



## CASE STUDY

# DevOps for Faster Delivery

## ABOUT THE CLIENT

Our client creates products to help people express their creativity with handmade cards, paper-crafting, keepsakes, and home decor. Beaufort Fairmont partnered with the client to improve quality and speed of software delivery.

### CHALLENGE

Introduce Test Automation and DevOps to improve quality in customer-facing applications. Guide the implementation of a DevOps process enabling faster delivery of software and satisfying customer demands.

### BY THE NUMBERS

**90%** Code Coverage

**900** Tests

**31** Weeks

### TECHNOLOGIES

.NET C# Selenium Azure DevOps Git Restful APIs Javascript Typescript Jest



## The Challenge + Solution

Beaufort Fairmont partnered with the client to improve quality and speed of software delivery.

During our initial consultation, we assessed the client's goals, approach, practices, and personnel involved in software development and testing. Together with the client's technical leadership, Beaufort Fairmont created a plan based on our recommendations for implementing faster delivery and higher levels of quality.

The new approach included training staff with courses in "Fundamentals of Testing", "Selenium in C#", and "Azure DevOps" through Beaufort Fairmont's customizable training offerings. Additionally, Beaufort Fairmont provided a consultant to guide implementation and mentor staff with the new DevOps processes and skills.

Embedded with the flagship Scrum team, our consultant implemented Beaufort Fairmont recommendations, including creating pipelines to test and deploy greenfield microservices and web UIs.

Test automation used C# and NUnit for service-level testing. Shifting left, the team began creating test automation before the UI was built. This provided an almost instant feedback loop for developers as they finished tasks.

The approach created a fast-running suite of over 900 test cases. Deployment was gated automatically by the status of the tests. The tests covered 90% of the codebase.

Once developed, the team created UI tests in Selenium WebDriver in C#. They built lower-level tests with Jest in JavaScript for the UI.



*Beaufort Fairmont helped us understand what we need to do and how to begin achieving wins immediately, as well as determining a plan to get to where we want to be.*



—SENIOR PROJECT MANAGER

## The Results

The client reached 90% code coverage across all services, never dropping below 73% in the first year. In 31 weeks, the team created over 900 tests. Often tests were created *before* application code was developed. **Testing shifted left.**

Developers gained confidence. The tests determined whether developers' changes worked within minutes.

Previously, the team spent hours in planning meetings sorting through the details of user stories. Now, the team created acceptance tests that either passed or didn't. Product Owners watched tests execute. They knew if their user stories were implemented correctly!

Beaufort Fairmont's consultants mentored testers in pursuit of becoming automation engineers. All succeeded in becoming Software Development Engineers in Test (SDETs).

On release of the application, the team recorded **fewer defects than any release in 25 years!** Further, when found, defects were quickly squashed as the team now had the ability to quickly represent the issue with an automated test and act on it. The team now deploys software **safely, quickly, and on demand!**



### ABOUT BEAUFORT FAIRMONT

Beaufort Fairmont is the software industry's source for automated testing staffing, consulting and training. Our engineers have a passion for implementing automated testing—allowing more companies to take advantage of the many benefits of automated quality assurance. We attract the industry's top talent, combining decades of experience and creativity in developing solutions for our clients. Our engineers are focused on writing high quality software in less time. This expertise, coupled with our extensive experience, results in a fast time-to-value for our clients. Learn more at [beaufortfairmont.com](https://beaufortfairmont.com).

CALL US TODAY AT **984.244.2313** TO LEARN HOW YOU CAN TAKE YOUR SOFTWARE TESTING PROGRAM TO THE NEXT LEVEL.