



Low code development with Microsoft Power Apps

A Microsoft Power Apps guide



Apps for everyone

The application development landscape is changing and fast. The rise of Low code development tools has been a significant change and one that presents huge opportunities for organisations. Developing new digital apps and solutions no longer need to be hugely expensive and started from scratch.

This is where Microsoft Power Apps comes in, it is one of the market leading solutions in this space. With a ready made database, connectors and a drag and drop editor makes it easier and cheaper to make new applications than ever before.

In this guide we will provide an overview of Microsoft Power Apps, what it does and how to get the best value from it.

This guide covers

- › Low code development
- › Power Apps
- › Canvas vs model driven apps
- › Use cases and case studies
- › Power Apps licensing
- › Rolling out Power Apps



Low code application development

Low-code/no-code development is a software development approach that enables developers to create applications with less or no code. Low-code/no-code platforms provide a variety of tools and features that help developers to automate tasks, generate code, and build applications using visual components.

Low code allows business users with no real coding skills to develop simple applications. When looking at more complex applications you will still likely require a developer but the platform will increase their efficiency.

Here are some of the benefits of using low-code application

- › **Increased productivity:** It can help developers to build applications faster and more easily than traditional code-first development.
- › **Improved accuracy:** It can help to reduce human error by automating tasks and generating code.
- › **Reduced costs:** It can help businesses to reduce the costs associated with developing and maintaining custom software applications.
- › **Increased agility:** It allows businesses to quickly and easily create and modify custom applications, which can help them to adapt to changing business needs.
- › **Empowered citizen developers:** It allows non-technical users to create custom applications, which can help to democratise application development and make it more accessible to everyone.
- › **Surface data:** No matter where your data is held, be it SQL database or legacy system you can easily build apps that allow you to surface key data to users.



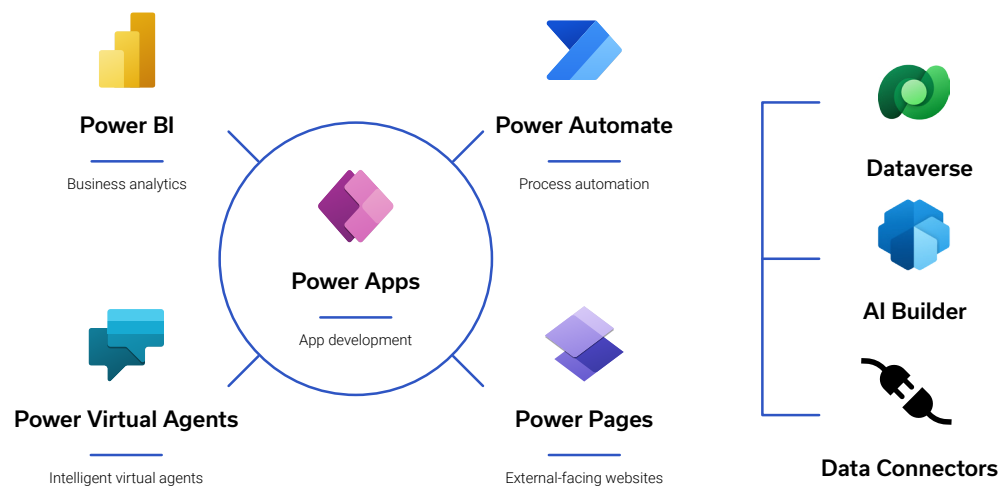
↓ 70%

**reduction in development
cost compared to traditional
custom applications**

- Microsoft

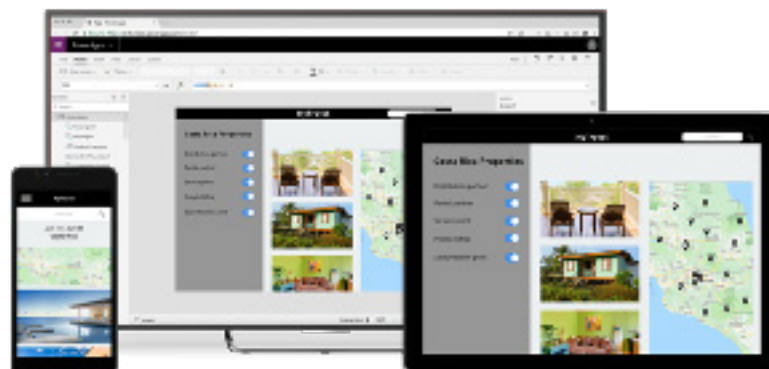


Microsoft Power Apps



Power Apps is a no-code/low code platform for building applications. It comes with a wide range of functionality that makes building an app as easy as possible. With a built in database, data connectors to most modern technology platforms and a drag and drop editor anyone can get started with building apps with Power Apps. Power Apps uses formulas like Excel spreadsheets and strong Excel experience can be a great asset for getting started with Power Apps.

If you can envision an app to solve a business problem, then you can use your existing skills to build it. Although Power Apps can be used by virtually anyone, it also offers advanced functionality for seasoned developers to design complex applications with ease.



Dataverse

Dataverse is the data platform that comes with Power Apps and allows you to store and model business data. It's the platform on which Dynamics 365 apps (such as Dynamics 365 Sales, Customer Service, Field Service, Marketing, and Project Service Automation) are built. If you're a Dynamics 365 customer, your data is already in Dataverse.

Dataverse allows you to securely store and manage data within a set of standard and custom tables, and you can add columns to those tables when you need them.

Data modelling, inbuilt security.



Building apps in Power Apps

When using Power Apps, there are two main ways you can build apps. The most common approach is Canvas Apps using the drag and drop editor, where by model driven apps are more about the data.

Canvas Apps

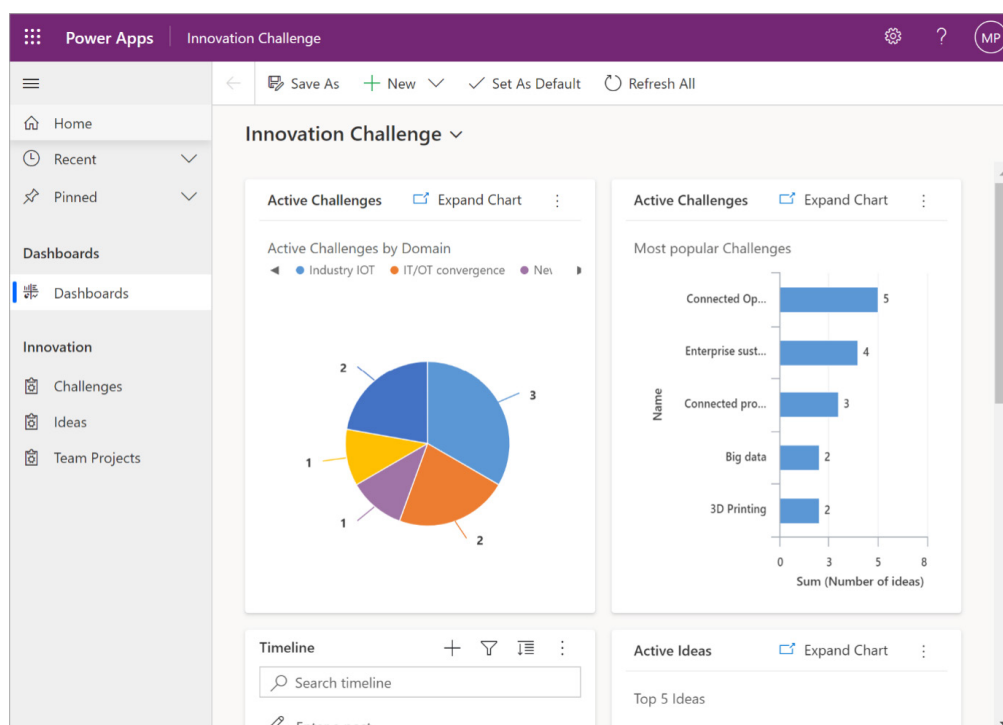
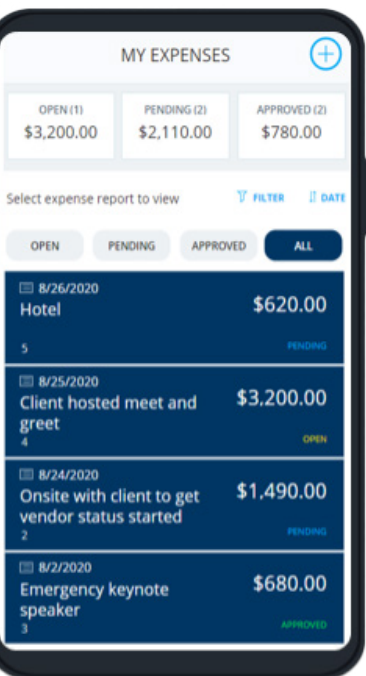
To easily remember what a canvas app is, think of a blank canvas. They get their name from the canvas that users are presented with when they start to create a Power App. It resembles an empty PowerPoint slide and gives you a background where you can drag and drop various elements. Canvas apps are designed for citizen developers (an employee who creates application capabilities for consumption by themselves or other), so there's still a click, drag and drop format powering the interface. Canvas apps are also great for pro developers and speeding up the design process with the same functionality.

With this type of app, the user has full control on how it will look including size and formatting of the components you add. With this amount of creativity and flexibility, no two Canvas apps are exactly the same.

Model Driven Apps

With a model-driven app you build the underlying data model, and the application interface is generated for you. The main point to remember here is model-driven apps take a more data-driven approach than a canvas app, the key word here is data. They are like Dynamics 365 applications and follow that process.

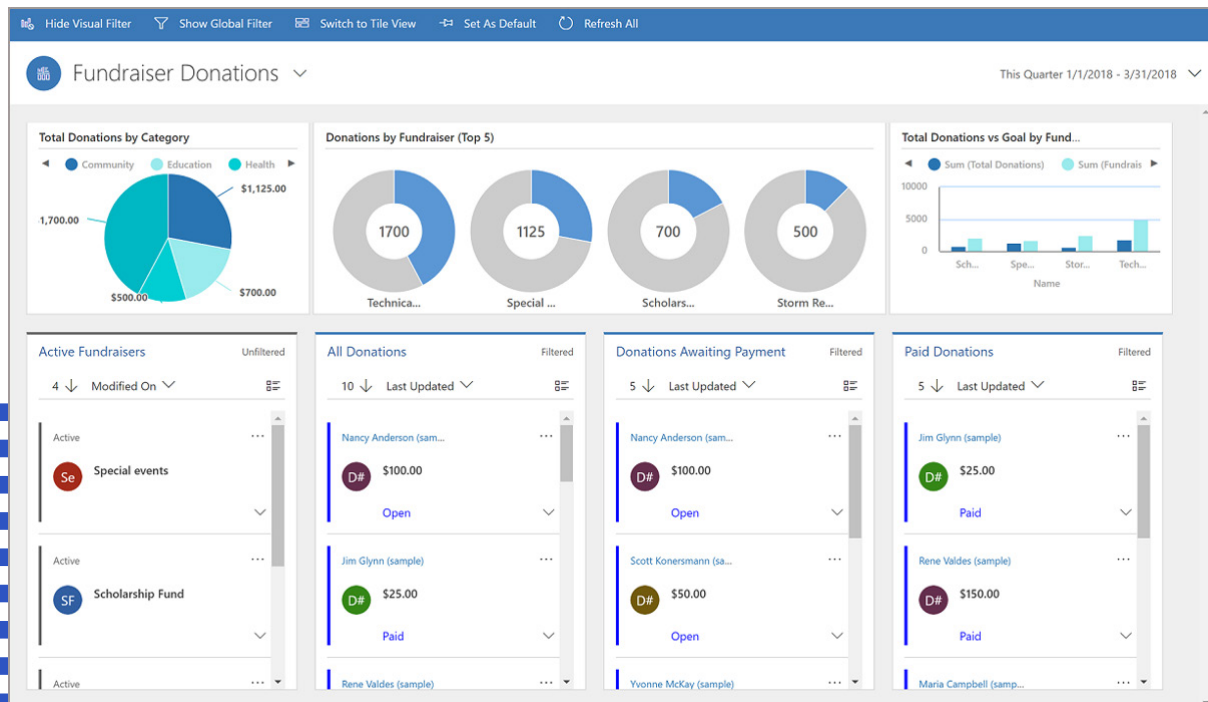
When comparing the look of model-driven apps you will notice they are not as flexible in design as canvas apps. This is because users have less control over layout and functionality than with canvas apps. The app conforms to the data, rather than the other way around. You can select components for representing and editing the data like charts, tables, drop down lists etc but you have little influence over where and how it appears.





Process driven apps

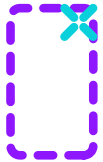
Model-driven apps are especially well suited to process driven apps that are data dense and make it easy for users to move between related records. For example, if you are building an app to manage a complex process, such as onboarding new employees, managing a sales process, or member relationships in an organization such as a bank, a model-driven app is a great choice.





Power Apps features overview

Microsoft Power Apps is an intuitive and easy to use platform for professional and citizen developers alike. Some of the great features that are available as part of Power Apps include:



Templates

One of the great features of Power Apps is the supporting infrastructure including templates. There is a whole selection of different templates you can download and use. This allows you to easily build a templated app but in reality we see a lot of users taking a template to speed up the process and editing it to suit their needs.



Connectors

One of the great thing about Power Apps is the ability to connect to different data sources and systems. We have already introduced Dataverse as the main data source for your Power Apps but you can also easily connect to; existing systems via an API or on-premise connector, SharePoint list or SQL database. Power Apps comes with hundreds of pre-built connectors available to connect to the most commonly used applications and services.



Drag and drop

The drag and drop editor is a key feature of Power Apps. You can select different application elements such as buttons, fields, images, menus and move them around easily to fit in with your vision of the application.



Branding

It is easy to brand your Power Apps to suit your business requirements. You can create custom themes that automatically provide your visual elements such as colours, logos, fonts etc.



Copilot

Copilot is Microsoft's integration of AI powered chat into their solutions. With Power Apps this allows you to use natural language such as "build an app that allows users to raise a support ticket and connects to our helpdesk solution". It can also be asked to review applications and suggest improvements and you can build copilot into your applications so that end users get the AI chat experience too.



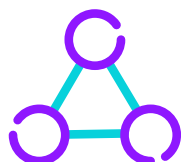
Power Apps mobile app

One of the best ways of accessing your Power Apps is the Power Apps mobile app. Once you have logged in all the Power Apps you have access to become available in the mobile app. This is a great way of getting Power Apps into the hands of your users and out into production.



Microsoft Teams integration

Microsoft Teams is becoming the home of work, we use it to communicate and collaborate across your business and Microsoft is adding more functionality and interactions directly into Microsoft Teams so you never have to leave.



Power Apps can be used in 3 scenarios with Teams.

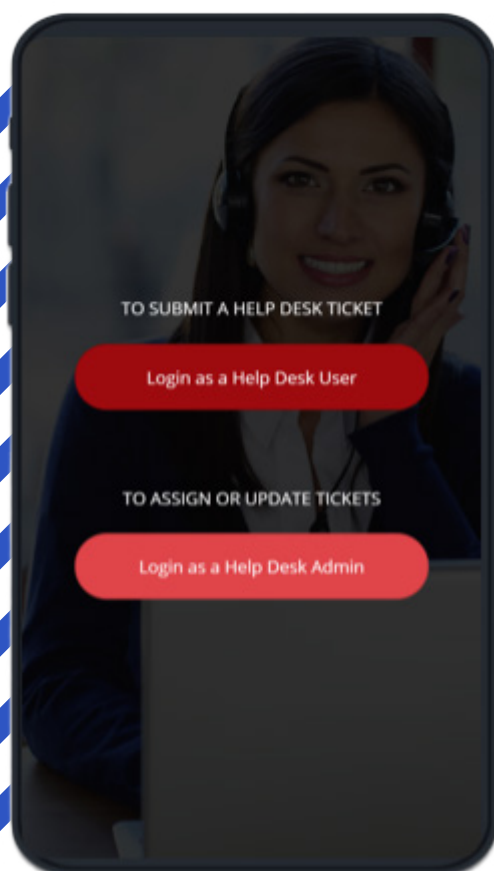
- › Embed an app as a tab - Use the Power Apps tab for Teams to embed an app as a tab app in Teams.
- › Create apps in teams - Use the new Power Apps app in Teams to create canvas apps within Teams backed by Dataverse for Teams, the new built-in, low-code data platform for Teams. Dataverse for Teams empowers users to build custom apps, bots, and workflows—by using Power Apps, Power Virtual Agents, and Power Automate, respectively—without ever leaving the Teams interface.



Power Apps and Dynamics 365

Dynamics 365 apps (such as Dynamics 365 Sales, Dynamics 365 Customer Service, and Dynamics 365 Marketing) also use the underlying Dataverse platform used by Power Apps to store and secure data.

This enables you to build apps using Power Apps and Dataverse directly against your core business data already used within Dynamics 365, without the need for integration. Effectively this allows you to easily connect to your business apps and provide custom interfaces and experiences for your employees that will work directly with your business data and update through Dynamics 365.

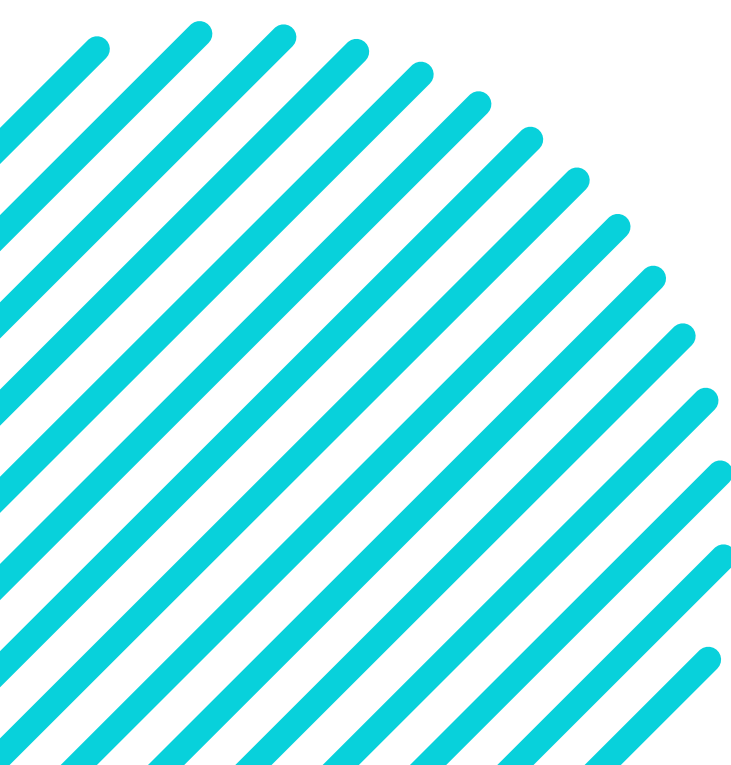




Use cases

When talking about Microsoft Power Apps the possibilities are endless and this can sometimes make it hard to see how you could use it in your own organisation. Here are some of the most common use cases.

- › **Digitising your processes** – Power Apps is great at taking manual, paper or spreadsheet based processes and digitising these. Any step by step, information gathering or provision of information can all be managed and captured using mobile devices. As the app can follow the same process as before only digital the learning and adoption curve is smaller, this is a great place to start when looking to save on productivity and data quality.
- › **Modernising legacy apps** – almost every organisation has atleast one slow, out of date and likely on-premise application. These can be hard to use, hard to update and a nightmare for new or casual users to get used to. This is a great opportunity for Power Apps, using the connector you can create a Power App or series of Power Apps that support users with key workflows with all changes applied to the legacy system and underlying data. This allows you to provide a great and simple experience for users while still keeping your legacy app as a core system for your superusers.
- › **Extending SaaS solutions** – Sometimes you need your SaaS solutions to do something unique. These systems such as CRM, finance, Marketing, ERP, stock management, HR solutions are all designed with standard workflows in mind. In order to make them work with a unique requirement Power Apps offers an alternative approach. You can connect directly to your system and build a Power App that works alongside it and allows you to extend the capability.
- › **Process automation** – Power Apps when working in tandem with Power Automate is a great tool for taking existing processes and automating them. You can automatically send notifications, update systems, capture data and lots more.
- › **Enabling frontline workers** – If you have users that are out of the office on customer sites for example then Power Apps is a great way of getting them access to your data and systems all on their mobile phone.





Case studies



Whyte and Mackay Sustainability

A solution for Sustainability Reporting, looking at the recycled content and make-up of packaging used for Whyte and Mackay products. This data, when collected, was then used to prepare statutory reporting for Whyte & Mackay for the Plastic Tax, Deposit Return Scheme and Extended Producer Responsibility.

Extended Producer Responsibility - ensuring that producers bear responsibility for the environmental impacts of products they place on the market

Data comes from W&M's core SQL database and is copied over to Dataverse. We then build on top of that data in order to store packaging attributes, such as recyclability.

We implemented the ability to store accreditations for each component, and those files are stored in SharePoint. This shows the extensibility of Power Apps and compatibility with other parts of the Microsoft ecosystem.

Off the back of this, we have produced Power BI reports that give all of the data needed to meet the regulatory requirements, and also to go beyond that. Whyte & Mackay can use this data to help them reuse components for new products, where in the past it would have been difficult to pinpoint those components.

There are already plans for extending this system, including a new Power Pages project to obtain data directly from W&M's suppliers.



Scotland's Housing Network

Scotland's Housing Network work across the housing sector in Scotland and as a result manage a large number of clients. Dealing with all of this information was proving difficult with spreadsheets as the data wasn't always up to date and wasn't easy to manage across members of staff.

Solution - A CRM system using a Model-Driven app was implemented which allowed for a single source of truth to manage all member activities and keep track of engagement. This has resulted in a much more easier to use system, which can be more efficiently and effectively to deliver outstanding service to its members.



Power Apps licenses

Power Apps licenses

Power Apps licensing is split into two key areas as detailed below. There are some instances like with Dynamics 365 licenses where you can get Power Apps licenses but are limited when it comes to premium connectors.

Per App plan

The per app plan is a license that is not attached to a particular user. Your organisation can assess the apps you have and the expected number of users at any one time and then purchase that amount of licenses.

The main benefit of this route is the fact that it is concurrent users not named users.

One of the slight complications of the per app plan is it gives more than access to one app, it provides access to 2 apps and a portal, which should factor into your calculations for how many licenses you need.

Premium

Power Apps Premium or as it was known Power Apps per user plan, is the more traditional licensing route. You purchase licenses that are attached to a user and allow that user unlimited access to any Power App in your organisation.

This is more expensive than the per app plan but for organisations with many well used Power Apps, this will be the better option. It is useful when you are planning on rolling out lots of apps across your organisation.

Pay as you go

Power Apps pay as you go pricing is as it says, you only pay when users access your Power Apps. Its great for when you are trying to work out what your usage/license needs or in cases where use of the App is for a large volume of users but only once or twice a year, rather than pay for a license all year you can pay for the use that month. The license cost gets you access to one app for one user for that month.

	Power Apps Per App	Power Apps Premium	Power Apps Pay as You Go plan
Price	£4.10 per user/app/month (includes up to one individual app)	£16.40 per user/month	£7.45 per active user/app/month*



Rolling out Power Apps in your organisation

Once you have decided to use Power Apps as a core technology platform you need to give careful consideration for how best to roll it out. As the solution is designed to support citizen developers this can encompass much of your organisation. Here are 4 key areas we have identified to help you effectively roll out Power Apps:

1. Identifying good candidate apps

Selecting good candidates for Power Apps to embark on your Power Apps journey can be a key decision to help get things moving. You want to select apps that drive business value, clearly showcase the speed and benefits of the platform. Once you have a proof of concept complete, finding an app that would be well used by lots of your employees can also be a good way to introduce users to Power Apps in a simple way.

2. Governance

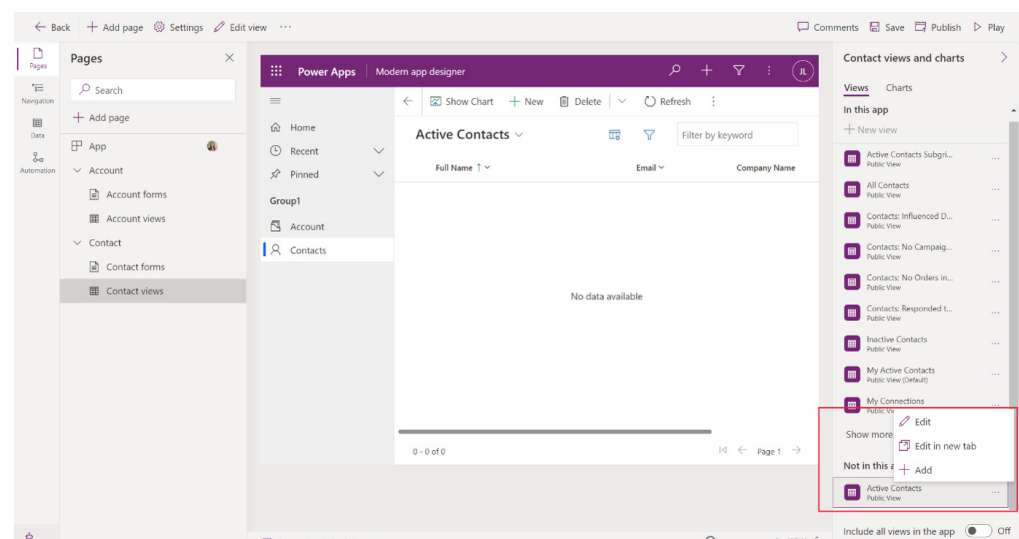
With citizen developers and an open platform some thought to governance is required. Who can make apps, what data they can connect to, how widely citizen developer apps should be before they are taken over by IT are all key questions needing answered to protect your organisation.

3. Adoption

Adoption is a critical area for success. Change causes resistance and moving from paper or spreadsheets can be a challenge for people to get used to. Getting domain experts, super users involved in the design process can be a great way to improve adoption. Doing beta testing with end users can also flush out any issues and help improve buy in.

4. Training

Training is key, training superusers and citizen developers to make the most of the platform is a key step to rolling out Power Apps. This can be core training on Power Apps for beginners, more advanced training for superusers, governance training. In some instances training on change management and six sigma can be useful. Poor training and support will lead to low adoption and governance challenges.



What's next?

Free 2-hour Power Apps briefing

Our Power Apps briefing is designed to provide you with a complete overview of the capability available. Whether you are exploring your options or want to get started, we will discuss your individual requirements to ensure the best solution to meet your needs.

[FIND OUT MORE >](#)

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