

Solution Brief

Problem Statement

Centralized member management built on .NET 9 with Clean Architecture, solving the fragmentation and inconsistency of member data across systems.

Key Benefits

- Robust validation using Fluent Validation to ensure data integrity.
- Global exception handling with Serilog logging and tracking IDs.
- Automated CI/CD pipeline deploying to Azure Web Apps for rapid delivery.
- Comprehensive unit and integration test coverage ensuring reliability.

Architecture at a Glance

Clean, layered architecture separates concerns:

- Presentation/API Layer: ASP.NET Core controllers exposing REST endpoints.
- Application Layer: Business logic and validation.
- Infrastructure Layer: EF Core SQLite database and repository implementations.
- Core Layer: Domain entities and interfaces.

Roadmap / Next Steps

- Extend CI/CD to support blue-green deployments.
- Enhance security with OAuth2/JWT authentication.
- Migrate to a cloud-native database (e.g., MS SQL).
- Add real-time notifications and analytics dashboard.