

CASE STUDY

Enabling Development Best Practices In Building a Member Experience Platform

CLIENT:

A Manitoban Credit Union

PROJECT:

Member Experience Platform

CHALLENGE

- Business membership onboarding process was time-consuming, involved many manual steps, and was prone to accidental errors
- The development team had an experience gap with the specific development language
- The development methodology the team was using had areas for improvement

SOLUTION

- Transitioned development team to current development best practices
- Installed and configured continuous deployment, automated deployment and unit tests
- Membership opening application was built using best practices in logging, security, system to system communication, modularity and reusability, automated testing

RESULTS

- Successfully developed and deployed a new core application used by internal staff to open personal and business memberships to production
- Optimized a process that previously took 30-60 minutes to 5-10 minutes while also removing frequent compliance errors
- Introduced development best practices to the team:
 - Implemented continuous integration and automated deployment
 - Designed an application architecture that has led to extensible, maintainable, testable code base
 - Introduced Docker and containerization into their application infrastructure
 - Provided developer training for writing clean code, unit testing, Angular, Entity Framework, and Docker
 - Created a process and framework to be used to further extend the system to other business cases

Client Quote:

“Resolute consultants demonstrate skills as a senior BA very well. They ask great questions, digging in to learn more about areas that require investigation, presenting insightful thoughts and findings, and overall representing themselves and your organization very strongly.

The consultants, as always, are superstars and continuing to have tremendous impact on our important project work.

Technologies Used:

- Angular
- .NET Framework
- SQL Server
- .NET Core
- Docker
- IIS / NGINX
- TeamCity
- Bitbucket
- Crucible

Services Provided:

- Development Consulting
- App Architecture
- Business Analysis

ABOUT

A Manitoba-based financial services provider and the second largest Credit Union in the province was revamping their internal processes for business membership opening and planned to develop an internal application to help streamline and automate the manual and error prone process. Their development team had started a proof of concept using an Angular front-end and a .NET backend when Resolute was engaged.

This project was the Client's development team's first foray with the Angular framework and was looking for someone with expertise to supplement their development team. Resolute was able to send a senior developer on site to provide guidance and training while overseeing the project. Resolute's developer was able to quickly identify development practices that needed updating as well as an overall application architecture redesign. Within the first week a plan was put in place to address the identified gaps.

Shortly after starting the project, the business analyst / QA assigned to the project was transitioned to another role in the organization. The development team was using the Agile SCRUM methodology but the user stories that had been assembled were not in a state where work could be done effectively. Resolute was able to provide a replacement to back fill the position until a new employee could be hired.

SOLUTION

The first step taken with the Client was to transition their development team to use current development best practices. Below is a list of improvements made in the first two weeks:

1. Transition of source code from SVN to Git
2. Installation and configuration of continuous integration using TeamCity
3. Creation of automated deployment scripts and environment progression processes
4. Introduction of automated unit tests
5. Introduction of code reviews using Crucible

Next, the existing Client proof of concept was analyzed and the requirements they had collected so far were reviewed. Much of the detail regarding existing processes and what the new process was supposed to look like had been collected but was not organized in a way the development team could work with. Resolute was able to provide a business analyst / QA to help with sorting through the requirements and writing proper user stories that could be implemented by the development team.

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The Client proof of concept that had been developed was redesigned using modern client and server principals into a framework that could act as the base of what would become the production ready membership opening software. The application was built using best practices in logging, security, system to system communication, modularity and reusability, automated testing.

RESULT

Within a year the first release of the application was deployed to production on schedule. The application was very well received by the user base and praised for its ease of use and intuitiveness.

One of the most impactful achievements of the application was being able to **reduce a process that previously took 30-60 minutes to 5-10 minutes while also removing frequent errors**. Development has continued after this initial release providing quarterly updates with new functionality.

After the initial release of the membership opening software, the Client wished to extend the application to replicate its success for other business processes. An architectural design was created to build out a group of components that would fulfill the needs of the roadmap provided by the product owner. The applications functionality would be supplied by a handful of micro services and compartmentalized applications. Docker was introduced as a container provider and the new backend components were written in .NET Core to better support the micro service architecture.

ABOUT RESOLUTE

We work with small to medium-sized businesses to help them implement and manage their technology needs. We develop, maintain, and support infrastructure and custom web, mobile, and packaged applications. Our expert consultants help optimize business processes and lead projects from start to finish. We have clients from a variety of sectors including wealth management, financial services, insurance, non-profit, agriculture, and manufacturing.

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