Microsoft Power Platform

Empowering RPA enthusiasts: "Harnessing the potential of Power Automate"

Speakers

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Christine Jefson
Gautier Chastan
Joe Fernandez
Soufiane Loukili
Dieter De Cock
Jay Padimiti
Ashwin Raju Krishnamurthi
Grant Archibald

Welcome!

1. Go to https://aka.ms/mppc23-rpa-labs
2. Start lab 1 (pre-requisites)

Workshop account password:
"**Mppc23rpa**"

If you're having issues installing the app on your machine, please let us know

Module	Timing	ID	Session	Lab	Timing
Part 0: Pre setup work office hours	8:00 - 9:00	0	Environment and account check. Setup lab, troubleshooting		60 minutes
Workshop officially starts here					
Part I: Introduction	09:00 - 9:30	1	Lab prerequisites 1 – Install required software	Lab 1	30 minutes
	9:30 - 09:50	2	Introduction to RPA, Power Automate and Desktop flows		20 minutes
Part II: Desktop flows basic	09:50 - 10.20	3	Create your first Power Automate Desktop flow	Lab 2	30 minutes
	10:20 – 10:50	4	Use input and output parameters	Lab 3	30 minutes
Break (10 minutes)					
Part III: Desktop flow Web and Office integration	11:00 – 12:00	5	Subflows, Excel and Web automation, AIBuilder with GPT action	Lab 4	60 minutes
Lunch break (60 minutes)					
Part IV: Hyperautomation	13:00- 13:30	6	Cloud integration (Outlook Trigger)- Machine connection & Attended run	Lab 5	30 minutes
	13:30 - 14:00	8	Intelligent automation: AI builder	Lab 6	30 minutes
		9	(Optional) Integration with Teams for Approvals	Lab 7	30 minutes
Break (10 minutes)					
Part V: Scale your automations and infrastructure	14:10 - 14:40	10	Hosted machines and unattended automation	Lab 8	30 minutes
	14:40 - 15:10	11	Monitor or troubleshoot desktop flow runs and machines	Lab 9	30 minutes
Part VI: Closing	15:10 - 16:00	12	Licensing update, Q&A		50 minutes

Part I
Introduction

Lab 1
Prerequisites - Install required software

30 minutes

Microsoft Power Platform

The world's most complete set of integrated, low-code development tools

Power Apps

for
web and mobile
application
development

Power Automate

for
process
or workflow
automation

Power Virtual Agents

for
chatbots and
conversational
agents

Power Pages

for
building secure,
data-centric
business websites

Power BI

for
data exploration,
analytics and
reporting

Data connectors

AI Builder

Microsoft Dataverse

Power Fx

Managed Environments

Microsoft Power Automate

The world's most complete intelligent automation solution
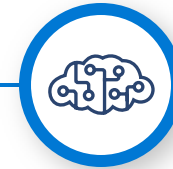**now with AI copilot powered by GPT**

Digital Process Automation (DPA) allows resilient, cloud-native automation through the creation of cloud flows

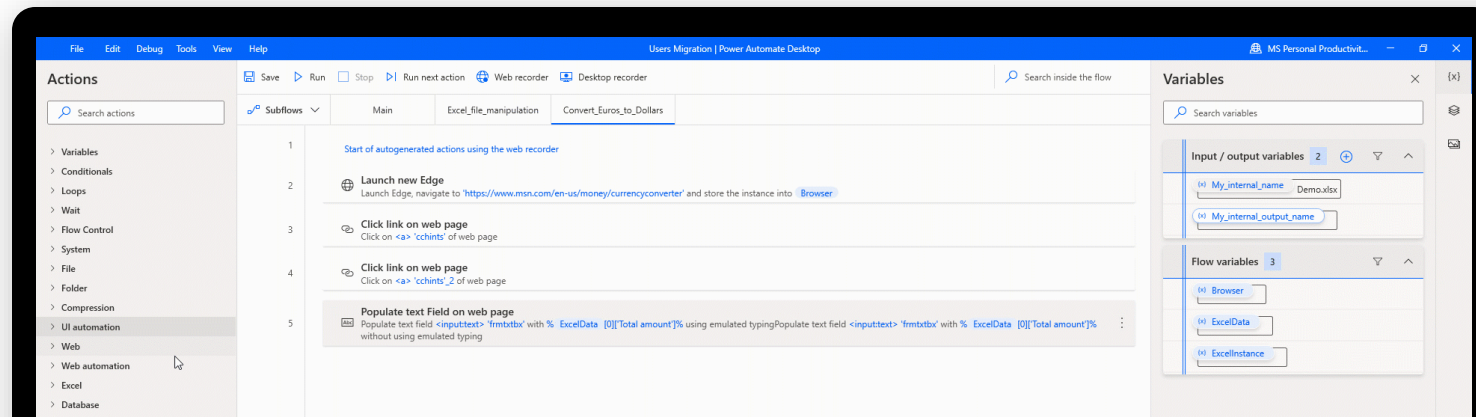**Business Process Automation (BPA)** streamlines complex processes for end users at scale
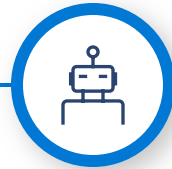
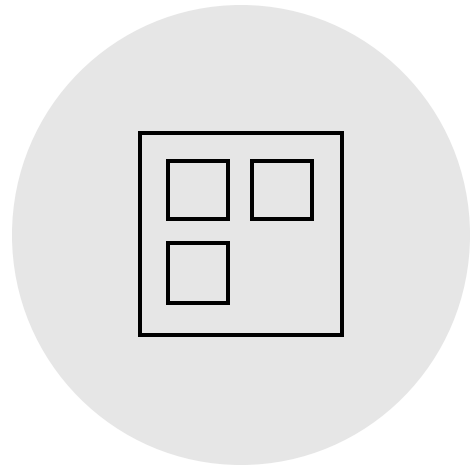**Robotic Process Automation (RPA)** uses robots that emulate human actions to automate activities

AI Builder creates intelligent automated workflows

Process/Task Mining enables users to visualize processes and gain deep insights into opportunities to optimize
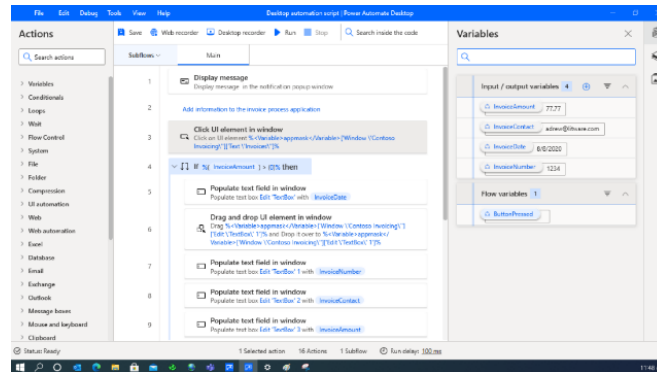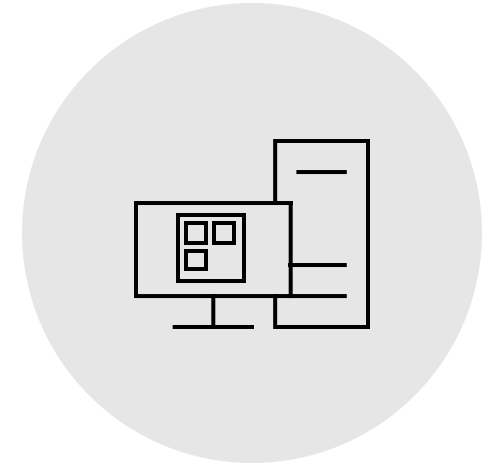
Power Automate:
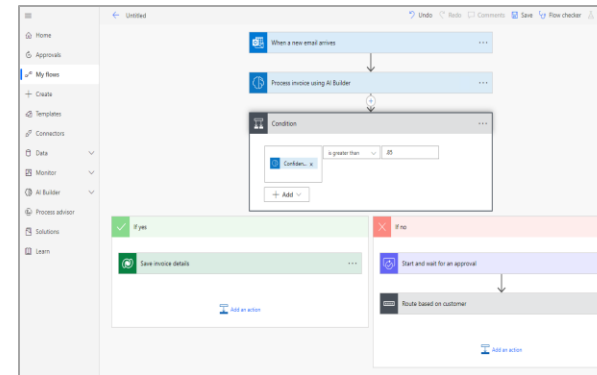Cloud and Desktop flows

Old apps without APIs

Desktop flows RPA

Power Automate bridges the gap, across on-premises and cloud

Modern Systems with APIs

Cloud flows DPA
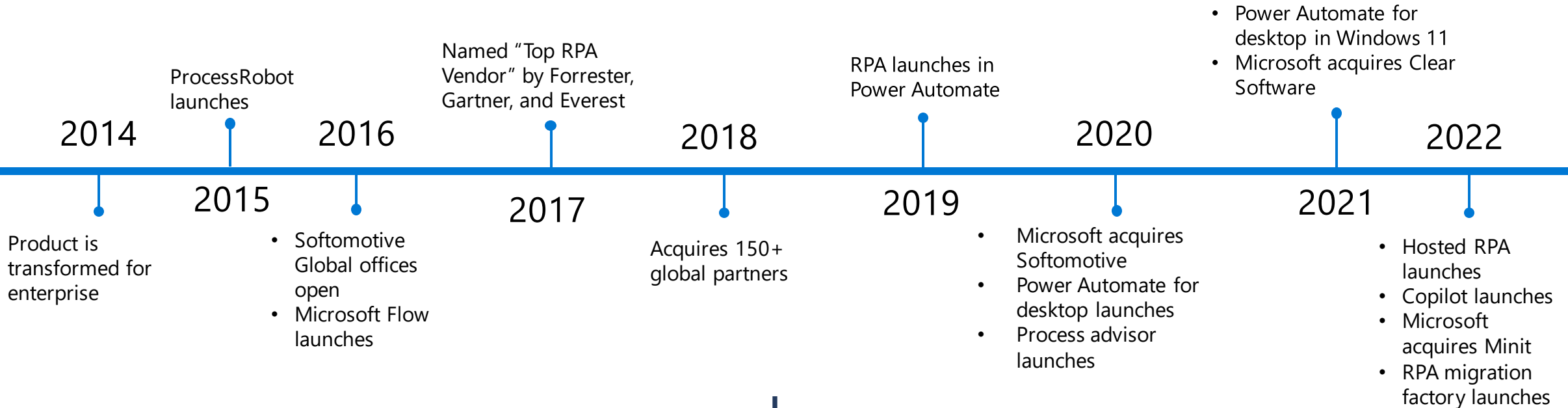
17+ years of RPA experience

2005	2006	500,000+
Softomotive founded in Greece	WinAutomation launches	Organizations use Power Automate monthly

2014

2015

ProcessRobot launches

2016

Named "Top RPA Vendor" by Forrester, Gartner, and Everest

2017

2018

RPA launches in Power Automate

2019

2020

- Power Automate for desktop in Windows 11
- Microsoft acquires Clear Software

2021

2022

Product is transformed for enterprise

- Softomotive Global offices open
- Microsoft Flow launches

Acquires 150+ global partners

- Microsoft acquires Softomotive
- Power Automate for desktop launches
- Process advisor launches

- Hosted RPA launches
- Copilot launches
- Microsoft acquires Minit
- RPA migration factory launches

21 regions | 42 languages*

*Power Automate for desktop is available in 15 languages

Introducing Power Automate desktop flows

Ease of use - Low-code/no-code Drag & drop approach
with Recorders (Desktop and Web)

Input –Output and flow variables

Advanced Debugging features

Reusability of Controls, Images and Subflows or even desktop flows

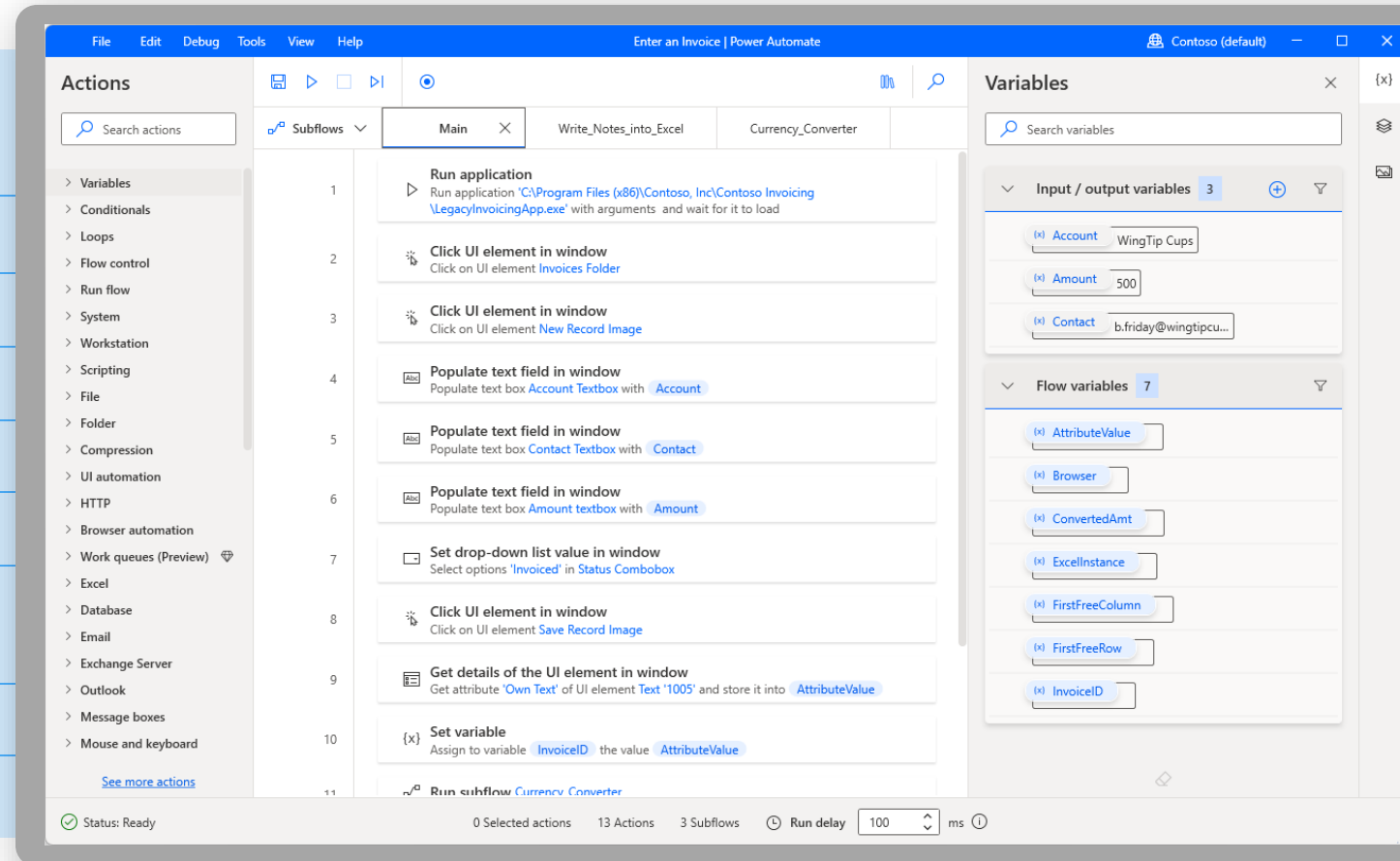User and Process collaboration through message boxes for attended

Advanced Error handling features with 2 error handling levels

Support for advanced coding-scripting
(VBScript, JavaScript, Python, PowerShell, Command Line)

Local Attended, Attended and Unattended execution mode

500+ actions to choose from +Cloud connectors and Custom Actions

...and more

What sets us apart

AI-centric

Infuse AI, including GPT and Microsoft's AI capabilities, into business processes for a differentiated intelligent automation

Democratization

Lowest price and most citizen-friendly experience + pro-dev enablement with governance that responsibly empowers both

Cloud-first

Natively integrated with seamless extensibility to central governance and collaboration for complete enterprise security and trust

87% of chief innovation officers and IT professionals believe *"increased AI and automation embedded into low-code platforms would help them **better use the full set of capabilities**."*[1]

[1] Microsoft's Low-Code Signals 2023 report

Lab scenario Overview – Contoso Coffee shop company Invoice processing

Email triggers cloud flow

AIBuilder extracts data

Desktop flow interacts with desktop app, Web, GPT

Confirmation email sent back

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 desktop flow will open the legacy desktop application that Contoso Coffee shop using to manage invoices and fill in the invoice details
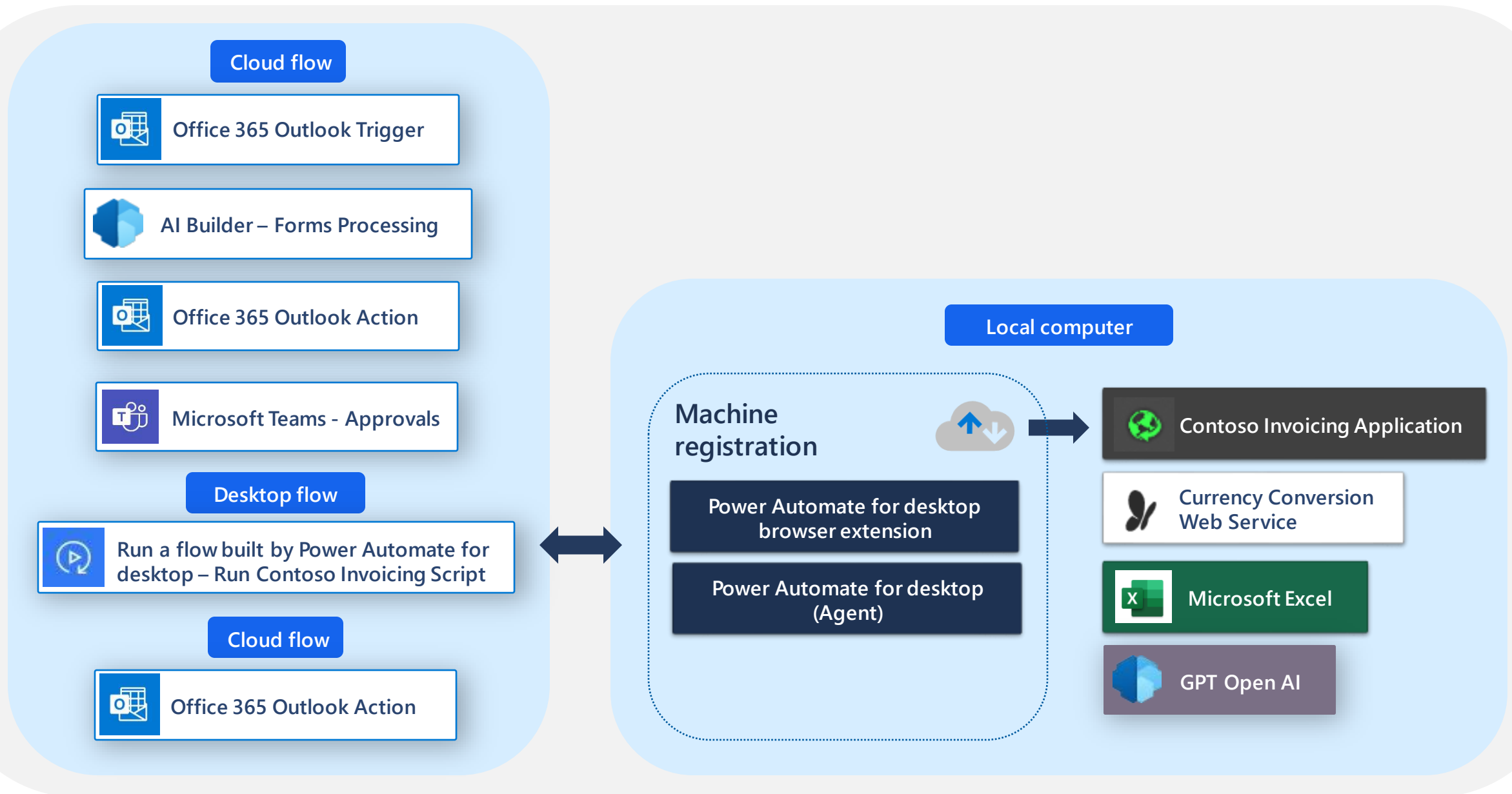
In the Desktop flow a web-based real-time currency conversion is used and an audit log is captured in Microsoft Excel

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

# Lab scenario – Invoice processing Solution Architecture

Cloud flow

Office 365 Outlook Trigger

AI Builder – Forms Processing

Office 365 Outlook Action

Microsoft Teams - Approvals

Desktop flow

Run a flow built by Power Automate for desktop – Run Contoso Invoicing Script

Cloud flow

Office 365 Outlook Action

Local computer

Machine registration

Power Automate for desktop browser extension

Power Automate for desktop (Agent)

Contoso Invoicing Application

Currency Conversion Web Service

Microsoft Excel
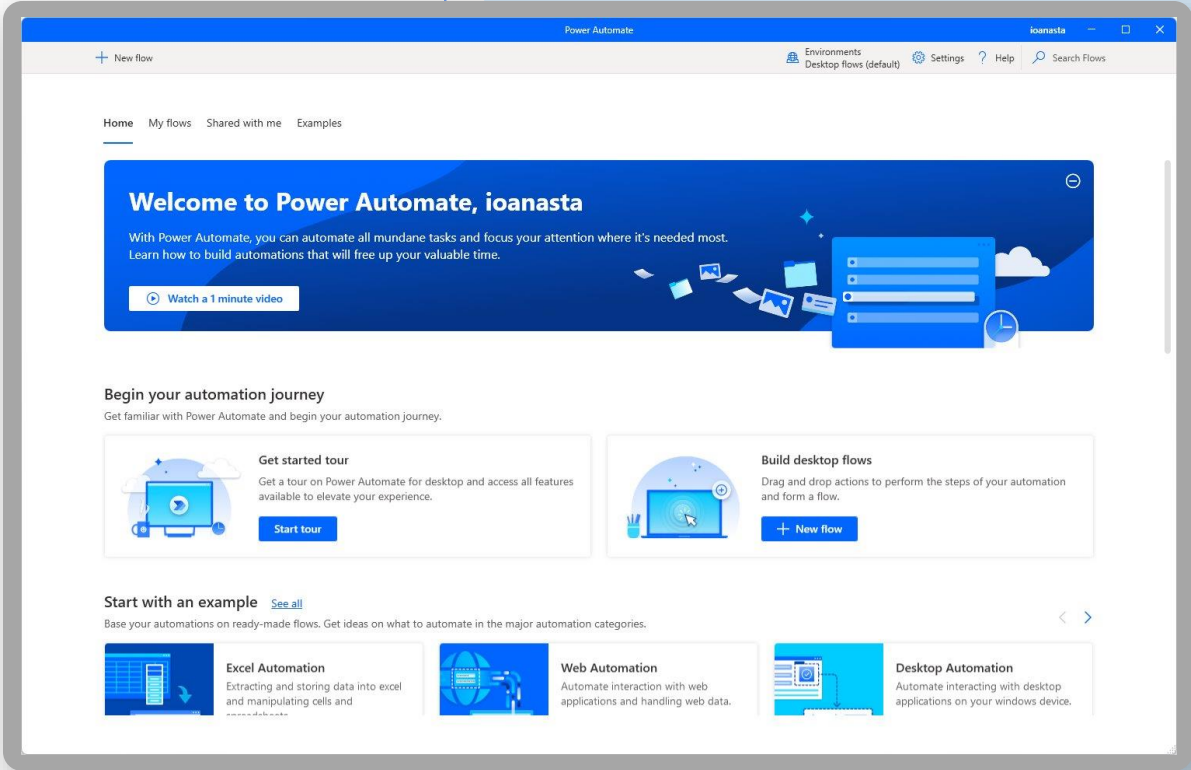
GPT Open AI

Part II
Desktop flows basic

Lab 2
Create your first Power Automate Desktop flow

30 minutes
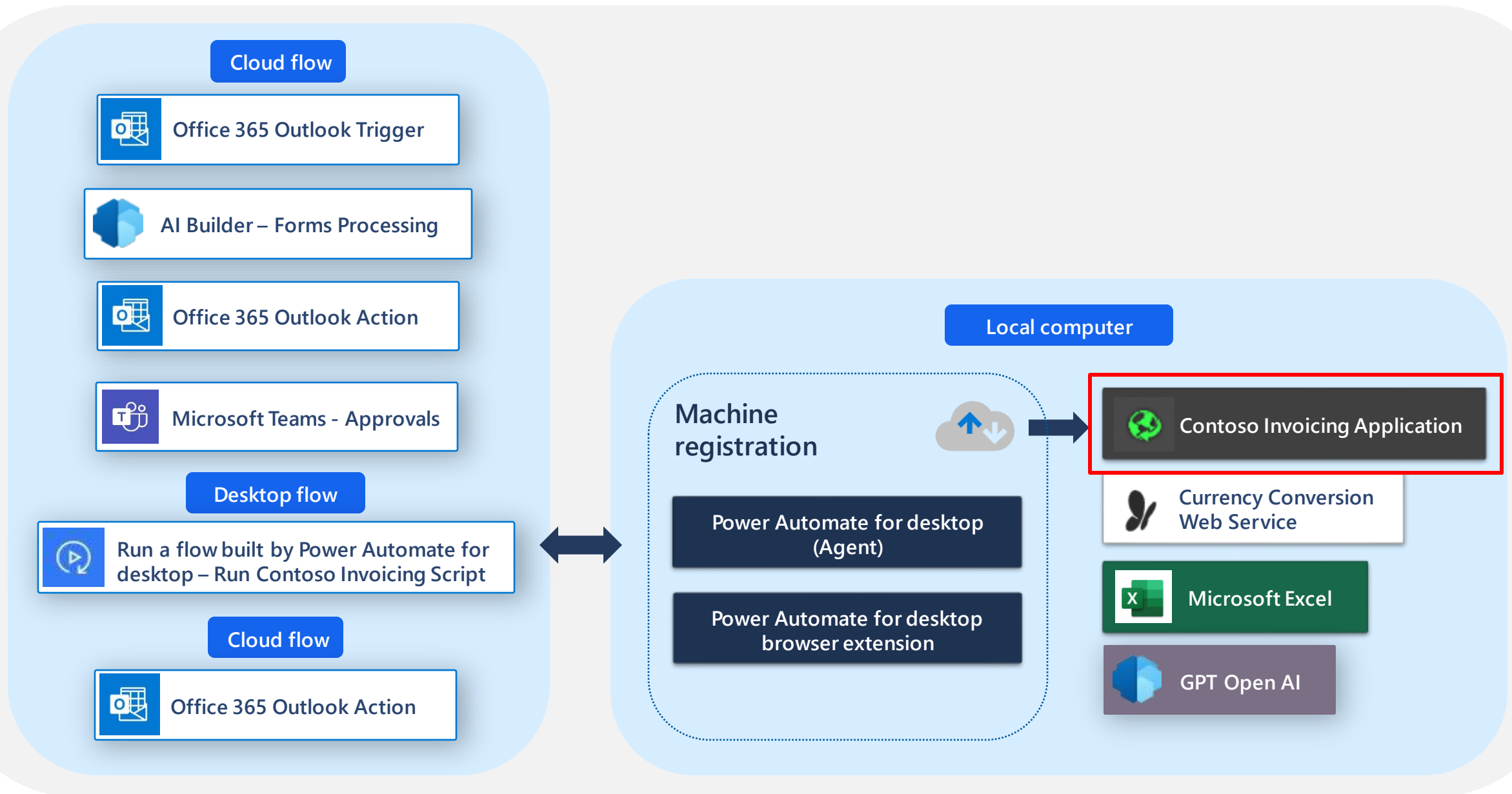
Power Automate for desktop

PAD Console
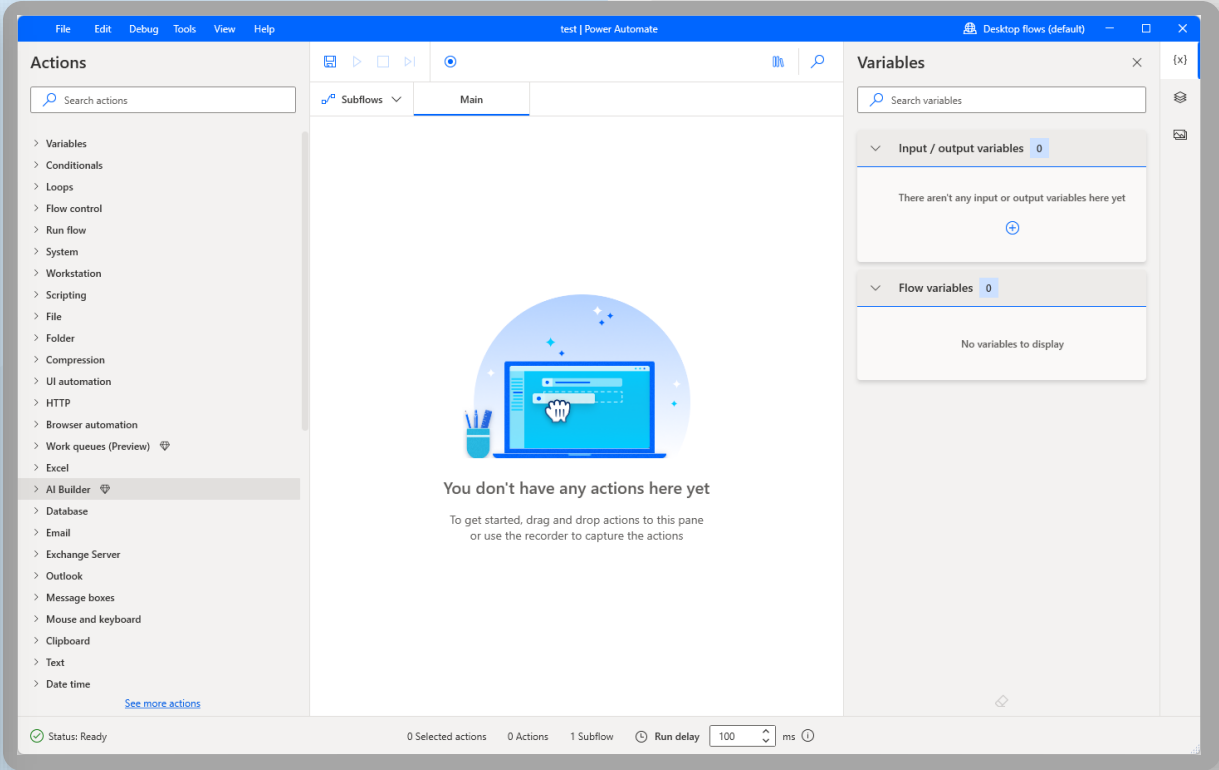
PAD Designer

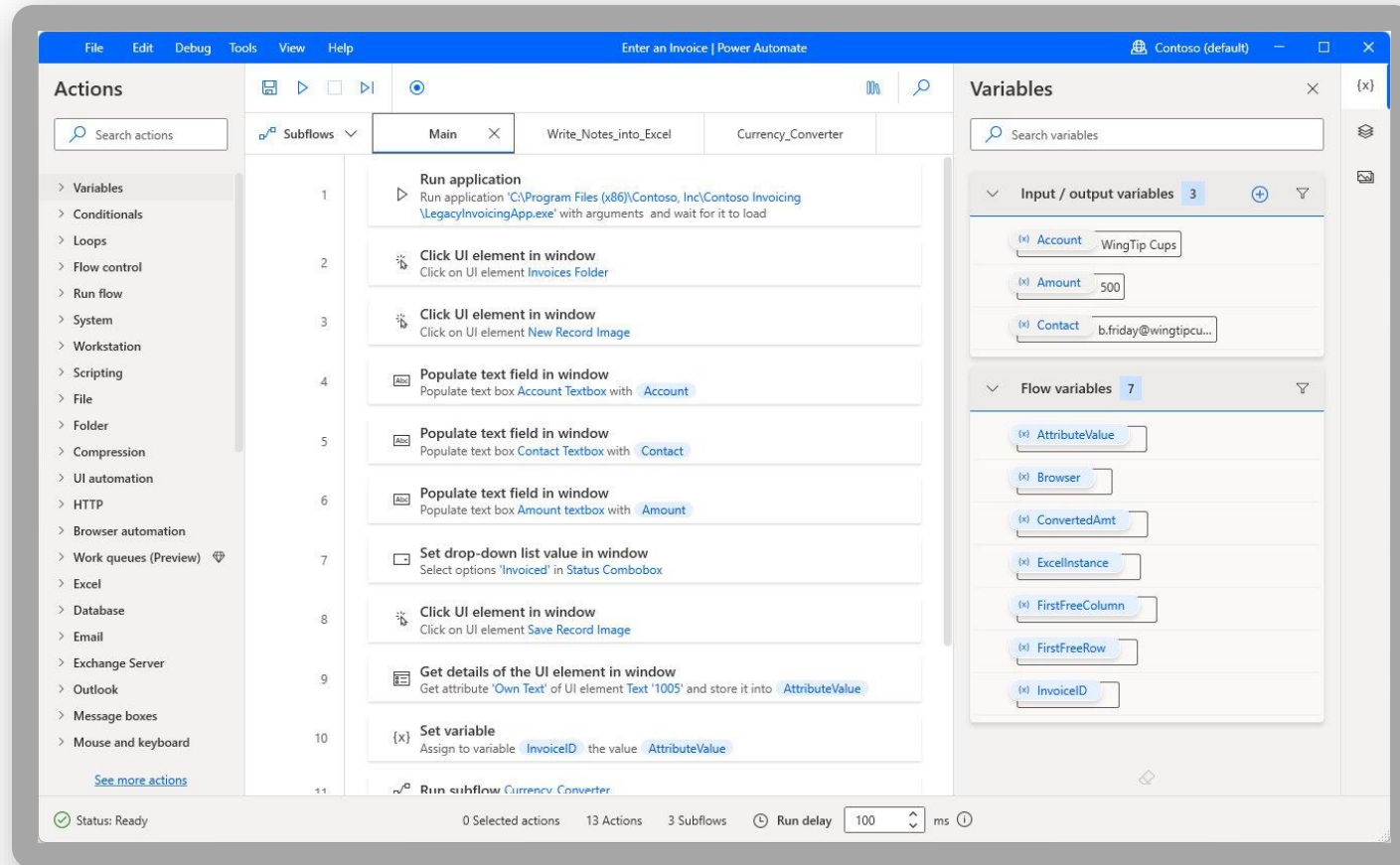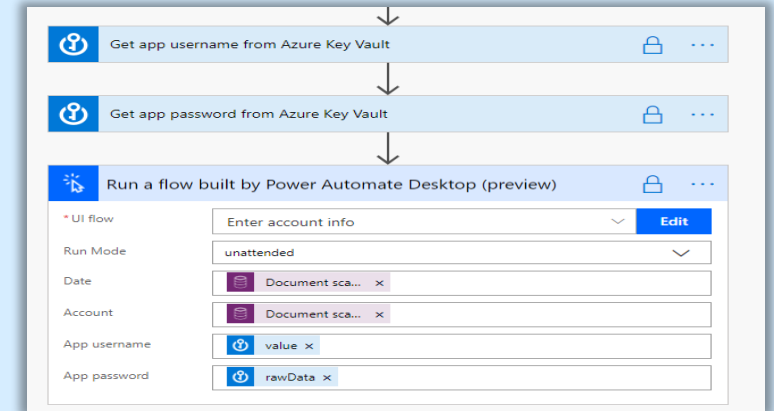# Where are we in the scenario in this Lab?

Lab 3
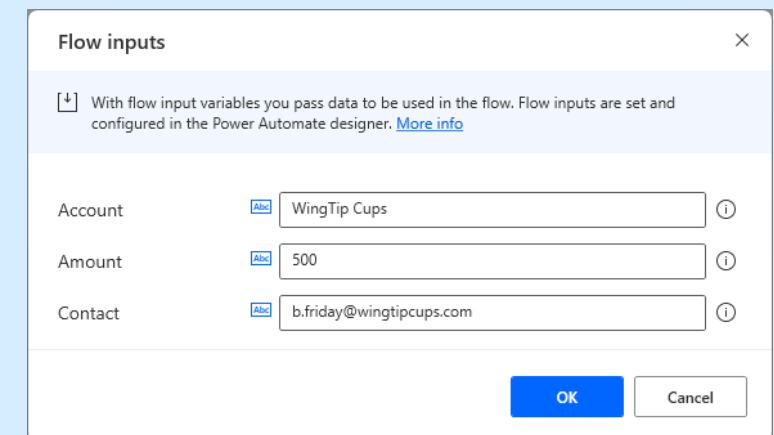## Use input and output variables
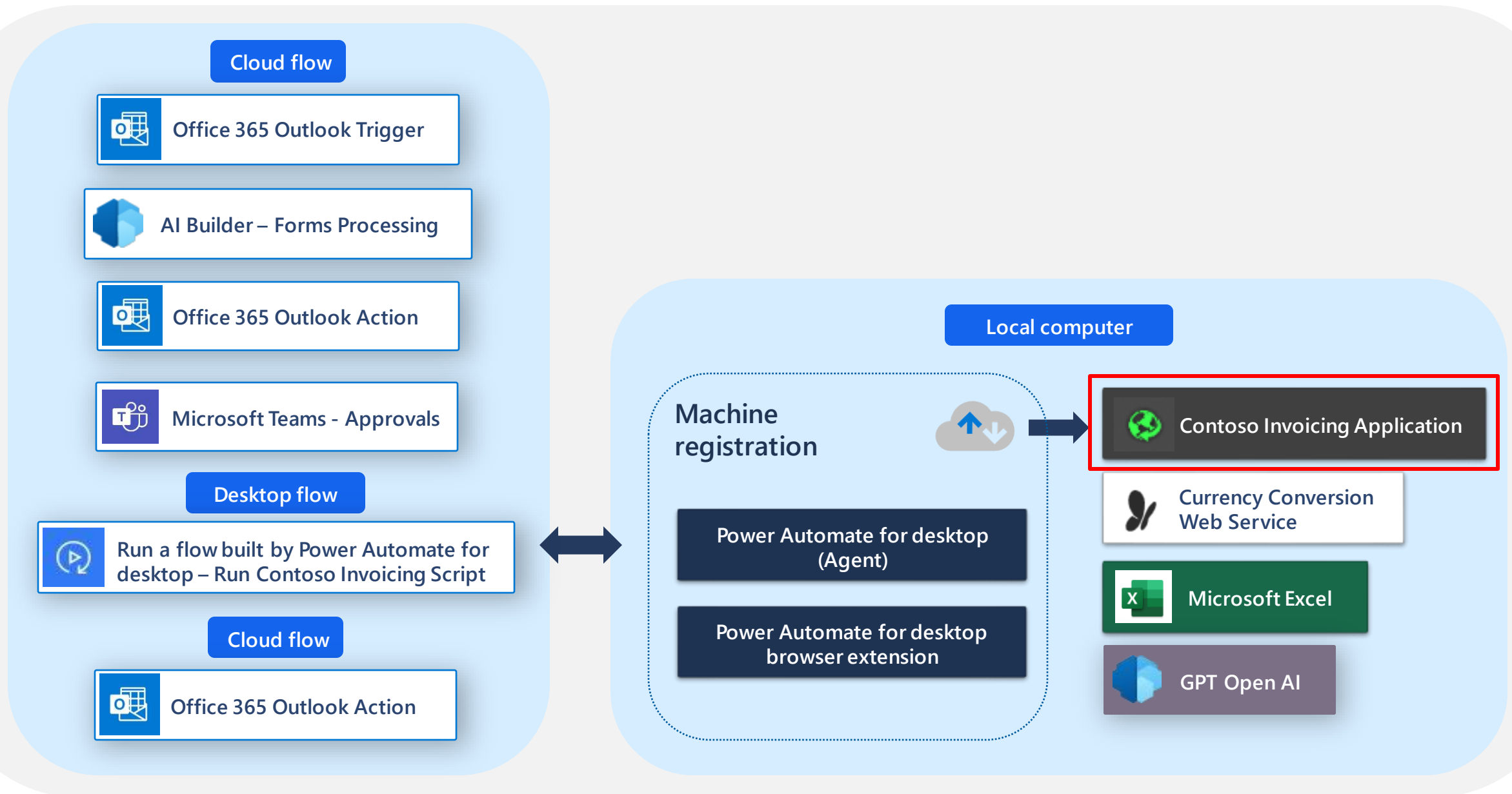
30 minutes

Why use inputs/outputs?

Bind them in the cloud flow that runs the desktop flow

Use them to run a local attended desktop flow

Where are we in the scenario in this Lab?

Cloud flow

- Office 365 Outlook Trigger
- AI Builder – Forms Processing
- Office 365 Outlook Action
- Microsoft Teams - Approvals

Desktop flow

- Run a flow built by Power Automate for desktop – Run Contoso Invoicing Script

Cloud flow

- Office 365 Outlook Action

Local computer

Machine registration

- Power Automate for desktop (Agent)
- Power Automate for desktop browser extension

- Contoso Invoicing Application
- Currency Conversion Web Service
- Microsoft Excel
- GPT Open AI

Part III
Desktop flow Web and Office Integration, GPT

Lab 4

Subflows, Excel and Web Automation
AI Builder with GPT action

60 minutes

Subflows, Excel, Web, GPT

Exercise 1

Build a Power Automate Desktop subflow to write notes into Microsoft Excel

----

Create a process with fixed value variables.

Exercise 2

Build web automation using Power Automate for desktop

Web data scraping and writing to Microsoft Excel

Exercise 3

Use AI Builder within Power Automate for desktop

Use the GPT action on Azure OpenAI service to summarize the details of invoices

Subflows in Power Automate for desktop

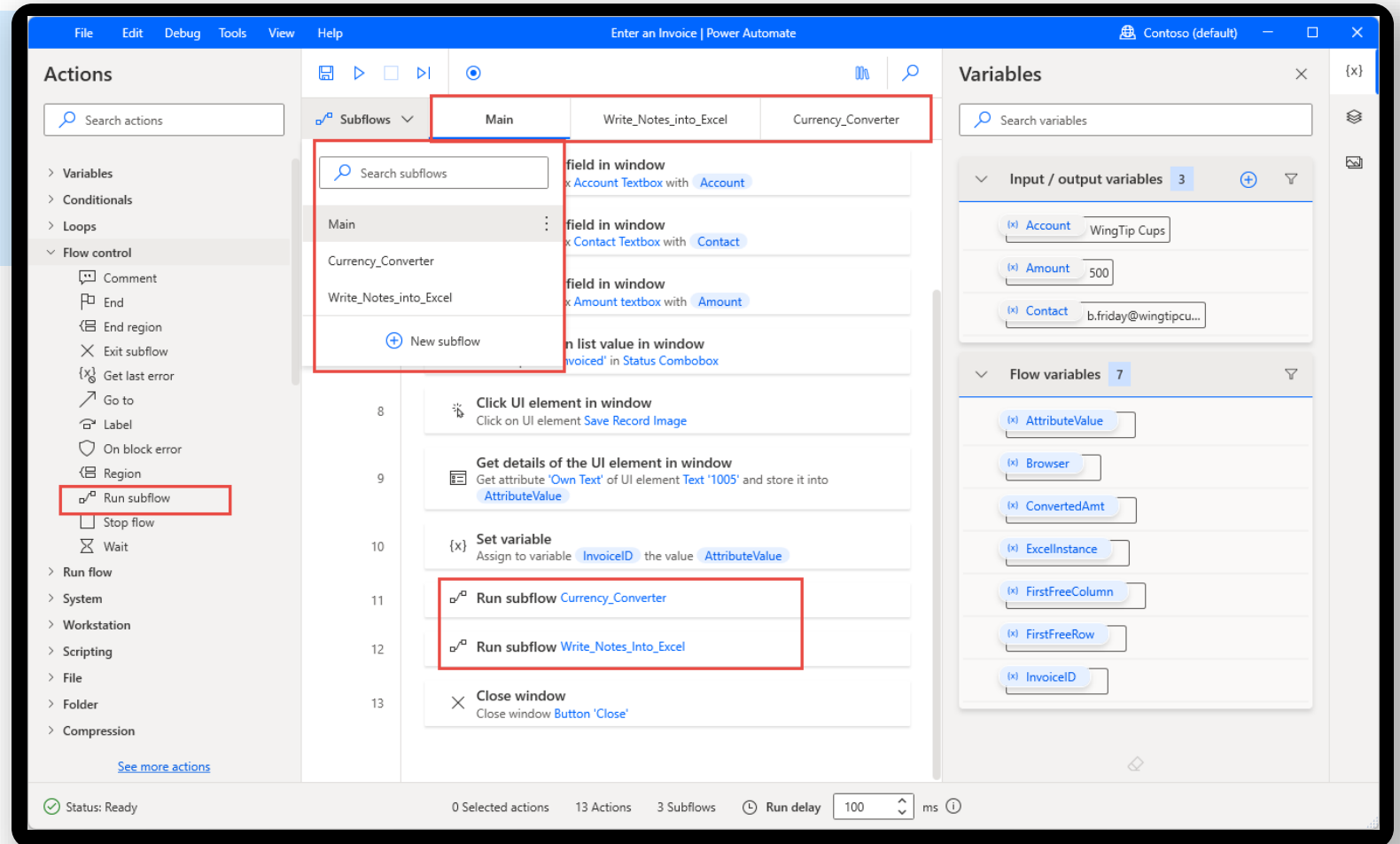Split the logic of the flow into subflows that can be called from anywhere in your flow

Better organization

Better readability
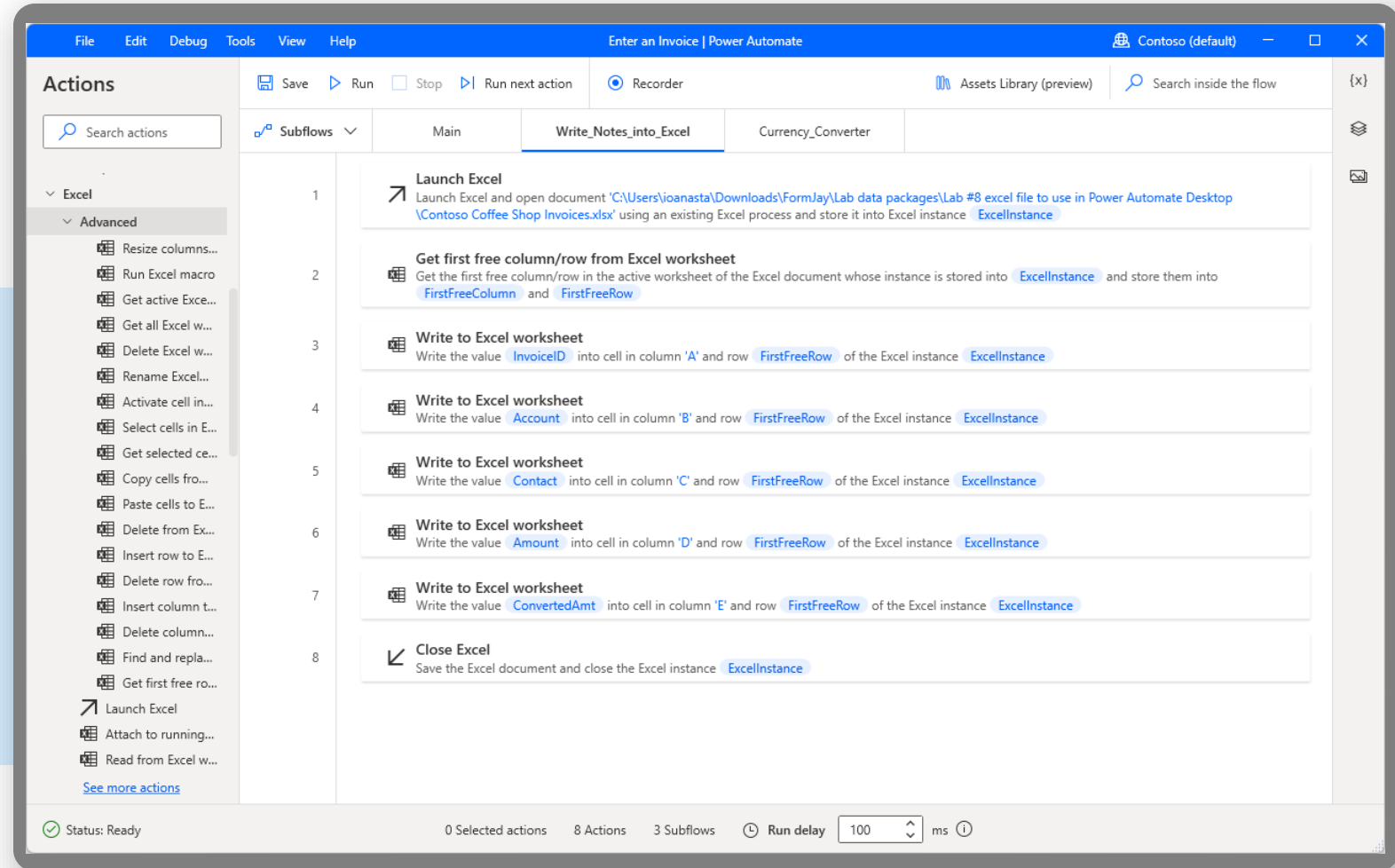
Better troubleshooting

Reusability

Excel Automation

A wide range of excel actions that help automate any excel related task.
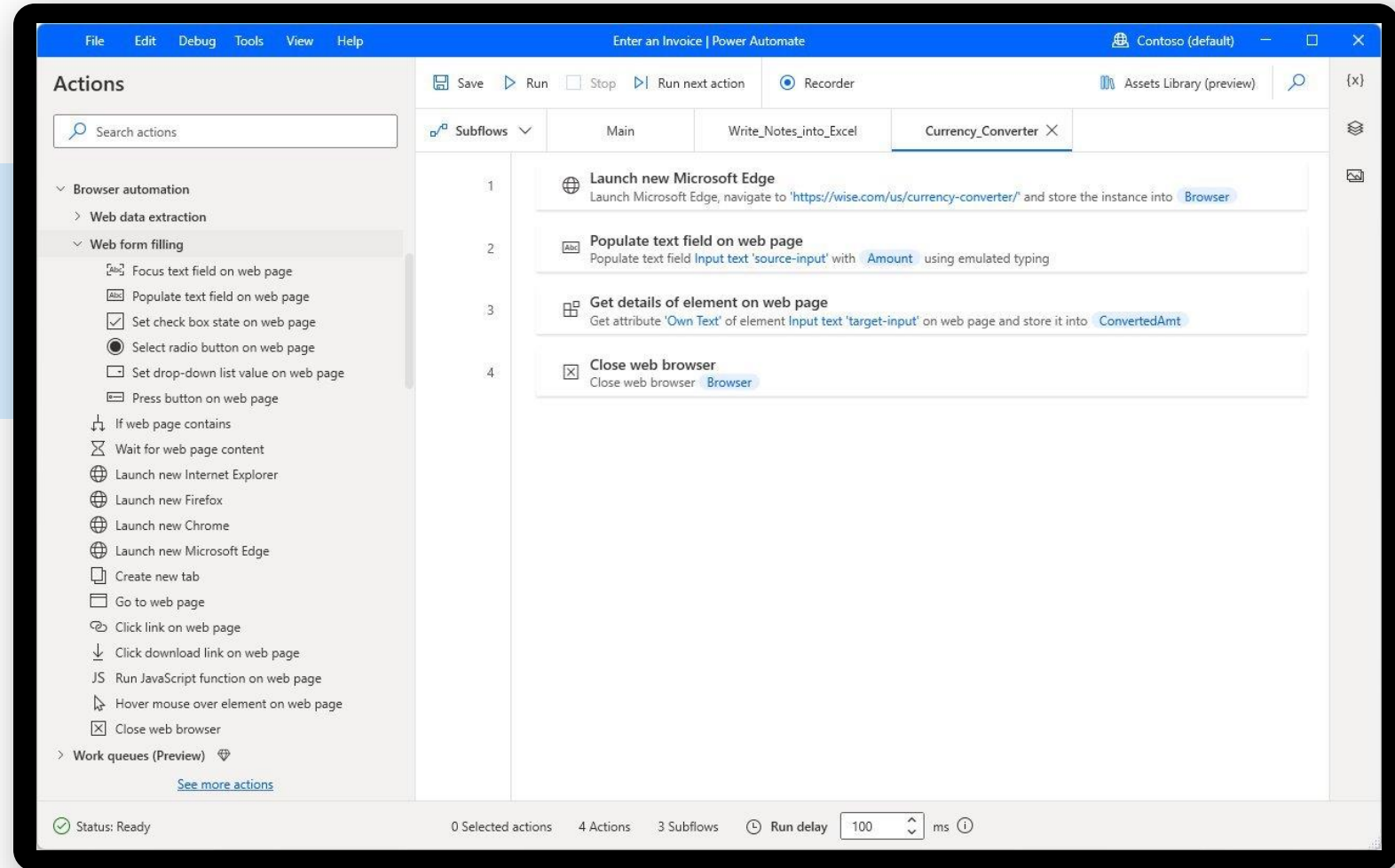
Web Automation

Web Automation supporting:
Edge, Chrome, Firefox browsers

Web data extraction

Web data filling

And any web related activity

GPT on Azure OpenAI

Get a response from Azure OpenAI service

Choose a template

or write your own instructions

Create text with GPT on Azure OpenAI Service ✕

⊙ Get a response from Azure OpenAI Service. More info

Select parameters

Instructions:
Summarize the text below in less than two paragraphs. {x} ⓘ
[Start of text]
%Account%
%Contact%
%Amount%
[End of text]

ⓘ AI-generated content can have mistakes. Make sure it's accurate and appropriate before using it. Read preview terms

✦ Create instructions

› Variables produced PredictV2Response PredictV2TextResponse

🛡 On error   Save   Cancel

✦ Create instructions ✕

Try a template or write your own instructions

Summarize text

Respond to a complaint

Create blog posts

Extract information from text

Classify text

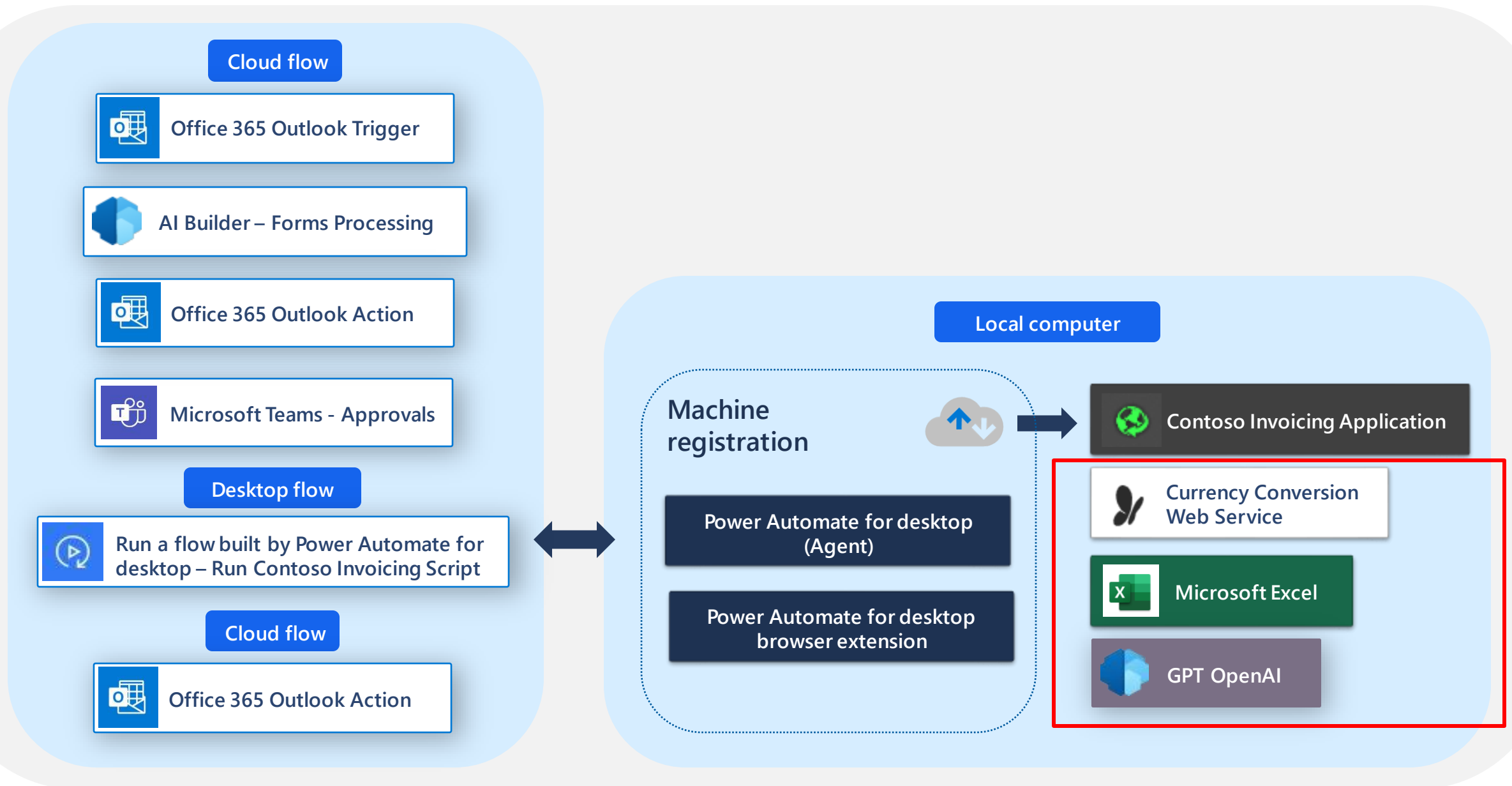Sentiment analysis of text

Extract action points from a text

Reminder email message about a task

Fact checking Q&A bot

Resources

📄 See documentation

Where are we in the scenario in this Lab?

Cloud flow

- Office 365 Outlook Trigger
- AI Builder – Forms Processing
- Office 365 Outlook Action
- Microsoft Teams - Approvals

Desktop flow

- Run a flow built by Power Automate for desktop – Run Contoso Invoicing Script

Cloud flow

- Office 365 Outlook Action

Local computer

Machine registration

- Power Automate for desktop (Agent)
- Power Automate for desktop browser extension

- Contoso Invoicing Application
- Currency Conversion Web Service
- Microsoft Excel
- GPT OpenAI

Part IV
Hyperautomation

- Cloud Flows and triggers
- Intelligent Automation with AIBuilder
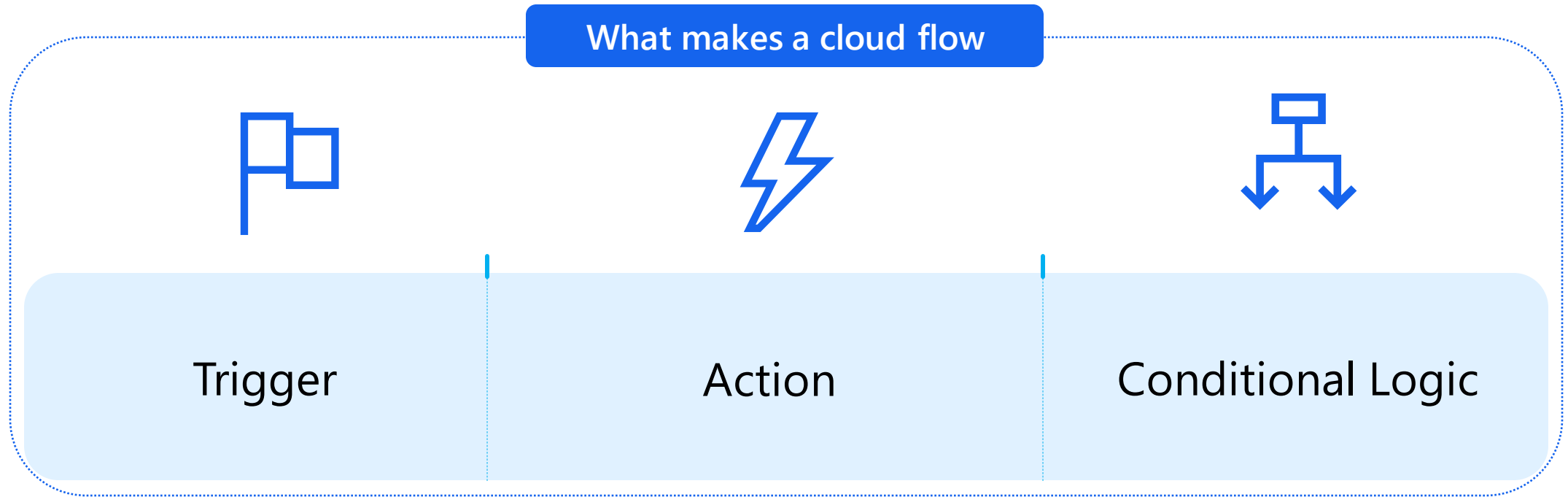- Integration with Teams for Approvals (optional)

Lab 5

Cloud Integration (Outlook trigger)
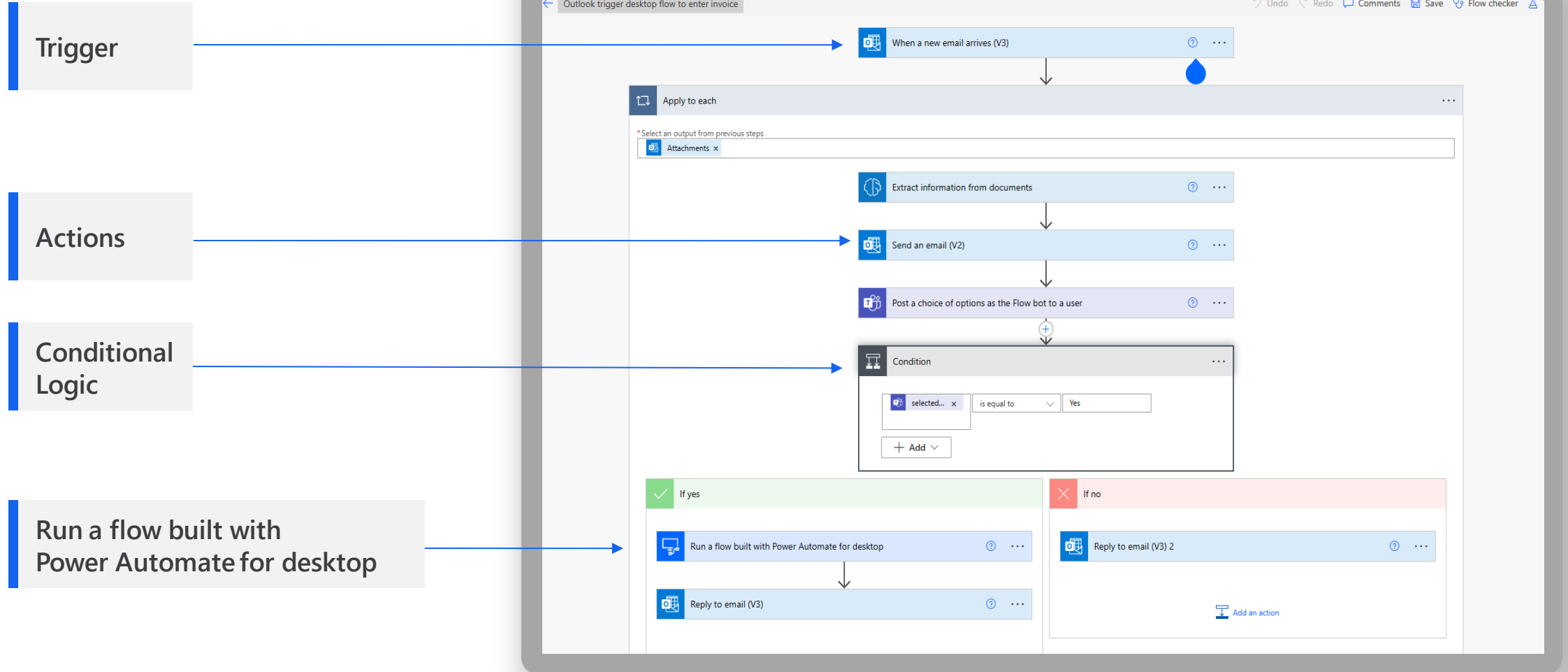## Machine connection and Attended execution

30 minutes

What is a Cloud flow?

A cloud service that allows you
to automate your business process

What makes a cloud flow

Trigger

Action

Conditional Logic

Cloud flow: Trigger – actions – conditional logic

Trigger

Actions

Conditional Logic

Run a flow built with Power Automate for desktop

Machine registration/connection

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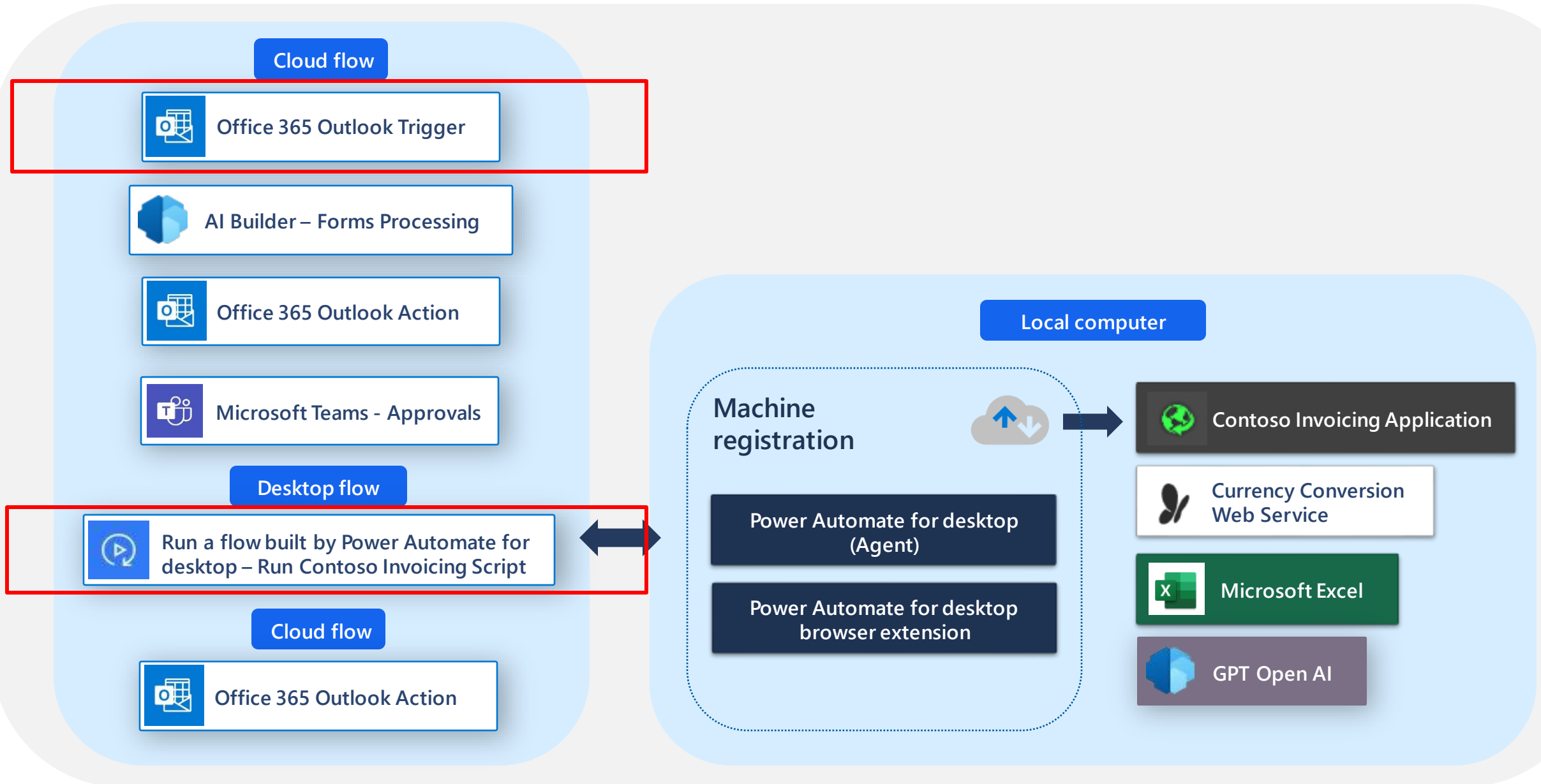
Allows cloud flows desktop flows on local machines

Once registered, can be managed from the cloud

Where are we in the scenario, in this Lab?

Cloud flow
- Office 365 Outlook Trigger
- AI Builder – Forms Processing
- Office 365 Outlook Action
- Microsoft Teams - Approvals

Desktop flow
- Run a flow built by Power Automate for desktop – Run Contoso Invoicing Script

Cloud flow
- Office 365 Outlook Action

Local computer

Machine registration
- Power Automate for desktop (Agent)
- Power Automate for desktop browser extension

- Contoso Invoicing Application
- Currency Conversion Web Service
- Microsoft Excel
- GPT Open AI

Lab 6
Intelligent Automation: AIBuilder

30 minutes

AIBuilder in Power Automate

- No-code AI
- AI for many industry scenarios
- AI for multiple industry vertical
- Pre-defined models
- Create Custom Models
- Integrate to flow and apps
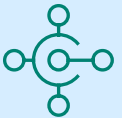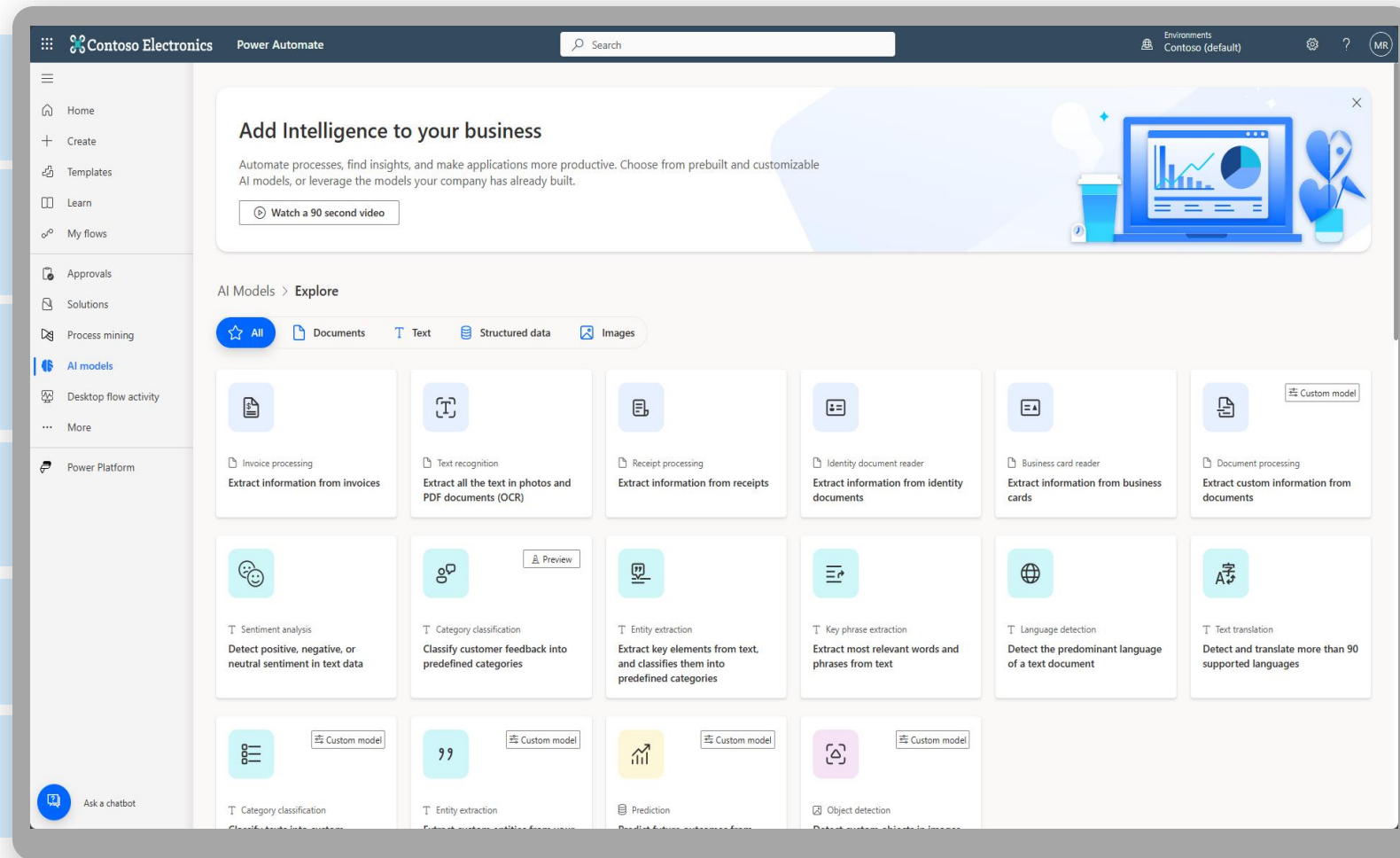
Where are we in the scenario, in this Lab?
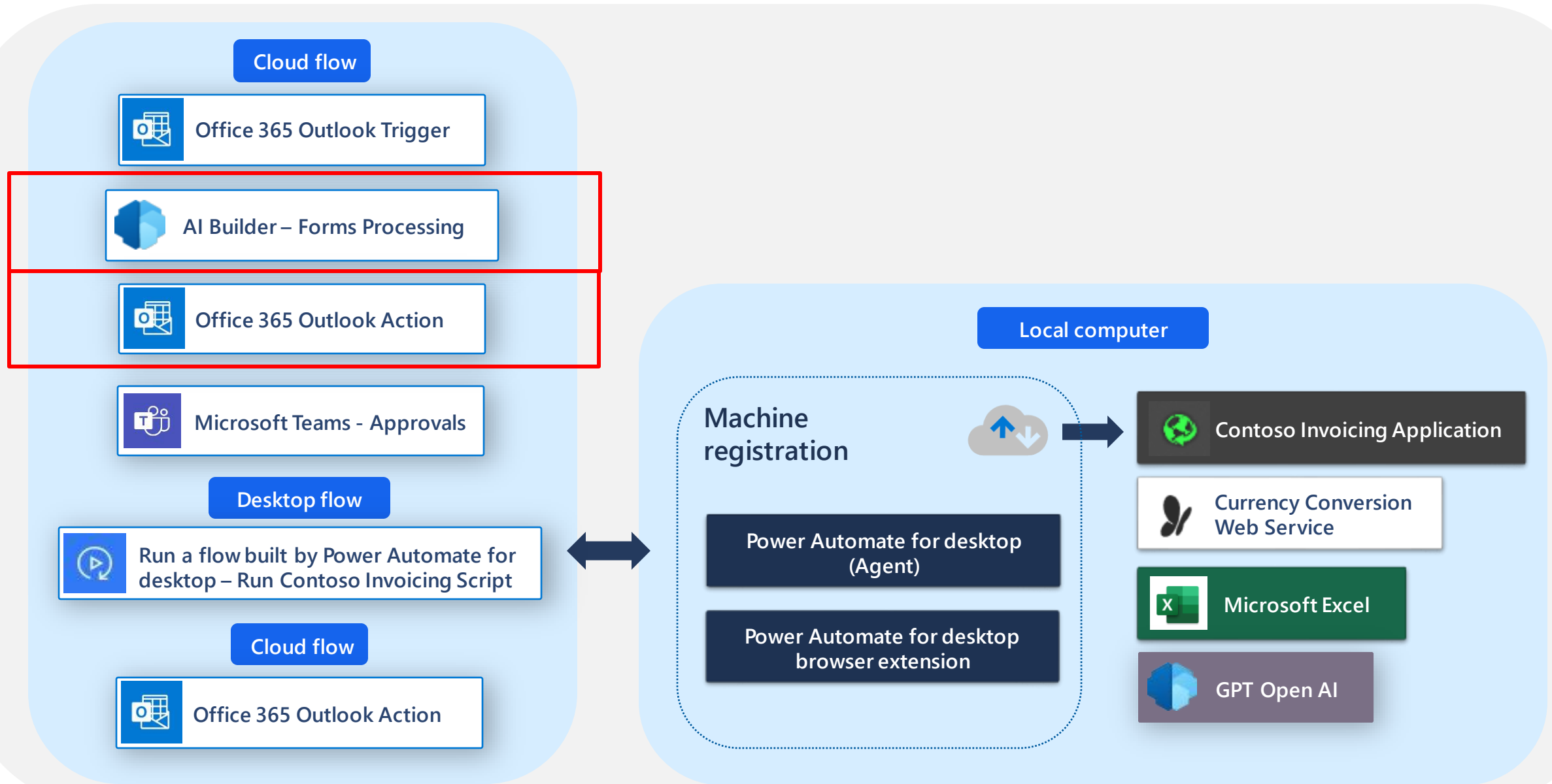
Lab 7 (optional)
Integration with Teams for Approvals

30 minutes

Why we need to invite Human into the automation process

Power Automate connects human and automation to work seamlessly together

Human

Automation

**Verifications
Approvals
Human decision making**
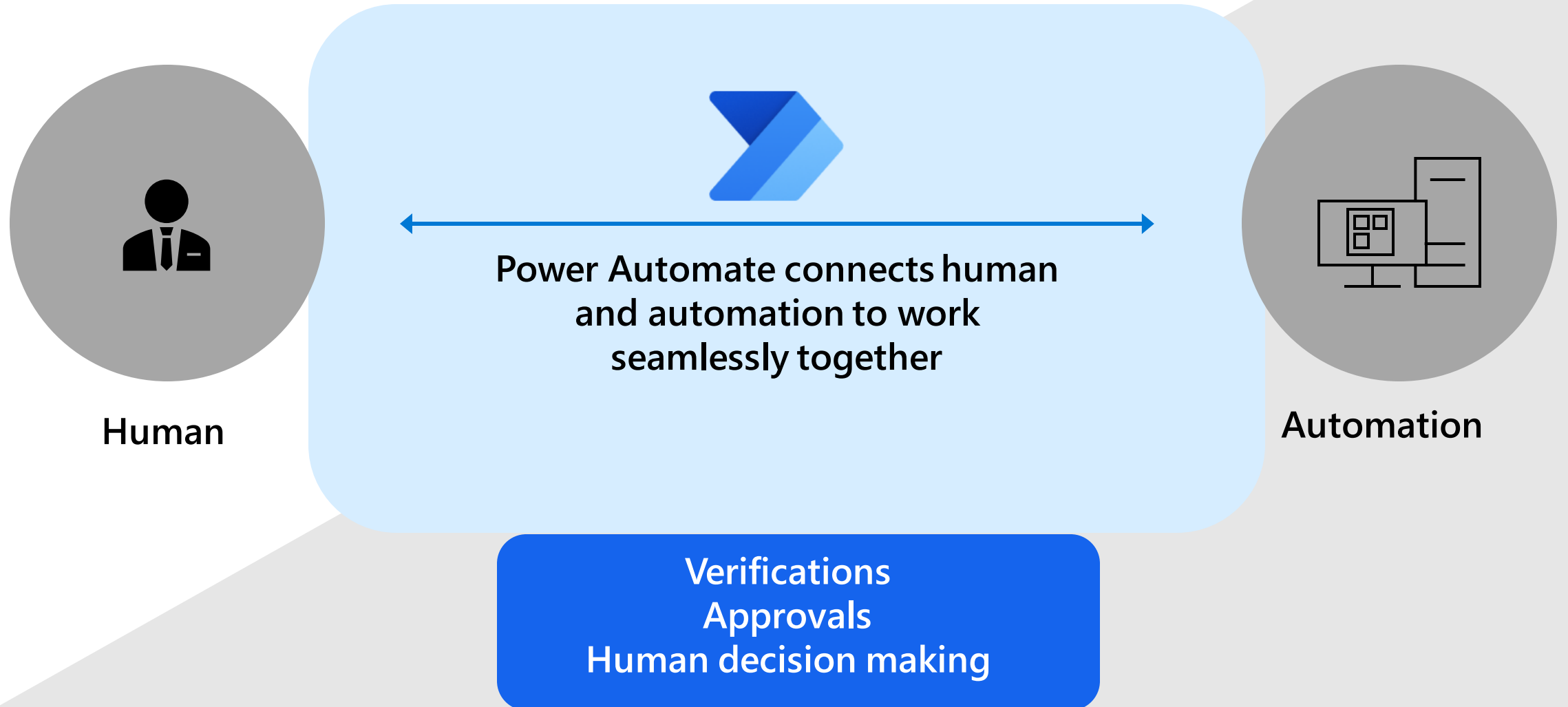
Where are we in the scenario, in this Lab?
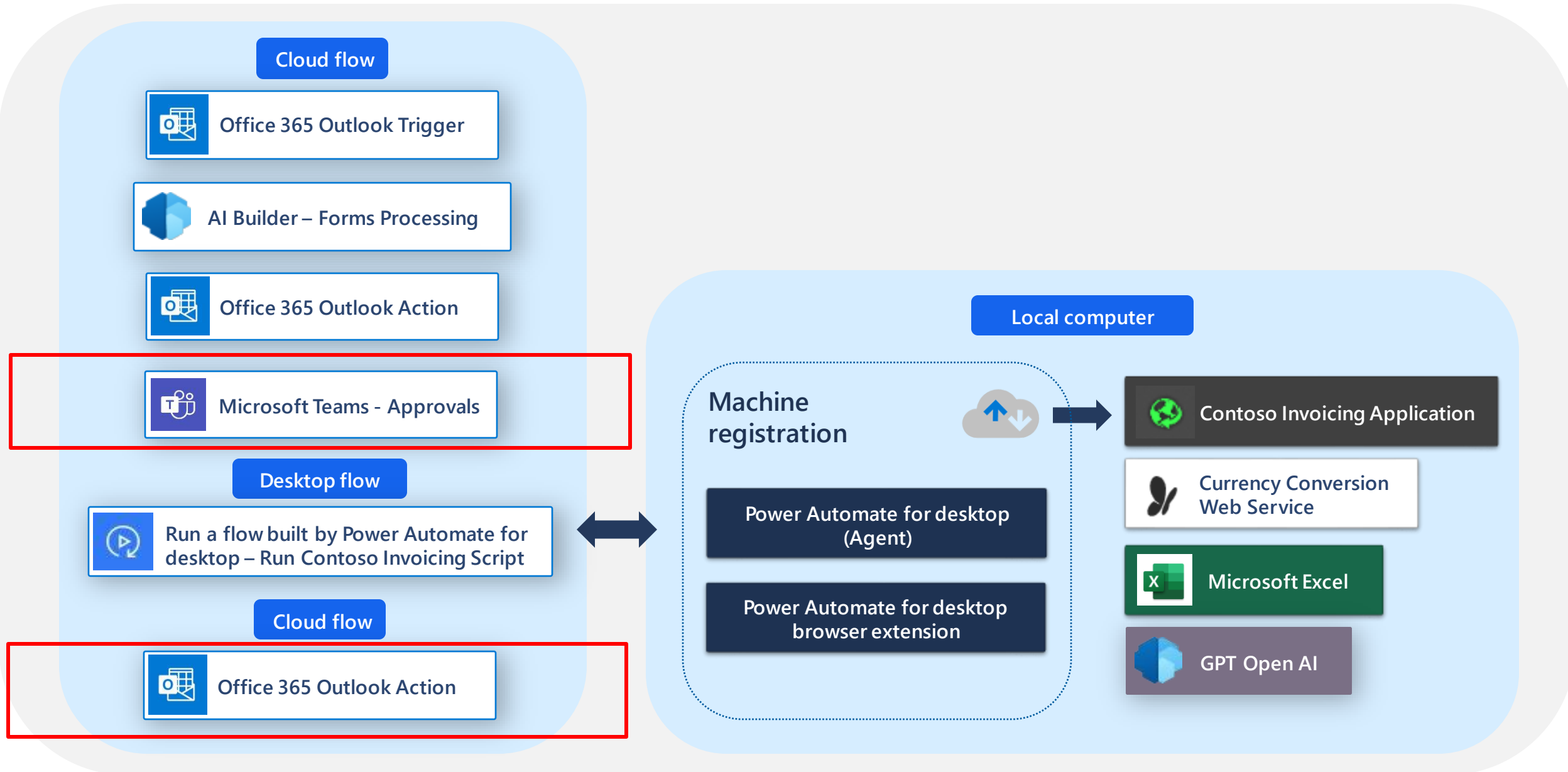
Part V
Scale your automations and infrastructure

Lab 8
Hosted Machines and Unattended Automation

30 minutes

Lab scenario – Invoice processing Solution Architecture

Cloud flow

- Office 365 Outlook Trigger
- AI Builder – Forms Processing
- Office 365 Outlook Action
- Microsoft Teams - Approvals

Desktop flow

- Run a flow built by Power Automate for desktop – Run Contoso Invoicing Script

Cloud flow

- Office 365 Outlook Action

Hosted machine

- Desktop flow

Power Automate portal

- Desktop flow connection in cloud flow designer

Local computer

Machine registration

- Power Automate for desktop browser extension
- Power Automate for desktop (Agent)

- Contoso Invoicing Application
- Currency Conversion Web Service
- Microsoft Excel
- GPT Open AI

Standardized and on demand machines for RPA

Using your own machine is sufficient for personal productivity but not beyond that.

Why?	Solution

1 **Best is a business process being 100% automated**

Dedicated machines to run your automation fully unattended
- Automation can run 24/7 with no human errors
- Allows you to keep using your machine

2 **Each automation requires its own software setup**

Standardized VM images and machine configurations
- Personal/developer software can interfere with the automation
- You may not be able to install the needed software

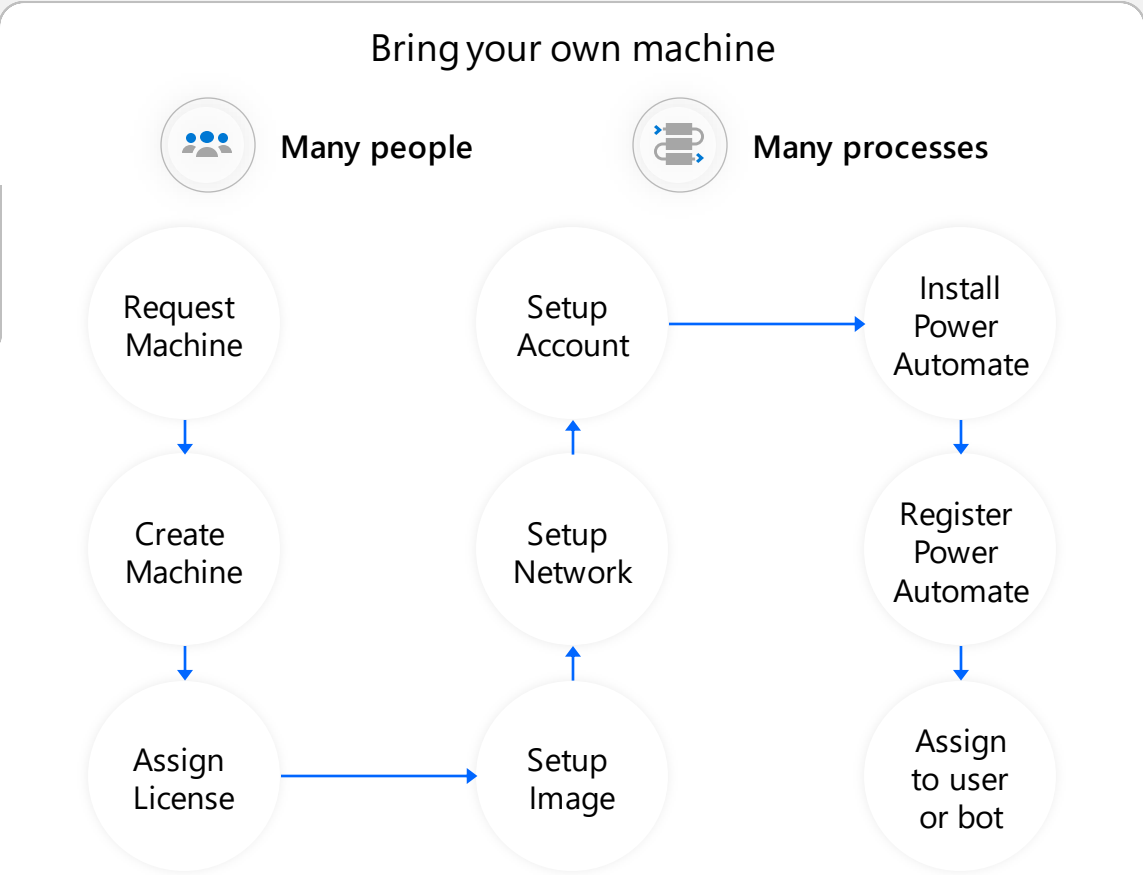**3** **Different hardware configuration may break your automation**

Consistent VM sizes (CPU, RAM, disk, …) and screen resolutions
- You can't have (all) software setup on your machine
- You have other software not needed for running it

Seamless setup

Simplify and accelerate RPA machine deployment

Why make it hard?

Bring your own machine

Many people   **Many processes**

Request Machine → Create Machine → Assign License → Setup Image → Setup Network → Setup Account → Install Power Automate → Register Power Automate → Assign to user or bot

When it can be easy!

With **Power Automate hosted RPA**

1 Request — Create environment directly from Power Automate

2 Deploy — Automated provisioning of hosted machine
- VM creation
- Network & identity join
- Install & register Power Automate Desktop to environment

3 Ready! — Direct access to hosted machine and start development

Dedicated machines available **within minutes** for development, testing and automation

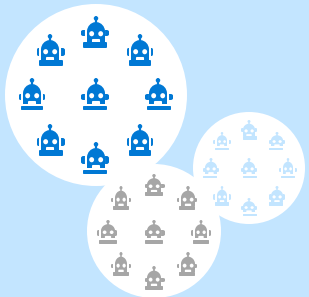# Scale your workloads with hosted RPA
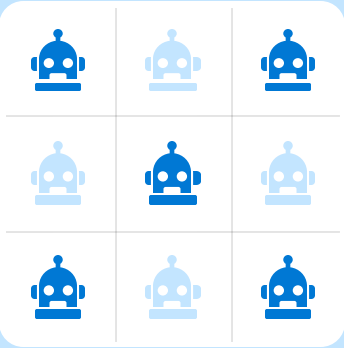
Single hosted machines

For pro and citizen developers

Build or test automation

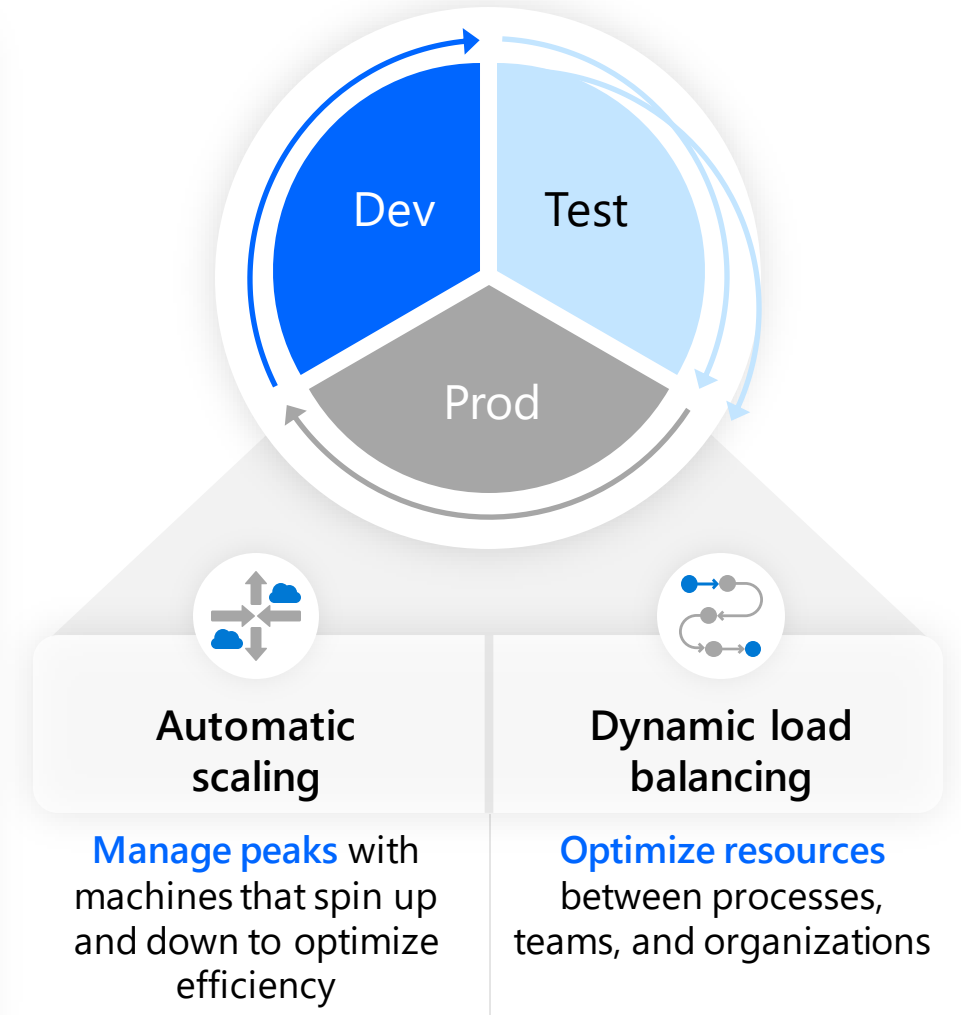**For** business users

Run automation on dedicated machines
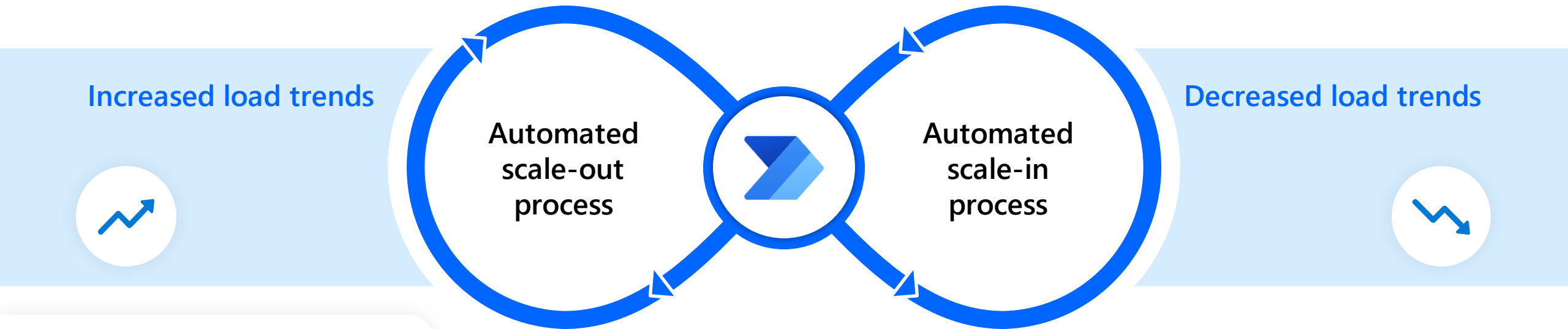
Hosted machine groups

For unattended automation in production

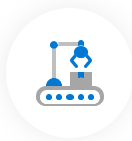Optimize your resources for higher efficiency and lower cost

Dev

Test

Prod

Automatic scaling

Manage peaks with machines that spin up and down to optimize efficiency

Dynamic load balancing

Optimize resources between processes, teams, and organizations

Hosted machine group: Unattended load-management

Increased load trends

Automated scale-out process

Automated scale-in process

Decreased load trends

~10 mins to 1 hour
Average time to scale-out/in

Machine utilization

Observations

- With hosted machine group, multiple RPA processes with varying load levels in an environment are automatically scaled-out/in based on real-time load.

- The number of allocated capacity in an environment are automatically assigned across different RPA processes, ensuring available machines are efficiently utilized

Hosted machine demo

Mustapha Lazrek

Hosted machines and unattended automation

Exercise 1 – Use of hosted machine to run unattended automation

o Edit your desktop flow (and remove the Excel actions)

o Create a new cloud flow that calls your desktop flow to run on a hosted machine in unattended mode

o Test run.
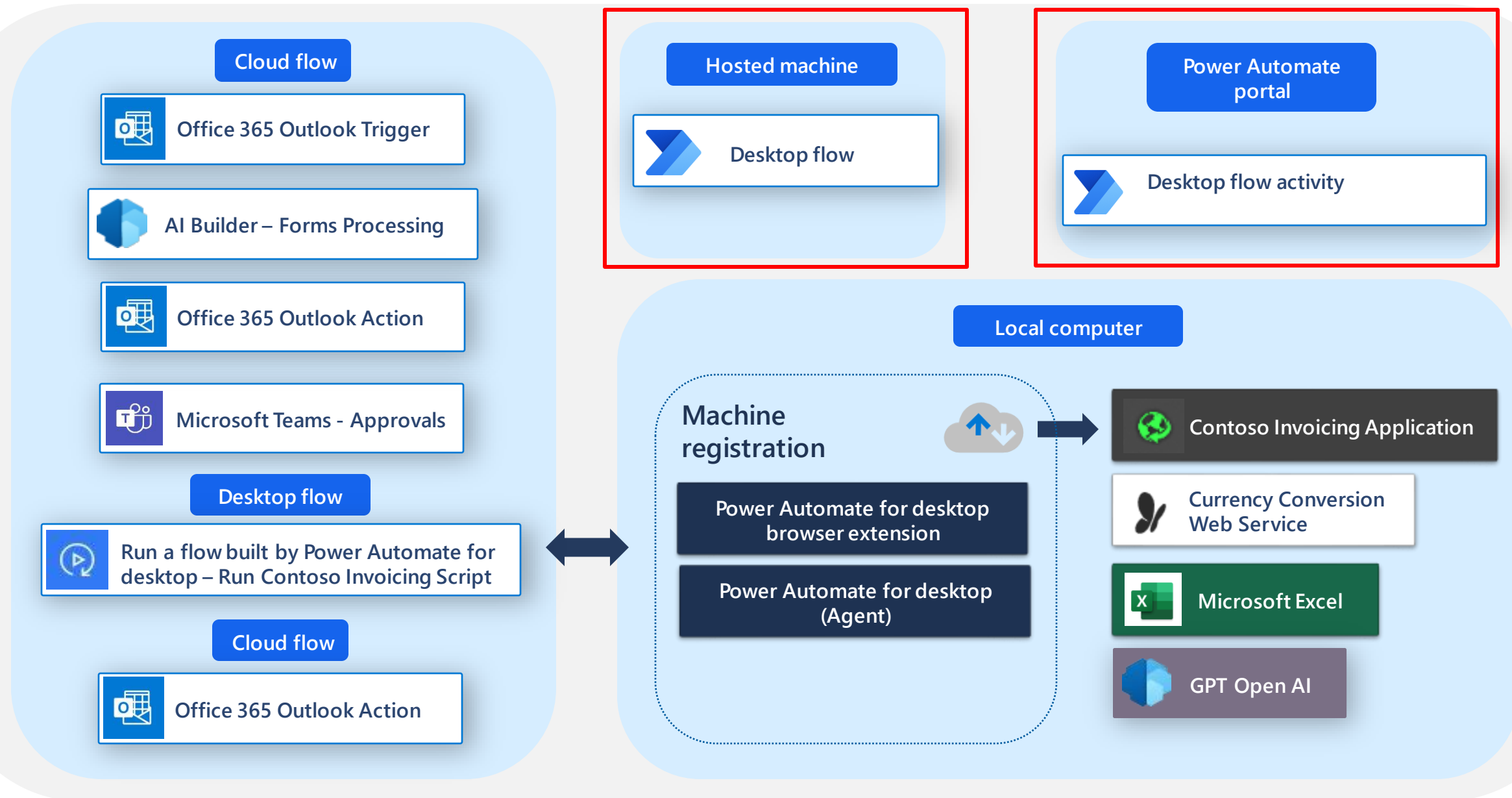
Exercise 2 – Unattended automations at scale

o Create a hosted machine group

o Use this hosted machine group to run your automations at scale

o Test run.

Lab 9
Monitor or troubleshoot desktop flow runs and machines

30 minutes

Lab scenario – Invoice processing Solution Architecture

Cloud flow
- Office 365 Outlook Trigger
- AI Builder – Forms Processing
- Office 365 Outlook Action
- Microsoft Teams - Approvals

Desktop flow
- Run a flow built by Power Automate for desktop – Run Contoso Invoicing Script

Cloud flow
- Office 365 Outlook Action

Hosted machine
- Desktop flow

Power Automate portal
- Desktop flow activity

Local computer

Machine registration
- Power Automate for desktop browser extension
- Power Automate for desktop (Agent)

- Contoso Invoicing Application
- Currency Conversion Web Service
- Microsoft Excel
- GPT Open AI

Desktop flow activity

Single pane of glass of all desktop automations in the environment

"Last runs", "current runs", "errors" and "machines" views

→ Developers get support while building their automations

→ Automation CoEs can monitor deployed automations

→ Automation CoEs can monitor all machines registered in the environment (on-prem or hosted)

→ Customizable Power BI template (Preview)
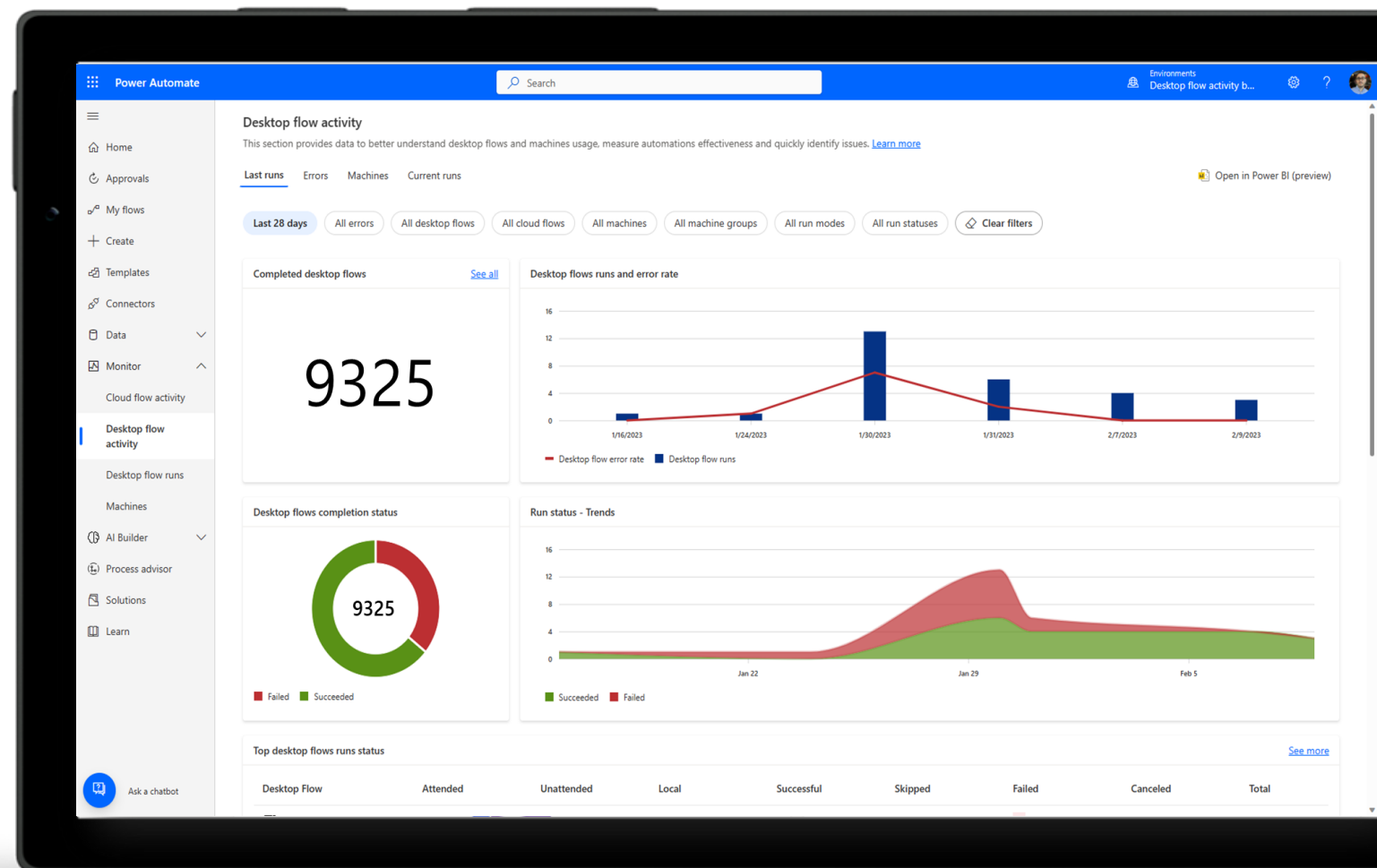
Part VI
Closing

Licensing simplification

- **More accessible per user license (includes attended RPA)**

- **No need to choose between RPA and DPA, unique process license for both**

- **Hosted RPA makes it simpler by providing the infrastructure on top**

Power Automate Premium	Power Automate Process	Hosted RPA
$15	**$150**	**$215**
per user/month	per bot/month[6]	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.	Run robotic process automation (RPA) as a service with hosted machine options.
• Unlimited cloud flows (DPA) and desktop flows (RPA) in attended mode	• Cloud flows (DPA)	• Microsoft hosted machine
• 50 MB Power Automate Process Mining data storage[1]	• Desktop flows (RPA) in unattended mode	• Desktop flows (RPA) in unattended mode
• 5,000 AI Builder credits	• Dataverse entitlements of 50 MB database and 200 MB file	• 5,000 AI Builder service credits per month
• Dataverse entitlements of 250 MB database and 2 GB file		**Available as an add-on for:**
		• Power Automate Premium

Tenant-level user license
- *For attended use*
- *For user or developer scenarios*

Environment-level bot license
- *For unattended use*
- ***Process***: *for DPA or RPA with on prem machine (1 per Windows session)*
- ***Hosted RPA***: *for RPA with on hosted machine*

Don't miss the upcoming:

Sessions:

- [Tues] Enable your automation COE to Modernize to Power Automate

- [Tues] Achieving RPA ROI and Control with Power platform automation kit: A 20-min walkthrough (https://aka.ms/ak4pp/mpp4   )

- [Wed] Power Automate in the real world with Stephen Siciliano and Customers

- [Wed] Desktop Flows Deep-dive

- [Wed] Process Mining Deep-dive

- [Thur] The future of Cloud Automateion: A deep-dive into intelligent cloud flows

Workshops:

[Friday] Empowering Makers: Exploring Copilot/AI Capabilities in the Power Platform

[Friday] Let's Get Mining

Q&A

Thank you!