

Dataverse + Power Pages: Secure Portals, No Heavy CRM

Solutions for Success Education Series

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Power Platform Solution

OVERVIEW

Power Platform Solution

A portal built on Dataverse, Power Pages, and Power Apps exposes selected business processes to external or internal users through a controlled web experience — with least-privilege access and no dependency on Dynamics 365.

Power Pages

External web experience — pages, forms, lists, and navigation for authenticated users.

Dataverse

Secure data platform storing business records, relationships, and security configuration.

Power Apps

Internal apps for staff to manage, review, and act on submitted information.

Power Pages Without Heavy CRM

Power Pages runs as a standalone Power Platform portal on Dataverse — Dynamics 365 is introduced only when the portal must extend and uses D365 workload.

Standalone Dataverse + Power Pages

- Build directly on Dataverse — custom tables, relationships, forms, views, and business rules
- No Dynamics 365 Sales, Customer Service, or Field Service required
- Expose forms, lists, and records through secure web roles and table permissions
- A cleaner, purpose-built solution for custom portal scenarios

Add Dynamics 365 only when...

- Exposing Customer Service cases or Sales account information
- Surfacing Field Service work orders
- Extending Finance & Operations data
- The portal must build on an existing Dynamics 365 workload

GOALS

Solution Objectives

1

Secure web access

Provide a secure portal for authenticated users to interact with business data.

2

Centralized data

Centralize data in Dataverse for consistent validation, security, reporting, and automation.

3

Internal operations

Use Power Apps for user needing richer data administration.

4

Least-privilege access

Apply role-based and record-level controls to protect sensitive information.

5

Governance at scale

Support auditability, maintainability, and future scalability across the platform.

ARCHITECTURE

High-Level Architecture

Responsibilities are separated across presentation, data, security, automation, and administration layers.

- **Identity & authentication**
Microsoft Entra ID / External ID
- **Portal experience**
Power Pages web interface
- **Data & application**
Dataverse via web roles & table permissions
- **Internal apps**
Power Apps with Dataverse security roles
- **Automation**
Power Automate orchestration

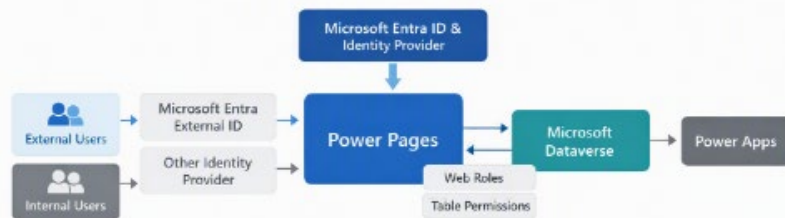


Figure 1 — Users authenticate through Microsoft Entra, reach Power Pages, and interact with Dataverse through web roles and table permissions.

Architecture Components

Layer	Primary Component	Purpose
Portal Experience	Power Pages	Secure web pages, forms, lists, and navigation.
Data Platform	Dataverse	Structured data, relationships, metadata, and security config.
Internal Applications	Power Apps	Staff and admins managing portal-submitted data.
Automation	Power Automate	Notifications, approvals, integrations, and background jobs.
Identity & Access	Microsoft Entra ID / External IDP	Authenticates users and secures sign-in.
Governance	Admin center, audit logs, DLP	Environment management, compliance, and monitoring.

Layered Security Model



Least privilege by design

Grant only the minimum access required for each business task.

1

Authentication

Confirm user identity before granting access; required for any sensitive page.

2

Web Roles

Define what a signed-in user can do — Customer, Partner, Reviewer, Administrator.

3

Table Permissions

Scope record access per table to the user, their account, or related records.

4

Dataverse Security

Role-based access for internal users via roles, business units, teams, and sharing.

AUTHENTICATION

User Authentication Methods

Authentication Method	Typical Use	Security Note
Microsoft Entra ID	Employees / internal users	SSO, conditional access, MFA; recommended for workforce.
Microsoft Entra External ID	Customers, partners, citizens	Managed external identity with configurable sign-up.
Azure AD B2C	Existing CIAM / B2C tenants	Mature customer identity and custom journeys.
OpenID Connect	Modern OIDC federation	Claims-based identity; preferred modern protocol.
SAML 2.0	AD FS, Okta, Ping federation	Fits existing enterprise SAML infrastructure.
OAuth 2.0 Social	Lower-risk public portals	Validate assurance & compliance before business use.
Local Authentication	Legacy / limited scenarios	Not recommended for new secure portals.
Invitation-Based	Controlled onboarding	Limits access to known, pre-approved users.

GUIDANCE

Entra ID for internal users; External ID or B2C for external users. Avoid local authentication in production.

Recommended Secure Portal Design

Design around clear personas, data ownership, and access scenarios — before building pages and forms.

- ✓ Require authenticated access for all sensitive areas
 - ✓ Disable anonymous access unless a public need exists
 - ✓ Define web roles by business persona, not by individual
 - ✓ Create table permissions for every exposed Dataverse table
- ✓ Prefer contact / account / relationship scoping over global permissions
 - ✓ Expose only approved columns in forms and lists
 - ✓ Separate development, test, and production environments
 - ✓ Apply DLP policies and enable auditing on sensitive tables

Example User Access Matrix

User Type	Typical Access	Security Approach
Anonymous Visitor	Public information only	Restrict to non-sensitive pages; no Dataverse records.
Authenticated User	Create requests; view / update own records	Customer web role; contact / account-scoped permissions.
Partner / Supplier	View & update org-related records	Account-based and relationship-based access.
Internal Reviewer	Review submissions; update status	Power Apps with Dataverse security roles.
Portal Administrator	Manage configuration & support access	Restrict to admins; monitor configuration changes.

Power Apps & Data Design

Power Apps for internal users

- Model-driven apps for data-centric review, triage, and approval
- Dataverse forms, views, dashboards, and business process flows
- Security roles aligned to operational responsibilities
- Separate administrative from operational functions

Dataverse data design consideration

- Model ownership & relationship fields early for record-level access
- Avoid exposing technical or administrative tables to the portal.
- Separate public, restricted, and sensitive data
- Validate business logic in both the portal and Dataverse

Implementation Approach

1 Discovery & Requirements

Audiences, use cases, data sensitivity, and processes.

2 Security Design

Personas, web roles, Dataverse roles, and permissions.

3 Data Model

Tables, relationships, ownership rules, and fields.

4 Portal Build

Site structure, pages, forms, lists, branding, and auth.

5 Internal App Build

Power Apps forms, views, dashboards, and flows.

6 Automation & Integration

Notifications, approvals, and data synchronization.

7 Testing

Functional, security, and security-access validation.

8 Deployment

Managed solutions and controlled release processes.

9 Operations

Monitor usage, review access, and improve continuously.

Key Risks & Mitigations

Risk	Impact	Mitigation
Overly broad table permissions	Users may see records they should not access	Use least-privilege permissions; test with multiple personas.
Anonymous access to sensitive pages	Business data exposed publicly	Require authentication; protect pages with web roles.
Poorly designed relationships	Record-level security hard to enforce	Design contact, account & ownership relationships first.
Uncontrolled maker access	Unapproved changes weaken security	Environment security groups, admin controls, and ALM.
Insufficient testing	Security gaps reach production	Perform positive and negative access testing pre-release.

NEXT STEPS

Recommended Next Steps

Move from design to a secure, governed portal with these actions:

- ✓ Confirm standalone Dataverse vs. a Dynamics 365 extension
- ✓ Document Dataverse tables, relationships, and ownership
- ✓ Confirm portal audience, identity provider, and personas
- ✓ Build a security matrix mapping personas to records & actions
- ✓ Select the authentication method for each user group
- ✓ Prototype forms, lists, and permissions, then security-test

Upcoming Events

Upcoming S4S Webinars

- Third Tuesday of Each Month
- Microsoft 365 Copilot – Third Friday of Each Month
- pointalliance.com/events

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