



CASE STUDY - LIMERICK CITY & COUNTY COUNCIL

Digital Transformation brought by BDO &
Microsoft Partnership

DIGITAL TRANSFORMATION PARTNERSHIP
Discover how BDO & Microsoft partnered with Limerick City & County Council to drive digital transformation, optimising operational efficiency, and enhancing asset management.

BDO as seen by our clients
“BDO demonstrated great ability to understand the nuances of Local Authority and had the patience to work with us in a collaborative manner. I would highly recommend partnering with BDO for your future process digitalisation and CRM needs.”

Summary

In a dynamic landscape where efficient asset management is paramount, Limerick City and County Council sought a robust solution to streamline their operations, enhance oversight, and drive compliance.

Partnering with BDO, the leading expert in digital transformation, the council embarked on a journey to revolutionize its asset management practices.

This case study delves into how BDO's tailored expertise delivered a cutting-edge Microsoft Power Platform solution. Explore the challenges faced, strategies implemented, and the transformative outcomes achieved through this strategic collaboration.

Limerick City & County Council explained

Limerick City and County Council (Comhairle Cathrach agus Contae Luimnigh) is the authority responsible for local government in the City of Limerick and County Limerick in Ireland. It came into operation after the 2014 local elections, on 1st of June 2014. It is a merger of Limerick City Council and Limerick County Council under the provisions of the Local Government Reform Act 2014.

Limerick City and County Council covers a 2755 sq.km geographical area and provides a wide range of services to more than 191,000 people - Limerick City: 57,106 and Limerick County: 134,703.

Limerick City & County Council vision

They envision, as an organisation:

- That Limerick is the desired location for business development, cultural enrichment, and educational opportunity.
- That Limerick is acknowledged for its inclusive participation of all its citizens in the development of their community.
- That Limerick and the mid-west will compete with other European destinations in terms of business, tourism, living and investment.
- That the people of Limerick are supported by a professional, proactive, and accessible local government structure at the heart of a wider public service.

Limerick City & County Council Objectives

They plan, as an organisation:

- To deliver a new model of local governance and service
- To enable an environment for real economic development and job creation
- To empower the citizens to participate in the development of their community, both rural and urban.

Limerick City & County Council Project

Limerick City and County Council have been embarking on a Digital-first approach since the launch of their Digital Strategy in 2017. Building Ireland's first Digital City set out several key strategic outcomes.



The Limerick Digital Strategy aims to lay the foundation for the “Sustainable Smart Limerick City Region and Communities”, a Limerick that uses digital technologies and embraces new work practices to empower communities, create better services, accelerate sustainable social and economic growth and improve the quality of life for all.

This cannot be done in isolation by an individual or a team, not even by a single organisation. It can only be achieved through collaboration across communities and agencies. It requires collaborative leadership and a readiness to challenge the status quo with a transformational mindset.

Figure 2: Strategic Approach



Limerick City & County Council Challenges

In the intricate landscape of this digital strategy, Limerick City and County Council encountered multifaceted challenges. With a network spanning over 350 CCTV cameras, they faced operational intricacies, financial oversight hurdles, incident tracking complexities, and the need for seamless stock management. To address these pain points and drive enhanced efficiency, Limerick City and County Council collaborated with BDO. This case study unveils how BDO's expertise offered a tailored solution, leveraging Microsoft Power Platform to reimagine asset management.

Limerick City & County Council chosen solution

On foot of a competitive tendering process, BDO was appointed as an implementation partner to support Limerick City & County Council.

The project included developing a production-ready Microsoft Power Platform (PowerApps) based asset, incident, maintenance & financial management system for the operational management of over 350 CCTV cameras and related assets that are owned and managed. Furthermore, BDO was requested to further create PowerApps for the pilot migration of two Microsoft Access databases to Microsoft's Power Platform.

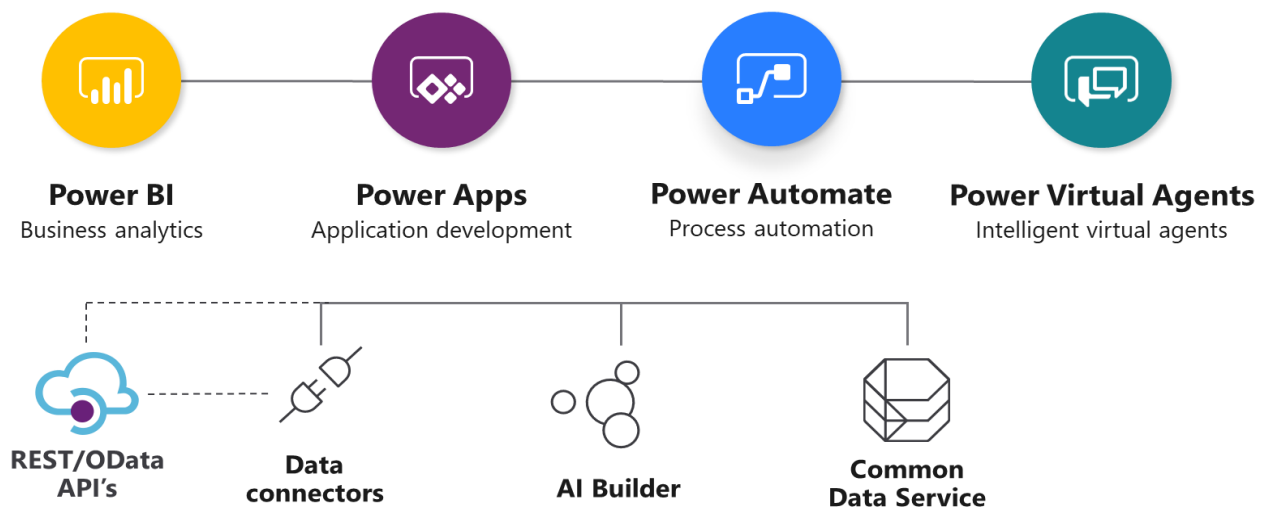
The Council sought to design and build an uncomplicated solution and BDO was the most suitable option, covering all their current concerns.

Limerick City and County Council currently own and maintain a network of over 350 community CCTV cameras located throughout the city and county. With a large camera ecosystem, that requires a large amount of operational and regulatory oversight. A centrally managed asset and operations workflow tool was required to ensure that the Council remains compliant and can respond to/ report on planned or unplanned events, in a responsible manner.

The council further sought a solution with a simple functional design, aligned with Limerick branding.

BDO's technical approach

PowerApps Overview



Microsoft Power Platform enables a ‘Triple Loop’ Vision. This is a closed-loop system that allows users to gain insights from data (Analyse) used to drive intelligent business processes via apps they build (Act) and processes they automate (Automate). The Microsoft Power Platform implements this vision via three cloud-based services: Power BI, PowerApps and Flow.

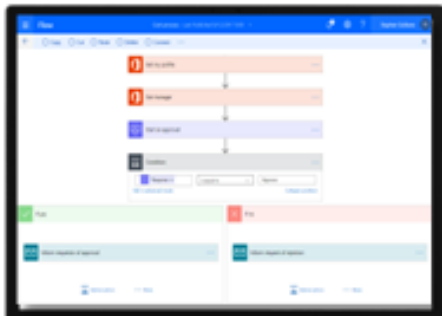
PowerApps is a ‘low-code’ application development platform - it allows users to build web and mobile applications without writing code. The natural connection between Power BI and PowerApps makes it effortless to put insights in the hands of its users.

Like Power BI, PowerApps connects to hundreds of business systems and databases, making it easy to connect users with the existing processes and data that make the business tick. All the data captured in PowerApps can make its way right back to those very systems for further analysis in Power BI creating a closed-loop process for continuous improvement.

Additionally, PowerApps comes with a built-in, fully-managed, enterprise-grade data store called the Common Data Service (Dataverse) for those applications that generate data not destined for a legacy system - and Power BI and Flow have deep connections to CDS making it that much easier to get even more value from data stored there.

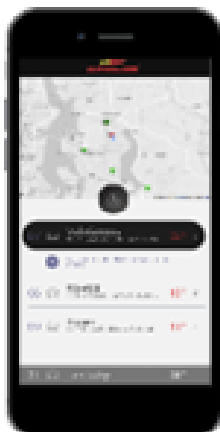
Extending the Power Platform via connectors to other Microsoft offerings allows our clients to leverage those investments and create productivity faster.

Power Platform at-a-glance



- Analyse your data.

Gain insights to act on your data by highlighting key business problems to solve and determine a plan to evaluate insights post-deployment.



- Act on your data.

Build apps to solve key business pain points on CDS and use connectors to Azure, Dynamics 365, Office 365, and 270+ other systems.

Leverage AI Builder for automation and extend them to external audiences via Portals.

- Automate your data.

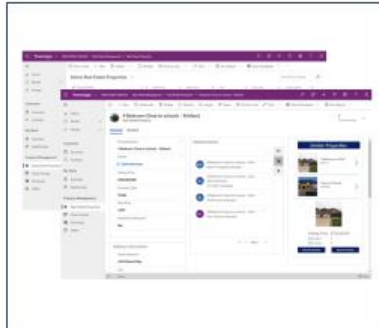
Create workflows that infuse desktop and AI automation to remove manual workflows and allow for productivity like never before.

Types of Applications

There are 3 different types of Applications which can be configured using Power Apps



Portal App:
Provides secure data access to internal and external stakeholders.



Canvas App:
User experience focussed, typically task or role-based apps leveraging mashup data from multiple data sources.



Model-Driven App
Leverage existing organisation data model, relationships and business processes in immersive, responsive applications.

BDO and Limerick City & County Council, in agreement

In agreement, with Limerick City & County Council IS team, BDO chose to deploy a Model Driven App that aligned with user requirements, strategic outcomes of the project and the existing licencing model, to ensure cost containment.

BDO engaged with the relevant internal and external stakeholders focussing on the building blocks of Model-Driven apps which included:

Data: Define the data the app will be based upon.

User Interface: Determine how users interact with the app.

Logic: Determine what business processes, rules, and automation the app will have.

Visualisation: Determine what type of data and reporting the app will show.

At the commencement of the project, the following functional requirements were aligned:

Phase 1 - CCTV App

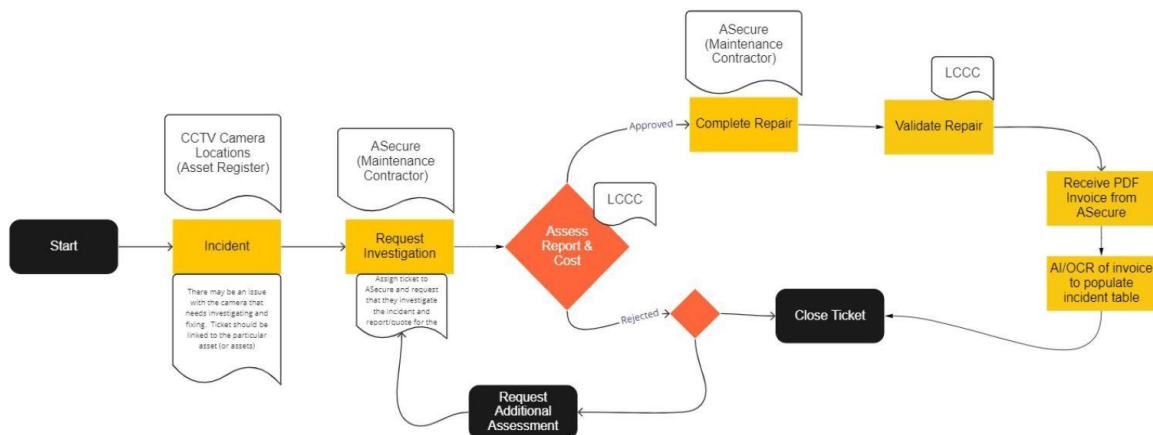
1. Maintain an Assets Database

Assets Database will be at the core of the PowerApp, including Limerick's unique reference numbers for identifying all poles, cameras, communications equipment, and signs currently owned by the Council. The database included core information about each asset, including:

- Name

- Scheme
- GPS Location
- Make
- Model
- Serial number
- Install date
- Change date
- Last/Next Inspection date

2. Records Incidents/Raise Tickets



The app helps to instigate and complete the flow of work from the initial raising of an incident in relation to an asset through to the works being completed.

3. Maintain Financial Oversight Management

The app enables Limerick City & Council oversight on incidents and maintenance from the CCTV budget as well as the current remaining budget. It further allows to view the spending to date per asset permitting strategic decisions to be made.

4. Track stock levels

The app allows for tracking of assets by serial number or location and the onward management of replacement parts for routine and non-routine maintenance requirements. Management can track the stock levels so that as parts are used, stock levels of items are updated and available to view.

5. Complete an application for a new camera install

New camera installations follow a strict process ensuring each stage is approved before it can move on to the next. This function tracks the application and if any of the requirements are not met at any stage, then the application will be pushed back to the previous step until all requirements are met.

Phase 2 - Migration of Legacy Access Databases to Power Apps

- Migrate two low-complexity Access databases and their user interfaces to Microsoft's Power Platform. The primary goal of this migration is to recreate the user interface in the subsequent Power Apps.
- Migrate Microsoft Access data to Microsoft Dataverse to be used by the new apps.

BDO and Limerick City & County Council, achieving objectives

Our overarching Design, Implementation and Test approach encompasses distinct phases.

- Align
- Assess
- Architect
- Activate
- Advance

We supported Limerick City & County Council Power App solution through a defined plan, project management and overall good governance, aligned with PMBOK standards and executed by PRINCE2 qualified personnel.

Using our methodological approach we ensured the overall solution was grounded in business rationale, with clear business benefits and supporting realisation metrics.

Our approach is designed to enable Limerick City & County Council business operations and further achieve the stated strategic transformation objectives.

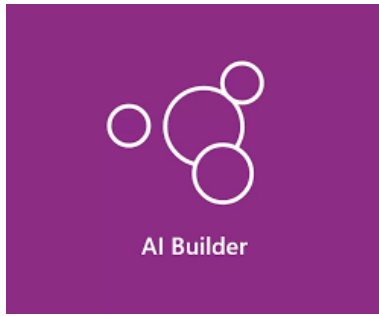
After thorough meetings and workshops with the key stakeholders, process owners and users to drill down into the specific requirements, we challenged the current ways of working and articulated a vision of what the future may look like.

BDO's way through Power Apps Development

To establish core functionality, BDO defined a Data-Model built using Microsoft Dataverse. This is the data backbone that enables data to be stored in a scalable and secure environment dynamically.

It takes advantage of the Common Data Model, a standard and extensible collection of schemas (entities, attributes, relationships) that represents business concepts and activities with well-defined semantics, to facilitate data interoperability. It is a way to organise data from many sources that are in different formats, into one standard structure.

Working with Limerick City & County Council Stakeholders BDO constructed a data model representing all the key data fields, values and attributes and their relational structures. This allowed for easier capturing, reporting, and scaling of data requirements.



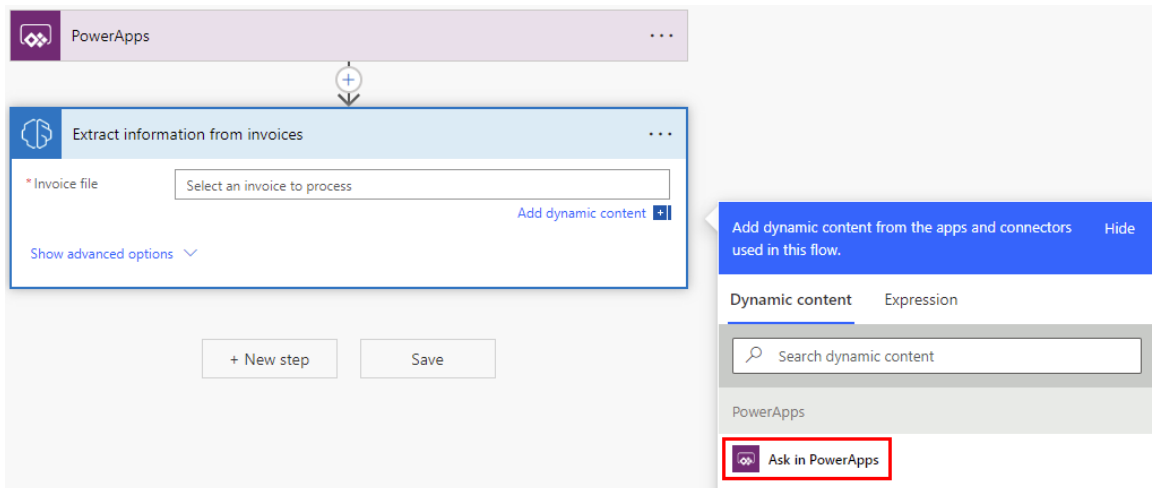
BDO team configured the Forms, Views and Business Process Flows in accordance with the specified business process requirements and financial management oversight needs.

For Optical Character Recognition (OCR) of invoices, BDO deployed AI Builder within the Power Platform and trained the Artificial Intelligence to

dynamically read incoming documents from the 3rd party CCTV supplier.



By integrating AI Builder with Power Automate, BDO were able to reduce the overall manual input of document designed to release valuable time back to the council. This enabled them to have a more defined and robust governance model for the management of costs.



Within Power Apps, BDO created a **Master Asset Register** designed to hold a record of all CCTV assets and their various movements. This allows tracking stock levels by SKU ID, description, location, and minimum stock holding, together with target SLAs for maintenance.

The overall purpose of this register is to ease installation, repairs, and maintenance processes.

A defined process workflow was also created to ensure a structured approach to requesting new camera installation.

This approach supported the gathering of required documentation and multi-layer approval processes, in accordance with Limerick City & County Council business processes and regulations currently in force.

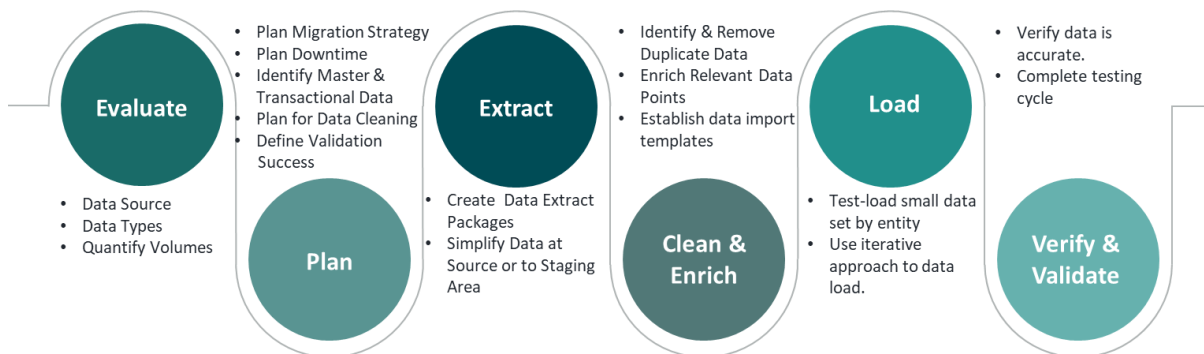
BDO going the extra mile

BDO provided regular status updates during the lifecycle of the project. Completing various ‘Show and tell’ demonstrations with key stakeholders, we ensured the development cycle remained aligned with the core deliverables and outcomes required.

BDO facilitated **User Acceptance Testing** before packaging and delivering the approved solution for Go-live within Limerick City & County Council Azure Environment. We also provided Train-the-trainer and solution documentation to the key personnel.

In Phase 2 of the project, BDO followed the same methodological structure ensuring stakeholders, key users and strategic outcomes were aligned.

Two additional Model Driven Apps were developed in line with the specified requirements.



In this Phase, BDO’s preferred methodology was ETL:

- Extract
- Transform
- Load

This determined the current master and transaction data sets, identifying which data needs to be transitioned to the new solution and the appropriate methodology in which to do so.

BDO worked with the key stakeholders to create the Data Migration Strategy and outline all of the source data repositories, the target data model, success criteria, roles and responsibilities.

BDO collated all the individual MS Access Databases into one master database and used the Access DB export to Dataverse functionality to create a mapping to the target solution. All in-scope data was transferred into the Model Driven App, tested, validated and available for production use.

BDO's experts explain

Looking back on the process, James Gaskin, BDO's Director of Management Consulting & Head of Business Transformation commented:



From the outset of our engagement, we established a trusted partnership model with key stakeholders determining their specific transformation and strategic requirements providing guidance, insight and approach for Power Apps ensuring the outcomes met with time, cost and functional requirements of the council.

Limerick City & County Council transformation

Alan Dooley Head of I.S. - Digital Strategy, Limerick City and County Council commented on the impact left by BDO's thorough attention:



The BDO team worked with Limerick City & County Council in 2022/2023 to design and build several Microsoft Power Platform solutions to help with the digitalisation and modernisation of their new and existing processes. BDO's team were attentive, detailed and a pleasure to work with.

Their application design and build process allowed for the quick and efficient gathering of requirements that resulted in a high-quality build phase.

BDO demonstrated a great ability to understand the nuances of Local Authority and had the patience to work with us in a collaborative manner. I would highly recommend partnering with BDO for your future process digitalisation and CRM needs.

Is your organisation being buried in repetitive tasks and manual data entry?

Or maybe you're frustrated with intricate operations, budgetary woes, and incident tracking...

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