TheTechPlatform
Where Tech Meets.

Introduction to Power Apps – Session 3

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AGENDA SLIDE

What we will cover today

01

Intro to Power Apps
Recap

02

Building Apps via PowerApps Template

03

Building Apps via Power Apps from scratch

04

Intro to Power Apps
Input, Galleries, Forms

05

Demos

House Keeping

6 pm IST - Start of Session

Class Slides

Labs

Additional Resources

Video Resources

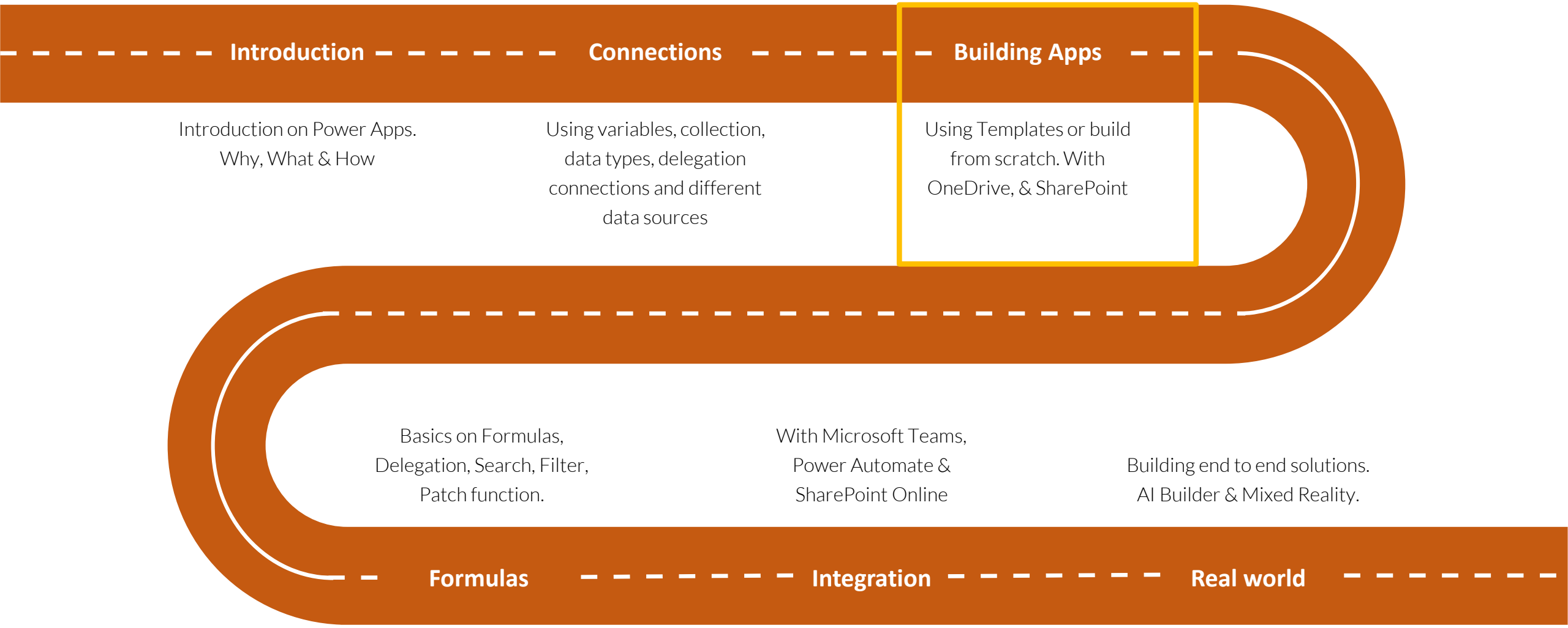
Q & A

Location of Slides

- http://bit.ly/PowerAppsCourse

Course Roadmap

Introduction to Power Apps



Low Code Concepts

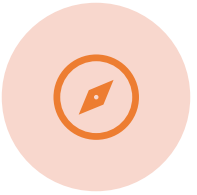
Declarative & **Imperative** Logic

Formulas

Variables and **Collections**

Data Sources

Controls & Bindings



Navigation

Variables

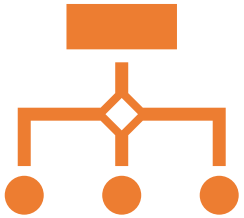
Variable Type	Scope	Description	Functions to Use
Global variables	App	Simplest to use. Holds a number, text string, Boolean, record, table, etc. that can be references from **anywhere in the app**.	Set
Context variables	Screen	Great for passing values to a screen, much like parameters to a procedure in other languages. Can be referenced from **only one screen.**	UpdateContext Navigate
Collections	App	Holds a table that can be referenced from **anywhere in the app.**	Collect ClearCollect

Understand variables in canvas apps - Power Apps | Microsoft Docs

Collections

Why **Collections**?

Locally store data in your apps



Group of items that are similar such as **SPO**

[Collect, Clear, and ClearCollect functions - Power Apps | Microsoft Docs]

Collections functions

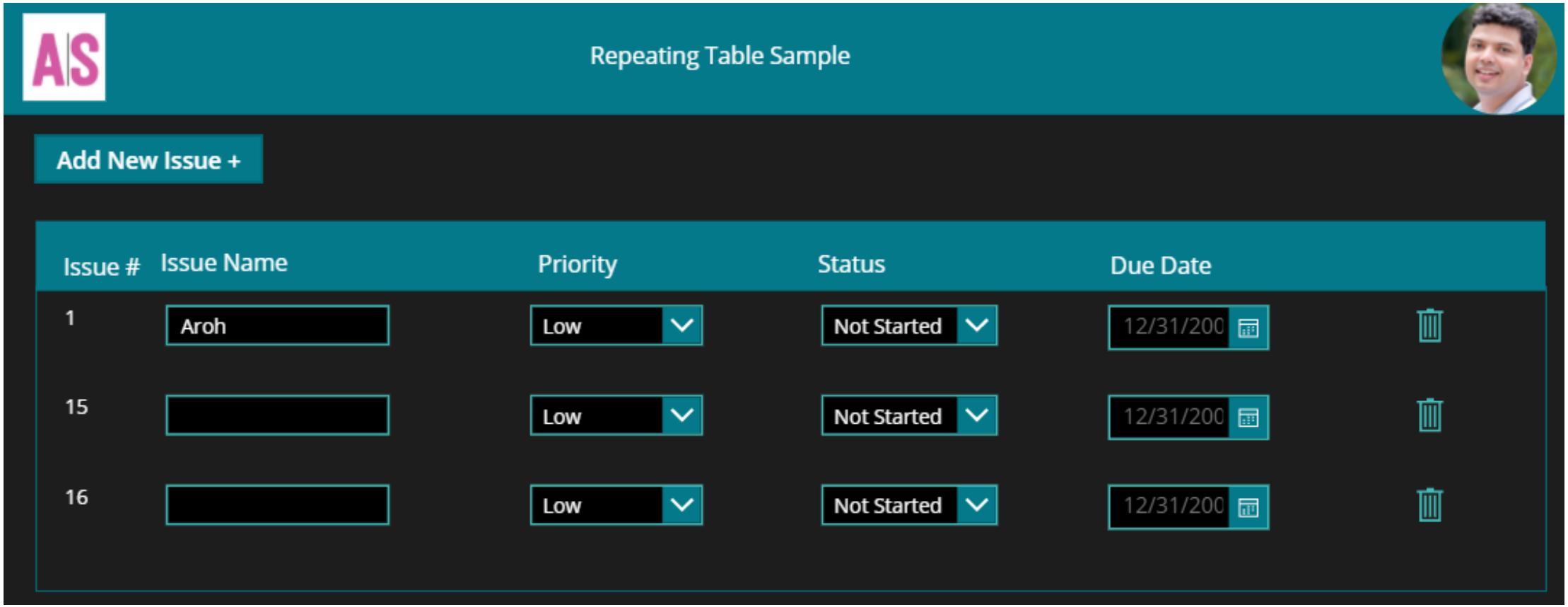
How to use?

Collect

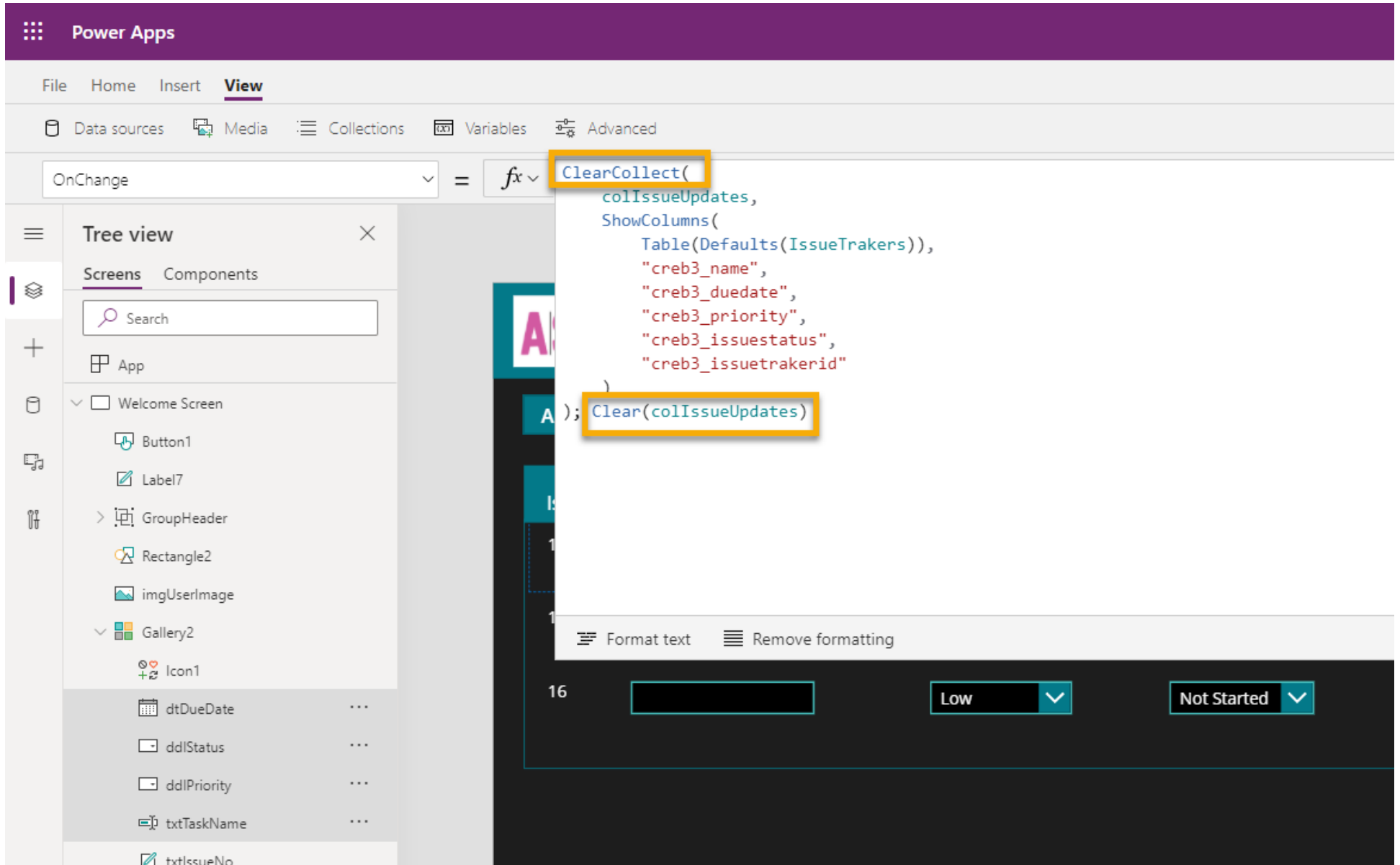
Clear

Clear Collect

Sample will work soon in Session 6



Sample will work soon in Session 6



Data Types

Data Type	Description	Examples
Boolean	A true or false value. Can be used directly in If, Filter and other functions without a comparison.	*True*
Color	A color specification, including an alpha channel.	Color.Red ColorValue("#102030") RGBA(255, 128, 0, 0.5)
Currency	A currency value that's stored in a floating-point number. Currency values are the same as number values with currency-formatting options.	123 4.56
Date	A date without a time, in the time zone of the app's user.	Date(2019, 5, 16)
DateTime	A date with a time, in the time zone of the app's user.	DateTimeValue("May 16, 2019 1:23:09 PM")
GUID	A Globally Unique Identifier.	GUID() GUID("123e4567-e89b-12d3-a456-426655440000")
Hyperlink	A text string that holds a hyperlink.	"https://powerapps.microsoft.com"

Data types - Power Apps | Microsoft Docs

Data Types

Data Type	Description	Examples
Image	A Universal Resource Identifier (URI) text string to an image in .jpeg, .png, .svg, .gif, or other common web-image format.	MyImage added as an app resource "https://northwindtraders.com/logo.jpg" "appres://blobmanager/7b12ffa2..."
Media* 1. Browser ~ supports **100 MB** 2. Mobile ~ supports **30-70 MB**	A URI text string to a video or audio recording.	MyVideo added as an app resource "https://northwindtraders.com/intro.mp4" "appres://blobmanager/3ba411c..."
Number	A floating-point number.	123 -4.567 8.903e121
Option set	A choice from a set of options, backed by a number. This data type combines a localizable text label with a numeric value. The label appears in the app, and the numeric value is stored and used for comparisons.	ThisItem.OrderStatus

Data types - Power Apps | Microsoft Docs

Data Types

Data Type	Description	Examples
Record	A record of data values. This compound data type contains instances of other data types that are listed in this topic. More information: Working with tables.	**{ Company: "Northwind Traders", Staff: 35, NonProfit: false }**
Record reference	A reference to a record in an entity. Such references are often used with polymorphic lookups. More information: Working with references.	**First(Accounts).Owner**
Table	A table of records. All of the records must have the same names for their fields with the same data types, and omitted fields are treated as *blank*. This compound data type contains instances of other data types that are listed in this topic. More information: Working with tables.	**Table({ FirstName: "Sidney", LastName: "Higa" }, { FirstName: "Nancy", LastName: "Anderson" })**
Text	A Unicode text string.	**"Hello, World"**
Time	A time without a date, in the time zone of the app's user.	**Time(11, 23, 45)**
Two option	A choice from a set of two options, backed by a Boolean value. This data type combines a localizable text label with a boolean value.	**ThisItem.Taxable**

Understand delegation in a canvas app

- Minimize the **amount of data** that must be brought to your **device**
- Only the **first set of records** can be retrieving
- Dramatically reduce the **processing power, memory,** and **network bandwidth** that your app need
- Snappier response times for your users**, even on phones connected via a cellular network.**
- PowerApps formulas meets the need to **minimize data** moving over the network
- Power Apps will delegate processing of **data to the data source (CDS, SharePoint, SQL Server)**
- Rather than moving the data to the app for processing locally.

[Understand delegation in a canvas app - Power Apps | Microsoft Docs]

Understand delegation in a canvas app

Working with **large data sets** requires using **data sources** and **formulas** that can be delegated

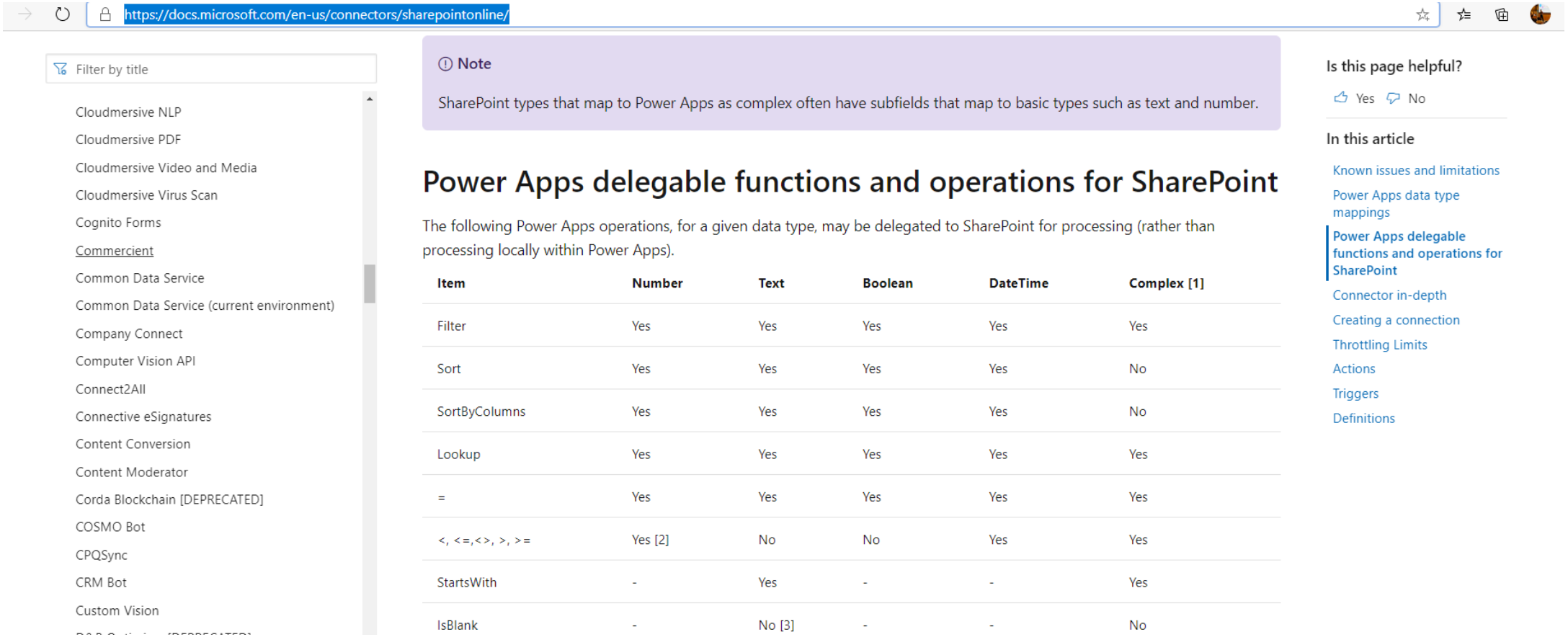
only way to keep your app performing well.

Small data sets (fewer than 500 records), you can use any data source and formula

App can process data locally, if the formula can't be delegated

Delegation

[SharePoint - Connectors | Microsoft Docs]



Delegation

Power Apps delegable functions and operations for Dataverse

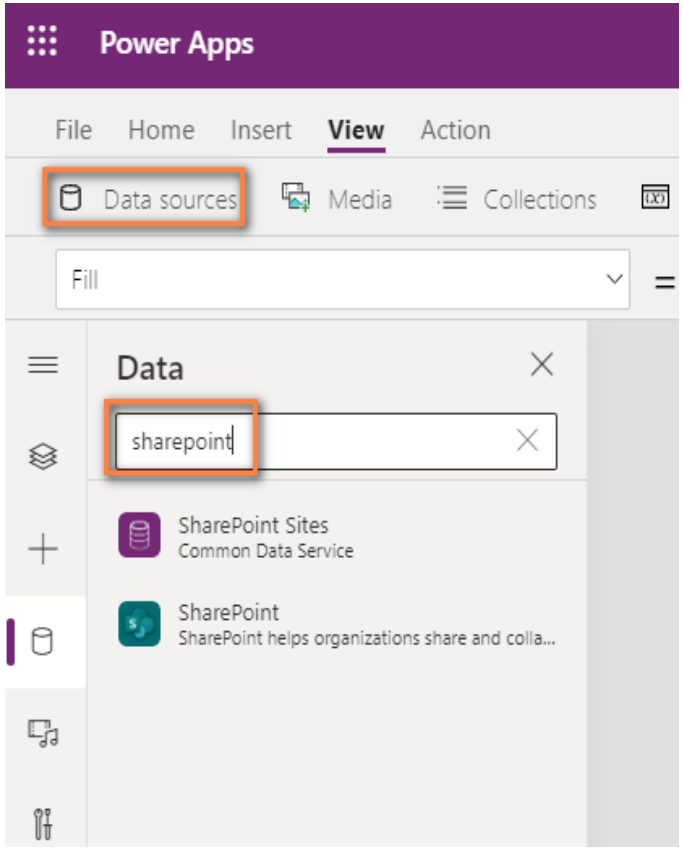
Power Apps delegable functions and operations for Dataverse

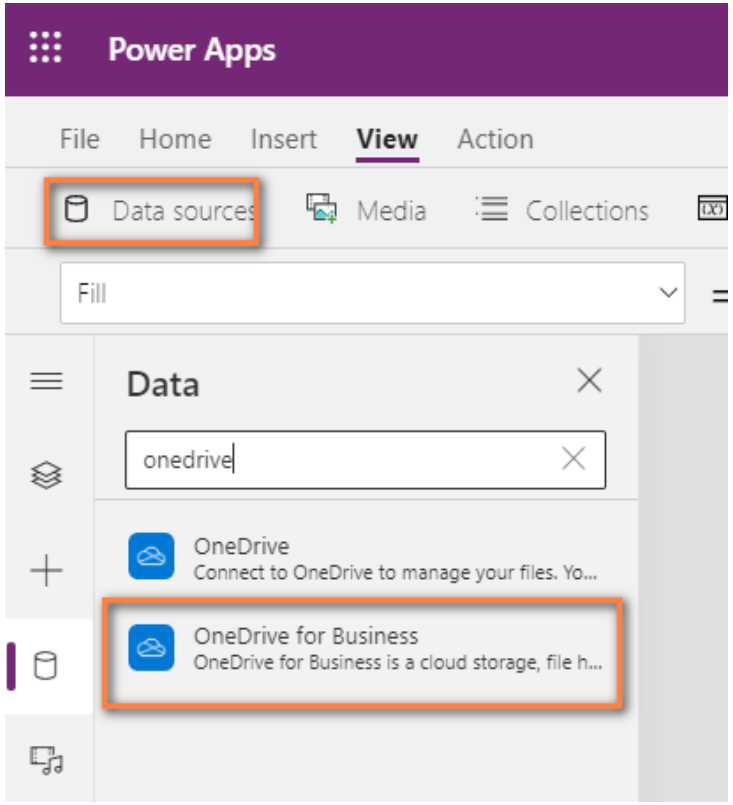
These Power Apps operations, for a given data type, may be delegated to Dataverse for processing (rather than processing locally within Power Apps).

Item	Number [1]	Text [2]	Choice	DateTime [3]	Guid
Filter	Yes	Yes	Yes	Yes	Yes
Sort	Yes	Yes	No	Yes	-
SortByColumns	Yes	Yes	No	Yes	-
Lookup	Yes	Yes	Yes	Yes	Yes
=, <>	Yes	Yes	Yes	Yes	Yes
<, <=, >, >=	Yes	Yes	No	Yes	-
And/Or/Not	Yes	Yes	Yes	Yes	Yes
StartsWith	-	Yes	-	-	-
IsBlank	Yes [4]	Yes [4]	No [4]	Yes [4]	Yes
Sum, Min, Max, Avg	Yes [5]	-	-	No	-

Data Sources

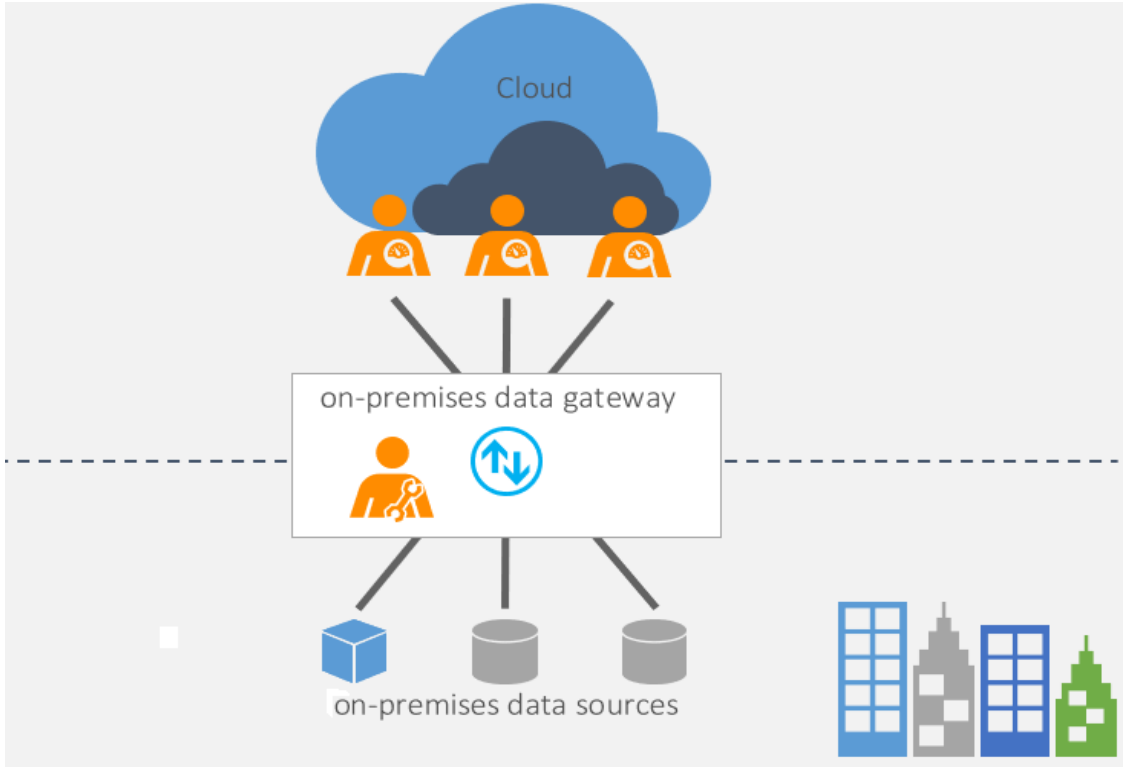
- In Power Apps, most canvas apps use external information stored in cloud services **called Data Sources**.
- A common example is a table in an **Excel file stored in OneDrive for Business** or SharePoint.





Data Gateway

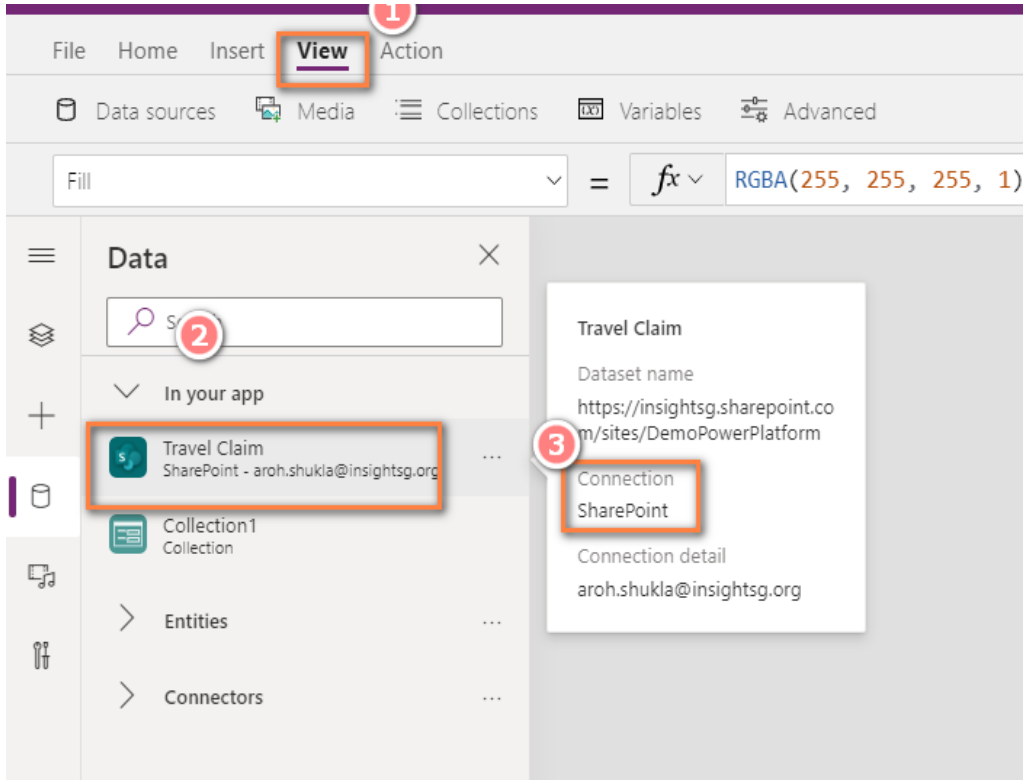
- By **using a gateway**, organizations can keep databases and other data sources on their on-premises networks, yet securely use that **on-premises data in cloud services.**



Connections

- Data is stored in **a data source**, and you bring that data into your app by creating a connection. The connection uses a **specific connector to talk to the data source.**

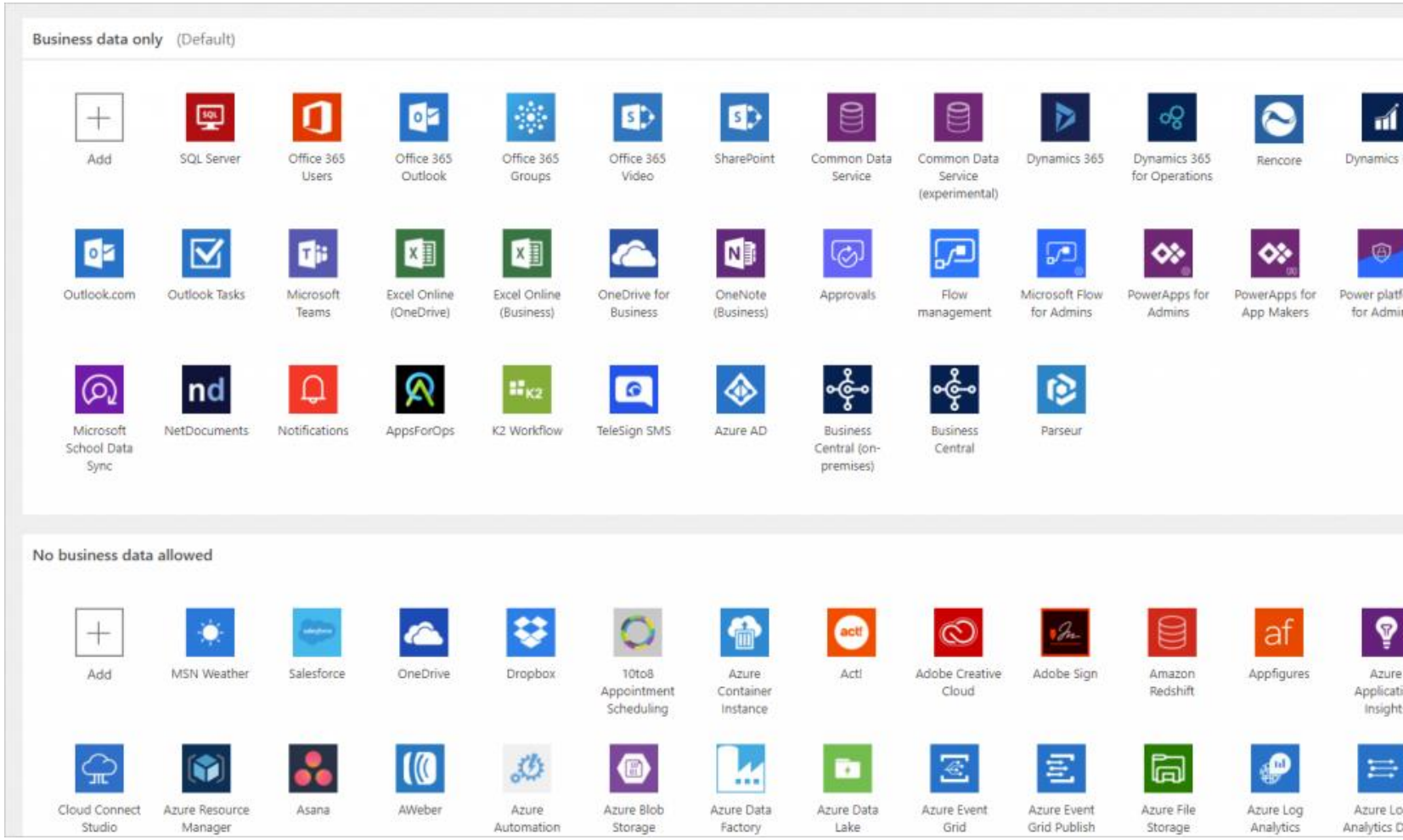
- Power Apps has **connectors for many popular services** and on-premises data sources, including **SharePoint, SQL Server, Office 365, Salesforce, and Twitter.**



Connectors

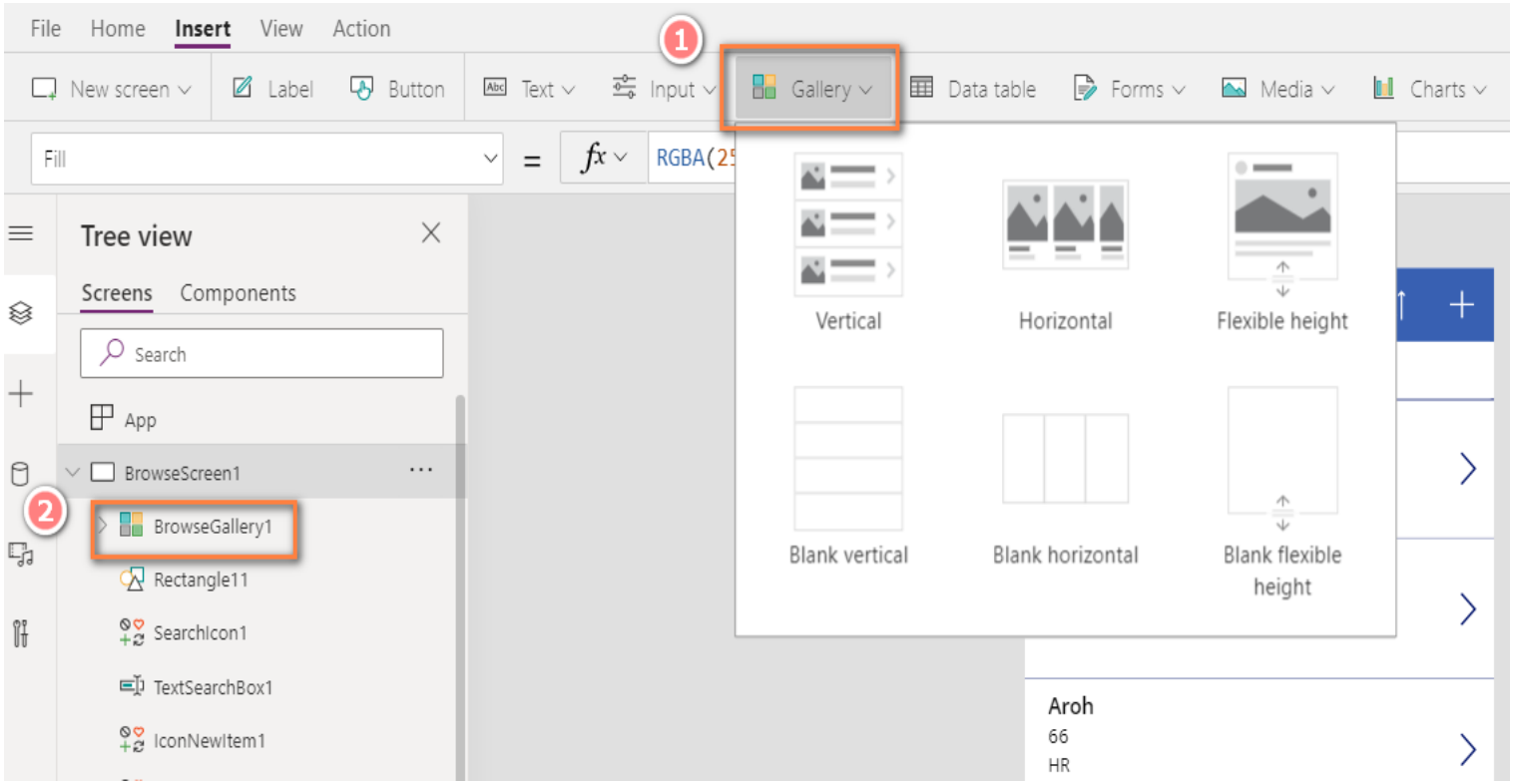
- Power Apps has more **than 300+** connectors. Power Apps has connectors for many popular services and on-premises data sources, **including SharePoint, SQL Server, Office 365, Salesforce, and Twitter.**

- **Power Apps can connect to 2 types of connector**
- Standard Connector
- Premium Connector



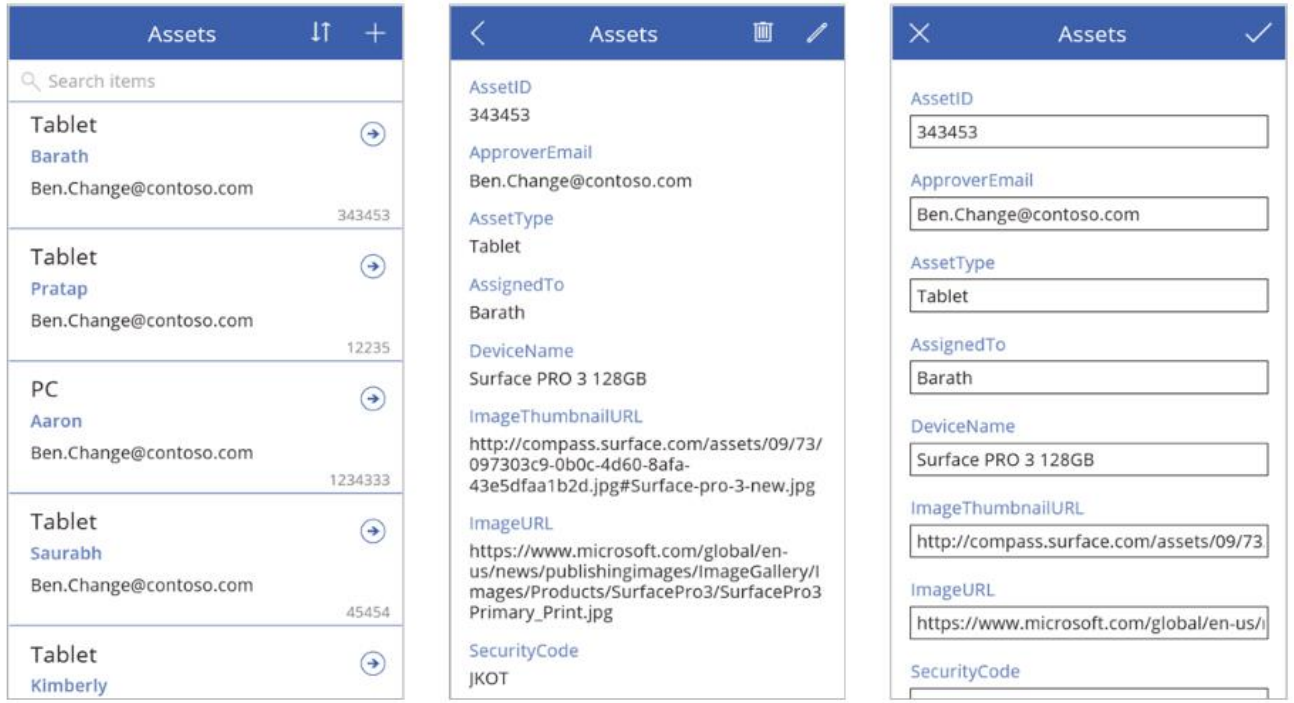
Galleries

- A **Gallery** control can show **multiple record**s from a data source, and each record can contain multiple types of data.
- For example, use a Gallery control to show multiple contacts with each item showing contact information that includes a name, an address, and a phone number for each contact.



Forms

- Add three **types of controls** to a canvas app so that the user can **browse** for a record, **display** details about that record, and **edit or create** a record:
-

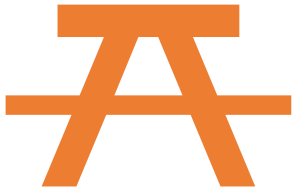


Canvas: Standard versus Customized List

Standalone Power Apps and **SharePoint Customized List** form are essential same. However, there are a few important differences that need to weigh before an avenue is chosen.

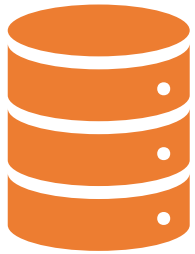
Feature set	Stand Alone	Customized SharePoint List
Backup / Export	✓	×
SharePoint List UI integration	×	✓
Embed in SharePoint Page	✓	✓
Power Apps Permissions	✓ with Power Apps management interface	SharePoint Permissions
Publish to Microsoft Teams	✓	×

1. Creating a Check In app



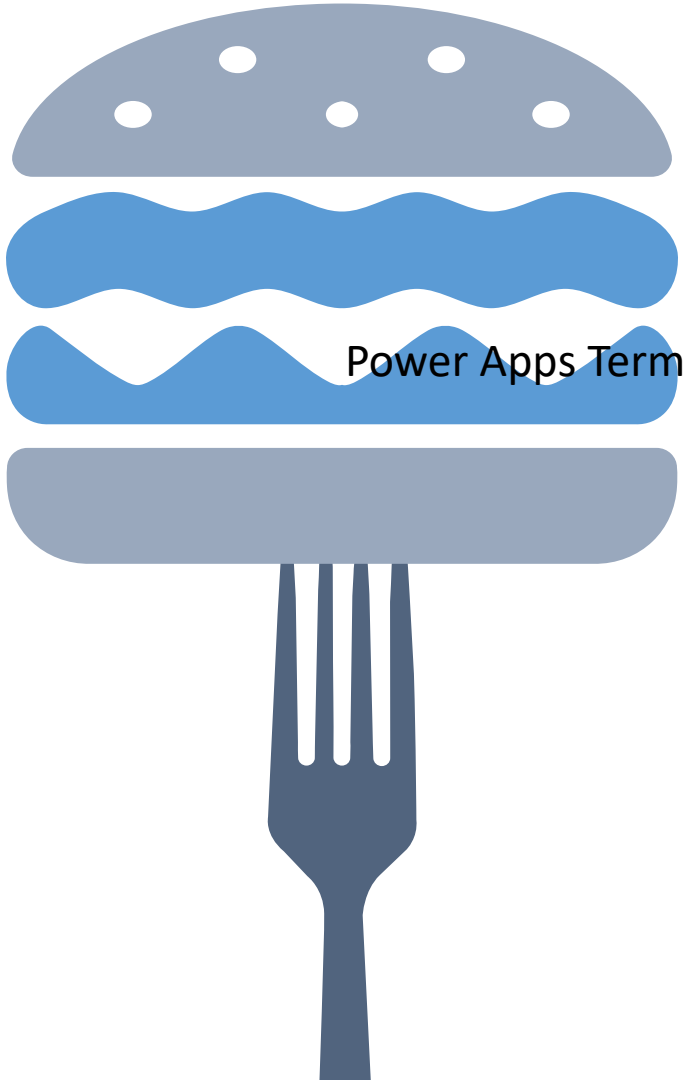
Simple **check-in** app

submit their **hardware issue**



Data source – **OneDrive** / Excel

Scenario 2 (SPO + Power Apps)



Business case

Users can **easily order food delivery service** at the comfort of their home due to COVID-19

Data Source

SharePoint Online Custom List .

Only with Mobile Phone

Ordering will only through mobile phone.

Demo

Collection Building Apps

YOU HELD THROUGH !

Prepared by:
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