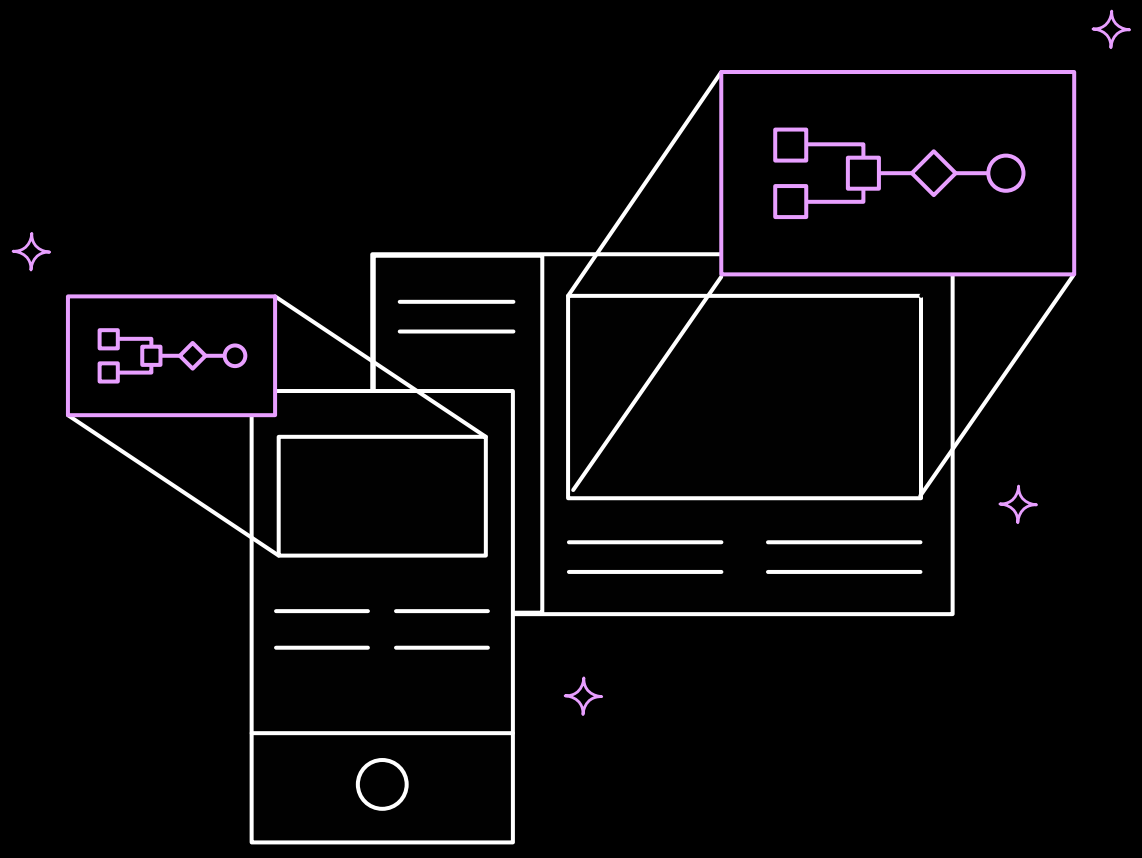
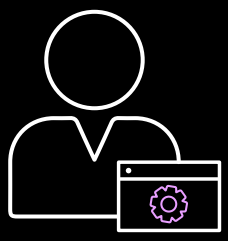
Microsoft Power Platform

Low Code, High Value:

Use Cases on Empowering Your Dev Team to Build Better Apps, Faster





Who this is for

Software development leaders whose responsibilities bridge technical and business requirements, such as directors of software development, software development managers, software engineering managers, senior software engineers, senior solutions architects, and CIOs.

Key Takeaways

Low-code platforms empower development teams to work efficiently and deliver more value to the business. However, they need professional-grade tools that augment, not replace, their existing skills. Building on real-world use cases, this e-book covers key capabilities you'll want to consider when selecting low-code tools for your team, including:

- **Maximizing existing investments and data**
- **A code-first approach to low code**
- **Compatibility with industry standards and app lifecycle best practices**
- **Administrative simplicity**
- **Compliance, governance, and scalability**

Contents

Estimated reading time: 11 mins

The challenges of business app development

Software development teams face powerful forces of change from both business and technical sides of their companies. The business side demands new digital solutions for ever-changing customer and employee needs. Plus, they want those solutions faster than ever.

At the same time, new technical possibilities continue to emerge, including cloud, AI, and automation, to name just a few. Software development leaders are expected to keep up with the latest capabilities and deliver value at a relentless pace.

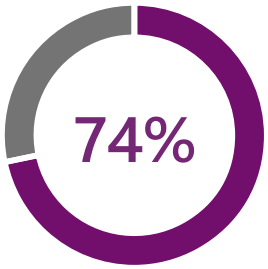
Low-code platforms offer a way to meet both of these needs simultaneously. They provide developers with tools to reduce repetitive manual aspects of coding. They also simplify cloud migration, support greater automation, and streamline access to advanced data and AI capabilities.

However, professional developers need low-code solutions that function seamlessly with the workflows they already know. Solutions must adhere to modern development best practices. And they must allow customization when necessary. And of course, low-code solutions must support security and governance.

The world's most complete low-code platform

Microsoft Power Apps is a low-code development platform that includes no-code services for things you need the most like AI, mixed reality, and augmented reality, built on the Common Data Service platform allowing for easy integration of your first- and third-party services while extending logic and services beyond Power Apps to your other apps downstream. It standardizes different types of data from across your organization to unlock data siloes and build business processes that flow efficiently across different departments and divisions.

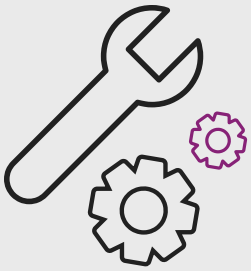
Together, they provide a rapid development environment that helps professional developers create custom apps faster and with more functionality in less time.



According to Forrester Research, organizations can reduce the cost of business application development by an average of **74 percent using Power Apps**.[1]

In this in-depth article, we'll discuss how Microsoft Power Apps meets these standards while demonstrating how professional developers can use it to modernize legacy apps, simplify maintenance, increase scalability, speed development, and create growth opportunities by integrating machine learning, AI, and IoT. We will also highlight use cases where businesses are already achieving these goals today.

[1] "The Total Economic Impact™ of Power Apps," commissioned study by Forrester Research, 2020. Results are for a composite organization based on interviewed customers.



Use case:

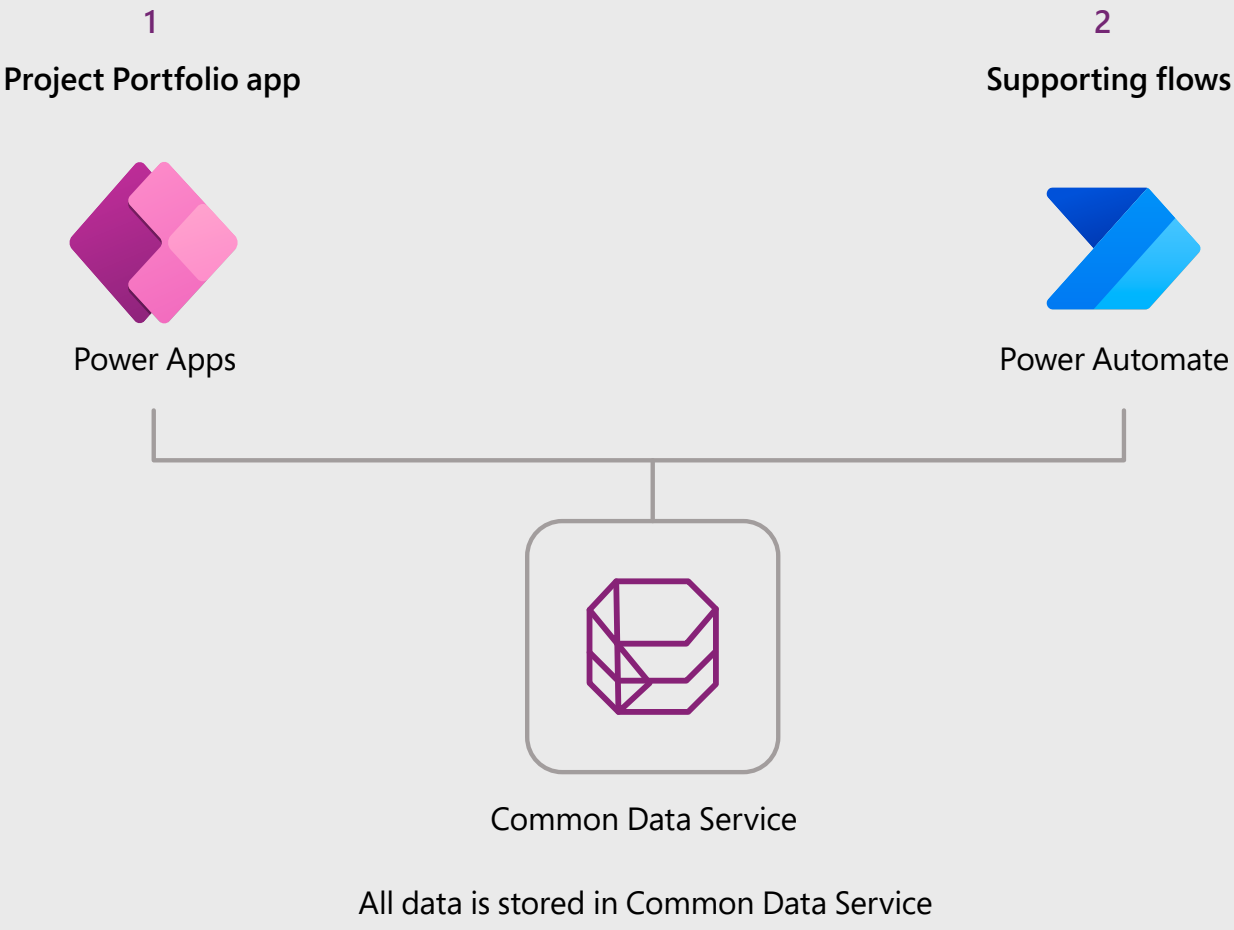
Build sophisticated apps

Customer: R3 Retail Development
Software Development Partner: Confluent

Using Power Apps, Confluent built a complete business app for R3 Retail Development, a retail project management company, in only 120 hours. R3 had moved from using Excel to a costly and limited solution for project management. The new app enables users to:

- Automatically view dashboards customized to their roles and responsibilities.
- Track detailed project information.
- Track IP addresses for connected customer devices, such as refrigerators and HVAC equipment.
- Share architectural drawings and other files related to projects.
- Automate processes with detailed custom business logic.
- Apply role-based access to prevent unauthorized access.

Confluent used Microsoft Power Automate to create automated notifications and reminders. It also unified app data on Common Data Service, a data platform that includes server-side logic, business process flows, a highly sophisticated security model, and an extensible platform that enables developers to customize business logic.



1

- App used primarily on desktop and tablet
- Read/write data from Common Data Service

2

- Flows connected to Common Data Service
- Used for notifications and reminders

Unlike ever before, using Microsoft Power Apps has allowed Confluent to deliver cost-effective, world-class solutions to midsize companies, as well as target specific line-of-business processes for complete automation for enterprise customers."

Jake Farrell
Founder and Chief Executive Officer
Confluent

Deliver more value to the business

Using low-code development with Power Apps enables you to maximize the impact and visibility of your team.

70% By reducing the time and effort required to create custom apps, it can cut the cost of development up to 70 percent compared to traditional coding methods.

Use connectors to maximize the value of existing investments and speed migration to the cloud

Power Apps provides more than 350 software as a service (SaaS) connectors that enable you to connect apps, data, and devices in the cloud. Examples of popular connectors include Microsoft 365, Salesforce, Twitter, Dropbox, and Google services.

A connector is a proxy or wrapper around an API that allows the underlying service to talk to Microsoft Power Apps (as well as Microsoft Power Automate and Azure Logic Apps). Developers use connectors to leverage prebuilt actions and triggers to build apps and workflows.

Actions are changes directed by a user. For example, you would use an action to look up, write, update, or delete data in a SQL database.

Triggers notify your app when specific events occur. For example, the FTP connector has the OnUpdatedFile trigger. You can build an Azure Logic App or a Power Platform flow that listens for this trigger and performs an action whenever the trigger fires.

Whether you're providing access to legacy or cloud data, you can use Azure Functions and Azure API Management to create and manage **custom connectors** for Power Apps Platform.

Unify data and deliver insights from across the business

Common Data Service, included with Power Apps, lets you securely store and manage data that's used by business apps. Common Data Service is the underlying data platform for Power Apps that contains the core functionality, such as server-side logic (plugins and workflows), business process flows, a sophisticated security model, and an extensible platform for developers to build apps.

Data within Common Data Service is stored in a set of entities. An entity is a set of records used to store data, similar to how a table stores data within a database. Common Data Service is highly performant and scalable to meet high levels of demand while providing a low-latency user experience.

Common Data Service is the data backbone that enables people to store their data in a scalable and secure environment dynamically," notes Chris Wagner, Analytics Architect at Rockwell Automation. "It enables [us] to look at data as a service spun up on-demand to meet ever-changing business needs."

Common Data Service includes a base set of standard entities that cover typical scenarios for maximum speed. Your team can also create custom entities specific to your organization and populate them with data using Power Query. Developers can then use Power Apps to build rich apps using this data. They can browse tables and columns, create queries that seamlessly integrate with SQL Server Management Studio, and take advantage of rich APIs for tables and actions.

By automatically determining your storage needs for relational data, file and blog storage, logs, and search indexing, Common Data Service frees your developers from time-consuming data management tasks so they can focus on building great apps. Automatic duplication detection and more than 300 built-in data transformations help you keep your data clean and ready for analysis.

Built-in cognitive services powered by AI Builder and Azure, as well as turnkey integration with Power BI, helps you deliver greater insight to the business to extract maximum value from data assets. Power Apps can also connect to online and on-premises data sources such as SharePoint, Excel, Microsoft 365, Dynamics 365, and SQL Server.

Rapidly deliver and iterate on prototypes

Users expect business apps that work as intuitively and efficiently as the apps they use at home or away from work. However, developing high-quality user experiences that work across device types can be complex and time-consuming.

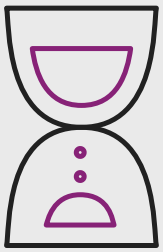
With traditional "waterfall," there's a long lead time before a user actually sees the working app. As a result, there's increased risk that what the user initially requested as a requirement won't match what the app developer created. Even with more modern development approaches, such as agile development, a significant amount of time can pass before the first minimum viable product is delivered to users.

With Power Apps, users experience the actual working app early in the development process. If new requirements arise, new features can be added to the next version. According to the Gartner Magic Quadrant for Low Code App Platforms, "Reference customers for Microsoft reported some of the fastest production deployment times for apps—nearly all said such deployment took less than two months, and many said less than one month."

Build on existing Microsoft investments

If your business already uses Microsoft solutions such as Microsoft 365, Microsoft Dynamics 365, or Microsoft Azure, you'll find that Power Apps can help you quickly create solutions that your users will find familiar and intuitive.

Dynamics 365 apps, such as Dynamics 365 Sales, Dynamics 365 Customer Service, and Dynamics 365 Marketing are built on Common Data Service and the Power Platform. This enables you to build apps using Power Apps and Common Data Service directly against the core business data already used within Dynamics 365 without the need for integration.



Use case:

Cut development time for custom apps

Customer: Priceline/Australian Pharmaceutical Industries

Australia's Priceline Pharmacy network has transformed access to data for its pharmacy business leaders, providing them near real-time insights they can use to grow the business and improve their customer experience.

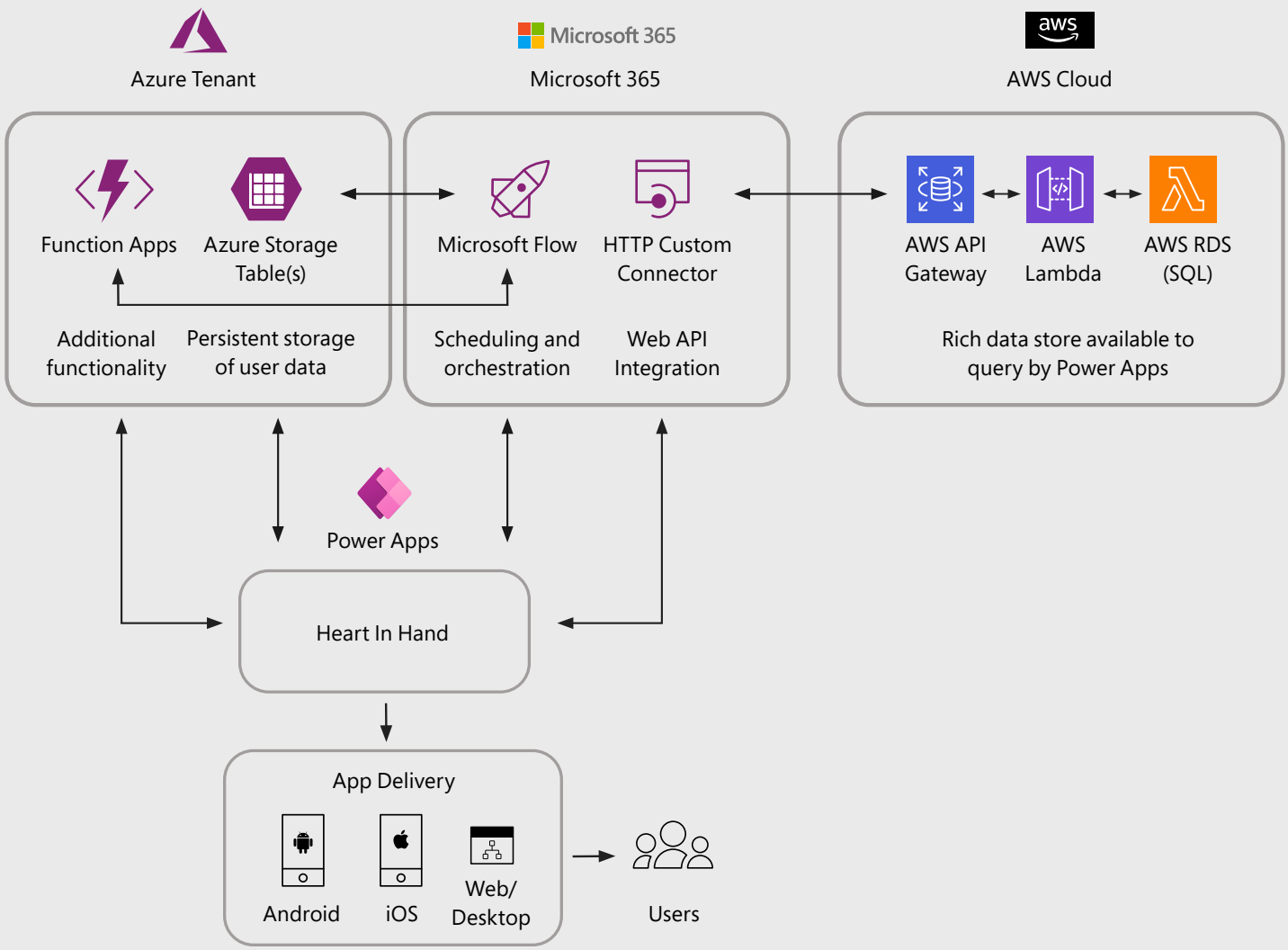
Instead of the two to three months of work that the app would have taken using more traditional development techniques, Matson was able to deliver the app in just two weeks. "From only a week or two of prototyping, it became apparent that any preconceived notions I had of low-code were about to be blown away," he said. Key project highlights include:

- Quickly built an engaging presentation layer.
- Linked serverless functions, table storage, maps, and existing APIs using pre-built connectors and integrations.
- Delivered instant insights based on real-time data.

These integrations might take even a pro developer several days or even weeks to complete, but with the Power Platform, the same functionality can be achieved with a few mouse clicks and some simple code placed in your app."

James Matson
IT Retail Innovation Lead
Australian Pharmaceutical Industries

Inside the Priceline Heart in Hand app



Empower your pro dev team to do their best work

Automation and modern engineering best practices are critical for scaling up your development capabilities. With Power Apps, you can use one platform for building new apps, modernizing legacy apps, and adding functionality to existing apps.

Developers can use their skills and code to create data and metadata, apply server-side logic using Azure functions, plug-ins, and workflow extensions, apply client-side logic using JavaScript, integrate with external data using virtual entities and webhooks, build custom connectors, and embed apps into your website experiences to create integrated solutions.

Innovate with advanced functionality

As part of the Power Platform, Power Apps also makes it easy to snap in a huge selection of other innovative functionality, from AI and analytics to bots, interactive maps, external portals, mixed reality, IoT, and more. UI- and API-based automation can be created through Power Automate to help bring legacy systems to life and integrate them with your modern applications.

Build rich logic

In addition to using pre-built business rules, developers can use the Client API object model for model-driven apps. It provides objects and methods that they can use to apply custom business logic in model-driven apps using JavaScript, such as:

- Get or set attribute values.
- Show and hide user interface elements.
- Reference multiple controls per attribute.
- Access multiple forms per entity.
- Manipulate form navigation items.
- Interact with the business process flow control.

Use familiar, industry-standard tools

No need to hire hard-to-find developers on specialized platforms. Power Apps works with the world's most popular developer tools, including Visual Studio, GitHub, and Azure, making it simple to build, validate, and deploy your apps repeatably in an agile manner.

Development effectiveness depends on your ability to manage release cycles, testing, and other aspects of the app development lifecycle. Using **Azure DevOps**, you can automate these tasks and deeply integrate DevOps best practices into your low-code workstreams, including planning, development, delivery, and operations. You can also get a running log of all activity within your apps to pinpoint performance, stability, and accessibility issues, and build low-code tests using a recorder or with familiar Power Apps expressions.

Accelerate delivery without compromising on quality

The **Microsoft Power Platform Build Tools** are a collection of Azure DevOps build tasks specifically for Power Platform that eliminate the need to download custom tooling and scripts manually to manage the app lifecycle of apps built on the Power Platform.

Re-use IP for consistency and efficiency

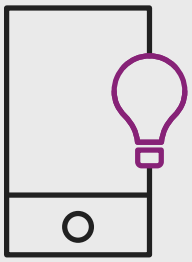
Enable your pro developers to build and share UI components to eliminate duplication and inefficiencies, lower maintenance, and create a consistent look and feel for apps across your organization.

Create custom functionality using industry-standard tools

The **Common Data Service Web API** provides a development experience that can be used across a wide variety of programming languages, platforms, and devices. The Web API implements the OData (Open Data Protocol), version 4.0, an OASIS standard for building and consuming RESTful APIs over rich data sources. Developers can also use the **organization service** which leverages the .NET Framework and SDK assemblies.

Increase automation

Automate your build processes and testing using the same tooling used for custom code.



Use case:

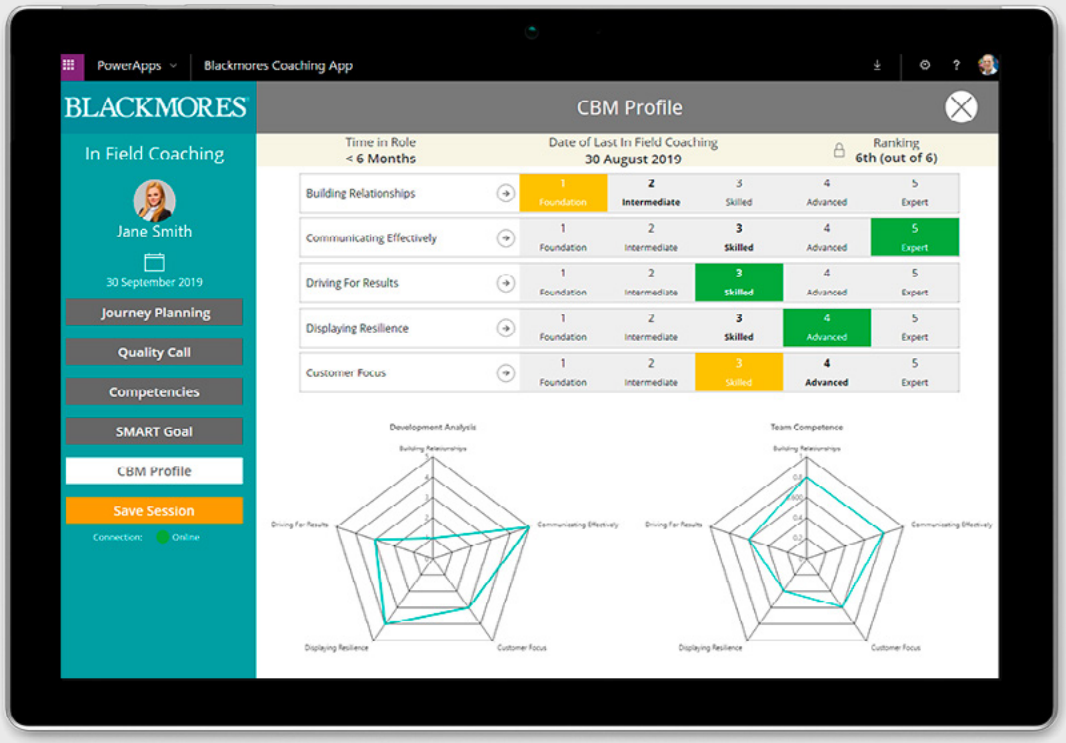
Meet diverse business needs with one platform

Customer: Blackmores Group

Australia's leading natural health company, Blackmores Group, helps people take control of, and invest in, their well-being. Power Apps has allowed the company to develop tailored solutions for different stakeholders and capture important insights from teams out in the field to feed back into the data. Examples include:

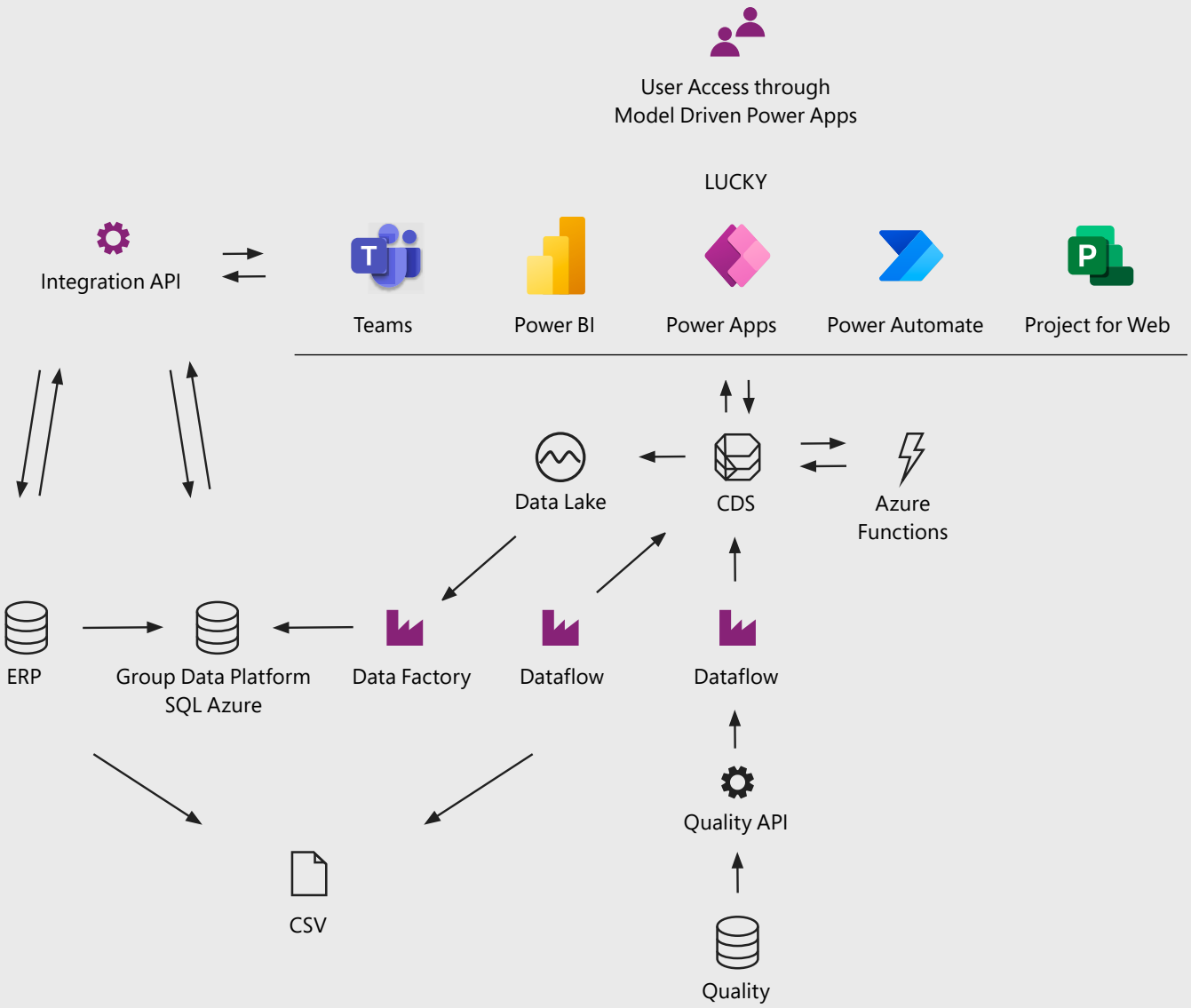
- A coaching app for managers to train their teams during store visits in the field.
- Solutions created for national account managers who work with the company's largest accounts to capture data in the field. That data is then immediately reflected in the company's CRM.
- Power Apps created for supplier management and new product development.
- Rapid adoption of AI and machine learning to maximize value of data.
- Connecting apps with Microsoft 365 and Dynamics 365 functionality for a seamless employee experience and real-time insights.

Rich user experience inside the Blackmore In Field Coaching App



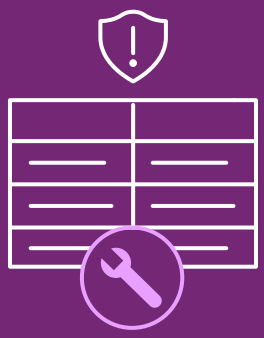
Inside the Blackmores Vendor Relationship Management App

Seamlessly integrating no code, low code, and pro code



> **Using Power Apps as a platform allows us to develop a tailored solution for Blackmores Group's unique needs without the overheads of traditional bespoke development. It also allows us to leverage the many additional features and integrations available in the platform."**

Tijn Tacke
Dynamics Platform Lead
Blackmores Group



Build on a secure, governed platform

Low-code apps are subject to the same security and governance requirements that apply to traditional development environments. Power Apps is built to meet the needs of organizations of all sizes with built-in tools for managing security, governance, and access.

Power Apps runs on Microsoft Azure, giving you the scalability, security, and compliance readiness you need to develop business solutions with confidence.

Simplify administration with a unified solution

With a single administrative console, you can maintain governance and compliance standards, enabling your organization to build more, without ever compromising quality. From the Power Platform admin center, administrators can manage environments, data integration, gateways, data policies, and get key metrics across Power Apps and other Power Platform solutions, including Common Data Service.

This centralizes management of users, apps, usage, and settings in a single admin experience to maintain app standards and reduce the risk of shadow IT. You can also create custom management tools using apps, flows, or PowerShell. Microsoft provides connectors that let you interact with the management APIs exposed by Power Apps and Power Automate.

Customize who can access which apps

User identities are managed through Azure Active Directory using a role-based security model, making it easy to control user access to databases. Environments can be incorporated as a way to create boundaries for different security needs. This makes it easy to ensure compliance by grouping apps with similar security requirements.

Within Azure Active Directory, you can access full audit logs, usage analytics, data loss prevention, and security and data management. Azure Active Directory provides the means to enable single sign-on (SSO) to thousands of SaaS applications. Learn more about **security management and Power Apps**.

Extend and integrate Microsoft services

Power Apps is natively integrated with the world's largest cloud ecosystem—Microsoft 365, Dynamics 365, and Azure—so you can do more with the tools you use. If you have existing Azure services, you can easily extend Bot Services, Logic Apps, Functions, Cognitive Services, Synapse, and more with clicks, not code.

Increase development ROI with a low-code platform

As the business demands more of your development organization, low code offers a clear path forward. With Power Apps, your team can deliver more value in less time while reducing development costs. At the same time, they have access to powerful pro-grade capabilities that make the most of their existing skills and empower them to focus on strategic priorities. With a highly secure and manageable solution, you can create applications that scale to meet any need while meeting your organization's requirements for security and compliance.

Experience how Power Apps can help your development team deliver more value, faster with a free trial >

Learn more about Power Apps with these resources:

Power Apps: New Capabilities Building Zero-To-Low-Code Apps Video >

Power Apps documentation for developers >

Developer Velocity Assessment >

Power Apps community >

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