WHY INTEGRATE POWER APPS WITH POWER AUTOMATE?

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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

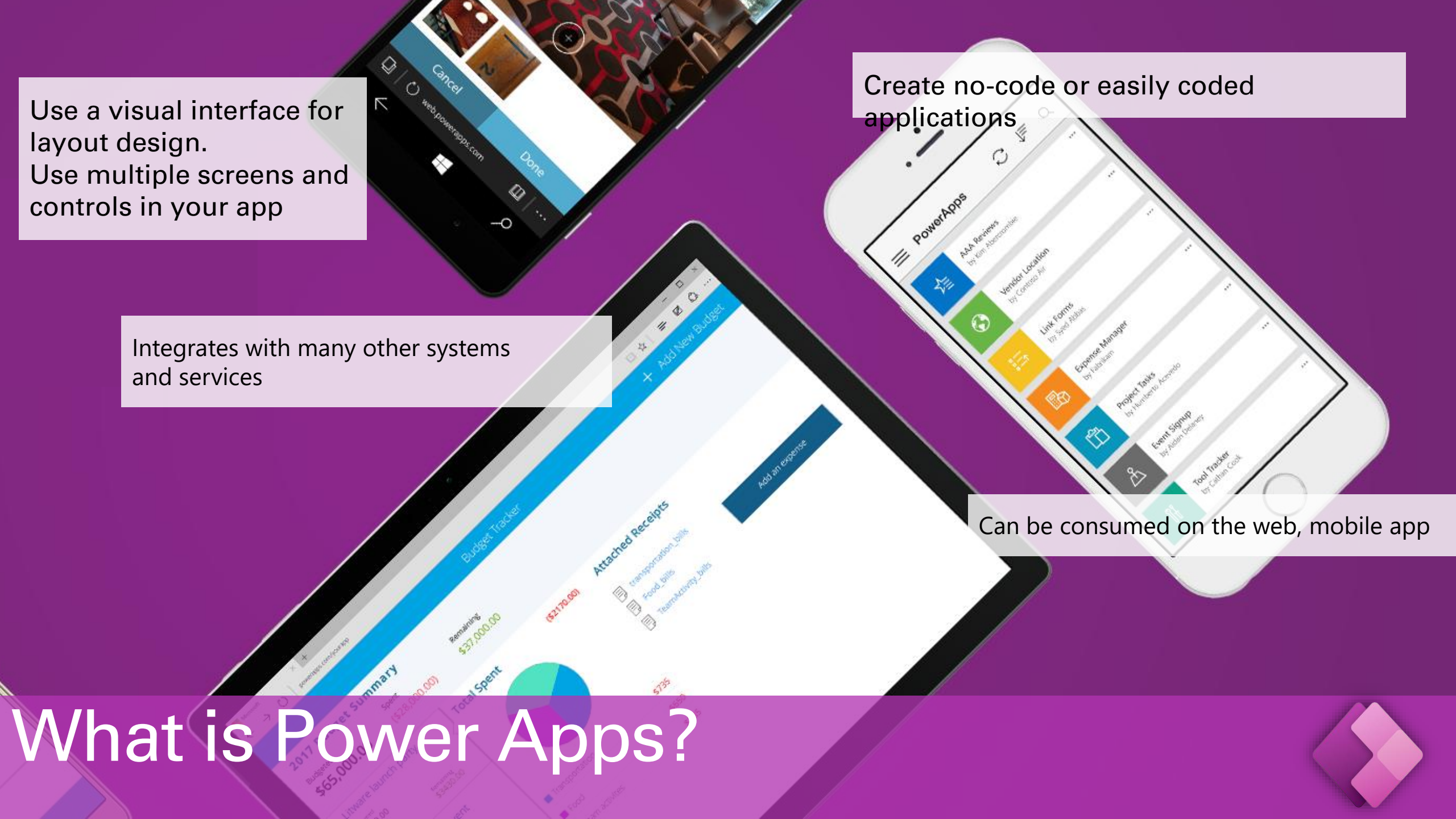
INTRODUCTION

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

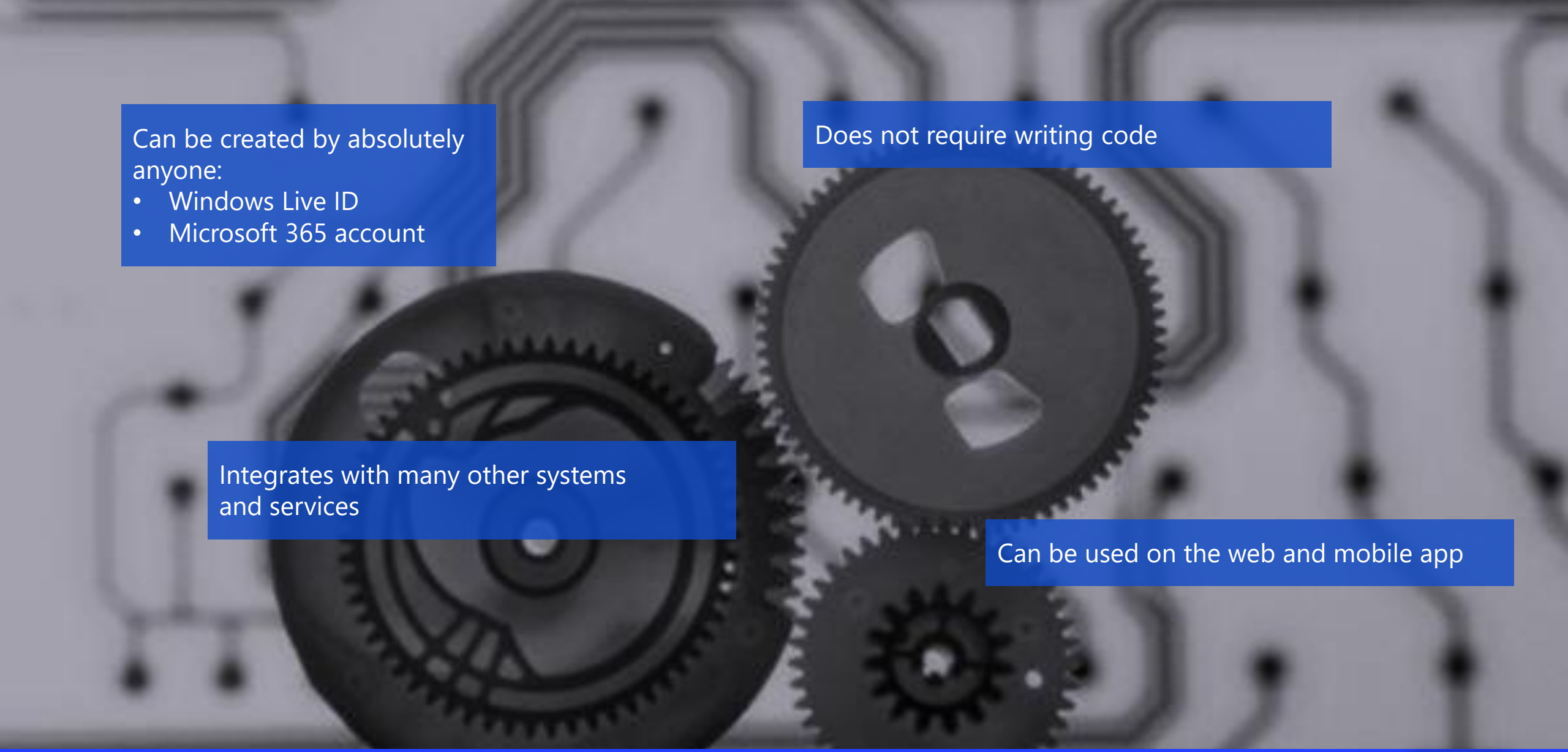
Create no-code or easily coded applications

Integrates with many other systems and services

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

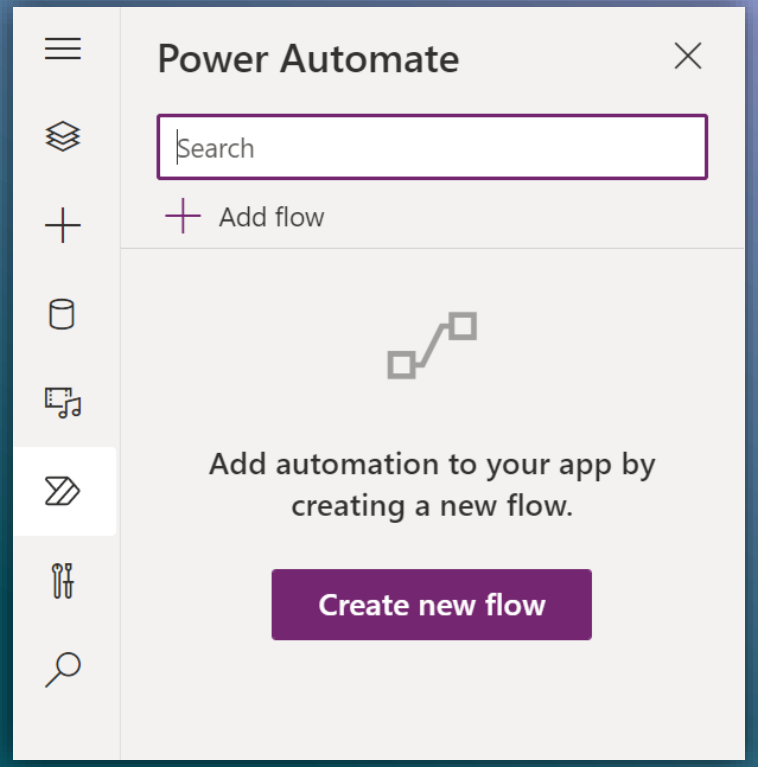
Integrates with many other systems and services

Can be used on the web and mobile app

What is Power Automate?

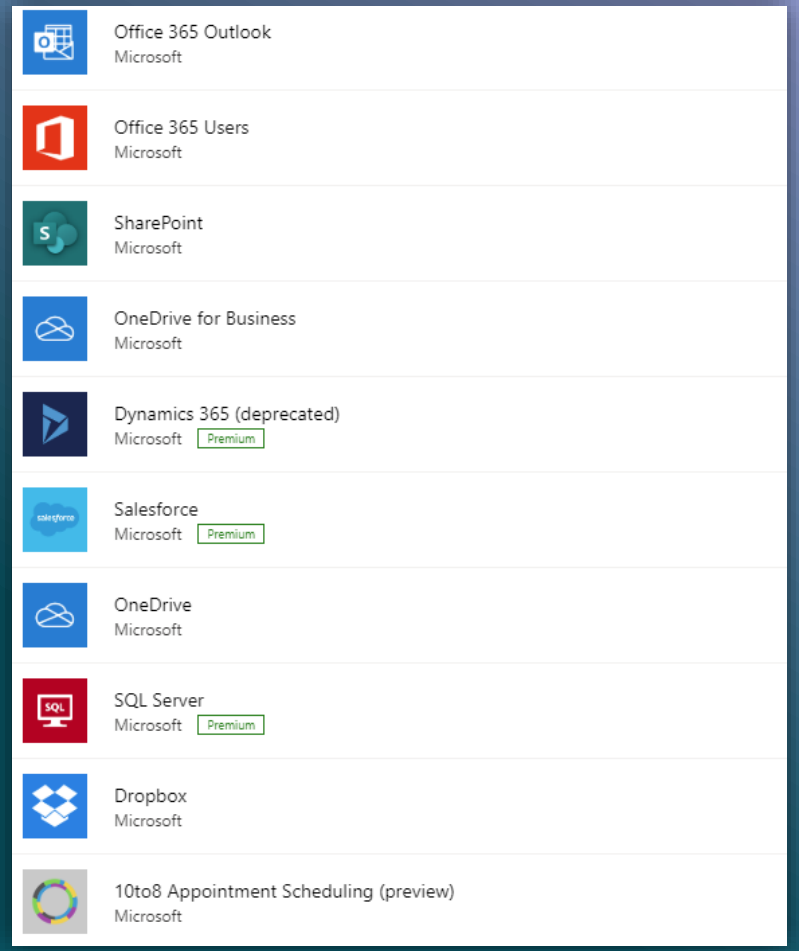
INTEGRATION

- 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

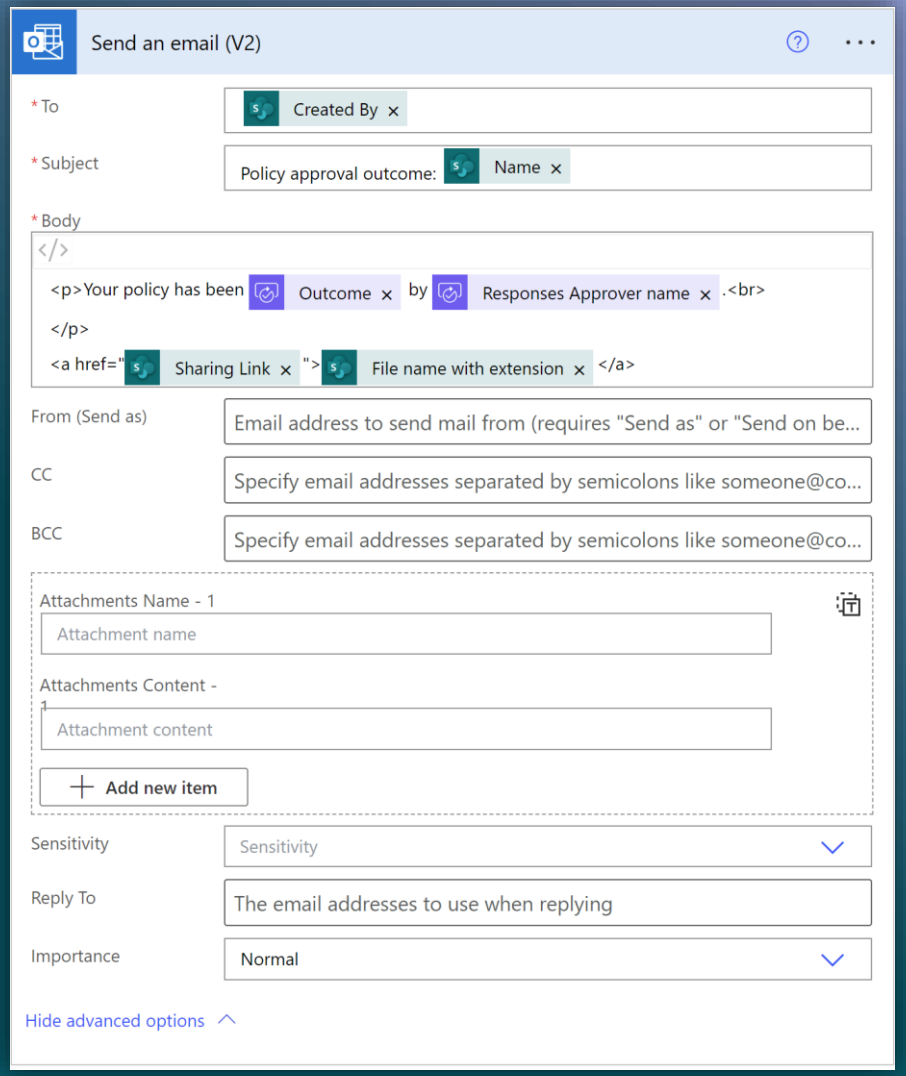
- Office 365 Outlook
  - Send email directly from the Power App, without the need for a Flow



EMAILS & NOTIFICATIONS

EMAIL FROM A FLOW

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

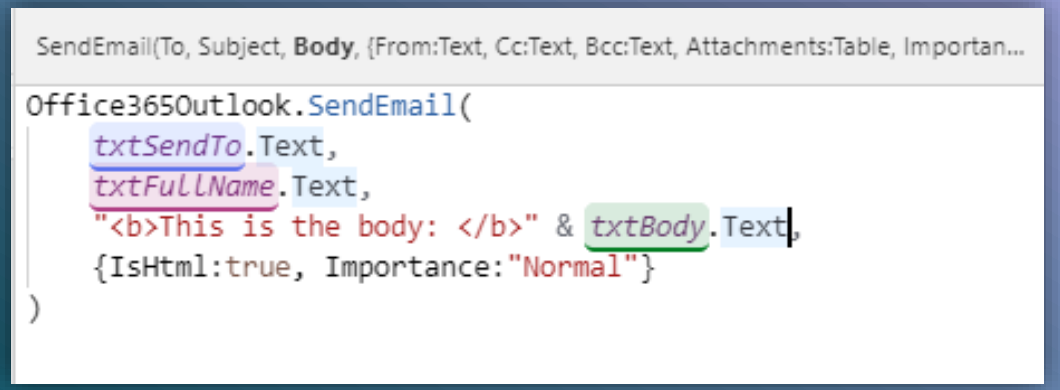


EMAIL FROM POWER APPS

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

  Office365Outlook.SendEmail
  (To, Subject, Body)

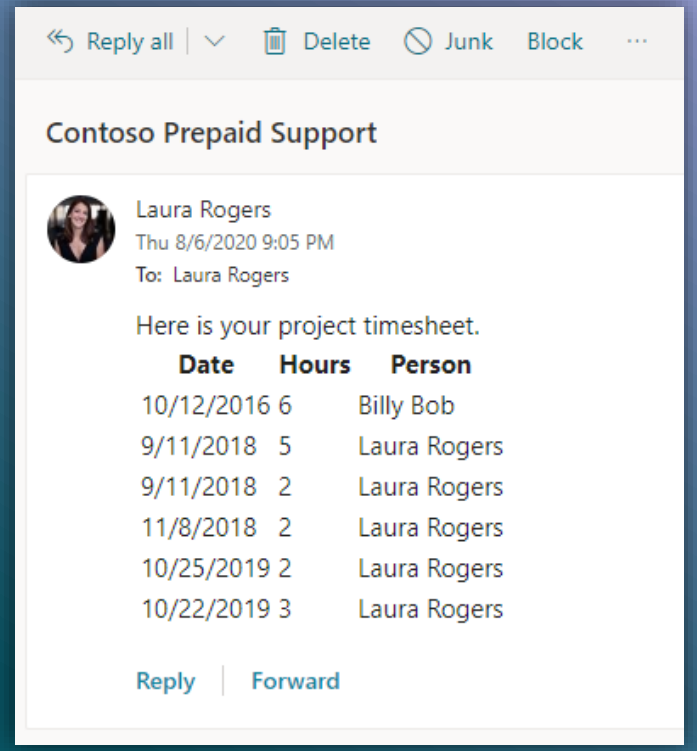
- Extras are optional parameters:
  - From, CC, BCC
  - Attachments - a table
  - Importance – “High” “Low” “Normal”
  - IsHtml - Boolean true or false



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"})
```

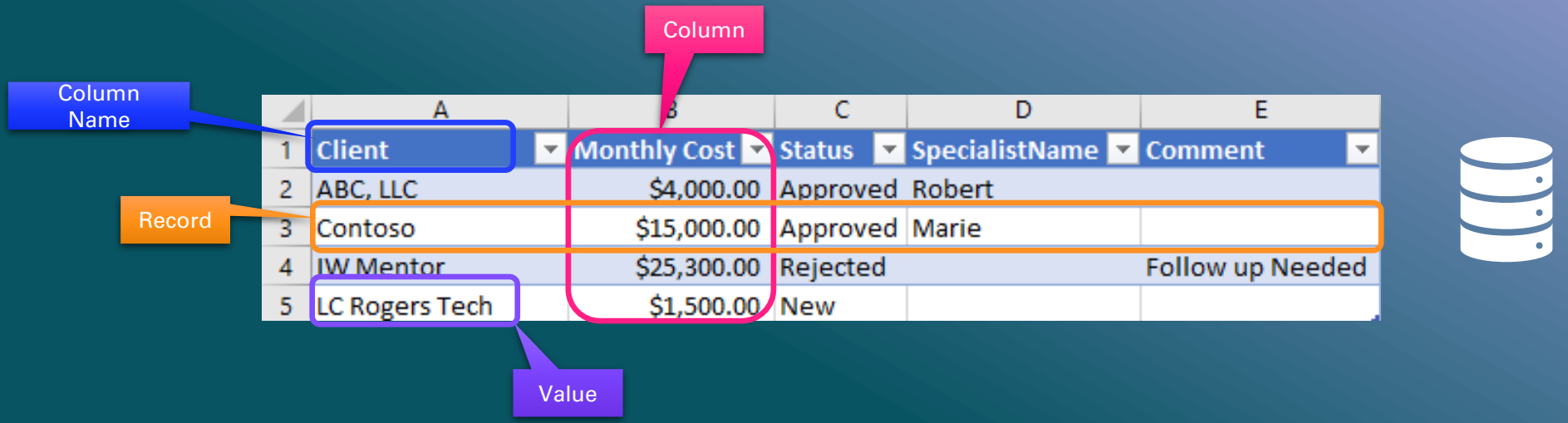


PATCHING DATA

- 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



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: “”}

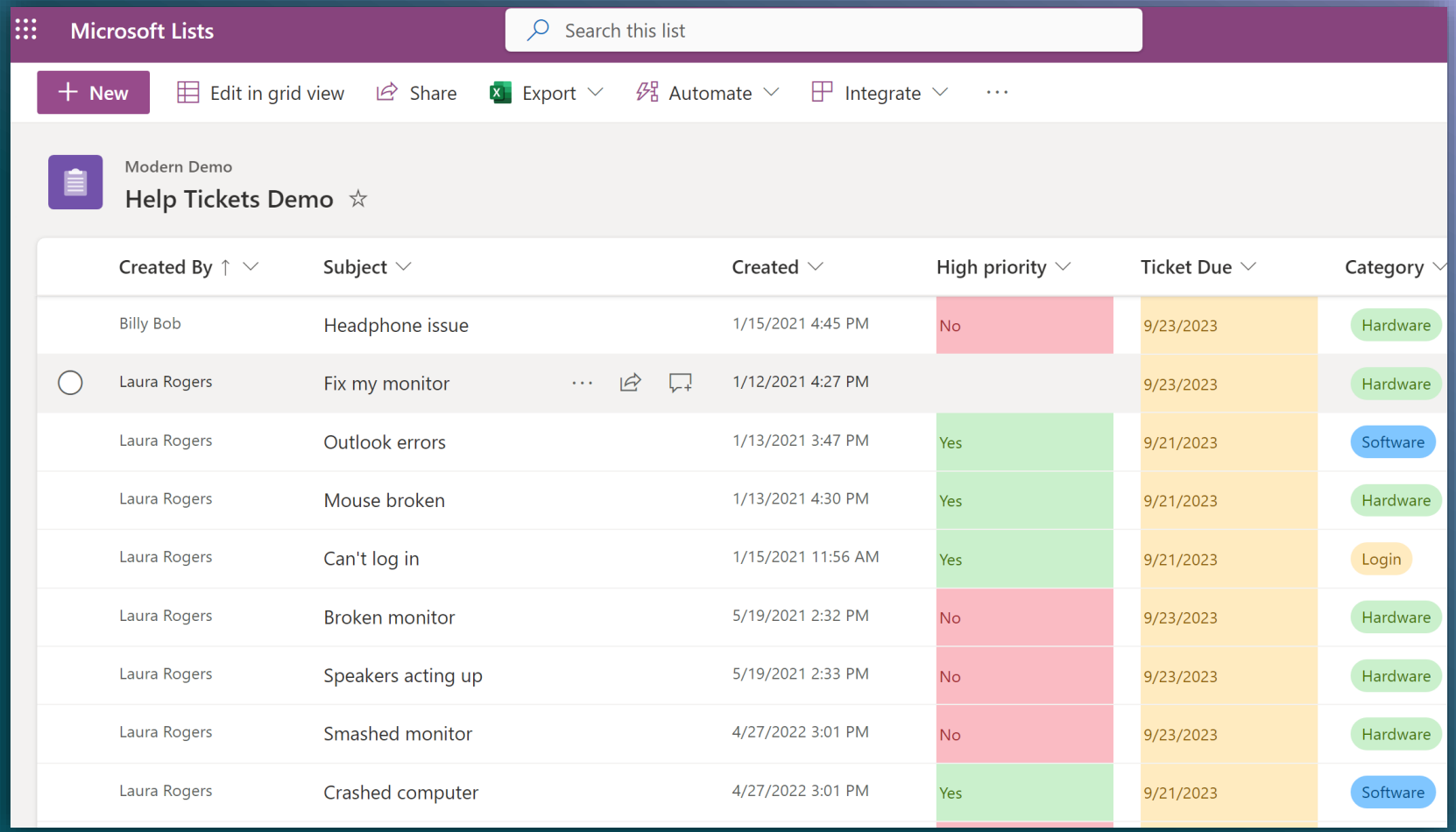
PATCHING SYNTAX

- 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

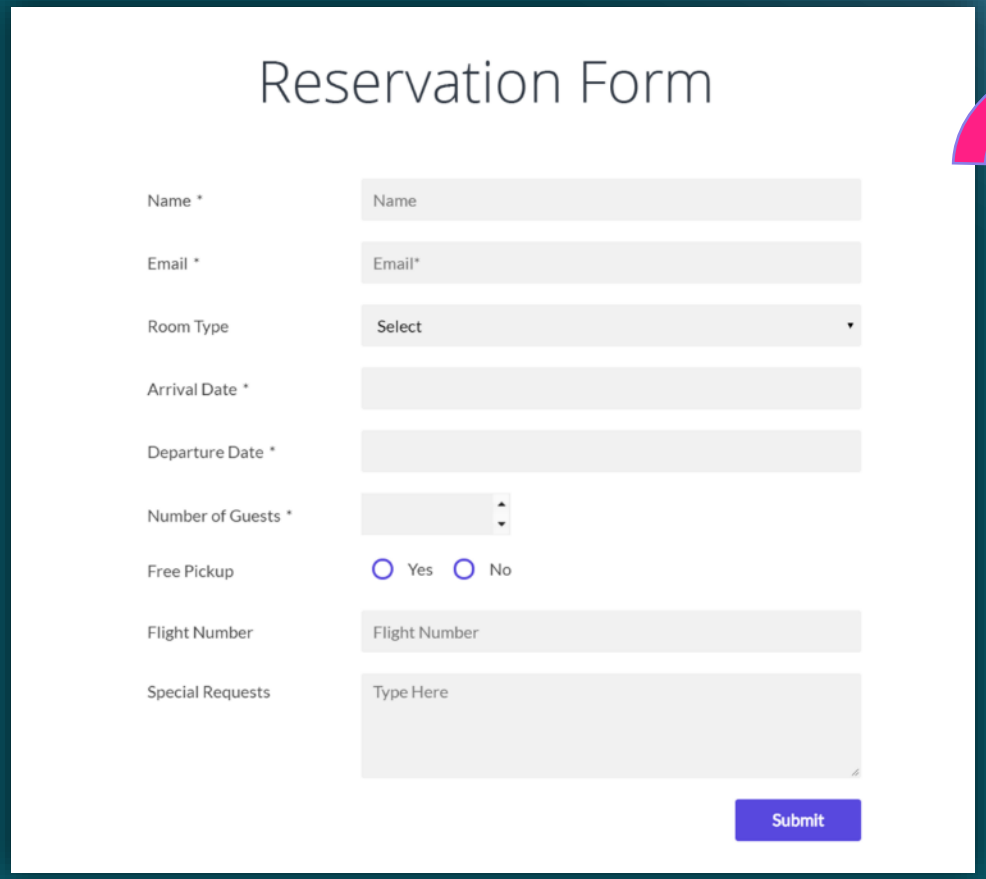
- Database or list
  - On create
  - On modify



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

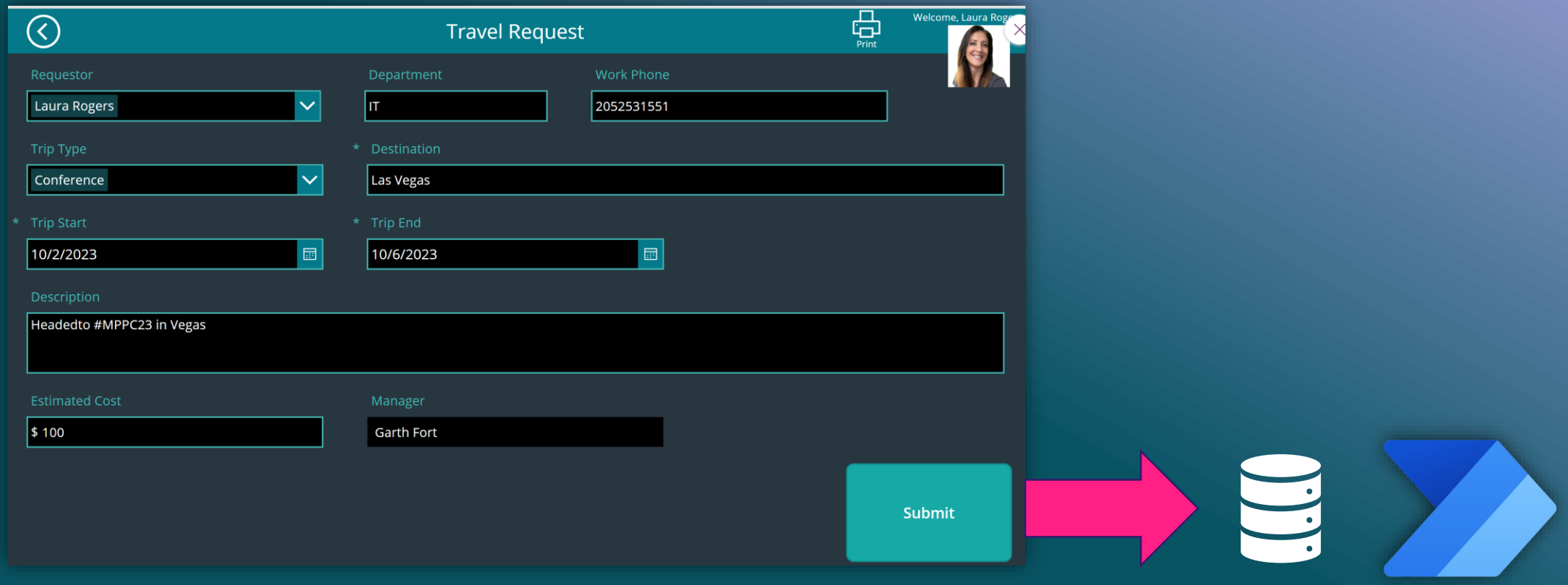
A form is one interface in which data can be collected into a data source



The data source is where data is stored

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

DATA FROM POWER APPS



WHY?

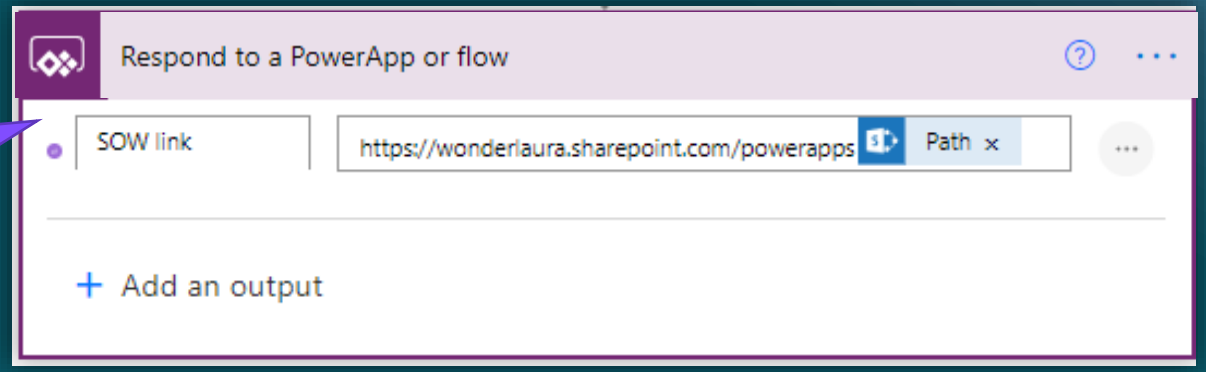
Do you really need to use the flow integration in your app?

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.

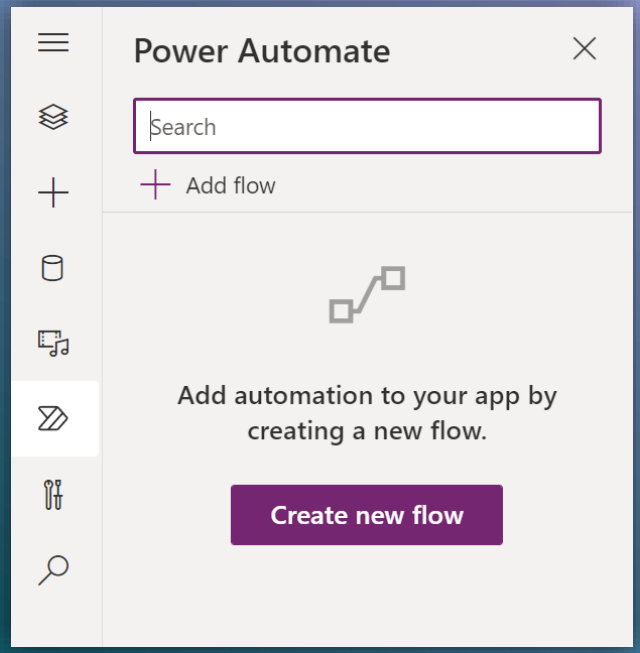
Power Apps Trigger

Power Apps Action: Respond to Power Apps



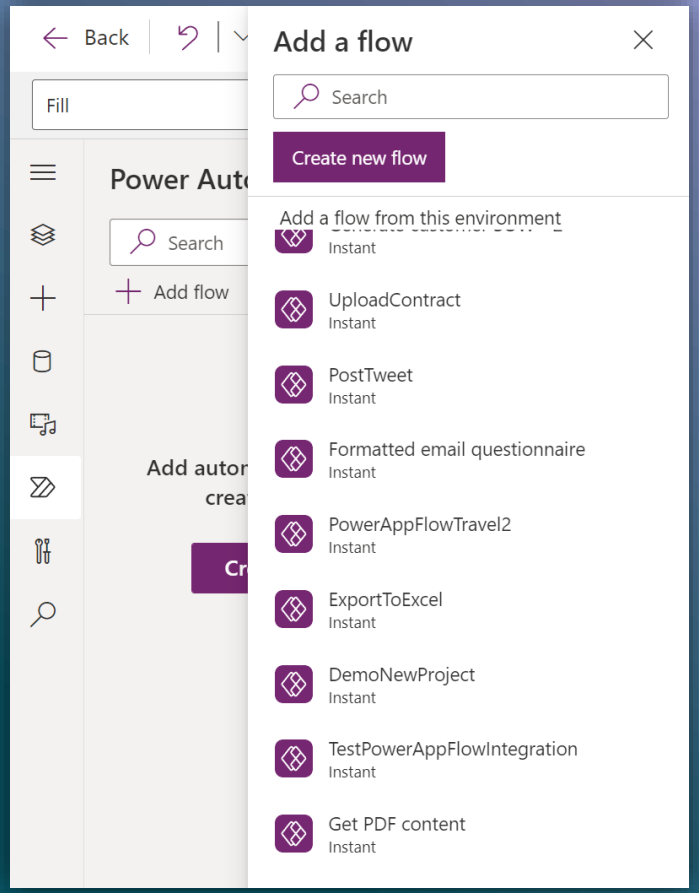
TRIGGER A FLOW ON CLICK

- 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.



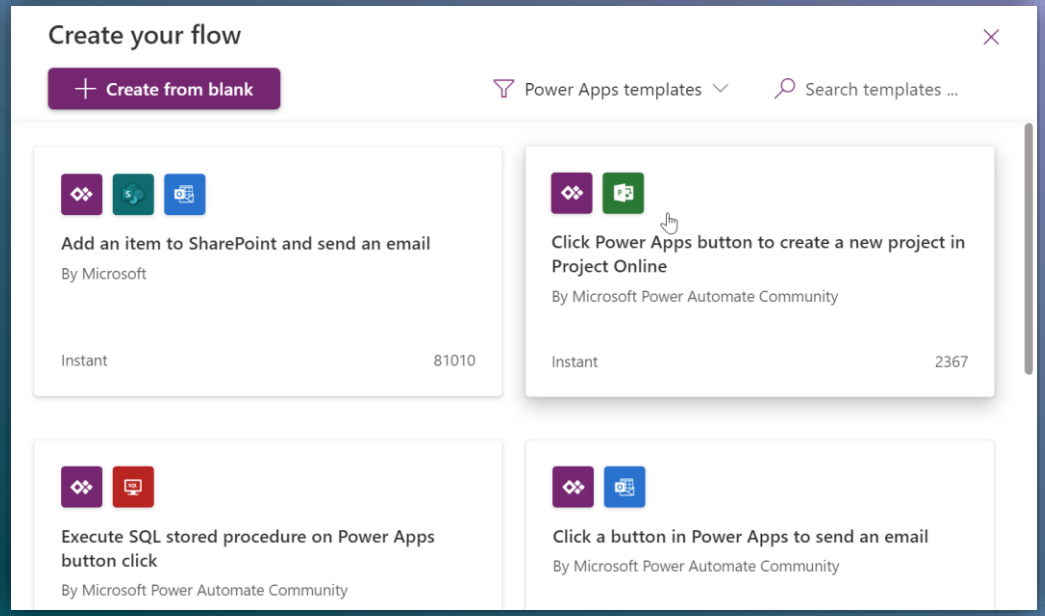
ADD AN EXISTING FLOW

- 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

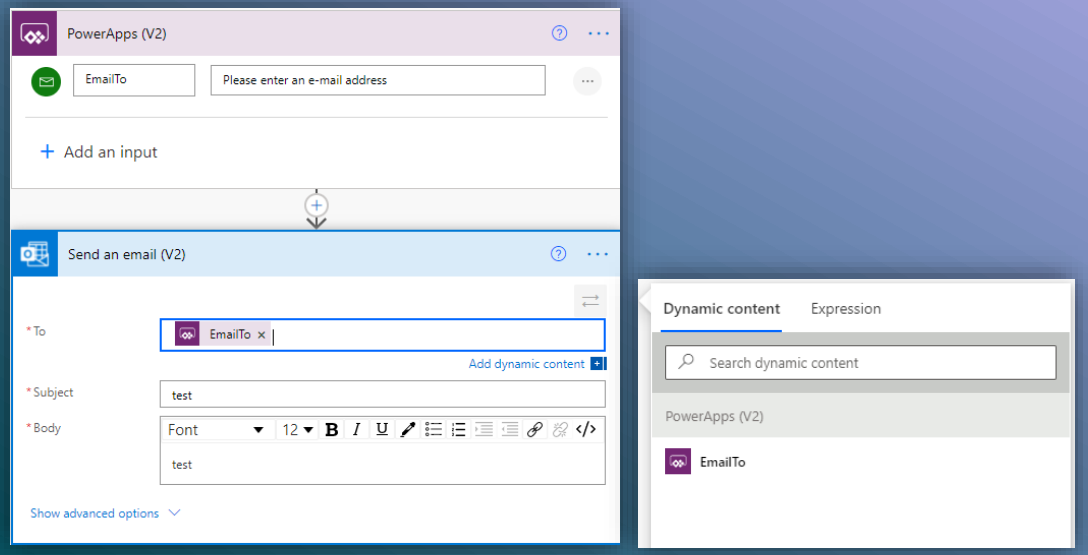
- From here, a new flow can be created.
- From blank, or a template
- **Best practice:**
  - Create the flow ***first*** then add the existing flow to the app.



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")
```

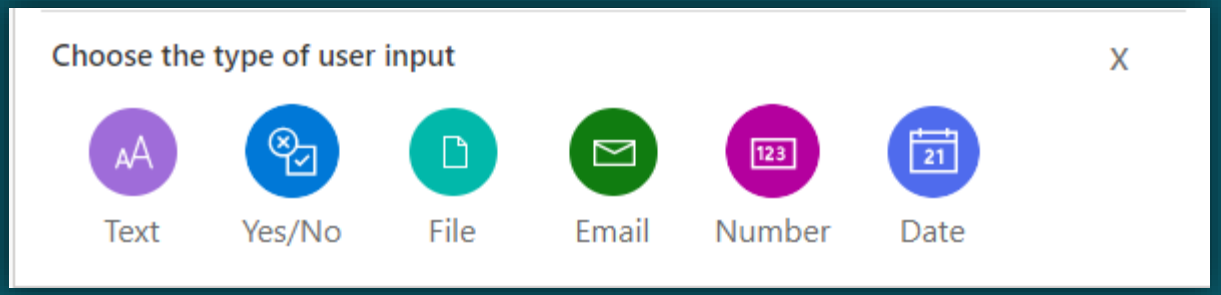
The name of the flow

One or more parameters

FLOW TRIGGERED IN POWER APP: STEP 1

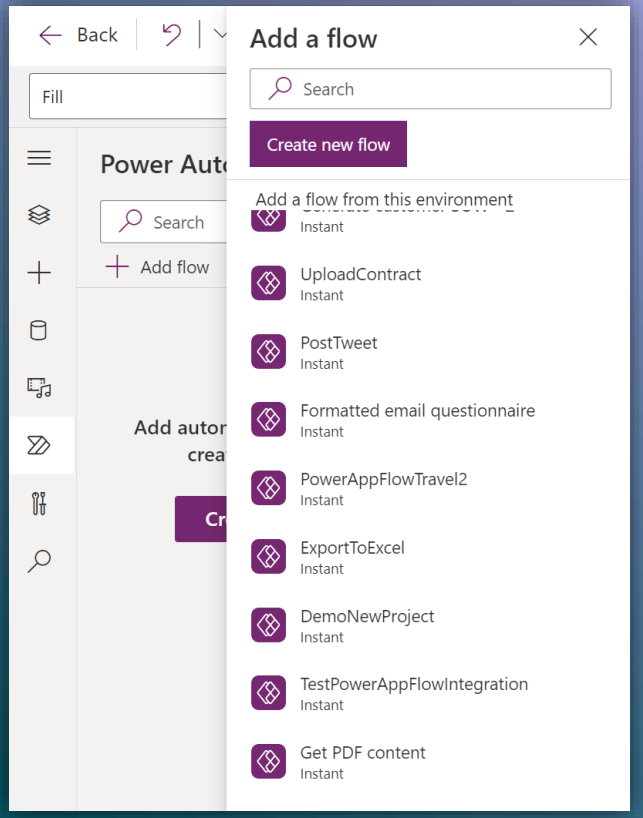
- Create a Flow using the Power Apps trigger.

- 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:



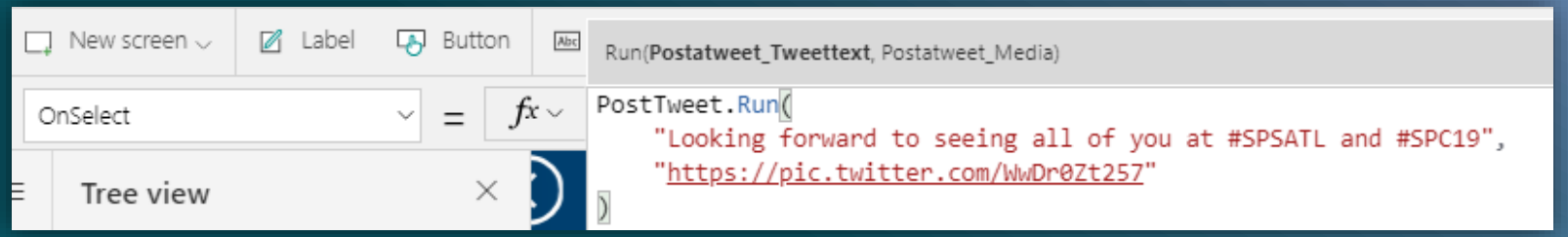
FLOW TRIGGERED IN POWER APP: STEP 2

- 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:

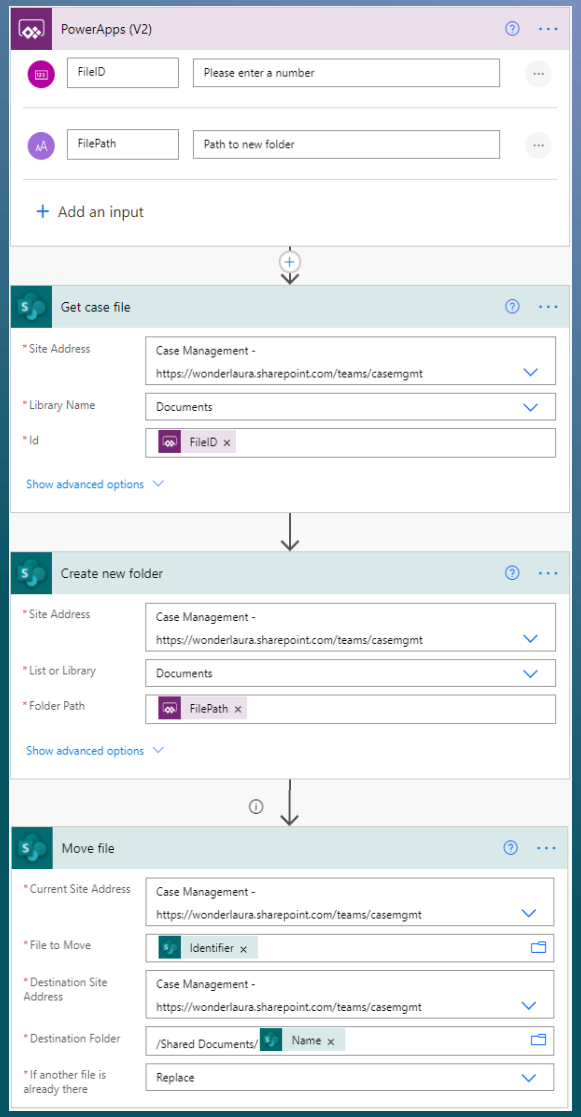


- The *flowname*.Run function will contain a parameter for each input that was created in the Flow.

EXAMPLE: POWER APP -> FLOW

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

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

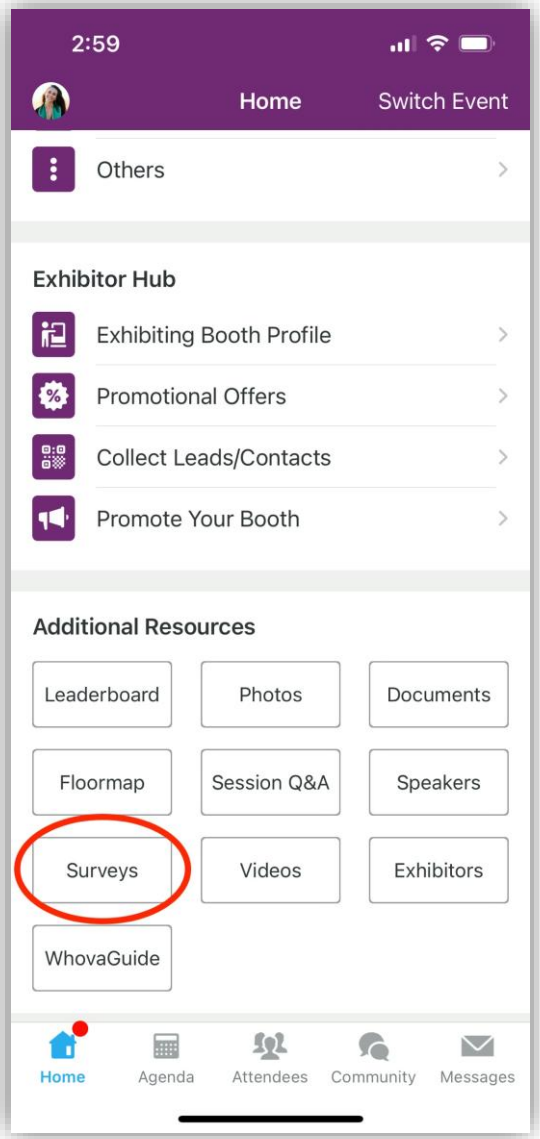


EXAMPLE: POWER APP -> FLOW

- 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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