



# Microsoft Power Platform **CONFERENCE**

POWER BI

POWER AUTOMATE

POWER APPS

POWER VIRTUAL AGENTS

POWER PAGES

# WHY INTEGRATE POWER APPS WITH POWER AUTOMATE?

Laura Rogers, Microsoft MVP

[Laura.Rogers@iwmentor.com](mailto:Laura.Rogers@iwmentor.com)



**@WonderLaura**





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Code: PPCFall2023**

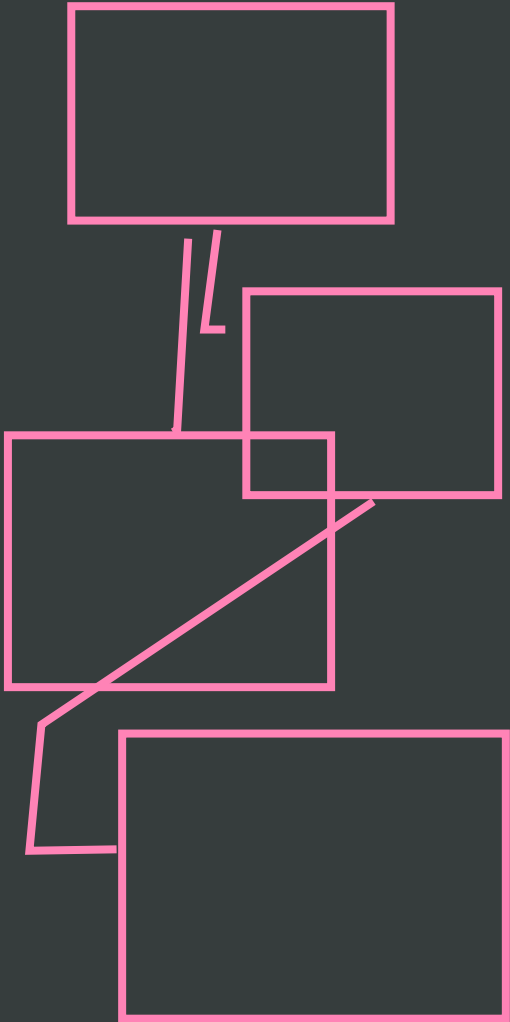
# AGENDA

- Introduction
- Common app automations
- Points of Integration with Power Apps & flows
- Create a Power App Trigger in flow
- Use the flow action in a Power App
- Advanced Examples





# INTRODUCTION



Use a visual interface for layout design.  
Use multiple screens and controls in your app

Integrates with many other systems and services

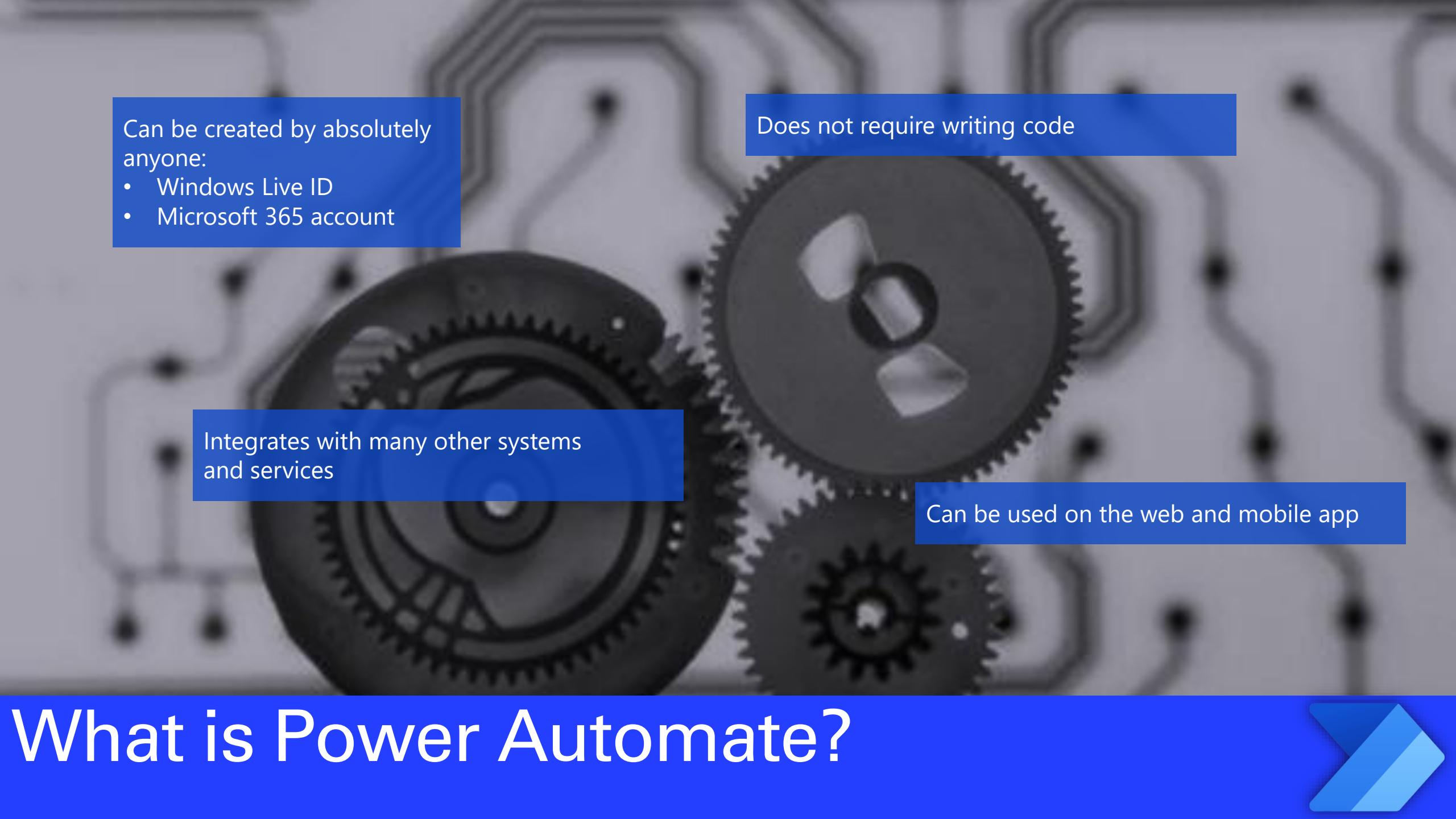
Create no-code or easily coded applications

Can be consumed on the web, mobile app

# What is Power Apps?







Can be created by absolutely anyone:

- Windows Live ID
- Microsoft 365 account

Does not require writing code

Integrates with many other systems and services

Can be used on the web and mobile app

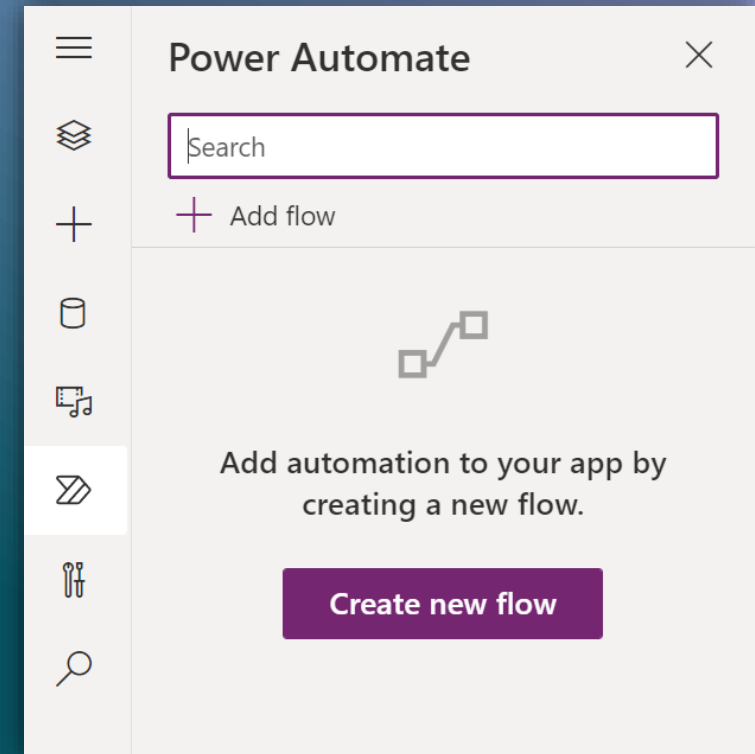
# What is Power Automate?



# INTEGRATION

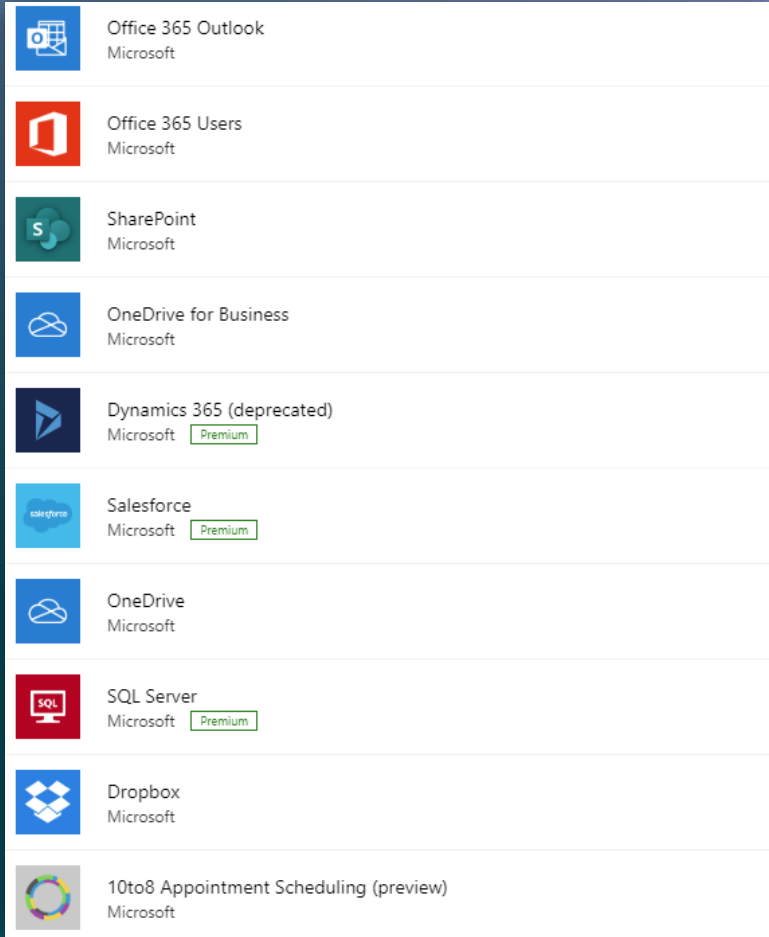












- Why use the flow integration in Power Apps?
- Alternately...
  - Emails can be sent directly from an app
  - Any database / table / list can be updated using forms or patching from the app
  - *Concept: Only use this integration for more complex scenarios.*



# M365 DATA SOURCES

- Office 365 Outlook
  - Send email directly from the Power App, without the need for a Flow



	Office 365 Outlook Microsoft
	Office 365 Users Microsoft
	SharePoint Microsoft
	OneDrive for Business Microsoft
	Dynamics 365 (deprecated) Microsoft <span>Premium</span>
	Salesforce Microsoft <span>Premium</span>
	OneDrive Microsoft
	SQL Server Microsoft <span>Premium</span>
	Dropbox Microsoft
	10to8 Appointment Scheduling (preview) Microsoft



# EMAILS & NOTIFICATIONS



# EMAIL FROM A FLOW

- Email Concepts:
  - Action can contain:
    - Fields and Variables
    - Text
    - Expressions
  - To, Subject, Body are required

The screenshot shows the configuration interface for the 'Send an email (V2)' action. The interface includes the following fields and sections:

- To:** A text field containing the variable 'Created By'.
- Subject:** A text field containing the text 'Policy approval outcome:' followed by the variable 'Name'.
- Body:** A rich text editor containing the following HTML code:

```
<p>Your policy has been [Outcome] by [Responses Approver name] .<br></p><a href="[Sharing Link]">[File name with extension] </a>
```
- From (Send as):** A text field with the placeholder 'Email address to send mail from (requires "Send as" or "Send on be...)'.
- CC:** A text field with the placeholder 'Specify email addresses separated by semicolons like someone@co...'.
- BCC:** A text field with the placeholder 'Specify email addresses separated by semicolons like someone@co...'.
- Attachments:** A section with two fields: 'Attachments Name - 1' (containing 'Attachment name') and 'Attachments Content -' (containing 'Attachment content'). Below these fields is a button labeled '+ Add new item'.
- Sensitivity:** A dropdown menu currently showing 'Sensitivity'.
- Reply To:** A text field with the placeholder 'The email addresses to use when replying'.
- Importance:** A dropdown menu currently showing 'Normal'.
- Footer:** A link labeled 'Hide advanced options' with an upward arrow.

# EMAIL FROM POWER APPS

- Add **Office 365 Outlook** as a connection
- Function:

Office365Outlook.SendEmail  
(To, Subject, Body)

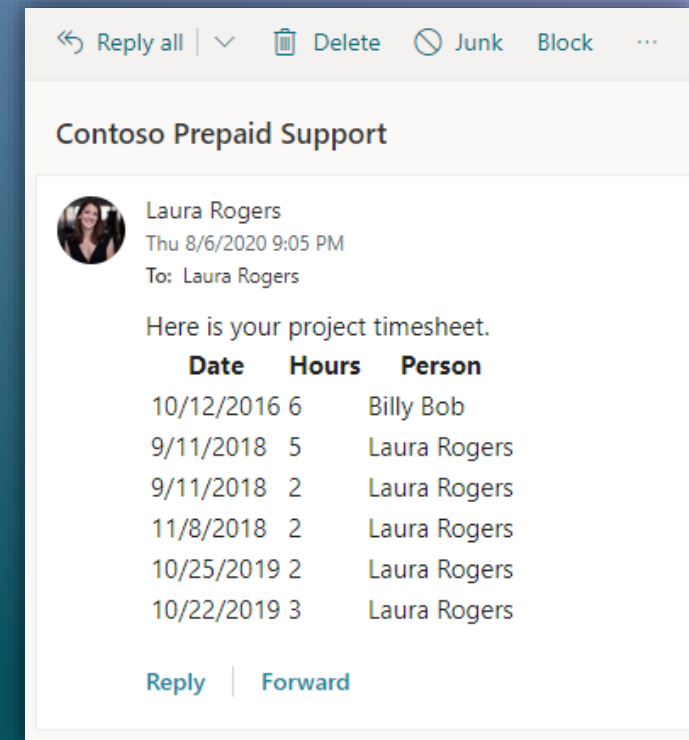
- Extras are optional parameters:
  - From, CC, BCC
  - Attachments - a table
  - Importance – “High” “Low” “Normal”
  - IsHtml - Boolean true or false

```
SendEmail(To, Subject, Body, {From:Text, Cc:Text, Bcc:Text, Attachments:Table, Importan...  
Office365Outlook.SendEmail(  
    txtSendTo.Text,  
    txtFullName.Text,  
    "<b>This is the body: </b>" & txtBody.Text,  
    {IsHtml:true, Importance:"Normal"}  
)
```

# EMAIL A LIST

- Concat: string several things together from a list
- Example: Concat a list of items into a table to send in an email. Example code and output:

```
Office365Outlook.SendEmail(  
    "admin@wonderlaura.onmicrosoft.com",  
    galProjects.Selected.'Project Name',  
    "Here is your project timesheet."  
    <table><tr>  
    <th><b>Date</b></th>  
    <th><b>Hours</b></th>  
    <th><b>Person</b></th>  
    </tr>" &  
    Concat(Filter(Timesheet,Project.Value=galProjects.Selected.'Project Name'),  
    "<tr><td>" & 'Work Date' & "</td>  
    <td>" & Hours & "</td>  
    <td>" & 'Created By'.DisplayName & "</td>  
    </tr>") & "</table>",  
    {IsHtml:true, Importance: "Normal"})
```



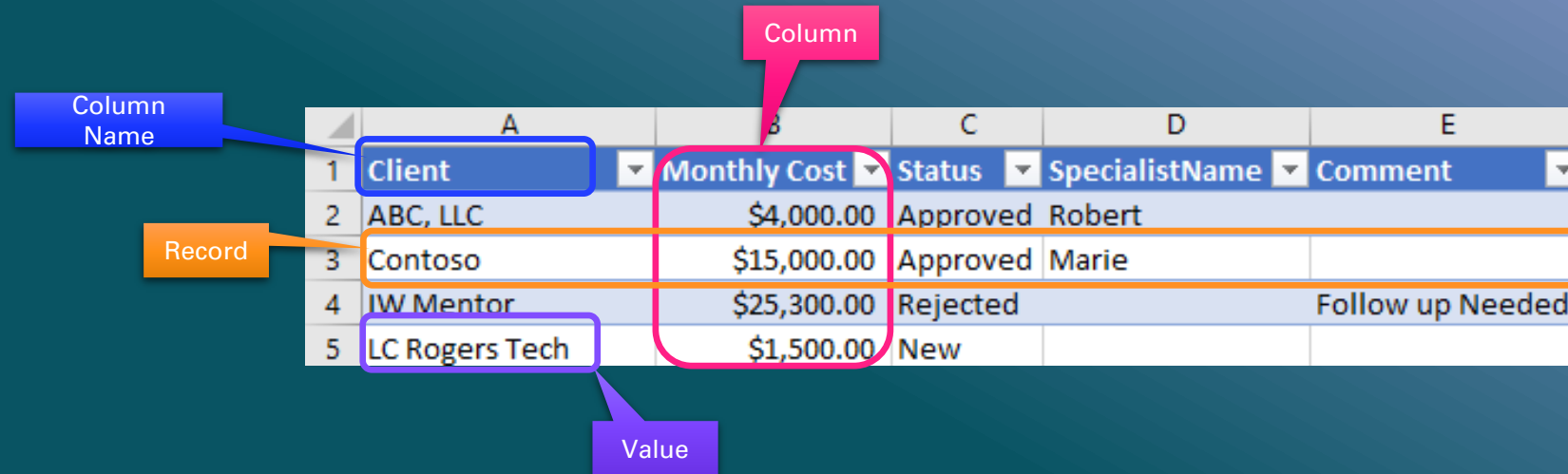


# PATCHING DATA

- Patching is a way of updating or adding rows of data, to a data source
- Why Patch?
  - Update data.
  - Provide a button in a gallery, that sets a field value.
  - Add or update several list / table items.



# DATA STRUCTURE IN POWER APPS



	A	B	C	D	E
1	Client	Monthly Cost	Status	SpecialistName	Comment
2	ABC, LLC	\$4,000.00	Approved	Robert	
3	Contoso	\$15,000.00	Approved	Marie	
4	IW Mentor	\$25,300.00	Rejected		Follow up Needed
5	LC Rogers Tech	\$1,500.00	New		



Each record is structured like this:

```
{Client: "ABC, LLC", MonthlyCost: 4000, Status: "Approved", SpecialistName: "Robert", Comment: ""},
```

```
{Client: "Contoso", MonthlyCost: 15000, Status: "Approved", SpecialistName: "Marie", Comment: ""},
```

```
{Client: "IW Mentor", MonthlyCost: 25300, Status: "Rejected", SpecialistName: "", Comment: "Follow up Needed"},
```

```
{Client: "LC Rogers Tech", MonthlyCost: 1500, Status: "New", SpecialistName: "", Comment: ""}
```

# PATCHING SYNTAX



- **Creating:** Create 2 tasks in task list

- ```
Patch( Tasks, Defaults( Tasks ),  
{ Title: "Create project charter", Status: "Not Started", DueDate: Now()+2 },  
{ Title: "Assign Team", Status: "Not Started", DueDate: Now()+3 })
```

- **Modifying:**

- Mark tasks complete, from a gallery

- ```
Patch(Tasks, ThisItem, {Status:"Completed"})
```

- **Updates**

- Example: Create a set of tasks each time a new project is created
  - Example: Create a gallery with a list of items to be approved. Users click a checkbox on each item, to approve.

# FLOW TRIGGERS



- Database or list
  - On create
  - On modify

Microsoft Lists

Search this list

+ New Edit in grid view Share Export Automate Integrate ...

Modern Demo  
Help Tickets Demo ☆

Created By ↑ ▾	Subject ▾	Created ▾	High priority ▾	Ticket Due ▾	Category ▾
Billy Bob	Headphone issue	1/15/2021 4:45 PM	No	9/23/2023	Hardware
○ Laura Rogers	Fix my monitor ...	1/12/2021 4:27 PM		9/23/2023	Hardware
Laura Rogers	Outlook errors	1/13/2021 3:47 PM	Yes	9/21/2023	Software
Laura Rogers	Mouse broken	1/13/2021 4:30 PM	Yes	9/21/2023	Hardware
Laura Rogers	Can't log in	1/15/2021 11:56 AM	Yes	9/21/2023	Login
Laura Rogers	Broken monitor	5/19/2021 2:32 PM	No	9/23/2023	Hardware
Laura Rogers	Speakers acting up	5/19/2021 2:33 PM	No	9/23/2023	Hardware
Laura Rogers	Smashed monitor	4/27/2022 3:01 PM	No	9/23/2023	Hardware
Laura Rogers	Crashed computer	4/27/2022 3:01 PM	Yes	9/21/2023	Software



# FORM DATA TO TABLE

A form is one interface in which data can be collected into a data source

Reservation Form

Name \*

Email \*

Room Type

Arrival Date \*

Departure Date \*

Number of Guests \*

Free Pickup ☐ Yes ☐ No

Flight Number




Special Requests

The data source is where data is stored

Name	Email	Room Type	Arrival Date	Departure Date
John Smith	<a href="mailto:john@smith.com">john@smith.com</a>	Single	1/5/2020	1/10/2020
Barbara Jones	<a href="mailto:barbara@jones.com">barbara@jones.com</a>	Double	5/5/2020	5/15/2020
Tyler Jobson	<a href="mailto:tyler@jobson.com">tyler@jobson.com</a>	Suite	8/5/2020	8/8/2020
Lisa Frank	<a href="mailto:lisa@frank.com">lisa@frank.com</a>	Single	10/15/2020	11/15/2020



# DATA FROM POWER APPS

Travel RequestWelcome, Laura Rogers

Requestor	Department	Work Phone
Laura Rogers	IT	2052531551
Trip Type	* Destination	
Conference	Las Vegas	
* Trip Start	* Trip End	
10/2/2023	10/6/2023	
Description		
Headedto #MPPC23 in Vegas		
Estimated Cost	Manager	
\$ 100	Garth Fort	

Submit





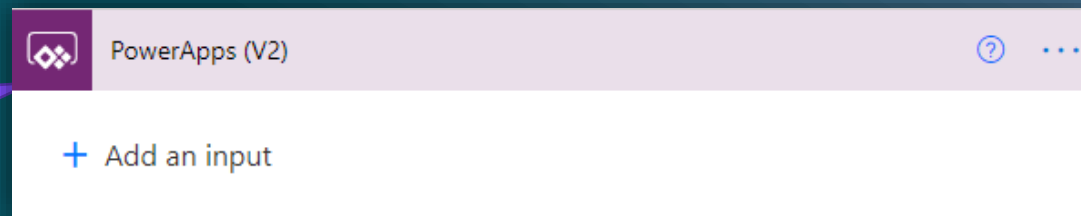
# WHY?

Do you really need to use the flow integration in  
your app?

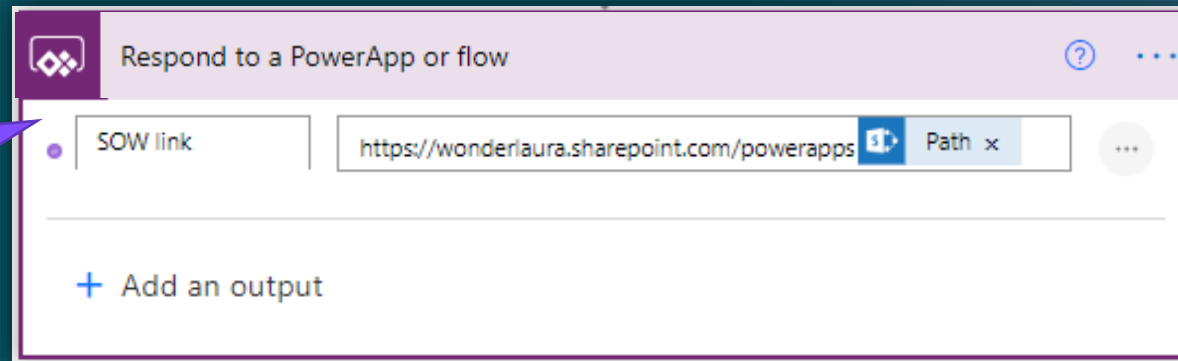
# POINTS OF INTEGRATION WITH POWER APPS

- A button / OnSelect in Power Apps can trigger a flow
- Power Automate can send data back to Power Apps
- Trigger and response can have inputs and outputs.

Power Apps  
Trigger



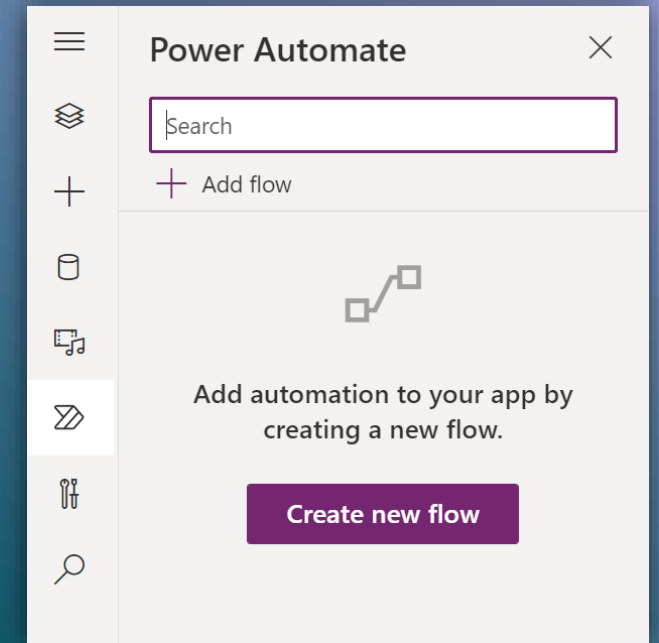
Power Apps Action:  
Respond to Power  
Apps





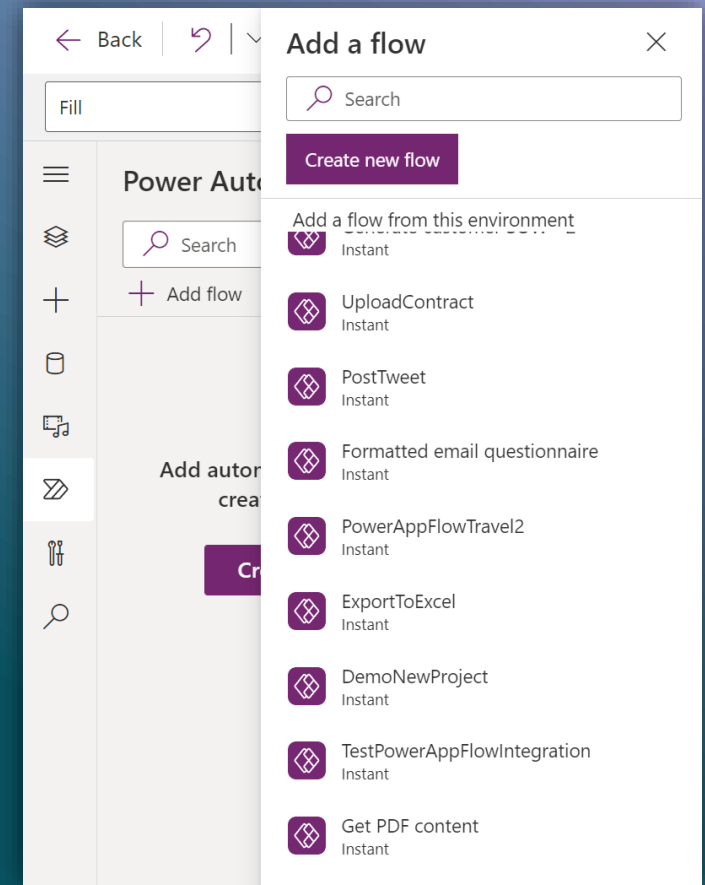
# TRIGGER A FLOW ON CLICK

- Power Automate is a connector in Power Apps
- It creates a function for your flow
- This is different than triggering a flow when an item is added or modified.



# ADD AN EXISTING FLOW

- Click Add flow.
- Pick an existing flow that has a Power Apps trigger
- Give the flow a short, simple name



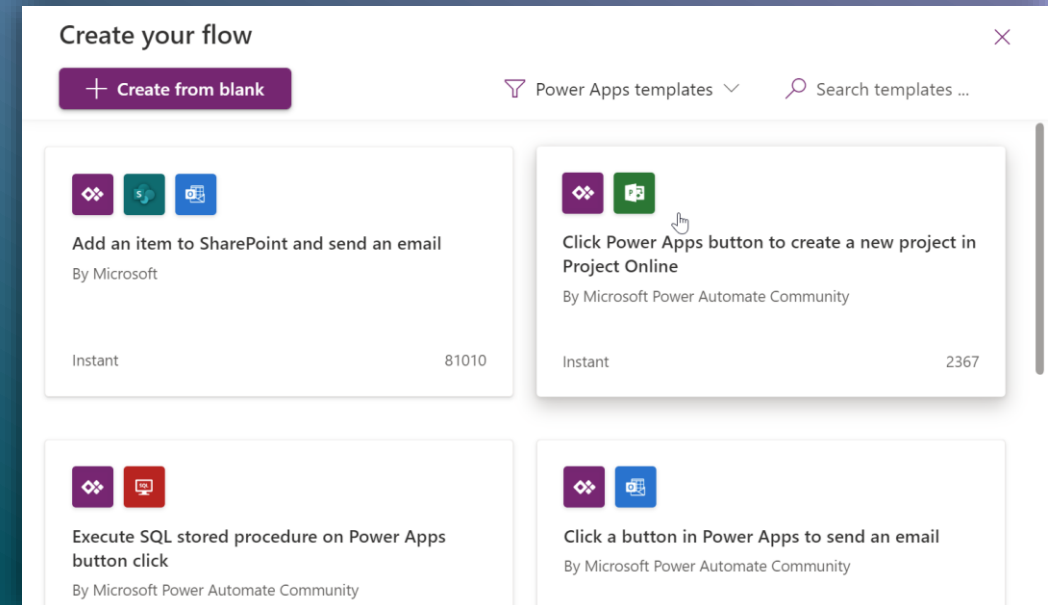
# OR CREATE A NEW FLOW

- From here, a new flow can be created.
- From blank, or a template



- **Best practice:**

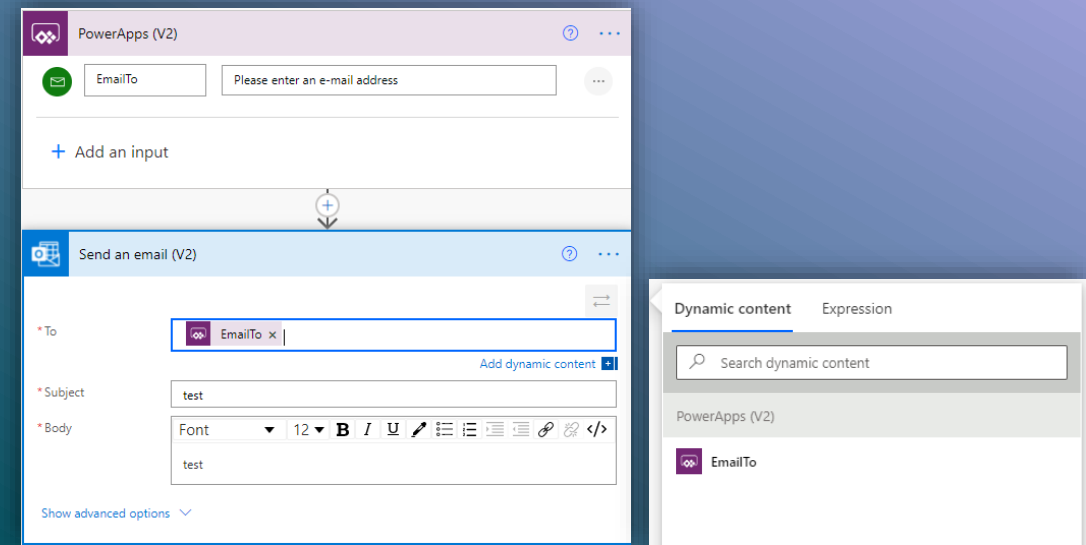
- Create the flow **\*first\*** then add the existing flow to the app.



# POWER AUTOMATE CONNECTOR

Power Automate uses inputs to retrieve data from the Power Apps trigger.

Example: flow is named **TestSendEmail**



The formula, in Power Apps, passes the required data (parameters).

```
= fx TestSendEmail.Run("support@iwmentor.com")
```

*The name of the flow*

*One or more parameters*

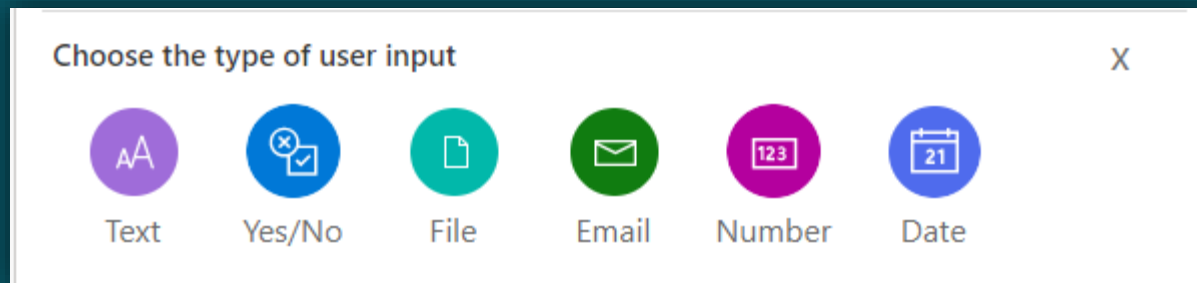


# FLOW TRIGGERED IN POWER APP: STEP 1

- Create a Flow using the Power Apps trigger.

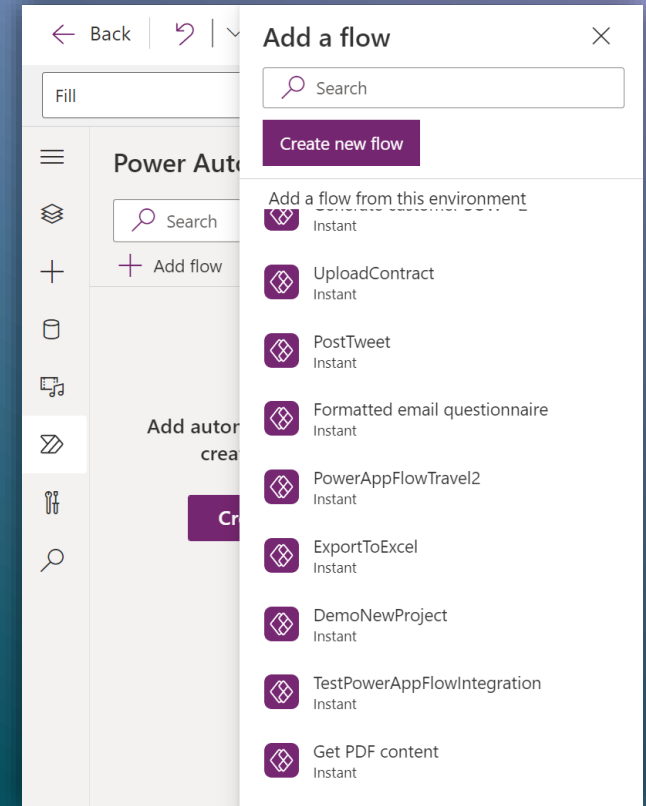


- What data in Power Apps, does the Flow need for your process?
  - For each piece of data, create an input parameter.
  - Click **Add an Input**
  - Choose the type of data:



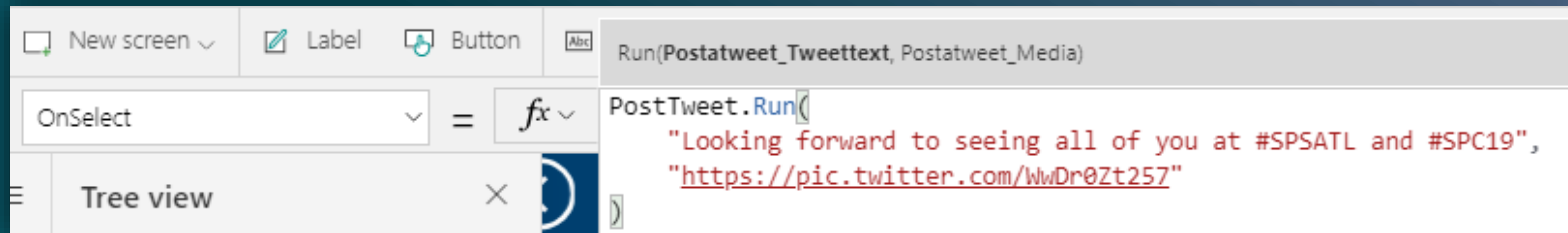
# FLOW TRIGGERED IN POWER APP: STEP 2

- Select the control in the Power App to trigger the Flow run. On the left tab, click **Power Automate**.
- Left panel shows Flows with a Power Apps trigger.
- Select a flow.



# FLOW TRIGGERED IN POWER APP: STEP 3

- In the OnSelect, start typing the name of your flow:



- The *flowname*.Run function will contain a parameter for each input that was created in the Flow.

# EXAMPLE: POWER APP -> FLOW

The screenshot shows a Power App interface with a dark blue header bar containing a back arrow and the title 'Case Management App'. Below the header is a list of documents, each with a file icon and a title: 'Marketing Compensation Report.xlsx', 'Senior Developer Overview.docx', 'Science Programs.docx', 'After Actions Review.docx', and 'Annual Marketing Report.docx'. To the right of each document title is a form for selecting an 'Existing Case'. The first document has a dropdown menu with 'Test Monday case' selected and a 'Save' button. The second document has an empty dropdown menu and a 'Create New' button. The third document has an empty dropdown menu and a 'Create New' button. The fourth document has a dropdown menu with 'Test Tuesday case' selected and a 'Save' button. The fifth document has an empty dropdown menu and a 'Create New' button.

```
CaseManagementMoveFile.Run(  
  ThisItem.ID, drpPickCase.Selected.Title)
```

This triggers the flow, sending the ID of the current file, and name of the selected case.

The screenshot shows a Power Automate flow canvas with three steps connected by arrows. The first step is 'Get case file' with inputs: 'Site Address' (Case Management - https://wonderlaura.sharepoint.com/teams/casemgmt), 'Library Name' (Documents), and 'Id' (FileID x). The second step is 'Create new folder' with inputs: 'Site Address' (Case Management - https://wonderlaura.sharepoint.com/teams/casemgmt), 'List or Library' (Documents), and 'Folder Path' (FilePath x). The third step is 'Move file' with inputs: 'Current Site Address' (Case Management - https://wonderlaura.sharepoint.com/teams/casemgmt), 'File to Move' (Identifier x), 'Destination Site Address' (Case Management - https://wonderlaura.sharepoint.com/teams/casemgmt), 'Destination Folder' (/Shared Documents/ Name x), and 'If another file is already there' (Replace).

# EXAMPLE: POWER APP -> FLOW

- Gallery in Power Apps displays files.
- Drop-down box of a list of case management cases.
- Pick a case name from the list, click Save.
- Flow moves that file into a folder with the same name as the case.
- Parameters:
  - FileID= The SharePoint ID of the document
  - FilePath = name of the case, to create a new folder for

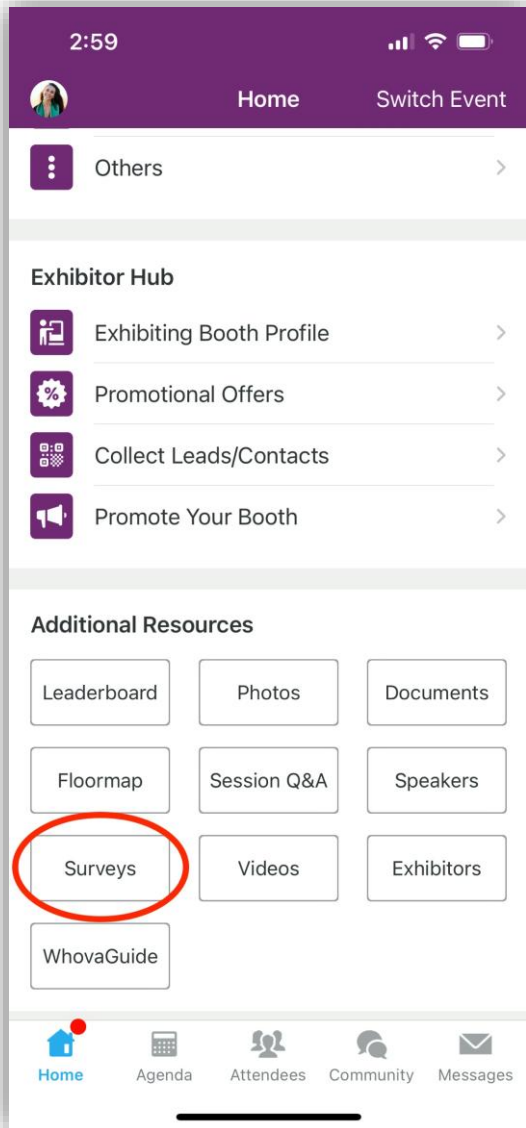


# PERMISSIONS CONSIDERATIONS

- When the flow run is triggered from an app...
- The same account / person needs to be the author of the flow and the app.
  - If the flow is set up to run as some other account like a shared or system account, the flow trigger button in the Power App needs to be created as that same account.
- Also, if any premium connectors are used in the flow, the end users in the app also need to be licensed for them.
- If using a Solution, both the Power App and the flow need to exist in the same solution.



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