

CASE STUDY

South Carolina Department of Transportation Expedites Updates with Cloud Hosting

CHALLENGE

SCDOT's challenge was simple - it didn't have the specialized AASHTOWare Project IT personnel needed to update to new versions of AASHTOWare Project® in a reasonable time frame. That meant missing out on enhancements, potential security issues, and challenges in troubleshooting.

SCDOT was also looking for a way to safely incorporate external personnel (for examples, contractors, subcontractors, FHWA, cities, and counties) into AASHTOWare Project. Ensuring data was 100% secure and backed up in case of a worst case scenario was essential to the DOT.

SOLUTION

The team at SCDOT knew they needed to tackle their upgrade challenges, so they began exploring cloud hosting services with Infotech®. When Infotech hosts AASHTOWare Project in the cloud for agencies, updates are handled automatically and much of the burden of security falls on Infotech, not the DOT.

RESULTS

Moving to hosting services for AASHTOWare Project has enabled SCDOT to easily upgrade, safely incorporate external personnel, and ensure its data is stored and handled securely in the event of an audit.



Real-time updates



External personnel incorporated



Data stored securely

After transitioning to cloud hosting with Infotech, SCDOT was able to upgrade from AASHTOWare Project 2.02 to AASHTOWare Project 4.2. They are currently on AASHTOWare Project 4.6.

Three key issues lead SCDOT to explore hosting services

To learn more about SCDOT's experience with hosting, we sat down with Jennifer Taylor, Contract Administration and Technology Manager at the DOT. All quotes are hers.

1. Limited IT Resources

Many DOTs face similar challenges as they attempt to make the most of IT budgets or try to get dedicated time from centralized IT departments. Not only can this slow down the upgrading process, it means that DOT personnel often have to eschew their typical responsibilities to focus on upgrades. Upgrades were a huge endeavor before the DOT was hosted.

“We didn’t have anybody that could specialize in AASHTOWare Project in our IT department. Every time we needed an upgrade, we needed four people to help in getting it coordinated.”

2. Security Vulnerabilities

Updates in AASHTOWare Project come with a host of community-directed enhancements that are often the primary motivation for updating. But perhaps more important are the security patches that eliminate the vulnerabilities hackers can target. These updates are crucial to cybersecurity and resilience. The ramifications of not staying updated can be huge, as entire DOTs have been shut down because an application was out of date and a malicious actor found their way into the system.

“Audits and risks, and making sure everything is secure is a true selling point for us. We need to make sure this information is not hacked or available to people it’s not supposed to be available to.”

3. External Personnel Challenges

DOTs often work with various external consultants and vendors that need access to AASHTOWare Project, whether through the Active Directory or some other means of access. Before moving to hosting services, these external parties were provided access through VMWare, which an independent auditor deemed a security risk for the DOT. SCDOT needed to find a way to work with external users without exposing internal systems to risk.

“Our big problem was that we have consultants, and we were having to give access to external users. The securities were not what we needed.”

The benefits of hosting AASHTOWare Project in the cloud

Staying updated with the latest version of AASHTOWare Project

Before transitioning to hosting, AASHTOWare Project updates were a lengthy and arduous process that involved multiple DOT stakeholders taking time away from their daily responsibilities. SCDOT pursued hosting to find a more efficient way to upgrade, without asking too much of its staff. With hosting services, they're quickly able to update as soon as new versions are released by working with Infotech's dedicated team.

The hosting team keeps track of firmware changes and potential impacts. They also keep a detailed checklist of agency configurations and interfaces to ensure everything is in place after every upgrade.

"When we get the [email] that there's new software, we go and immediately put it in our test system, and it's done at our convenience. [Infotech] will say 'hey when can we do this for you,' and we go from test to our development to make absolutely sure it's working and then we move it to production."

Safely inviting external consultants and technical support

One of the biggest issues SCDOT wanted to tackle was finding a safe and secure way to incorporate external personnel into AASHTOWare Project. When SCDOT is finished with their ongoing implementation of AASHTOWare Project Construction & Materials, they will be able to invite external personnel to log in to the system through secure means that they control. As an added benefit, they're also able to add Infotech customer support staff so the team at Infotech can easily look at technical issues and provide a solution.

"Being able to work with the people at Infotech is a big benefit for us. We've been able to have people log on to our system, we gave them permission - Rocco, Alice, Cliff - there's a whole set of people that actually have access to the site now because it is hosted where we wouldn't have been able to do that before."



Allowing for multiple environments in offsite servers

When it comes to storage space, DOTs often find that on-site, physical server infrastructures aren't enough to support their digital needs. These issues are eliminated when their software systems are hosted in the cloud. For SCDOT, their on-site servers did not have enough space to support test and development environments, so all of their updates went straight to production, an experience Taylor describes as "scary." Hosting proves the DOT with five environments: Production, Test, Dev, Training, and Implementation.

"There wasn't enough space in our servers, we didn't have the experience that was needed. So now we've got all of that - test, production, development, and training."

Working with Infotech to make the transition

The advice of an external auditor prompted SCDOT to look for cloud hosting solutions. They decided to work with Infotech because of their familiarity with SCDOT and AASHTOWare Project. After a presentation to the DOT's leadership, DOT teams and Infotech begin working together to make the transition to hosting.

During this remote implementation period, Infotech worked with the SCDOT staff to ensure the project stayed on schedule and the final hosted environment met the agency's specific needs. This process included connecting AASHTOWare Project to SCDOT's financial system and ensuring that the final solution would hold up for the DOT's upcoming security assessment.

TIMELINE: 6 MONTHS TO PRODUCTION

“We liked working with Infotech very much, you don't have to remind anybody, and they're very knowledgeable about their jobs. The agency as a whole has got an external auditor that's coming in. He's going to look at the data collected and the systems we use and we have to prove that everything we do is in a secure environment. I've already given him Marty's documents so far I have not had any questions whatsoever about AASHTOWare Project.”

What should agencies interested in AASHTOWare Project Hosting know?

The Process

“I think that having one person over the project makes it much easier. Knowing who we needed in our agency to do which pieces would have been helpful. Also, the implementation didn't come out of my budget because it was a security risk, it comes out of the IT budget, so that might be something to consider for states with centralized IT.”

The Benefits

Taylor provided the following list of benefits for agencies considering hosting services:

- + Web based and can be accessed anywhere via a web browser
- + Frequent upgrades and enhancement, easier to update the software
- + Highly configurable to meet an agency's needs
- + Hosting provides an easy way for external users to access the system. These users include: consultants, FHWA, contractors, vendors, and auditors
- + Infotech service and support is a one-stop shop for infrastructure or application support and service by the company that wrote the software
- + Limited IT resources are required
- + Increased application performance with upgraded hardware

Run AASHTOWare Project in a cost-effective and secure hosted environment

We offer cloud hosting services for new release evaluation, data migration, implementation, and production.

- + Maximize limited IT budgets
- + Eliminate infrastructure maintenance
- + Access data anytime, anywhere
- + Stay protected and up-to-date
- + Reduce exposure to threats

Contact your Infotech Account Manager to learn more about upgrading to a hosted environment.



Infotech provides hosted environments through Amazon Web Services. As a leading public cloud provider, AWS helps organizations build sophisticated applications with increased flexibility, scalability, and reliability.

Learn more at aws.amazon.com