



# Black & Veatch gains security and agility in application development

Move to DevSecOps delivers quality and safety to clients in shorter timelines

Black & Veatch is an employee-owned engineering, procurement, consulting, and construction company with a 100-year legacy of advances in sustainable infrastructure. With innovative thinkers, Black & Veatch is a trusted advisor which delivers excellence to clients to continually transform today's technology into tomorrow's safe, long-lasting infrastructure.

Many of Black & Veatch's customers need strategic innovation. Traditionally, markets such as utilities require more time to respond to change but, as the pace of business accelerates, the company's clients need to be more technically savvy and look for strategic ways to innovate, improve efficiencies, lower costs, and reduce their climate footprint. At the same time, utilities and infrastructure are becoming increasingly concerned about cybersecurity.

“When we looked at potential partners to work with on getting set up on the DevSecOps framework, we were really impressed with not only Capgemini's methodology in introducing it but also the templates and all of the other resources brought to the project. We appreciate the expertise they brought from having done this before with other companies.”

**Jim Waters**  
CISO  
Black & Veatch

## More secure application development at speed

Black & Veatch has responded by being more strategic with its technology. A perfect example is the introduction of the DevSecOps methodology. Traditionally, Black & Veatch rarely created or built its own applications and, when it did, a waterfall-type of approach was used. The development team would gather requirements and deliver an application six months later. But clients needed applications faster.

“The traditional waterfall approach that Black & Veatch was using for our software development lifecycle did not allow for good communication and feedback from our clients and our business, and the collaboration that we needed with IT to deliver that value was missing,” says Jim Waters, Chief Information Security Officer, Black & Veatch. “Moving to a more scrum-like DevSecOps methodology allows us to not only deliver business value faster but it is also done in a way that maintains quality and security within those applications.”

Black & Veatch already had a significant footprint within the Microsoft Azure space and, since this was the first foray into DevOps and scrum-like methodology, the goal was to remove as many variables as possible. Instead of trying to reattach and relearn a new group of systems, applications, and processes, the company decided to use its existing Microsoft technology as a starting point.

“We needed to change into a more DevSecOps-type of methodology to deliver the business value to them faster,” he explains. “It was all about speed. We can’t sacrifice quality or security. We had to make sure quality and security were part of the mix when we started building more applications and delivering more value to our clients.”

## Accelerating to adopt DevSecOps

Black & Veatch decided to work with longstanding partner Capgemini on the project. The choice was based on the existing relationship and the results delivered from other projects and initiatives.

Black & Veatch leveraged a number of existing templates that Capgemini brought to the project. These allowed them to stand up and test all the systems, with automations introduced across the entire framework and lifecycle. It meant on day one, the company had an almost fully automated DevOps lifecycle from project initiation through to security testing and production. It saved months compared to starting from scratch.

“One of the things Black & Veatch introduced within our application-development methodology was a systematic and automatic way to apply security policies to DevOps to ensure the code produces a secure application,” he says. “Working with Capgemini, we leveraged its expertise on what has worked in other projects and this really allowed us to very quickly look at the potential tools that were available and decide on Micro Focus’ Fortify application as the best fit for our environment. It provided a simple way to ensure our code is secure as it works through the DevOps pipeline.”

## Delivering value and growth

The first pilot project came from its Water operations division. The team had employed some DevOps elements with an application, but it was struggling to deliver a quality product in the sprint timeframe. The project was consistently behind and sprints were exceeding the prescribed timelines because the full process and automations were not in place.

When the pilot application ran through the new Microsoft Azure DevOps platform, all the sprints were brought into the required timeline and the team was able to deliver faster. It meant the application could be delivered to the business closer to the original timelines.

“If we had tried to build the automations ourselves, we would have gotten it done, but having Capgemini bring in its expertise really shortened the timeframe down so we were up and running in a matter of weeks, rather than months,” he says.

With the automation in place, developers can concentrate on code rather than doing quality and security checks on the code. They can target their time and allow the system to run through all of the checks. And Micro Focus’ Fortify does more than just point to code errors. It fully explains the issues to developers, making it easier to remediate the findings and speed up the process.

Now, QA personnel can target the big-picture items rather than having to look through 25 quality policies.

They can concentrate on the one or two that really need to be remediated and have the system fix all the rest, increasing efficiency.

“We are now developing secure code,” Waters says. “Prior to this project, questions around security were always hanging in the air. So, once an application was already somewhat in a production state, we would have to test it and then come back with details on the security issues to fix. But unfortunately, it was already in the production state with security problems. Now, this automatic testing through Micro Focus’ Fortify means, when it gets to deployment, I can very quickly say whether it has complied with all of the security remediations. And I can be reassured that an application is going into production with the security necessary to make sure our data is safe and our client’s data is secure.”

Black & Veatch’s clients require rigor around cybersecurity, ensuring their data and all the related information is secure. The company must guarantee it is providing secure, quality products that add value. Having the CISO part of the project, system, and framework really ensures security is top-of-mind throughout the entire development lifecycle, rather than just at the end.

“It makes my life a lot easier and helps me sleep at night knowing that applications being deployed have passed the security test before they can move into our production systems,” says Waters.



# Connecting business and application development

Now, Black & Veatch can be much more flexible and agile to client needs. As the pace of business changes, the company can deliver quality and value more quickly to their clients and be ahead of the game.

“Our business lines using this new framework are happier for two reasons,” Waters explains. “Now, the business people are part of the process, so they know what is coming, what is being done, and why it is happening in a particular order, so the application delivered is ready to go. They can also be more agile when changes come up. Rather than it taking another month before a change will be entered into the system, they can make changes much more quickly as part of the process. And they can have business value delivered faster. They are going to get an application that delivers their business need when they need it.

“Key performance indicators around speed of delivery versus estimates are built into the system and the delivery of applications and the estimate we provided are also captured. They are also gathering business-line metrics around efficiencies gained to show if it is providing the value anticipated.

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## About Capgemini

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“CISOs can make security a central part of application development by being a partner in the process,” he says. “CISOs have a reputation of being the people who come in after the fact and say no. But if we come in as a partner to say we want to work with you to make sure from the outset that what you are doing is going to be secure, pass the checks, and deliver value, I think that is important. It is not about being an outside entity making demands. Being a partner means developers engage with the CISO organization and have the conversations to solve problems early.”

The new application-development speed is also helping to drive growth. Now, when Black & Veatch clients make a request, the company can deliver the value in a week or two rather than months. It helps drive the client relationship to be more positive and allows for growth within their current base and the opportunity to expand into new areas.



Your first inclination is to do the project yourself but I would recommend getting a good partner. You can hire a couple of scrum masters and think you can get it set up yourself. But it takes time and, often, you will find yourself stuck and not sure how to get out because you haven't done it before. Having a valued partner who has done it before with the right experience is very important to make this a success.”

**Jim Waters**  
CISO  
Black & Veatch

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