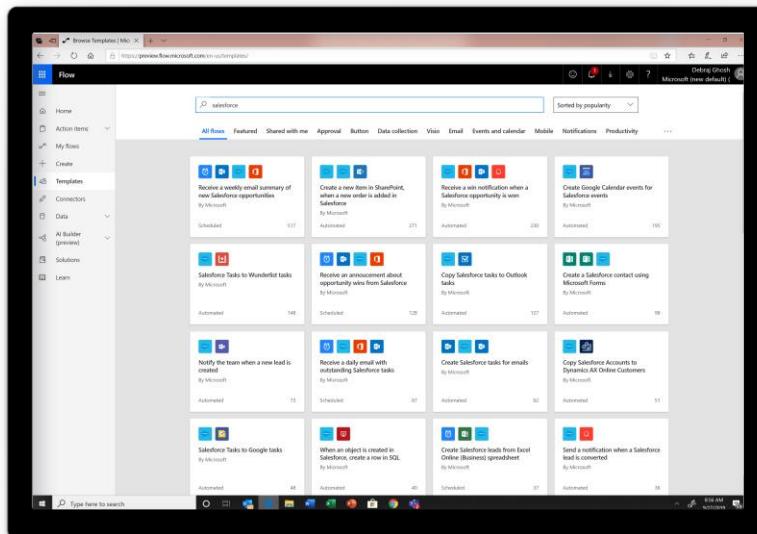


Easily automate your core operations processes

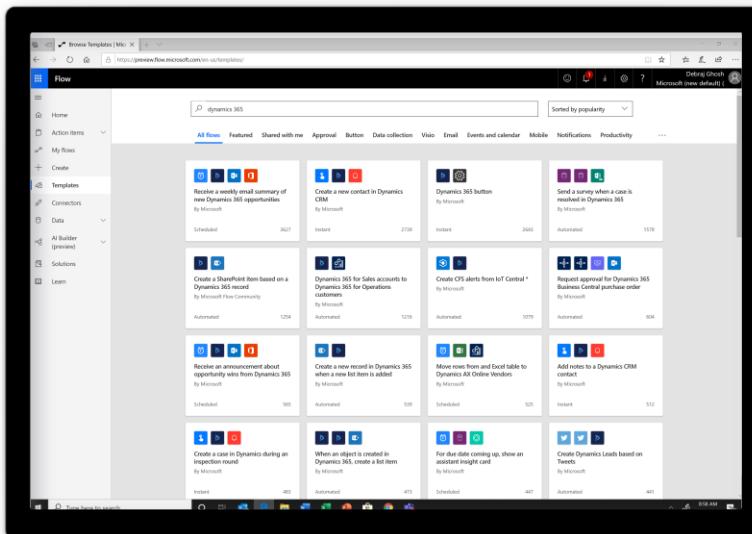
Automate your mission critical tasks with seamless integration to Salesforce, Dynamics 365, and SAP

- Track Salesforce closed converted leads and send an email
- Request approval for Dynamics 365 Business Central purchase order
- Notify your team about new opportunities

Salesforce



Dynamics 365

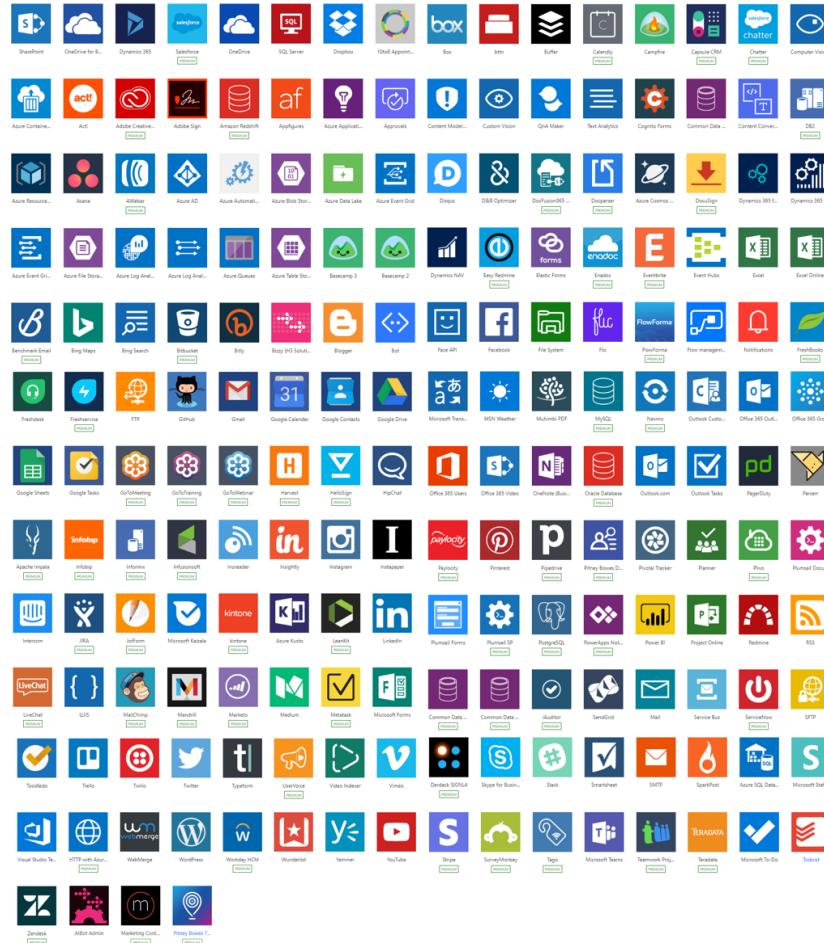


SAP

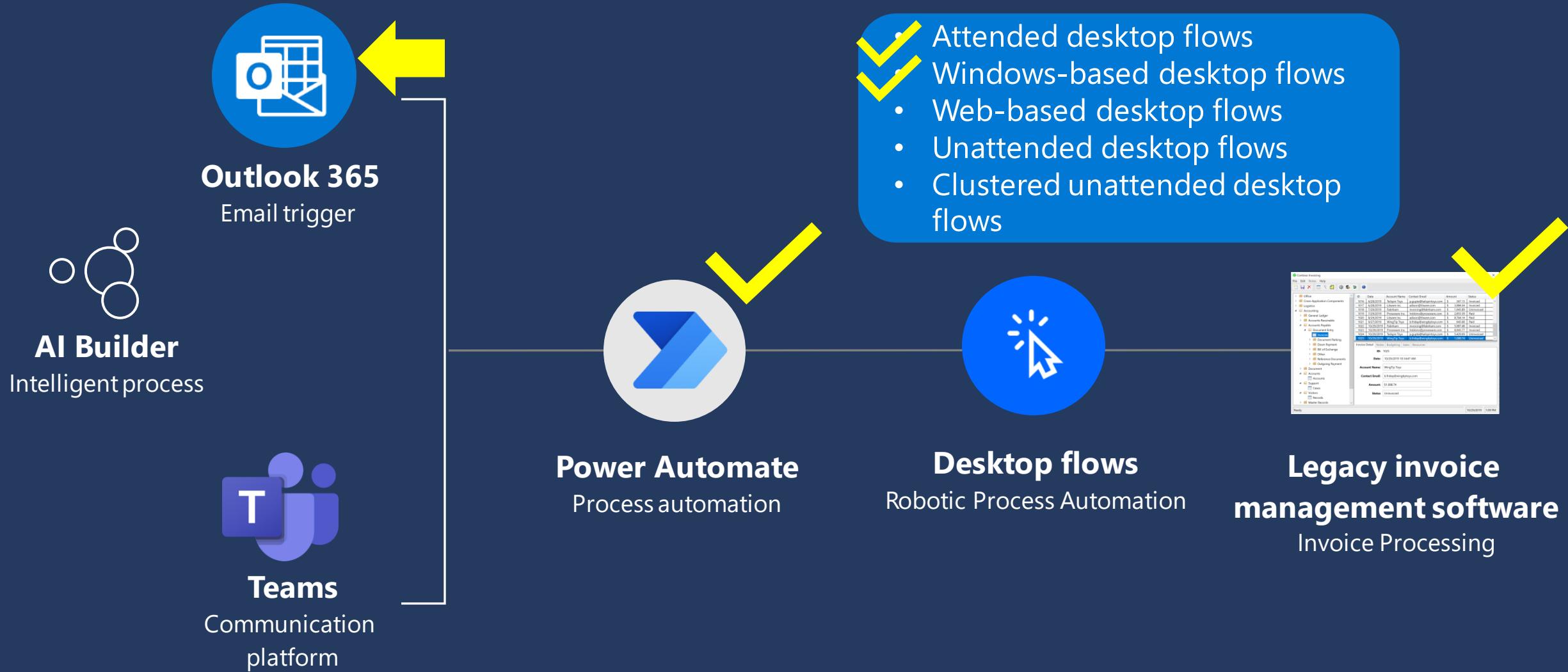


Connectivity & integration

- File providers
- Databases
- Web APIs
- Productivity apps, etc.
- Pluggable extensibility via **Custom Connectors** to integrate existing LOB systems into Power Automate



Lab 5: Use Outlook email to trigger desktop flows and pass inputs (25 minutes)

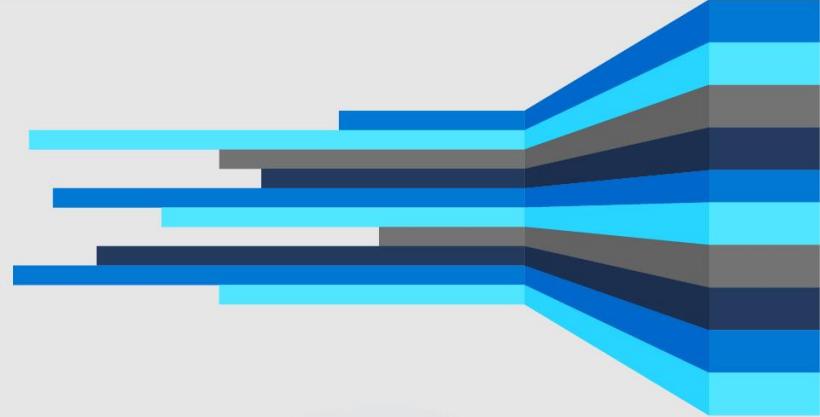


Student's demo of lab 5 using Outlook connector as trigger

Session 6: Integrate with AI Builder

AI transformation

- AI is accelerating the digital transformation for every industry
- Organizations that incorporate AI far outpace their competitors
- However, need a programming or data science background



There is a huge gap

Gap

Between actions...



14%
Deployed AI

23%
Will deploy in
next 12 months

84%
AI provides a
competitive
advantage

75%
AI will create
new business

...and expectations.

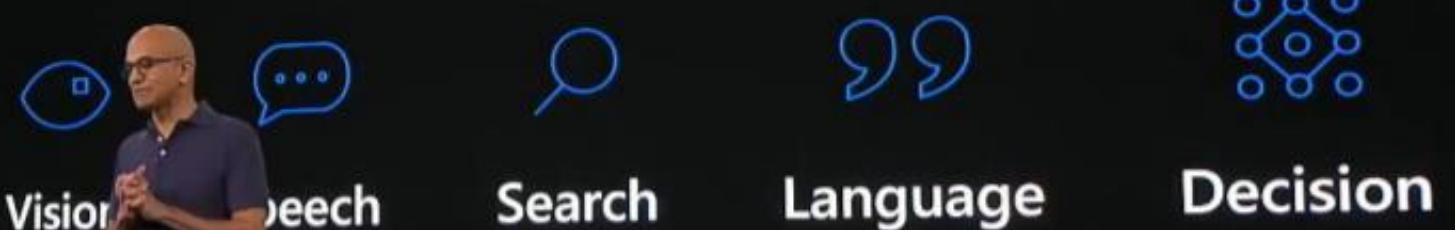
Source
Gartner, 2019. BCG, 2017.

TAKE THEM TO EDGE DEVICES AND,
OF COURSE, USE RICH ML.

Search



Azure Cognitive Services



Why use AI Builder of Power Automate



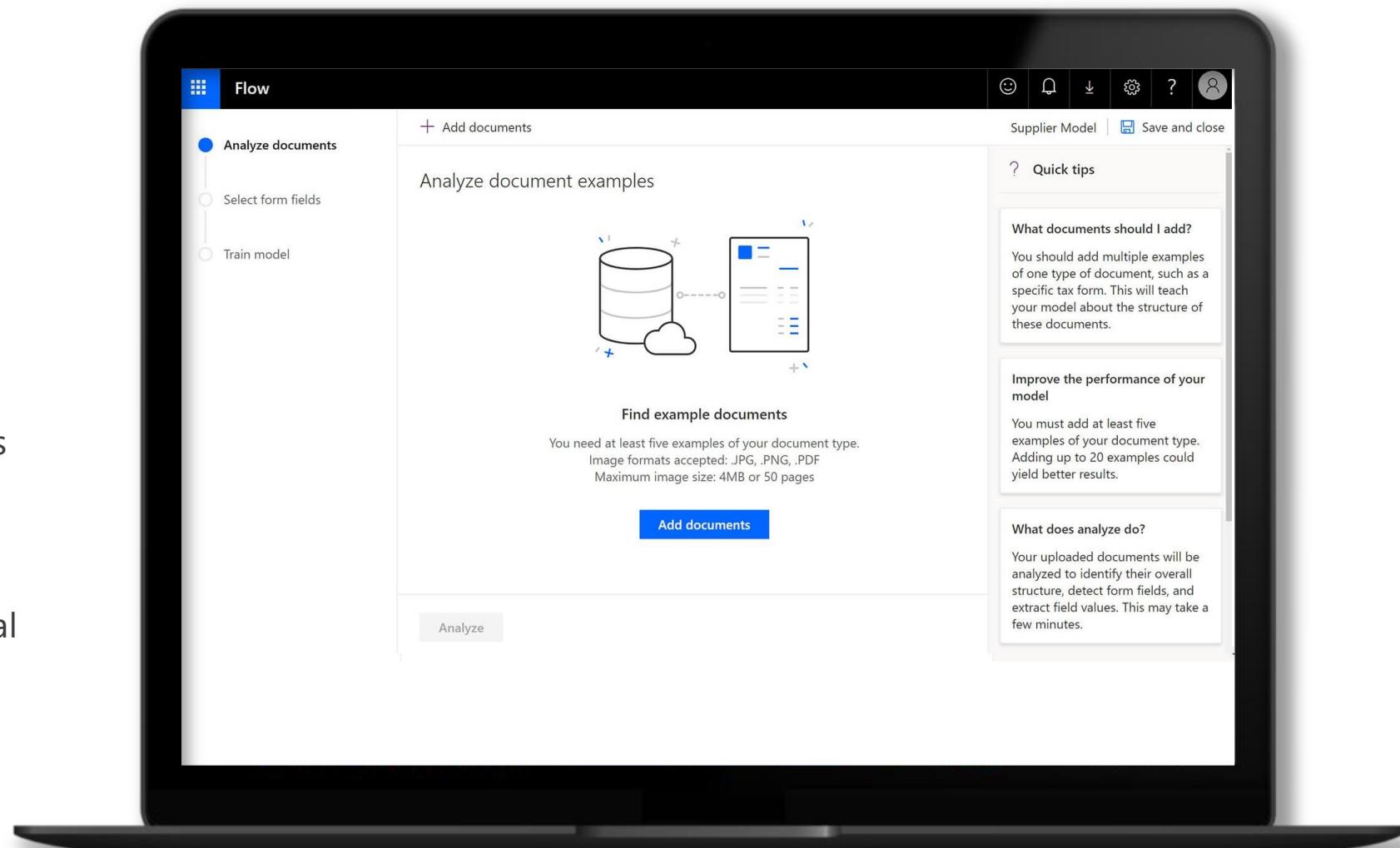
No-code AI



AI for many industry scenarios



AI for multiple industry vertical



Enhance Automation with the Power of AI

Use Powerful Pre-defined AI Models



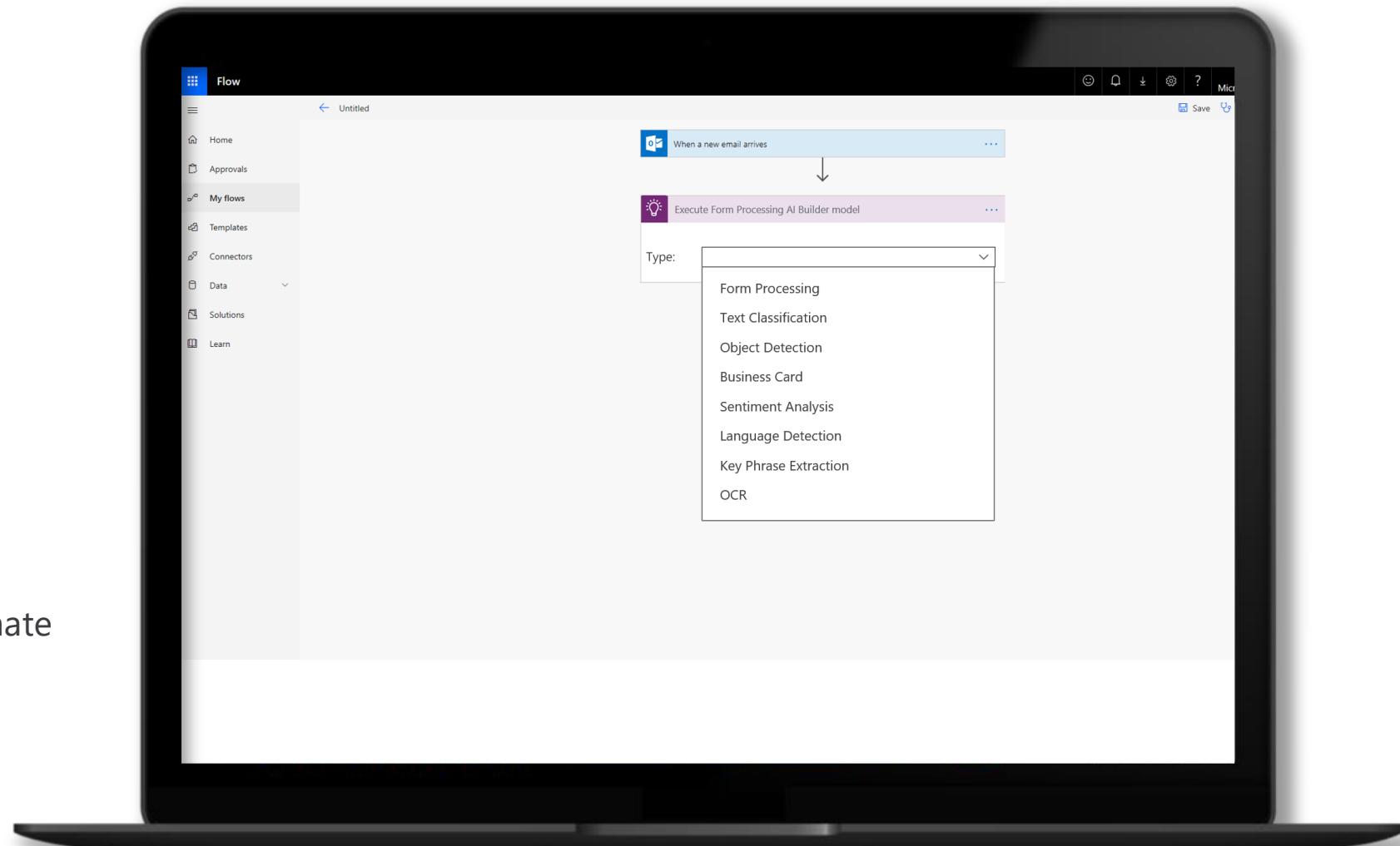
Pre-defined models



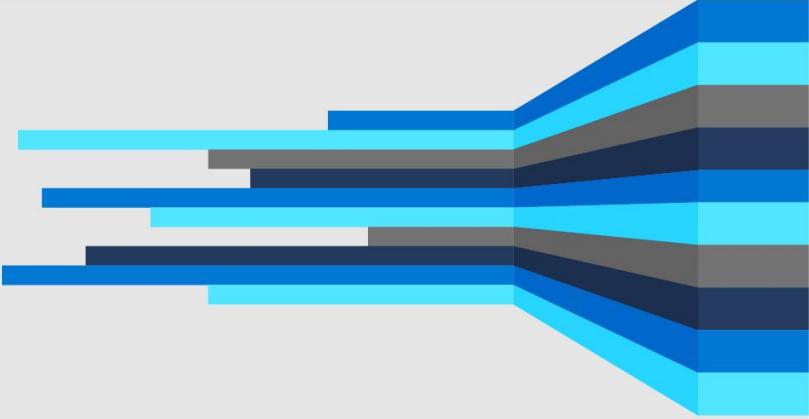
Create Custom Models



Integrate to any Power Automate



Wide range of AI capabilities



Prediction

Prediction



Language

Key phrase extraction
Language detection
Sentiment analysis
Text classification



Vision

Business card reader
Form processing
Object detection
Text recognition

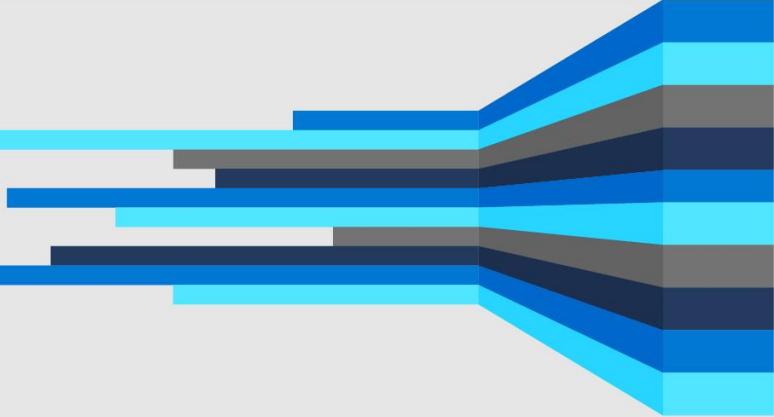
Pre-Build Power Automate AI templates

AI Builder

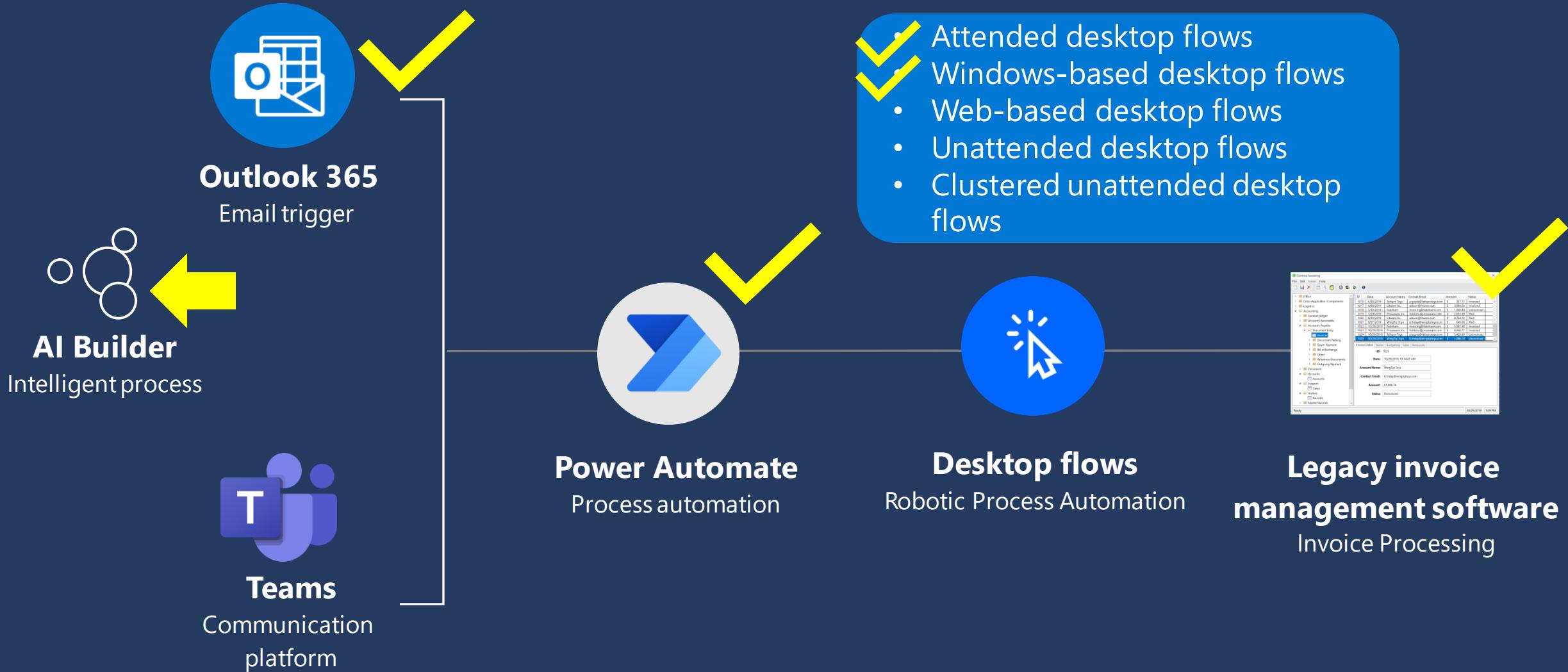
Sorted by popularity

All templates Top picks Shared with me Remote work Approval Button Visio Data collection Email Calendar Mobile ...

<p>Send a notification with the sentiment of manager's email using AI Builder By Microsoft Automated 3874</p>	<p>Extract text from images or PDF documents using AI Builder Text Recognition By Microsoft Instant 16833</p>	<p>Read information from invoices By Microsoft Instant 15872</p>	<p>Click a button to read and save information from documents using AI Builder By Microsoft Instant 10698</p>
<p>Extract entities of received emails using AI Builder By Microsoft Automated 4558</p>	<p>Route emails as per the language detected by AI Builder on new email By Microsoft Automated 3457</p>	<p>Analyze incoming emails and route them to the right person By Microsoft Automated 2864</p>	<p>Notify me on Teams when I receive an email with negative sentiment By Microsoft Automated 2676</p>
<p>Analyze tech articles with AI Builder and send results to Teams By Microsoft Scheduled 2380</p>	<p>Track expenses by scanning receipts added to your OneDrive for Business By Microsoft Automated 2007</p>	<p>Create contact in CDS from a business card using AI Builder on button click By Microsoft Instant 1236</p>	<p>Click a button to recognize and count objects in images using AI Builder By Microsoft Instant 1205</p>
<p>Translate text into another language By Microsoft Scheduled 1120</p>	<p>Process receipts from Teams with AI Builder By Microsoft Instant 1096</p>	<p>Classify Teams messages using AI Builder By Microsoft Instant 1069</p>	<p>Predict in real time when a CDS record is created or updated By Microsoft Instant 1069</p>



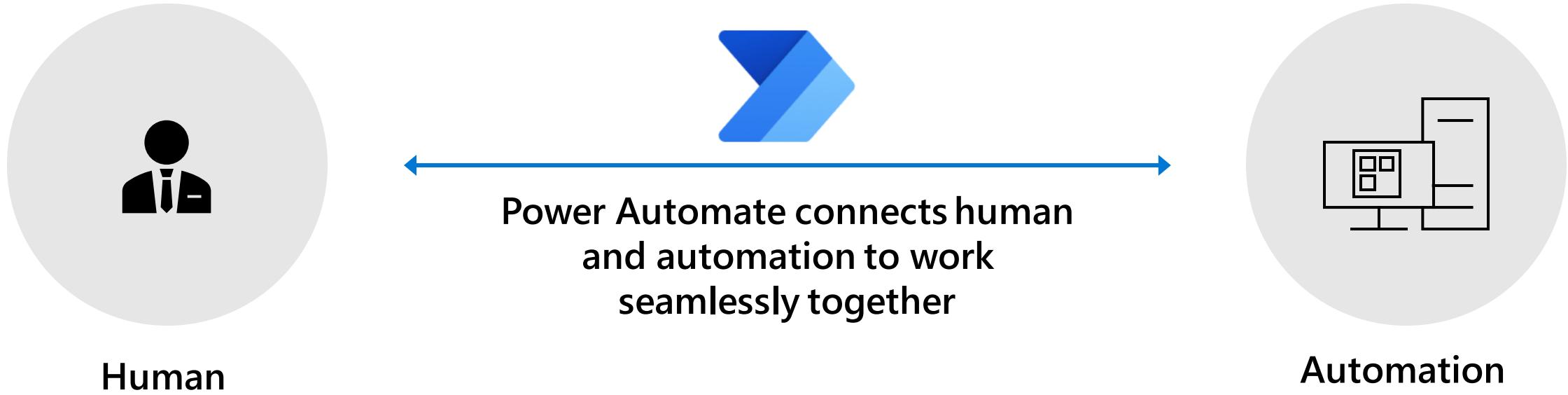
Lab 6: Use AI model to process invoice forms (25 minutes)



Demo of lab 6: using AI Builder in Power Automate to process invoice forms

Session 7: Integrate with approval in Microsoft Teams

Why we need to invite Human into the automation process



Automate human approvals



Automate approvals to focus on more valuable tasks



Many approval scenarios offered out of the box

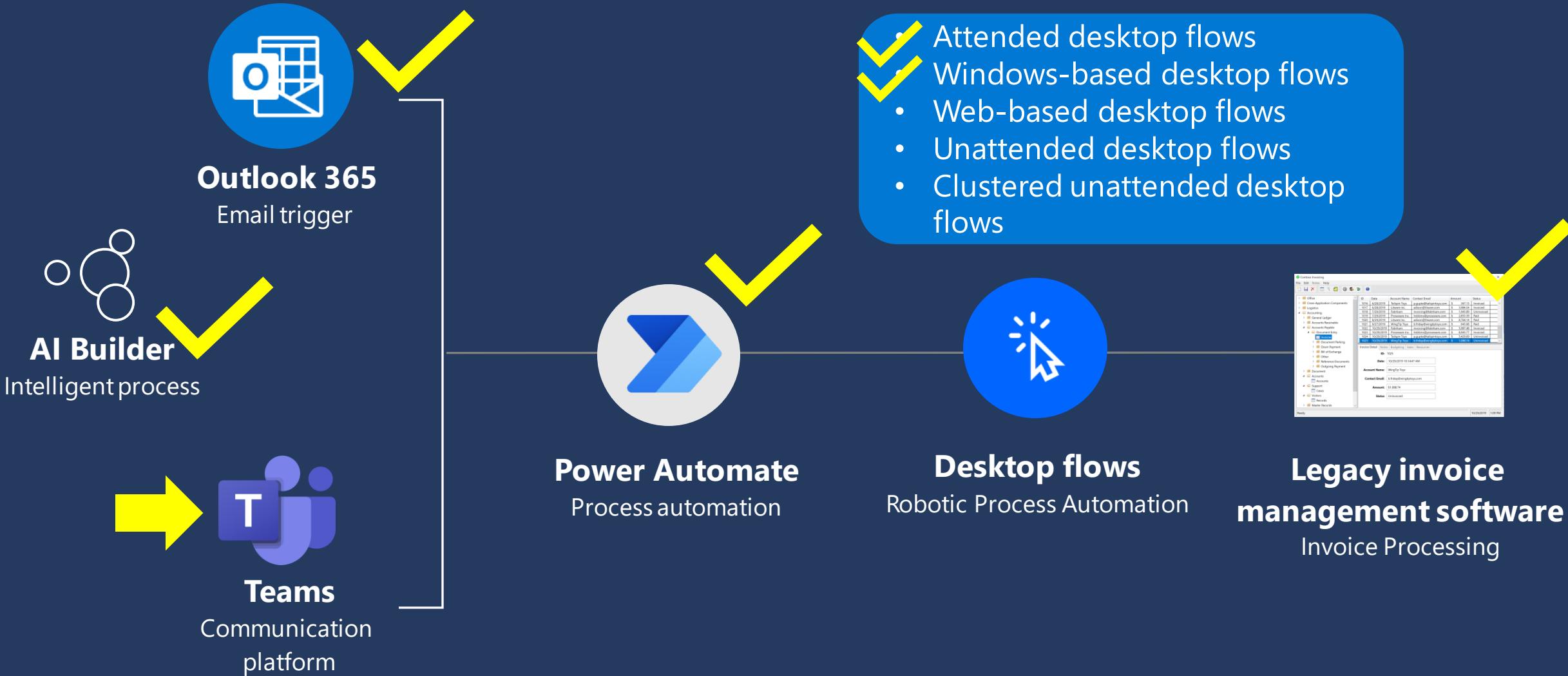


Quickly save departmental time

The Microsoft Power Automate interface displays a grid of approval-related templates. The columns represent different categories: All flows, Featured, Shared with me, Remote work, Approval, Button, Visio, Data collection, Email, Events and calendar, Mobile, and Notifications. The rows show various pre-built flows, each with a title, description, creator, status, and popularity count.

All flows	Featured	Shared with me	Remote work	Approval	Button	Visio	Data collection	Email	Events and calendar	Mobile	Notifications
Save Office 365 email attachments to OneDrive for Business By Microsoft Automated 588108	Send myself a reminder in 10 minutes By Microsoft Instant 370534	Get a push notification when you receive an email from your boss By Microsoft Automated 326004	Get today's weather forecast current location By Microsoft Instant								
PowerApps button By Microsoft Instant 276985	Start approval when a new item is added By Microsoft Automated 259449	Send a customized email when a new SharePoint list item is added By Microsoft Automated 246966	Send a customized email when a new file is added By Microsoft Automated								
Record form responses in SharePoint By Microsoft Automated 195121	Save Outlook.com email attachments to your OneDrive By Microsoft Flow Community Automated 129899	Request manager approval for a selected file By Microsoft Automated 2574	Send form responses for approval By Microsoft								

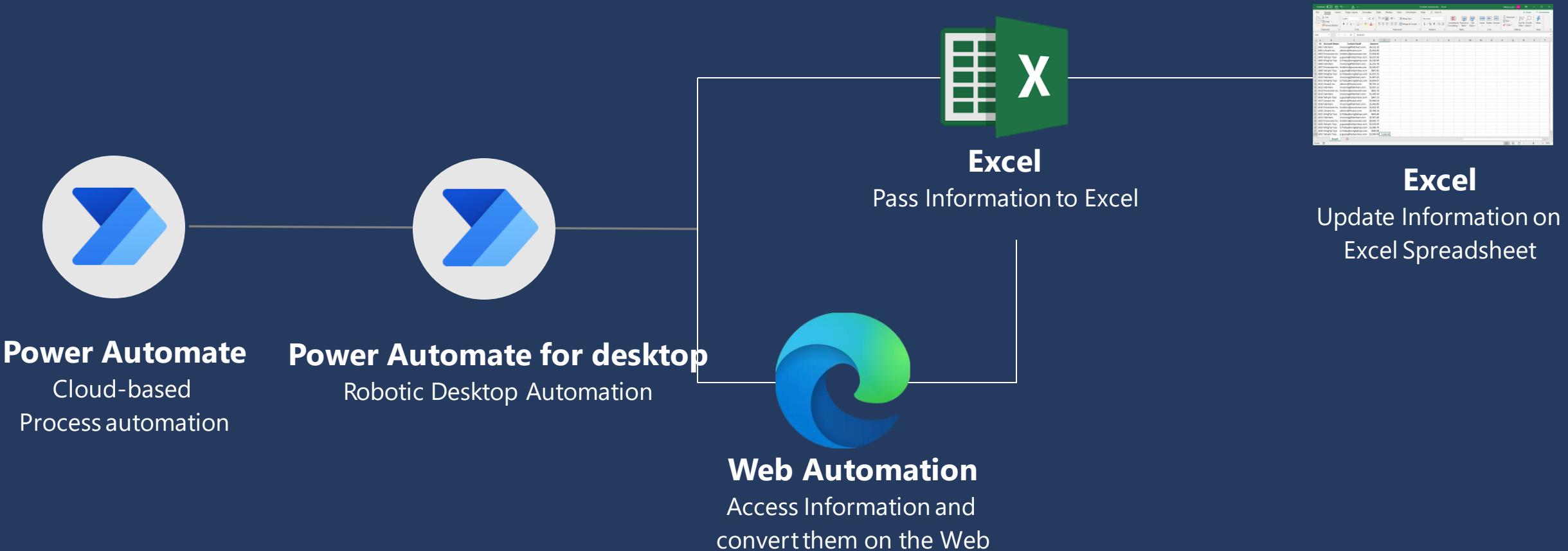
Lab 7: Use Microsoft Teams to integrate approvals (25 minutes)



Student's demo of lab 7: using Teams Approval

Session 8: Use Power Automate for website and Excel

Lab 8: Extend a Power Automate desktop flow to write notes into Excel (90 minutes)



Student's demo of lab 8 using Power Automate for desktop

Lab 8 review Tips & Tricks Power Automate for desktop and Power Automate

- ✓ You can drag and drop actions to the workspace to form the Process.
- ✓ Repeating Actions can be copied and then pasted changing just their properties.
- ✓ The backbone of a Process can be captured using the Web and Macro Recorders.
- ✓ Make sure to save the Power Automate desktop flow and close the Process Designer before running it from Power Automate.

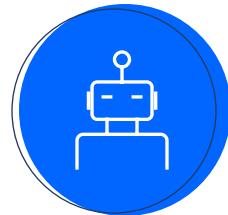
(Optional)
Session 9: Unattended desktop flows

RPA – Attended vs. Unattended

Automation whether you're at your logged in or not



Attended



Unattended

	Personal automation	Enterprise automation
Overview	Drive efficiencies and automate manual, individual tasks across desktop and web	Accelerate the automation of high-volume and tedious tasks without lifting a finger
Scenario	On-demand task automation	Automate company processes at scale
Audience	Citizen developer in business unit	Automation specialist (for now) in a Center of Excellence dedicated to RPA
Requirement	User signed in on their device/human initiated	Jobs on dedicated machines/robots do the work

RPA in Power Automate: Attended

File Edit Debug Tools View Help Enter an invoice | Power Automate Desktop

Actions Subflows Main Write_notes_into_excel Currency_Exchange

Variables

Search actions

Search variables

Input / output variables 4

Run application
Run application 'C:\Program Files (x86)\Contoso, Inc\Contoso Invoicing\LegacyInvoicingApp.exe' with arguments

Start of autogenerated actions using the desktop recorder

Click UI element in window
Click on UI element Text 'Invoices**'

Click UI element in window
Click on UI element Image 'Image'

Populate text field in window
Populate text box Edit 'TextBox' with Account

Populate text field in window
Populate text box Edit 'TextBox' 2 with Contact

Populate text field in window
Populate text box Edit 'TextBox' 3 with Amount

Set drop-down list value in window
Select option(s) 'Invoiced' in Combo Box 'Combo'

Get details of a UI element in window
Get attribute 'Own Text' of a UI element Text '105'

Set variable
Set InvoiceID toAttributeValue

Click UI element in window
Click on UI element Image 'Image' 2

End of autogenerated actions using the desktop recorder

Contoso Invoicing

File Edit Notes Help

ID Date Account Name Contact Email Amount Status

1053	12/15/2020			\$	Uninvoiced
1054	12/15/2020			\$	Uninvoiced
1055	12/15/2020			\$	Uninvoiced
1056	12/15/2020	WingTipToys	b.friday@wingtiptoys.com	\$ 500.00	Invoiced
1057	12/15/2020	WingTip Toys	b.friday@wingtiptoys.com	\$ 500.00	Invoiced
1058	12/15/2020	WingTip Toys	b.friday@wingtiptoys.com	\$ 500.00	Invoiced
1059	12/15/2020	WingTip Toys	b.friday@wingtiptoys.com	\$ 500.00	Invoiced
1060	12/15/2020	WingTip Toys	b.friday@wingtiptoys.com	\$ 200.00	Invoiced
1061	12/15/2020	WingTip Toys	b.friday@wingtiptoys.com	\$ 500.00	Invoiced

Invoice Detail Notes Budgeting Sales Resources

ID: 1061
Date: 12/15/2020
Account: WingTip Toys
Contact: b.friday@wingtiptoys.com
Amount: \$500.00
Status: Invoiced

Ready 12/15/2020 2:31 PM

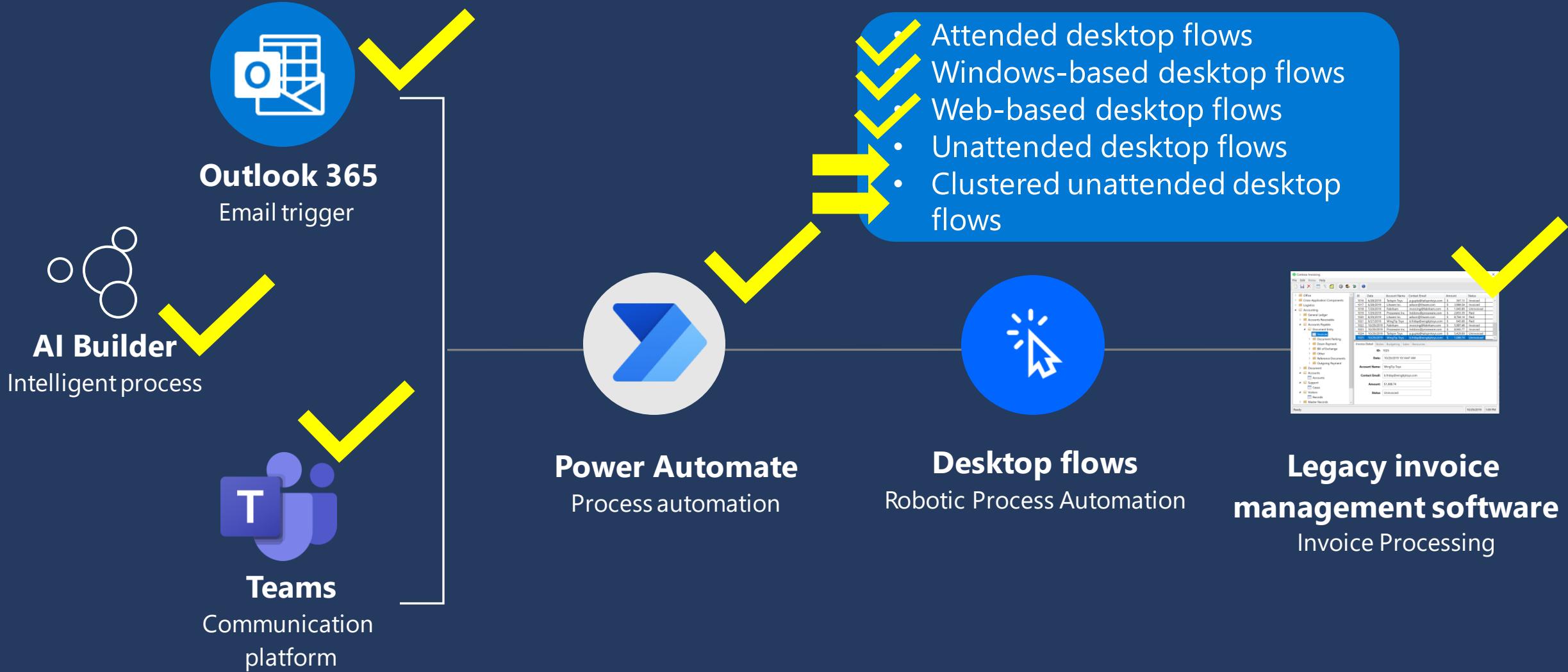
RPA in Power Automate: Unattended



Machine group (cluster) – scale up the automation

- 2 or more machines can join into a machine group (cluster)
- Easy to scale to maximize hardware productivity
- Require to have the same log in credential

Lab 9: Test RPA in Unattended mode (90 minutes)



Demo of lab 9: unattended desktop flow that run on a group of VMs

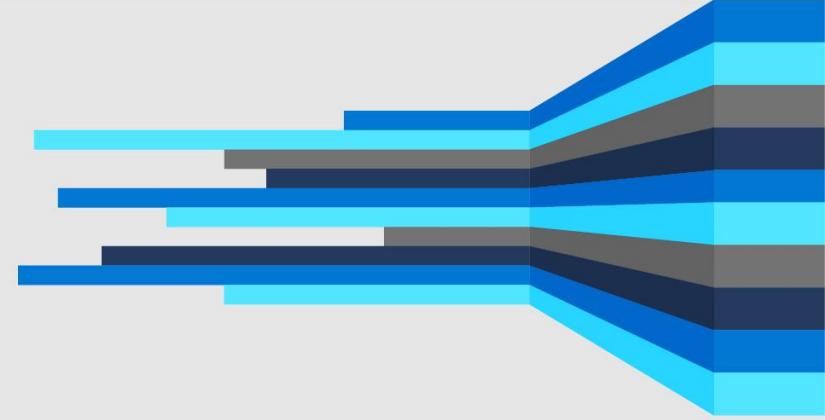
Lab 9 review Tips & Tricks

Unattended desktop flows



- ✓ Unattended mode executes when user is not signed in. Remember to log off from the session (lock the screen is not enough) when running in unattended mode – you should type “logoff” from the windows command bar and select it if you’re working on the machine yourself.
- ✓ You can distribute unattended desktop flow to a group of machines to fully utilize the resource pool capacity.
- ✓ Make sure the machine shows online (so the VMs are turned on).
- ✓ Troubleshooting sequences:
 1. Desktop flow testing -> make sure your desktop flow app and extension are installed and enabled.
 2. Attended flow testing -> make sure the connection is correct, machine is online and execute the run in attended mode.
 3. Unattended flow testing.

Lab 9 review: Tips & Tricks for machine groups



- ✓ Group is a set of machines.
- ✓ The group name can be any. Other machines are just added to this existing group (cluster).
- ✓ From the portal groups details page, you will see the other machines in this group.
- ✓ On the portal machines page, you can configure the group to run in distributed mode by toggle **Run on all machines in group**.
- ✓ If you are using local windows accounts, all VMs in the group must have the same local account with the same password, those are the credentials you should use when creating the desktop flow connection.

(Optional) Session 10: Error handling

Action level exception handling

The screenshot shows the Power Automate Desktop interface with the title bar "Error Handling | Power Automate Desktop". The main workspace displays a flow with a "Get window" action selected. A context menu is open over the action, showing options like "Set variable", "Get variable", "Delete", and "Cancel". The "Set variable" option is highlighted. The "Variables" pane on the right lists several variables: AppProcessId, AutomationWin..., ButtonPressed, ButtonPressed2, ErrorLocation, and LastError. The "Flow variables" section shows six variables: AppProcessId, AutomationWin..., ButtonPressed, ButtonPressed2, ErrorLocation, and LastError. The "Actions" pane on the left lists various actions categorized under "Main", "exception_handler", and "Subflows". The status bar at the bottom indicates "Status: Ready", "1 Selected action", "6 Actions", "2 Subflows", and "Run delay: 100 ms".

Get window

The following rules will apply if the action fails [More info](#)

Retry action if an error occurs 1 time(s) with an interval of 2 second(s)

All errors [New rule](#)

Set **ErrorLocation** {x} to Couldn't get window for app {x}

[Continue flow run](#) [Throw error](#)

[Clear all](#)

Advanced [New rule](#)

Failed to get window

[Return to parameters](#) [Save](#) [Cancel](#)

Status: Ready

1 Selected action 6 Actions 2 Subflows Run delay: 100 ms

Group level exception handling

The screenshot shows the 'Error Handling | Power Automate Desktop' interface. A modal dialog titled 'On block error' is open, explaining that it marks the beginning of a block to handle actions errors. It allows selecting a subflow named 'exception_handler'. Two buttons are available: 'Continue flow run' and 'Throw error'. The 'Throw error' button is highlighted in blue. The background shows a list of actions on the left and variables on the right.

Actions

- > Compression
- > UI automation
- > Web
- > Web automation
- > Excel
- > Database
- > Email
- > Exchange
- > Outlook
- > Message boxes
- > Mouse and keyboard
- > Clipboard
- > Text
- > Datetime
- > PDF
- > CMD session
- > Terminal emulation
- > OCR
- > Cryptography
- > Services
- > XML
- > Active Directory
- > AWS

Error Handling | Power Automate Desktop

Variables

Input / output variables 0

There aren't any input or output variables here yet

Flow variables 6

- (x) AppProcessId
- (x) AutomationWin...
- (x) ButtonPressed
- (x) ButtonPressed2
- (x) ErrorLocation
- (x) LastError

On block error

Marks the beginning of a block to handle actions errors [More info](#)

Select parameters

Name: Launch_Application

Run subflow exception_handler

Continue flow run Throw error

Clear all

Save Cancel

Status: Ready

1 Selected action 6 Actions 2 Subflows Run delay: 100 ms

Get last error

The screenshot shows the Power Automate Desktop interface with the title bar "Error Handling | Power Automate Desktop". The main area displays a flow titled "exception_handler" containing two steps:

- Step 1: "Get last error" action (x) - Description: Get the last error that occurred and store it into `LastError`.
- Step 2: "Display message" action (x) - Description: Display message 'An Exception has occurred : ' `ErrorLocation` '. Error details: ' `LastError` in the notification popup window with title 'My Exception Handler'.

A modal dialog for the "Get last error" action is open, showing its description and variable output:

Get last error

(x) Retrieves the last error that occurred in the flow [More info](#)

> Variables produced `LastError`

Save Cancel

The "Variables" pane on the right lists the following variables:

- Input / output variables: 0
- Flow variables: 6
 - (x) AppProcessId
 - (x) AutomationWin...
 - (x) ButtonPressed
 - (x) ButtonPressed2
 - (x) ErrorLocation
 - (x) LastError

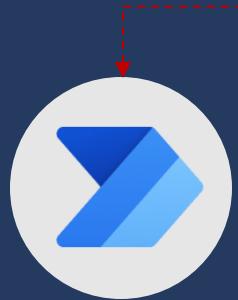
Status: Ready

1 Selected action 2 Actions 2 Subflows Run delay: 100 ms

Lab 11 (optional): Error handling (60 minutes)

Errors can be caught:

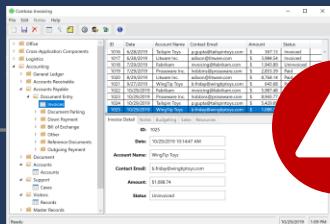
- At action level
- At group of actions (on block error)
- In cloud flow, at “Run a flow built with Power Automate for desktop” action



Power Automate
Cloud-based
Process automation



Power Automate for desktop
Robotic Desktop Automation



Error occurs

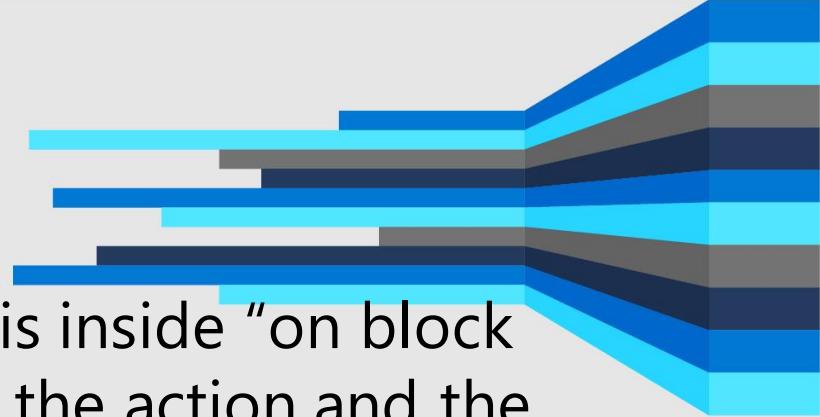
Legacy Software
Invoice Processing

Demo of lab 11: error handling inside Power Automate for desktop and Power Automate

Lab 10 review Tips & Tricks

Error handling

- ✓ If you configure error handling on an action level that is inside "on block error", then if exception occurs, both instructions from the action and the block level will be executed.
- ✓ If error handling inside desktop flow is configured to continue the flow, action "Run a flow built with Power Automate for desktop" inside cloud flow will complete successfully as well.
- ✓ If no error handling is configured, in case of exception, desktop flow will terminate with an error as well as action "Run a flow built with Power Automate for desktop" inside cloud flow that triggered it.
- ✓ When handling exceptions inside desktop flows, use "Get last error" action together with "Take screenshot" to gather as much details about the exception as possible.



(Optional)

Session 12: Monitor desktop flow runs and manage queues

Monitor desktop flow runs on machines or machine groups

Power Automate

Search for helpful resources

Environments

New machine New VM image (preview) Scale with Starter Kit

Machines

Check the real-time health and status of your machines and the desktop flows running on them. [Learn more](#)

Machine group name	Description	Machines	Flows running	Flows que...	Access	Owner
Invoicing	—	2	1	1	Owner	Poszy...
Procurement SAP	—	3	3	2	Owner	Poszy...
Test group	—	2	0	0	Owner	Poszy...

Machine group name Description Machines Flows running Flows que... Access Owner

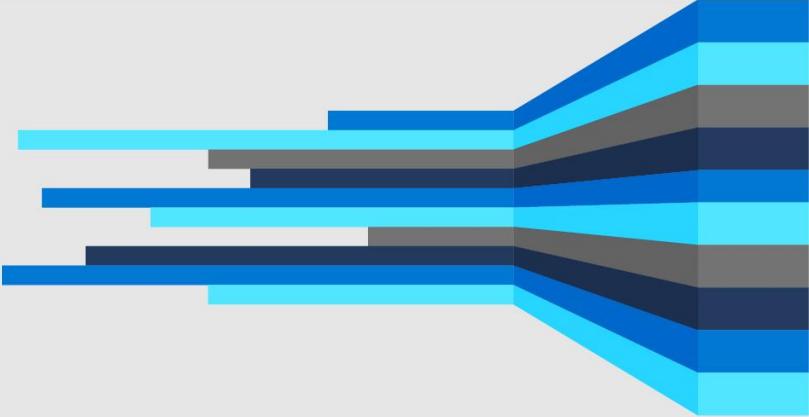
Invoicing — 2 1 1 Owner Poszy...

Procurement SAP — 3 3 2 Owner Poszy...

Test group — 2 0 0 Owner Poszy...

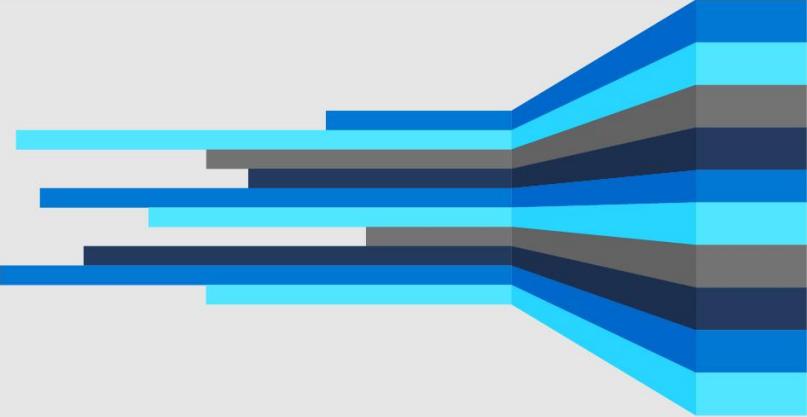
Home Action items My flows Create Templates Connectors Data Tables Connections Custom connectors Gateways Monitor Cloud flow activity Desktop flow runs Desktop flow queues Machines AI Builder

Manage queue and priorities



Queue	Desktop flow	Requested	Priority	Status	Run start	Parent flow
○	Enter data into invoice application	29 sec ago	High	Running	8 sec ago	Process shipping...
○	Create new Outlook task	30 sec ago	Normal	Running	23 sec ago	Process shipping...
1	Retrieve shipping information	29 sec ago	High	Next to run	---	Process shipping...
2	Find files containing existing text	29 sec ago	Normal	Queued	---	Process shipping...
3	Print document	29 sec ago	Normal	Queued	---	Process shipping...
4	Get folder size	29 sec ago	Normal	Queued	---	Process shipping...
5	Request manager approval for a selected file	29 sec ago	Normal	Queued	---	Process shipping...
6	Zip and email files	29 sec ago	Normal	Queued	---	Process shipping...

Troubleshoot desktop flow runs



Screenshot of the Microsoft Power Automate interface showing the "Desktop flow runs" section.

The left sidebar shows navigation options: Home, Action items, My flows, Create, Templates, Connectors, Data, Monitor (highlighted with a red box), Cloud flow activity, Desktop flow runs (highlighted with a red box), and Desktop flow queues.

The main area displays a table titled "Desktop flow runs" with the following columns: Requested, Desktop flow, Status, Run start, Run mode, Duration, and Parent flow.

Requested	Desktop flow	Status	Run start	Run mode	Duration	Parent flow
Mar 29, 08:21 AM (51 min ago)	open calculator	Failed	—	Attended	00 ms	test 11 17
Feb 18, 01:24 AM (1 mo ago)	Flow to share	Succeeded	Feb 18, 01:23 AM (1 mo ago)	—	00:00:02	—
Feb 13, 03:47 AM (1 mo ago)	FlowWithSensitiveInput	Succeeded	Feb 13, 03:47 AM (1 mo ago)	—	00:00:03	—
Feb 9, 07:03 AM (1 mo ago)	WA_06 - Search for a certain value in Excel and retrie...	Succeeded	Feb 9, 07:03 AM (1 mo ago)	—	00:00:12	—
Feb 9, 05:46 AM (1 mo ago)	WA_04 - Loop through Excel Data using indexes (Ex...	Failed	Feb 9, 05:46 AM (1 mo ago)	—	00:00:05	—
Feb 9, 05:42 AM (1 mo ago)	WA_04 - Loop through Excel Data using indexes (Ex...	Failed	Feb 9, 05:41 AM (1 mo ago)	—	00:00:06	—
Feb 9, 05:01 AM (1 mo ago)	Untitled	Succeeded	Feb 9, 05:00 AM (1 mo ago)	—	00:00:03	—

Lab 11 (optional): Monitor desktop flow runs (60 minutes)

- Monitor desktop flow runs
- Review runs queue
- Change queued desktop flows order
- Set execution priority
- Cancel desktop flow execution



Power Automate

Cloud-based
Process automation



Outlook

Get message priority
and use as desktop flow
priority



Power Automate for desktop

Robotic Desktop Automation

Queue	Desktop flow	Requested	Priority	Status	Run start	Run end
1	Enter data into application	20 min ago	High	Pending	4 hr ago	Power Automating
2	Create new Outlook task	20 min ago	Normal	Running	4 hr ago	Power Automating
3	Remove shipping information	20 min ago	Normal	Not yet run	—	Power Automating
4	Find files containing existing text	20 min ago	Normal	Queued	—	Power Automating
5	Get file size	20 min ago	Normal	Queued	—	Power Automating
6	Get folder size	20 min ago	Normal	Queued	—	Power Automating
7	Request manager approved for a selected file	20 min ago	Normal	Queued	—	Power Automating
8	Zip or unzip file	20 min ago	Normal	Queued	—	Power Automating
9	Print document	20 min ago	Normal	Queued	—	Power Automating
10	Get file date	20 min ago	Normal	Queued	—	Power Automating
11	Request manager approved for a selected file	20 min ago	Normal	Queued	—	Power Automating
12	Zip or unzip file	20 min ago	Normal	Queued	—	Power Automating

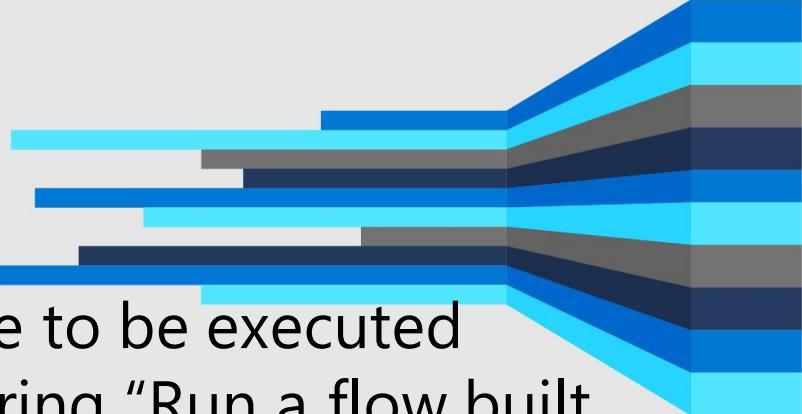
Monitor

Use Monitor and runs queue
to see desktop flows
execution queue
and details about each instance

Demo of lab 12: monitoring desktop flow runs and managing runs queue

Lab 11 review Tips & Tricks

monitor machines and run queues



- ✓ If you have important desktop flows that you would like to be executed before others, set their priority to “High” when configuring “Run a flow built with Power Automate for desktop” action.
- ✓ Use runs queue to change order of desktop flows execution that are waiting in the queue.
- ✓ Use Monitor to review execution logs, including errors, input and output data at each action, and to get more details about each desktop flow instance.
- ✓ If you would like to cancel desktop flow that is already running, go to Monitor and cancel it there.

(Optional)

Session 12:

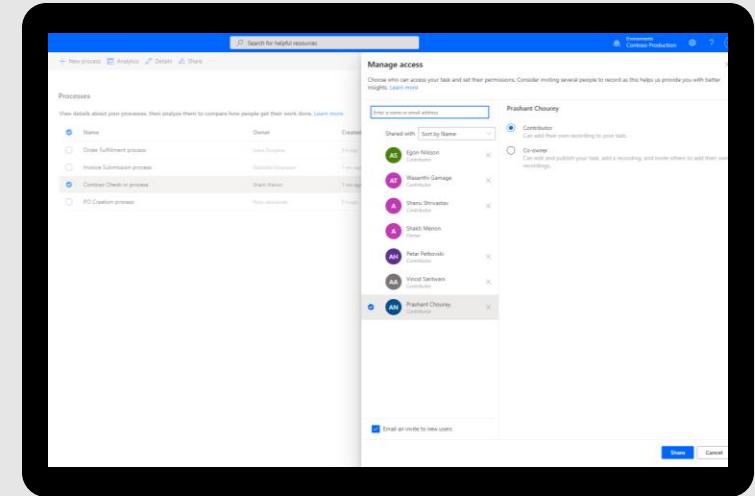
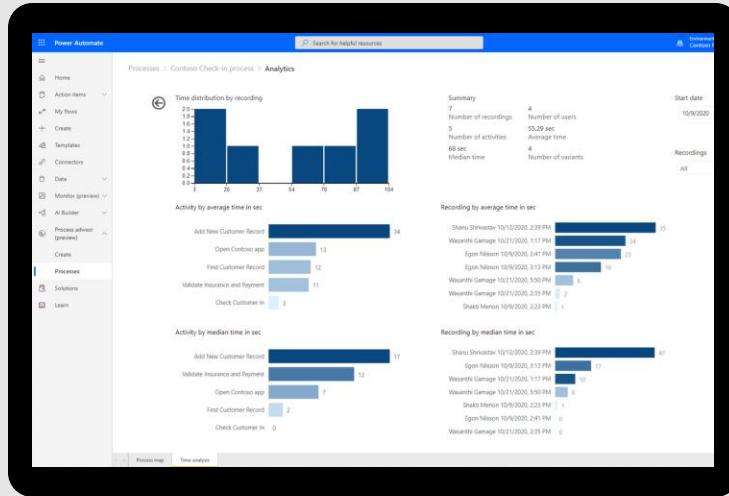
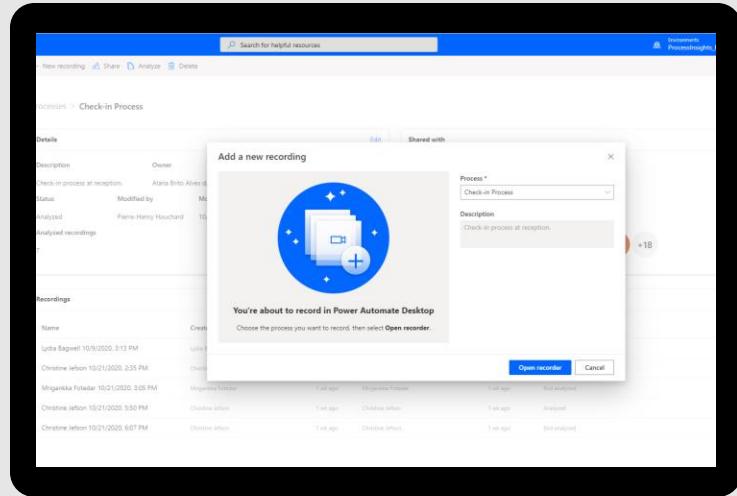
Identify automation opportunities using Process advisor



Introducing Process advisor

Introducing Process advisor

Enabling automation for everyone to optimize how they work



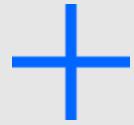
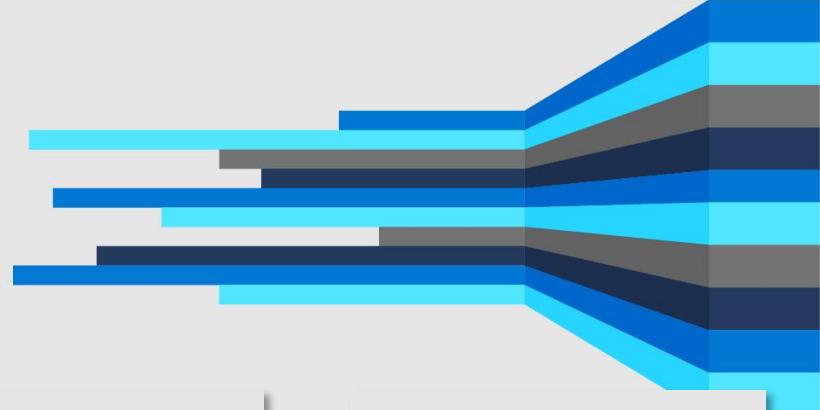
Get started quickly with the intuitive interface for capturing and recording your tasks.

Gain deeper insights on processes and break down complex processes.

Discover new ways of working and drive collaboration.

5 easy steps to get started

Start turning processes into reality with process advisor



Create

Set up a new process and identify potential areas of opportunity for automation.



Share

Invite colleagues to collaborate and add new recordings.



Record

Record the actions either you or your colleagues take to complete the process at hand.



Annotate/Edit

Remove sensitive information, then group your actions into meaningful activities.



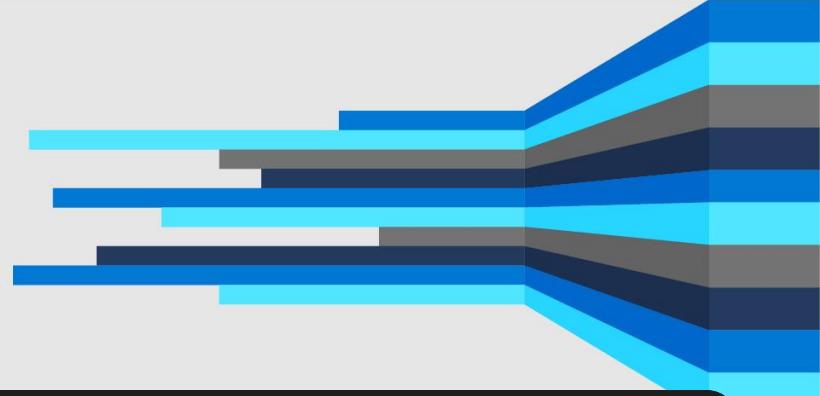
Analyze

Generate a process map so that you can analyze it and get insights.



Microsoft
Power Automate

Click to edit Master title style



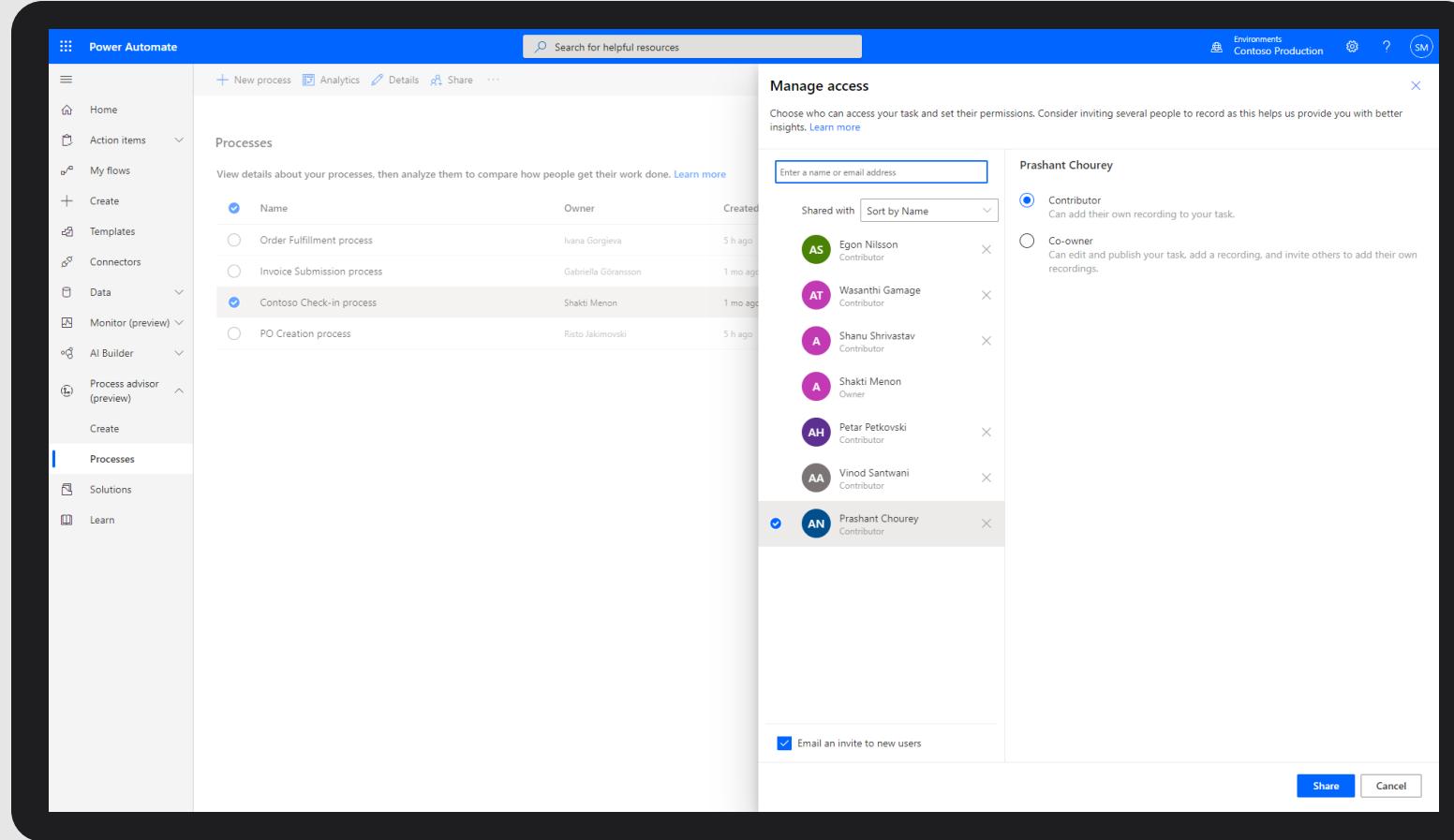
- Import existing event logs and analyze
- Record processes for detailed steps of any process
- Easy to use, intuitive interface

A screenshot of the Microsoft Power Automate desktop application. The main interface shows sections for "Optimize your business processes", "Build a process", "Add to a process", and "Learning more about processes". A modal window titled "Add a new recording" is open in the center, featuring a large blue circular icon with a video camera and plus sign, and the text "You're about to record in Power Automate Desktop". It includes a dropdown menu labeled "Process * Choose a process" and buttons for "Open recorder" and "Cancel".

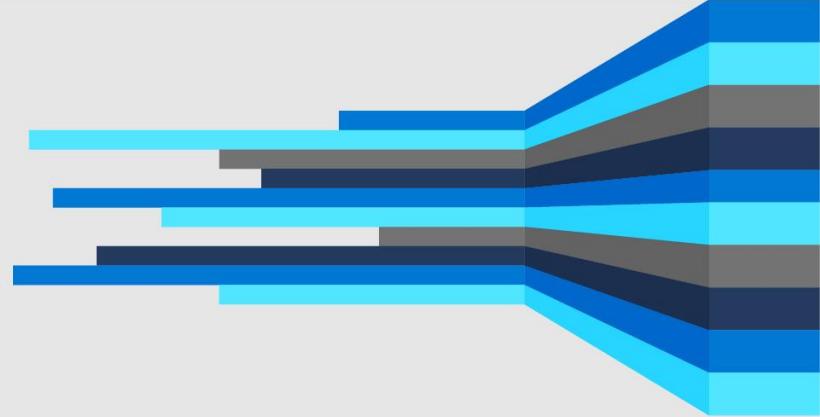


Microsoft
Power Automate

Click to edit Master title style



The screenshot shows the Microsoft Power Automate interface. On the left, the navigation bar includes Home, Action items, My flows, Create, Templates, Connectors, Data, Monitor (preview), AI Builder, Process advisor (preview), Create, Processes, Solutions, and Learn. The Processes item is selected. In the center, the 'Processes' section lists several processes: Order Fulfillment process, Invoice Submission process, Contoso Check-in process (which is selected), and PO Creation process. The Contoso Check-in process was created by Shakti Menon 1 month ago. On the right, the 'Manage access' dialog box is open, titled 'Prashant Chourey'. It asks 'Choose who can access your task and set their permissions. Consider inviting several people to record as this helps us provide you with better insights. [Learn more](#)'. A search bar at the top of the dialog box contains 'Enter a name or email address'. Below it, a dropdown menu shows 'Shared with' and 'Sort by Name'. A list of users is shown, each with a small profile icon and their name and role: Egon Nilsson (Contributor), Wasanthi Gamage (Contributor), Shantu Shrivastav (Contributor), Shakti Menon (Owner), Petar Petkovski (Contributor), Vinod Santwani (Contributor), and Prashant Chourey (Contributor). The user 'Prashant Chourey' is highlighted with a blue selection bar. At the bottom of the dialog box is a checkbox for 'Email an invite to new users' and two buttons: 'Share' and 'Cancel'.



Include multiple recordings from
you and your colleagues

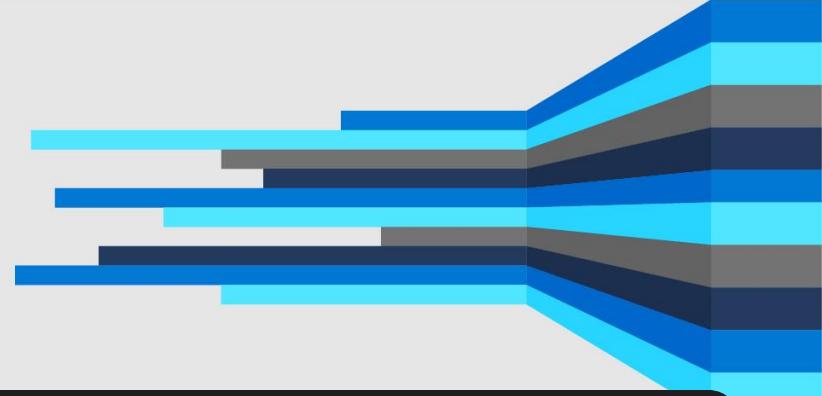


Share processes and collaborate



Microsoft
Power Automate

Click to edit Master title style



Easily group steps and keep
standardized with existing groups



Manage sensitive data

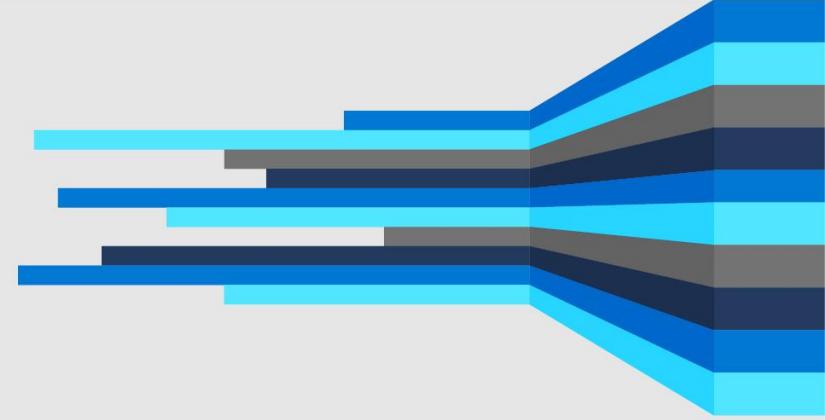
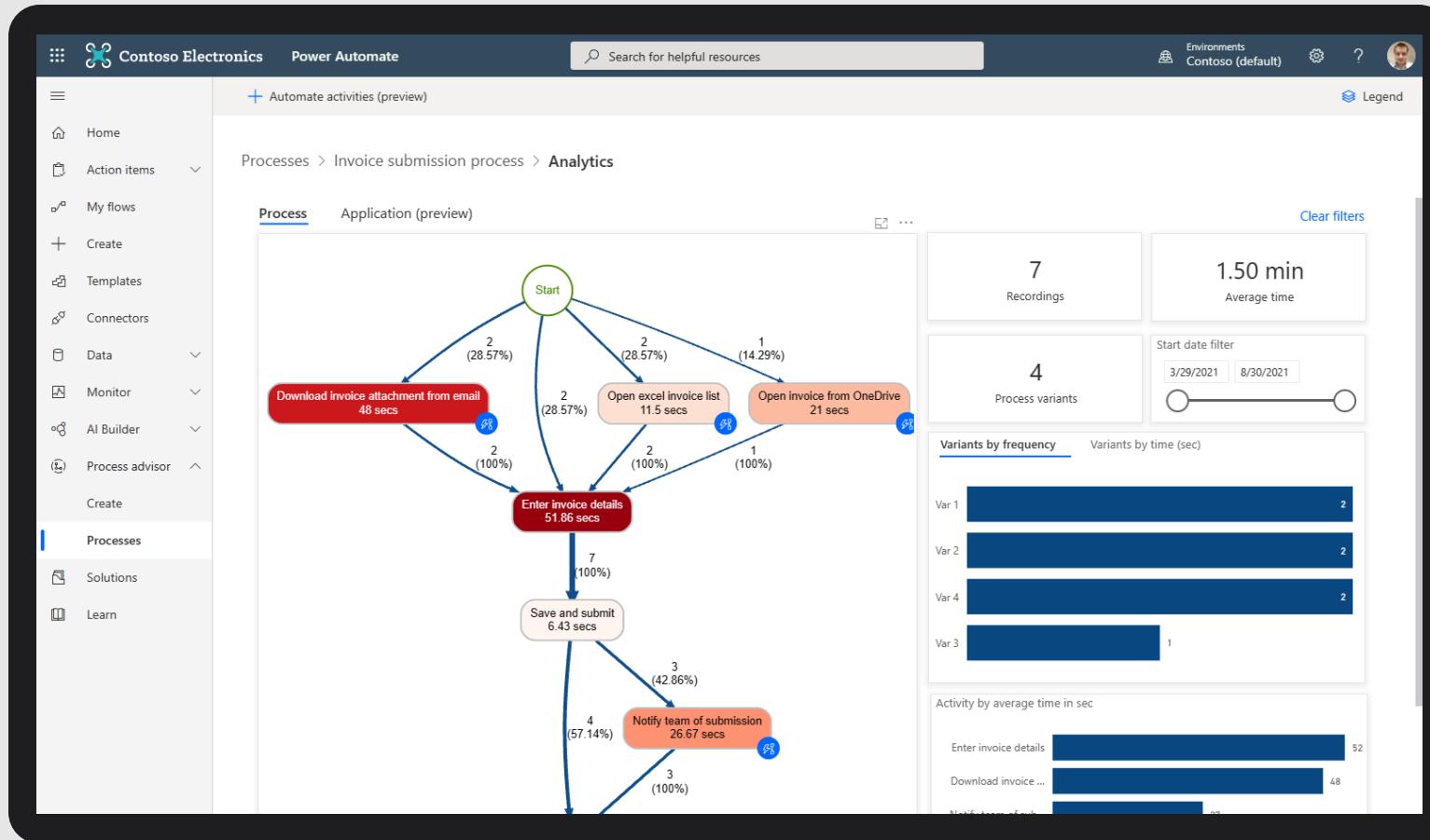
The screenshot shows the Microsoft Power Automate interface. On the left is a navigation sidebar with options like Home, Action items, My flows, Create, Templates, Connectors, Data, Monitor, AI Builder, Process advisor (preview), Create, Processes, Solutions, and Learn. The 'Processes' option is currently selected. The main area displays a recording of a process named 'Preston Morales 11/29/2020, 7:41 PM'. The recording details are as follows:

Time	Action	Details
07:43:08 PM	Click UI element in window	Tree Item 'LegacyInvoicingApp.Models.FolderModel' in Window 'Contoso Invoicing'
07:43:17 PM	Populate text field in window	Edit 'TextBox' in Window 'Contoso Invoicing'; Text: 'Joe smith llc'
07:43:21 PM	Populate text field in window	Edit 'TextBox' 2 in Window 'Contoso Invoicing'; Text: 'Joe smith'
07:43:31 PM	Populate text field in window	Edit 'TextBox' 3 in Window 'Contoso Invoicing'; Text: 'joesmith@joesmith.com'
07:43:34 PM	Click UI element in window	Window 'Contoso Invoicing'
07:43:39 PM	Click UI element in window	Image 'Image' in Window 'Contoso Invoicing'
07:43:41 PM	Click UI element in window	Image 'Image' 2 in Window 'Contoso Invoicing'
07:43:45 PM	Press button in window	Power Automate Recorder - 1 running window in Quick Launch Bar

On the right side of the interface, there is a 'Group name' input field containing 'Check In Customer', a 'Save' button, and a note saying 'Ready to analyze'. Below these are 'Quick tips' with the following bullet points:

- Select a published group, or create a new one.
- Try to create a simple and meaningful name, such as "Download invoice attachment" or "Enter invoice details".
- To see a group on the process map, publish the process first.
- Deleting a group will only remove it from this recording.

Click to edit Master title style



Identify inefficiencies and areas for potential automation

Use default analytics to gain insights

View the end-to-end visualization

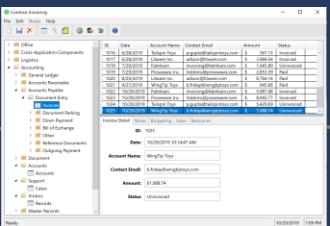


Microsoft
Power Automate

Click to edit Master title style



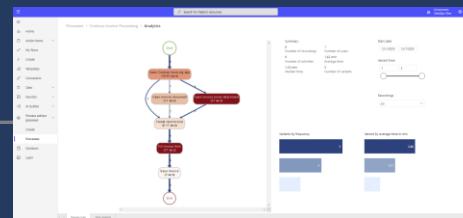
- Record Contoso Invoicing interactions
- Edit recording transcripts and add groups
- Analyze process performance, identify bottlenecks and gain insights
- Prepare for automation



Contoso Invoicing
Legacy Application



Power Automate
Recording



Process advisor
Analytics

Session 13: Summary

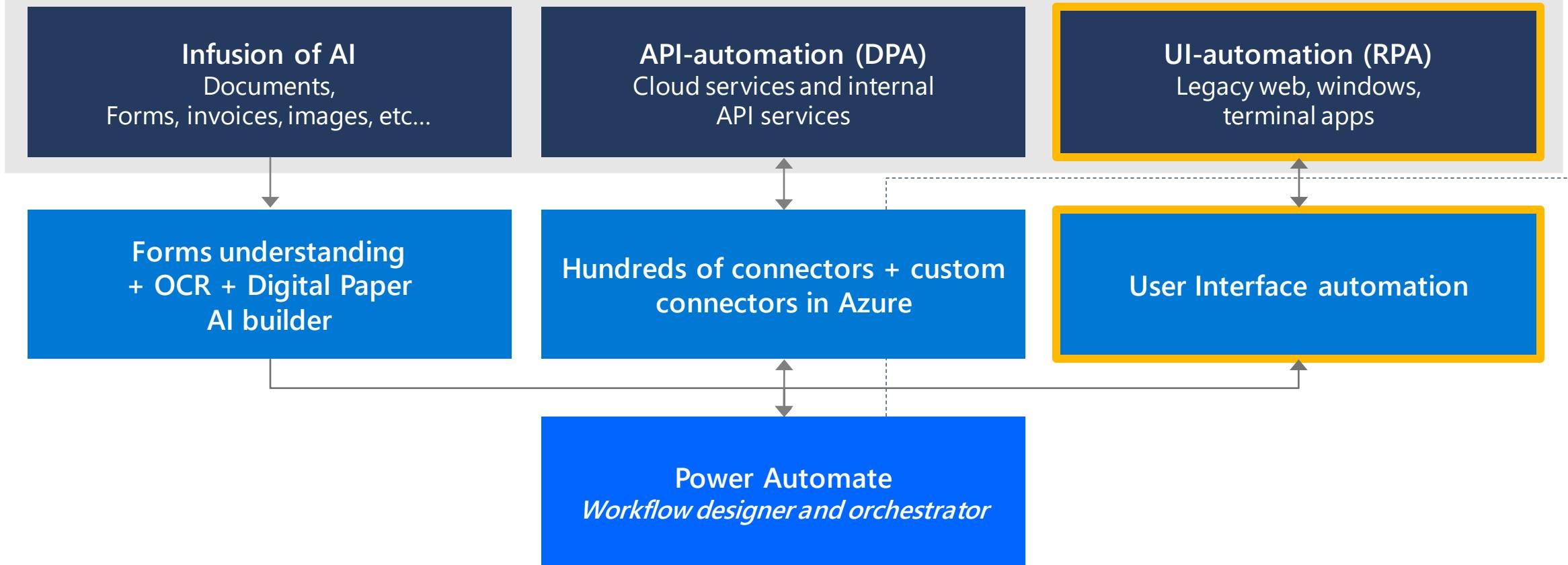
Power Automate RPA Licensing & Roadmap

Completing the automation portfolio w/RPA



Diverse interfaces

AI, cloud services (APIs), and legacy UI-based systems



Language support

- **Support for UI localization**

Does not include right-to-left languages (Arabic, Hebrew, etc.)

Languages	Locale
Bulgarian (Bulgaria)	bg-BG
Catalan (Catalan)	ca-ES
Czech (Czech Republic)	cs-CZ
Danish (Denmark)	da-DK
German (Switzerland)	de-ch
German (Germany)	de-DE
Greek (Greece)	el-GR
English (Australia)	en-au
English (Canada)	en-ca
English (United Kingdom)	en-gb
English (Ireland)	en-ie
English (India)	en-in
English (New Zealand)	en-nz
English (Singapore)	en-sg

Languages	Locale
English (United States)	en-US
English (South Africa)	en-za
Spanish (Spain, International Sort)	es-ES
Spanish (Latin America)	es-mx
Estonian (Estonia)	et-EE
Basque (Basque)	eu-ES
Finnish (Finland)	fi-FI
French (Belgium)	fr-be
French (Canada)	fr-ca
French (Switzerland)	fr-ch
French (France)	fr-FR
Galician (Galician)	gl-ES
Hungarian (Hungary)	hu-HU
Indonesian (Indonesia)	id-ID

Languages	Locale
Italian (Italy)	it-IT
Japanese (Japan)	ja-JP
Kazakh (Kazakhstan)	kk-KZ
Korean (Korea)	ko-KR
Lithuanian (Lithuania)	lt-LT
Latvian (Latvia)	lv-LV
Malay (Malaysia)	ms-MY
Norwegian, Bokmål (Norway)	nb-NO
Dutch (Belgium)	nl-be
Dutch (Netherlands)	nl-NL
Polish (Poland)	pl-PL
Portuguese (Brazil)	pt-BR
Portuguese (Portugal)	pt-PT
Romanian (Romania)	ro-RO

Languages	Locale
Russian (Russia)	ru-RU
Slovak (Slovakia)	sk-SK
Slovenian (Slovenia)	sl-SI
Serbian (Cyrillic, Serbia and Montenegro (Former))	sr-Cyrl-CS
Serbian (Latin, Serbia and Montenegro (Former))	sr-Latn-CS
Swedish (Sweden)	sv-SE
Thai (Thailand)	th-TH
Turkish (Turkey)	tr-TR
Ukrainian (Ukraine)	uk-UA
Vietnamese (Vietnam)	vi-VN
Chinese (Simplified, PRC)	zh-CN
Chinese (Traditional, Hong Kong S.A.R.)	zh-HK
Chinese (Traditional, Taiwan)	zh-TW

Licensing

<https://powerautomate.microsoft.com/pricing/>

Power Automate offers

Best for businesses that want predictable licensing with per-user or per-bot plans

Power Automate Premium	Power Automate Process
\$15 per user/month	\$150 per bot/month ⁶
Enables licensed users to automate modern applications via API-based digital process automation (cloud flows) and legacy applications via UI-based robotic process automation (desktop flows) in attended mode.	Licenses a single "automation" bot that can be used for unattended desktop automation (RPA), or a digital process automation (DPA) flow that can be accessed by unlimited users in the organization.
<ul style="list-style-type: none">Unlimited cloud flows (DPA) and desktop flows (RPA) in attended mode50 MB Power Automate Process Mining data storage¹5,000 AI Builder creditsDataverse entitlements of 250 MB database and 2 GB file	<ul style="list-style-type: none">Cloud flows (DPA)Desktop flows (RPA) in unattended modeDataverse entitlements of 50 MB database and 200 MB file

Buy now >

Buy now >

Pay-as-you-go plans

Best for businesses that want the flexibility to pay only when a flow runs³

License by flow run	License by flow run	License by flow run
\$0.60 per flow run ⁴	\$0.60 per flow run ⁴	\$3 per flow run ⁴
Pay for each cloud flow run	Pay for each desktop flow (attended mode) run	Pay for each desktop flow (unattended mode) run
Includes the following:	Includes the following:	Includes the following:
<ul style="list-style-type: none">Cloud flows (DPA)	<ul style="list-style-type: none">Desktop flows (RPA) in attended mode	<ul style="list-style-type: none">Desktop flows (RPA) in unattended mode

¹Pricing information provided above is intended solely to be a non-binding estimate as of the date this guidance is provided. It does not constitute an offer by Microsoft. The actual pricing will be reflected on the EA Price List.

Session 14 (optional)

Innovation backlog app

Use the Innovation Backlog app to manage app and flow ideas

The Center of Excellence wants to ensure the most impactful and valuable scenarios are selected for development. They want to ensure ideas are submitted via a standard process that gathers information on personas, tools, and pain points.

A canvas app can be used by everyone in the organization to describe their ideas and pain points, or vote on existing ideas.

For more information:

[Use the Innovation Backlog app to manage app and flow ideas - Power Platform | Microsoft Docs](#)

[Set up Innovation Backlog components - Power Platform | Microsoft Docs](#)

Business team add a new idea

Power Apps Innovation Backlog

Submitted Ideas

	Edit Email voters Email creators Share Send for testing Get feedback on solution	
+ Add idea		
Supplier Invoice Processing Developer Owner: Available Not configured 108.7 hours/month Complexity	Idea Supplier Invoice Processing Remove like Pain Points Time Consuming Manual Work, Error Prone, Data Loss Estimated return on investment Not Configured 108.7 hours/month Complexity Complexity Keywords invoice, excel Tools 	Number of Likes: 1 Status New Edit status Developer Owner Available Edit dev owner Being developed for + Add team repro Finance

CoE pick an idea for development

The screenshot shows a Microsoft Power Apps interface for an 'Innovation Backlog' item. At the top, there's a purple header bar with the title 'Power Apps | Innovation Backlog'. Below it is a toolbar with icons for back, forward, cancel, and send. The main area is a draft email window. The 'To' field contains three email addresses: AdeleV@PPlatform.OnMicrosoft.com, LeeG@PPlatform.OnMicrosoft.com, and AdeleV@PPlatform.OnMicrosoft.com. The 'Subject' field is set to 'Please provide feedback on work for: Invoice Processing3'. The 'Body' field contains a message and a bulleted list:

Hello, A solution for this Innovation Backlog item is now ready for your feedback. [Invoice Processing3](#)
You are listed as an interested party and as such I wanted to reach out for you to take a look:

- In order to gain access to the solution, please do the following:
- You should expect to see improvements to the following measures:
- The following measures are not yet improved:

Vote on ideas and add your own scenario

Submitted Ideas

	Search	Edit	Email voters	Email creators	Share
+ Add idea					
Automate Environment Developer Owner: Available \$20,000.00 /month 0.2 hours/month Not Configured	Idea Automate Environment Provisioning	Being developed for + Add team repro			An app that will collect information about the
Customer Feedback Developer Owner: Available \$12,777.00 /month 103.3 hours/month 25 Complexity	Pain Points Time Consuming Manual Work, Processing Delays				
Find the Expert Developer Owner: Available \$4,953.00 /month 38.1 hours/month 28 Complexity	Estimated return on investment \$20,000.00 /month 0.2 hours/month	Number of Likes: 1 Add like	Status New		
Make the Awesomizer actually Developer Owner: Available \$836.54 /month	Complexity Not Configured		Edit status	Developer Owner Available	
	Keywords Power Platform Environment			Edit dev owner	
	Tools 				

Join the Power Automate Community



[Microsoft Power Automate Community](#)



Follow all the latest Power Automate news on the [Power Automate Blog](#)



Automate IT - Power Automate RPA Patterns and Practices [YouTube Channel](#)



[Monday & Tuesday Video Series on YouTube](#)



[Power Automate Product Roadmap](#)

Group discussion and feedback

Group discussion – How can we help you?

1

How will you be integrating these products within your business?

2

How do you see the business potential?

3

How do you see us vs. our competitors?

4

What are the biggest challenges/risks you will face when scaling these solutions? How can we help?

5

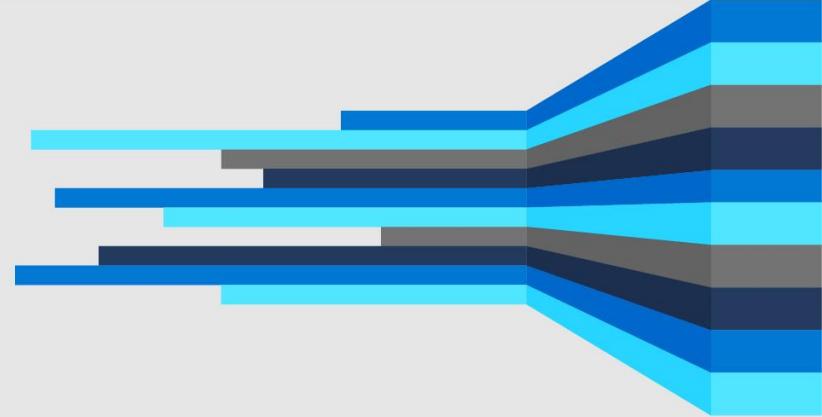
What else do you need from us to be successful?



Thank you!

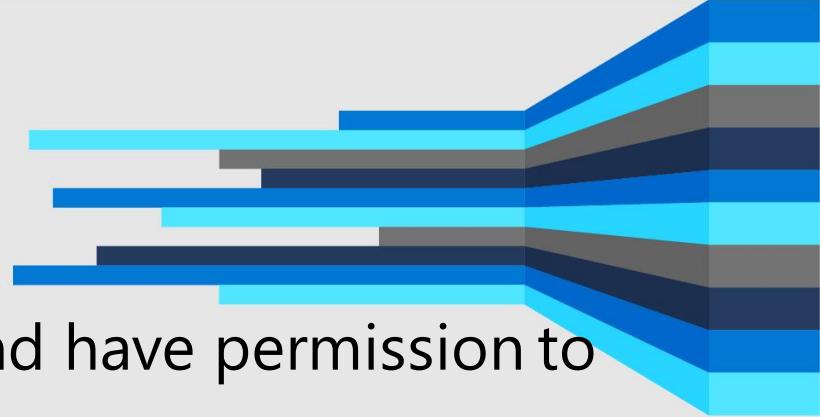
APPENDIX: Desktop flows Tips, Tricks and Troubleshooting

Desktop flows Tips and tricks

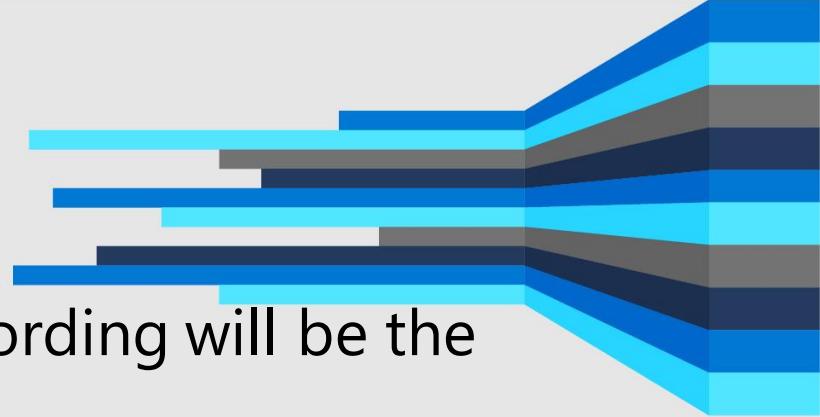


- Installing
- Recording
- Playback
- Edit and optimize
- Monitor the run
- Machine registration and groups
- Desktop flow Connection
- Unattended
- Web desktop flows
- Use the full power of Cloud + desktop flows

Installing

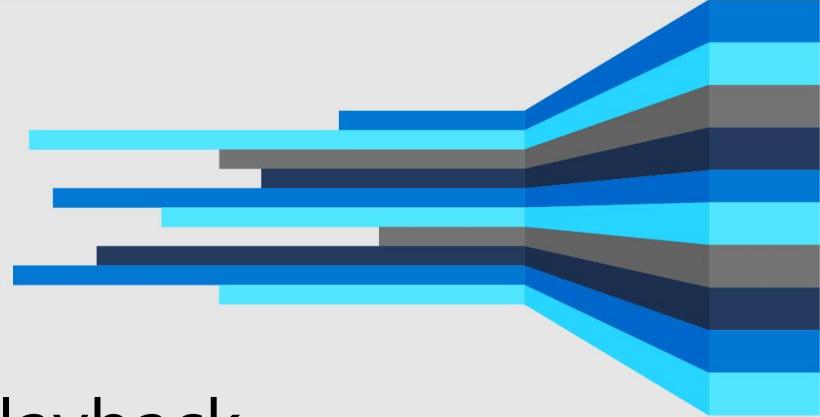
- 
- ✓ Have a computer of Win10 or Win server 2016/2019 and have permission to install apps on it.
 - ✓ For browsers, use Edge (chromium) or Chrome.
 - ✓ Need to restart browser after installing.
 - ✓ Make sure Power Automate for desktop app is running (not the dark color icon in the task bar, but a white color icon).
 - ✓ Double check if the web extensions are enabled after installing Power Automate for desktop:
 - For desktop flow, you need one web extension "**Microsoft Power Automate for desktop**".
 - You don't need to uninstall then reinstall. You can upgrade directly.
 - ✓ To run the desktop flow from a cloud flow, you also need to register the machine and create a desktop flow connection.

Recording



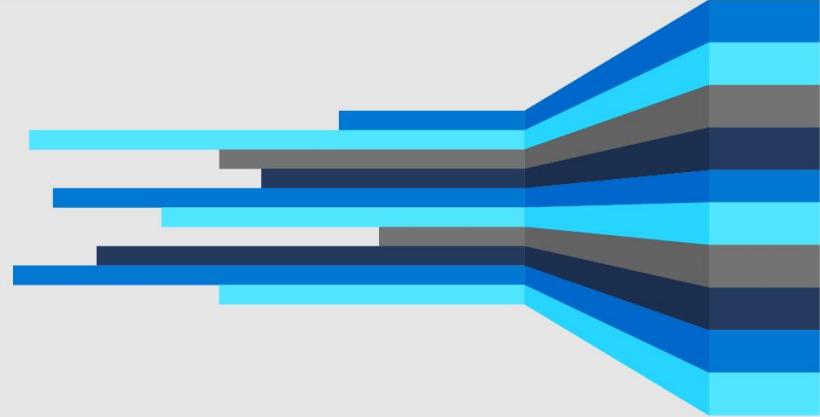
- ✓ Ensure that the keyboard layouts you use during recording will be the same as for playback.
- ✓ Use shortcuts instead of clicking. For instance, copy paste with `ctrl + c` & `ctrl + v` instead of right click copy.
- ✓ Use “enter static text” if you are working with strings for better readability.
- ✓ When you insert text into a field that already has text inside, you should click `ctrl + A` and `backspace` to clear up the field first.
- ✓ Playback uses accessibility by default, can fallback to coordinate as well if you turn it on:
 - Use a standard resolution and scale setting that across your recording and playback devices.
 - Maximize the application window that you are recording.
 - Finish the recording in one monitor if possible.

Playback



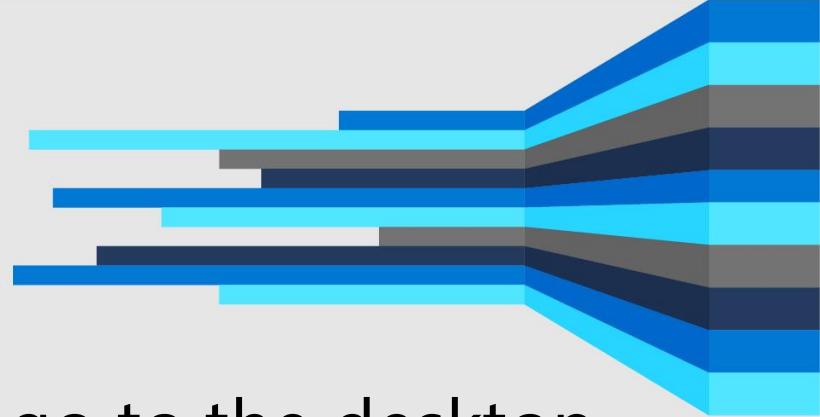
- ✓ Do not use the keyboard and mouse during playback.
- ✓ Try to adjust your app to have the same initial state as during recording time.
- ✓ Use the same keyboard and locale setting as during recording time.
- ✓ If you are using coordinate offset fallback:
 - Current coordinate-based fallback is conservative and ensures the control is same as what was recorded, including the size.
 - Use the same resolution and scale setting as recording time.
 - Maximize the app size to minimize disruption.

Edit and optimize your desktop flow



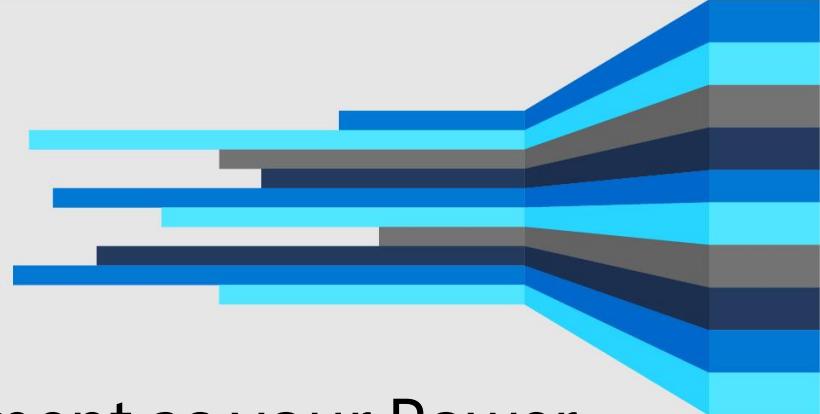
- ✓ Adjust the wait time in the designer. By default, the script waits as long as the recording process took.
- ✓ By default, desktop flows launches applications. You can edit the script to change if you want to launch or attach the app.
- ✓ Enable coordinate-based playback if you know your app is safe to be used in that mode.
- ✓ Add validation and error handling using advanced editor.

Monitor the run



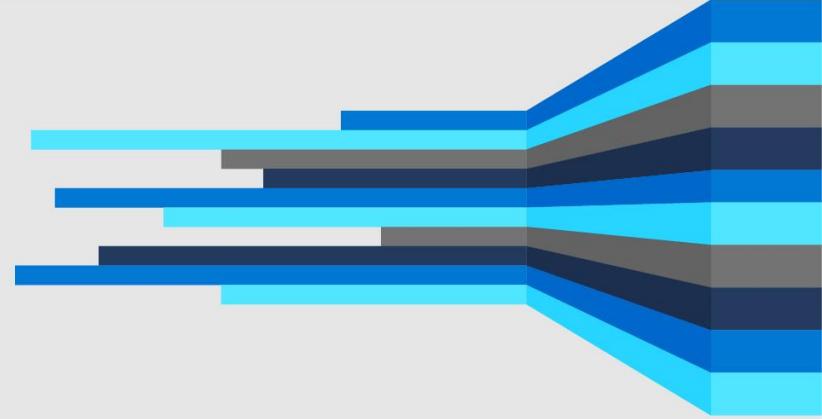
- ✓ If the flow run failed at the desktop flow step, go to the desktop flow page to look up run history from there to see detail error messages.

Machine registration key points



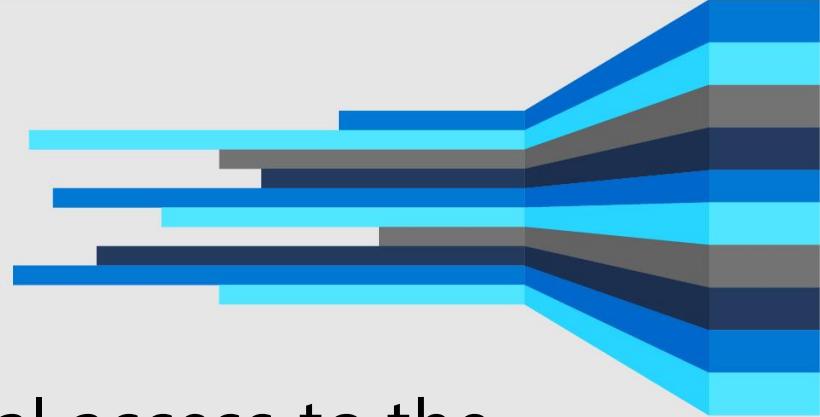
- ✓ Machine must be registered in the same environment as your Power Automate desktop flow. This is necessary to ensure data moving between the service and machine honors data sovereignty rules.
- ✓ Use the same account that you are logging into portal to setup the machine.
- ✓ If you need to switch environment, you must re-register machine.
- ✓ If you only need to switch an account, you can just log in using the new account.
- ✓ Machine will be online even if you're not logged in. You can check its status from the portal.

Machine groups



- ✓ Group is a set of machines.
- ✓ The group name can be any. Other machines are just added to this existing group (cluster).
- ✓ From the portal groups details page, you will see the other machines in this group.
- ✓ On the portal machines page, you can configure the group to run in distributed mode by toggle **Run on all machines in group**.
- ✓ If you are using local windows accounts, all VMs in the group must have the same local account with the same password, those are the credentials you should use when creating the desktop flow connection.

Desktop flow Connection



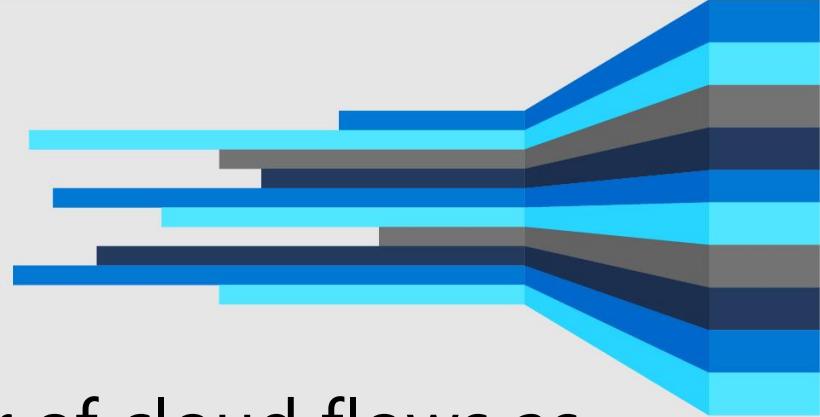
- ✓ Use a user account and password that has local access to the registered machine.
- ✓ Desktop flows supports local machine accounts, Active Directory accounts for AD domain-joined machines and Azure AD accounts for Azure AD-managed machines. Microsoft Account (MSA) is not supported.
- ✓ Make sure to check that you are using the correct connection if your desktop flow did not run successfully.
- ✓ When registering a machine, you can as well add it to an existing group.

Unattended



- ✓ Unattended mode executes when user is not signed in. Remember to log off from the session (lock the screen is not enough) when running in unattended mode – you should type “logoff” from the windows command bar and select it if you’re working on the machine yourself.
- ✓ You can distribute unattended desktop flow to a group of machines to fully utilize the resource pool capacity.
- ✓ Make sure the machine shows online (so the VMs are turned on)
- ✓ Troubleshooting sequences:
 1. Desktop flow testing -> make sure your desktop flow app and extension are installed and enabled.
 2. Attended flow testing -> make sure the connection is correct, machine is online and execute the run in attended mode
 3. Unattended flow testing.

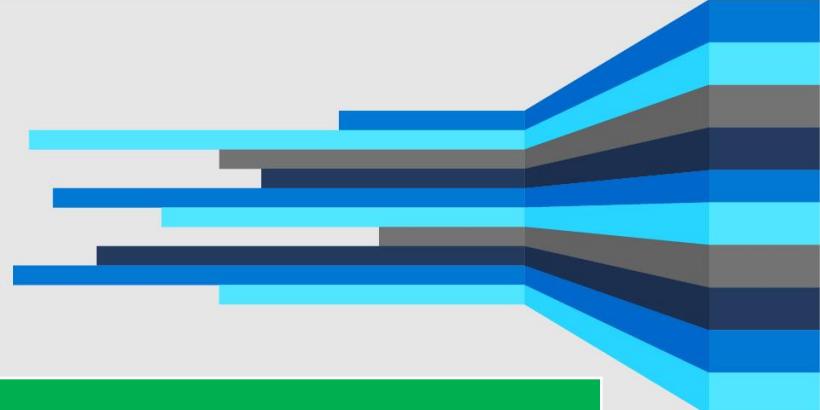
Use the full power of cloud + desktop flows



Desktop flows are not standalone. Use the power of cloud flows as well. This includes:

- Loops, use the loops on cloud flows.
 - Loops can also execute in parallel, enabling you to run desktop flows in parallel on a cluster
 - Loops also supported in Power Automate for desktop and are useful for local processing
- Passing parameters into the desktop flow and retrieving outputs
 - Pass in usernames and passwords
 - Retrieve generated identifiers for use in additional API calls or to report to the user
- Connecting to data sources such as LOB apps, SQL, Excel.
- Etc.

When to use desktop or cloud flows



	When to use
cloud flow	<ul style="list-style-type: none">• Higher reliability than UI automation• Runs in the Power Automate service at planet scale• Resistant to software UI updates• Hundreds of connectors available, no-code custom connectors can be created
desktop flow	<ul style="list-style-type: none">• When APIs are not available• Easy to create, driving high ROI & user reach within corporations