



**Nationwide**  
On Your Side

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## Overview

### The need

Nationwide needed to better respond to changing market requirements and regulations, increase speed to market for new products and services, and support new channels of customer interaction.

### The solution

Nationwide engaged IBM to support its agile transformation and help enable a DevOps approach to application development and delivery across its distributed and mainframe environments.

### The benefit

Nationwide improved code quality by 50 percent over a 3-year period, reduced user downtime by 70 percent and moved 58 percent of its teams to the top quartile in key productivity measures.

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# Nationwide embraces DevOps, improves software quality by 50 percent

*IBM helps transform application delivery across culture, processes and tools*

Over the past 80 years, Nationwide Mutual Insurance Co. has grown from a small mutual auto insurer owned by policyholders into one of the world's largest insurance and financial services companies, with more than USD135 billion in statutory assets. Headquartered in Columbus, Ohio, Nationwide has an IT staff of more than 5,000 employees working in various locations across the country.

## Moving from waterfall to agile development

Nationwide needed to improve its market responsiveness. "Our business is highly dependent on technology," says Steve Farley, vice president of the application development center at Nationwide. "We're a highly regulated industry with changes coming at a very fast pace. We have new products and services that need to hit the street, so our software delivery lifecycle is pertinent to the success of our business."

Ten years ago, Nationwide used primarily waterfall development methodologies to create the software products that its members, customers and agents use online. However, the gap between software requirements and product delivery with the waterfall method had caused a rift between IT and the business. "Before the agile transformation at Nationwide, I believe our [internal] customers felt like IT was the black hole. Basically they would put in their business request, and then we would go into the back office and do our software delivery," says Farley.

Recognizing the value it could achieve by embracing lean and agile practices at scale for its enterprise, Nationwide began shifting from waterfall to agile development. In 2010, the company created a development center that centralized six development teams, representing about 50 people.



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*“This [solution] allows us to be more agile as a business and more responsive to our customers. This has led to improved quality by 50 percent and reduced system downtime by 70 percent over the last three years.”*

— Steve Farley, vice president, application development center, Nationwide Mutual Insurance Co.

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At the center, the business demonstrated early success with agile methods by improving from eight defects per release and 60 percent on-time delivery to one defect per release and 90 percent on-time delivery. The development center has since expanded to 32 teams across two cities, and it expects to double in the next two years.

### **Embracing a DevOps culture of collaboration and agility**

Nationwide has operationalized agile practices across IT, lines of business and the entire delivery lifecycle, as well as across technology domains that include the existing mainframe, distributed systems and business intelligence data solutions. Using a DevOps approach, Nationwide can now perform continuous integration of its code and continuous deployment into its development environment several times a day. Teams can also perform acceptance testing of customer requirements in the same iteration with development. And they can show the customer, in near-real time, what developers are producing. This almost immediate feedback helps ensure that what’s being produced is going to meet the customer’s needs.

To support collaboration, Nationwide organically forms cross-functional teams that sit together physically at pods, comprising members from the business and multiple IT disciplines, including development and infrastructure. “We’re more agile as a business and more responsive to our customers. Collaboration has become an expected part of our culture and is built into our office space and practices,” says Farley. “We embrace change and we know that we will not know all the answers at the beginning of the software delivery lifecycle.”

“The more agile we can be, from an IT perspective, the more agile I think the business can be, in terms of going from idea development to actually being able to deploy a product that’s in use by our customers,” says Carmen DeArdo, a director and application development leader at Nationwide. Using the DevOps approach, Nationwide has achieved increases in productivity, along with improved software quality. According

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## Solution components

### Software

- IBM® Rational® Asset Analyzer
- IBM Rational Developer for System z®
- IBM Rational Development and Test Environment for System z
- IBM Rational Requirements Composer
- IBM Rational Team Concert™

### Services

- IBM Software Services for Rational
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to Farley, careful measurement is the key to the DevOps approach at Nationwide. “We commit to build targets and then we measure against them. And we do it transparently,” he says.

## Using continuous delivery to facilitate mainframe development

After achieving a measure of success with the DevOps approach for its distributed teams, Nationwide rolled out the solution to its mainframe teams as well. “One of our priorities is to take some of the things we’ve learned with the Java technologies and apply [them] to mainframe,” says DeArdo. “Initially, when [we] started talking about continuous integration and deployment on mainframes, I got some strange looks. But now as people see the success we’ve had, and some of the tools and capabilities that are available, we have the ability to create the same kind of development environment, and get the same concepts of continuous integration and continuous deployment. We absolutely can get those same advantages from a mainframe perspective.”

Nationwide has found that this approach invigorates mainframe developers by letting them see improvements in the way they do things, which then engages them and makes them more productive. The newly invigorated mainframe teams have helped Nationwide infuse new talent into these technologies. Nationwide uses pairing to help boost employee productivity. The company pairs Eclipse-based developers with mainframe experts to further collaboration and enhance skills.

## Using IBM software to support the application delivery transformation

Nationwide has embraced several software development practices and tools from IBM in its DevOps approach. For example, the business uses IBM® Rational® Requirements Composer, IBM Rational Team Concert™ and IBM Rational Asset Analyzer software to manage application workloads and provide collaboration capabilities. It also uses a suite of modernization products, including IBM Rational Developer for System z® and IBM Rational Development and Test Environment for System z software.

“Our ability to work with IBM across that heterogeneous set of tools, across the lifecycle, allows us to look holistically at the tools together, what’s the best architecture, what’s the best approach, in order to meet our goals of high quality, high productivity and delivery for our customers,” says DeArdo.

Using the Rational Requirements Composer software, the company can clearly establish its requirements. Teams can define a high-level requirement and then break it down into smaller software requirements, which staff members then load into the Rational Team Concert software. Using these applications, Nationwide can build traceability from its test cases back to its requirements, helping ensure that the software they’re going to build meets the needs of those who are going to use it.

Applying these concepts to the mainframe team required a cultural change. By allowing the mainframe developers to build momentum and provide feedback, they embraced agile principles and incorporated them into their everyday tasks. Rational Development and Test Environment for System z software gives developers their own independent environment and supports repeatable testing. The application has helped developers become more productive and produce higher-quality code.

### **Achieving benefits and gaining recognition**

The DevOps approach has transformed software development at Nationwide. “Some of the specific outcomes that we’ve seen are higher productivity and higher quality. It’s not uncommon to develop code that, when we deliver it to system test, has zero defects,” says DeArdo. Fifty-eight percent of the Nationwide teams are in the top quartile of the industry based on lines of code produced. The company has improved software quality by 50 percent over the last three years, and it has reduced user downtime by 70 percent.

Outside organizations have recognized Nationwide's achievements. Nationwide is one of the first agile at scale organizations to achieve a Capability Maturity Model Integration (CMMI) Level 3 rating. Further, the company's Des Moines, Iowa, development center won a 2013 Iowa technology award for best use of technology.

"We know that as we move forward, things are going to happen more frequently, more rapidly," says DeArdo. "The need for change is going to become more, not less, and that IT component, which is an essential element of delivering value to our customers, has to be able to keep up. It has to drive that ability to be agile for us to be successful, and do what we want to do, which is protect the things that are most important to our customers."

Nationwide plans to continue to expand its DevOps approach, use of agile methods and adoption of IBM products and know-how. The company intends to operationalize lean functions in other IT practices that include call center support for IT, software maintenance, and incident and problem management. "At Nationwide, we use IBM as a partner to show us the way, to teach us where industry practices are evolving and going, but also help us at the grass-roots level to implement the services that we acquire from IBM," says Farley.

### About the IBM DevOps approach

The DevOps approach is an enterprise capability for continuous software delivery that helps enable organizations to seize market opportunities, respond more rapidly to customer feedback, and balance speed, cost, quality and risk. By offering the right approach for incremental adoption, the IBM DevOps solution helps organizations deliver a differentiated and engaging customer experience, achieve quicker time to value and gain increased capacity to innovate. The DevOps solution uses an open-standards-based platform and a continuous feedback loop across the delivery process, and it's designed to integrate into existing heterogeneous lifecycle environments to deliver value more quickly.

## For more information

To learn more about the IBM DevOps approach, please contact your IBM marketing representative or IBM Business Partner, or visit the following website: [ibm.com/ibm/devops/us/en](http://ibm.com/ibm/devops/us/en)

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