Using SaaS for
'INCREDIBLE SPEED
TO MARKET'

A USDA success story

How the Department of Agriculture's move to an enterprise cloud platform is saving millions of dollars and improving support for America's producers.

—BY FEDSCOOP STAFF

Agriculture is an enormous global industry that impacts Americans every day. Food purchases make up 13 percent of American households' expenditures. Agriculture and its related industries provide 9.2 percent of U.S. employment. Food manufacturing employs 14 percent of factory workers in the U.S.

Ensuring the nation's farms and food supply chains operate safely and that Americans get the nutrition they need are just some of the duties of the U.S. Department of Agriculture and its 100,000 employees, working in 29 agencies and offices across the country and abroad. With an annual budget of roughly $150 billion, the USDA oversees food imports and exports, agriculture, nutrition, natural resources, conservation and rural development, among other missions, as well as administering grants, loans and insurance to the nation's farmers.

To offer these vital public services, the USDA spends more than $2.5 billion annually on information technology. For more than a decade the department has been a technology trailblazer in the federal government, leading the charge toward innovative, customer-focused solutions by consolidating data systems and embracing the power of the cloud.

But USDA officials have taken a relatively new direction in recent years, working in part with Salesforce, to create a consolidated application development portal. That in turn has helped the department quicken the delivery pace for a wide range of enterprise and customer services.

FIVE WEEKS FROM 'DECISION TO DELIVERY'

The USDA's commitment to delivering digital services was put to the test this summer when the White House and U.S. Secretary of Agriculture Sonny Perdue announced plans to provide short-term financial relief to agricultural producers hit by retaliatory trade tariffs.

Officials at the USDA's Farm Service Agency, a division of Farm Production and Conservation, which offers low-interest loans and disaster relief to agricultural producers, quickly went to work to set up a new Market Facilitation Program and a digital platform for farmers to apply for relief payments.

FPAC and FSA had already made major strides consolidating seven digital platforms and 150 federal web resources into a single, mobile friendly website known as Farmers.gov. The digital platform behind Farmers.gov, developed with the help of Salesforce, allows farmers, ranchers, foresters and agriculture producers to register electronically and gain tailored access to various services, including agriculture-related data, maps and tools to help manage their business. The platform also includes a Level 2 eAuthentication identity verification system that streamlines self-service capabilities.

"Using platforms that industry has taken advantage of, especially in the field of customer relationship management, gives us an advantage in being able to configure instead of custom code everything we build," says Chad Sheridan, USDA's IT Director at FPAC. "It improves our speed to market, and ultimately our delivery [of services] to our users and customers."

Sheridan said that from the time the Market Facilitation Program was launched, it took just "five weeks from decision to delivery. We got something in production and then another few weeks later, we opened up self-service options. A year ago, it wouldn't have happened," he noted.

FROM VISION TO EXECUTION

The journey to quick-turn, self-service digital service application development had taken a number of detours before USDA leaders finally looked to proven industry platforms to accomplish the department's vision.

Like at many federal agencies, officials at the USDA recognized that meeting its mission increasingly meant overcoming a combination of IT challenges, including:

- A slow "waterfall-style" applications development and delivery process
- Inflexible solutions architectures
- Duplicate applications and data within multiple IT environments
- Duplicate business lines, organizations and staffs
- Inability to respond nimbly to consumer and business IT needs

That led to the creation of an internal Digital Services Center – and the decision to move away from using on-site servers for application development, to a centrally managed, cloud-based platform-as-a-service (PaaS) model. The decision of how to use PaaS, however, was left to each agency and office. While that opened the door for modernizing, few USDA agencies and offices ventured through it – in part because they lacked the staff expertise to take full advantage of PaaS technology.

To close the skills and knowledge gaps, and jumpstart the promise of the Digital Services Center, USDA contracted with Salesforce, with which it had already worked on a number of successful cloud initiatives using the company's software-as-a-service (SaaS) offering.

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> –Chad Sheridan

USDA SET OUT TO TRANSFORM ITS DIGITAL SERVICES CENTER AND REWORK ITS SERVICES MODEL TO MEET THREE OBJECTIVES:

Objective 1: Consolidation with shared services

Fragmentation and siloes meant that the left hand didn't know what the right hand was doing. Moving toward a single shared services cloud environment allowed USDA agencies and offices to communicate and collaborate on projects and products, and to avoid costly duplications of effort, time, expense, and data. The shared services environment allows USDA to offer its components:

- **Enterprise shared services** – such as contracts, licensing, vendor management, governance, onboarding and training

- **Security services** – including product ownership, inheritance strategy and ATOs

- **Platform Services** – including expert third-party assistance; design and architecture; standards development for data, process and technology; object management; development, testing, integration, training, production, provisioning; change and release management; and operations and maintenance

Objective 2: Sustainability via USDA Exchange

Instead of reinventing the wheel every time a need for a new solution was identified, developers could save time and costs by reconfiguring existing applications, using an application sharing platform called USDA Exchange.

"One of the things we've gotten ourselves into a hole in is we tend to go after custom code as a solution," said FPAC's Sheridan. "Custom code [has advantages], but the maintenance costs and the continuing support costs end up dragging us down."

USDA Exchange helps do away with the need for custom coding solutions. It offers a complete inventory of every application that has been built in the department and is available for reuse or scale. And it helps improve service delivery and customer relationship management so that customers can be served faster than ever before.

Now developers can build a customer-facing solution with a complete focus on solving a business problem, and ensure it is compliant and sustainable with a single click, according to Sheridan.

Objective 3: Innovation from the 'coalition of the willing'

When it initially began, the Digital Services Center adopted a top-down approach with the belief that "there could be value in providing a common framework across the USDA for these service platforms," said Sheridan. "But we didn't have enough practice knowledge. The problem with centralization is, if you don't have a lot of operational experience in the platforms, you may get in the way of good ideas."

The Digital Services Center is now, at its heart, a bottom-up organization – offering assistance, guidance, support and strategic advisement – not policy. Participating in the Digital Services Center and the migration to the Salesforce PaaS environment is a choice for agencies, not a requirement. Yet 100 percent of USDA agencies and offices have signed on.

This "coalition of the willing" is critical to the Digital Services Center's success. They provide answers and remove obstacles so that agencies can develop applications that deliver better experiences without the red tape and prolonged bureaucratic timelines.

They also bring the expertise of experienced cloud operators like Salesforce to the table to demonstrate what's possible and help agencies roll out applications more effectively.

SPREADING THE SUCCESS

The success of those efforts is spreading at USDA. At the USDA's Animal and Plant Health Inspection Service, which safeguards the flow of agricultural goods in and out of the country, IT officials were able to develop and deploy an electronic application "re-use engine" known as CARPOL. The engine makes use of cloud-based, off-the-shelf software without custom coding. CARPOL provides:

- One platform and authorization engine for eight large legacy custom-stack applications to deliver any certificate, accreditation, registration, permit, or other license

- More than 900,000 authorizations among 100 unique authorization types so far

- Optimized processes – authorization now takes as little as five minutes as compared to 30 days under the old model, and there are only 15 process steps as opposed to 47

- Faster delivery, with applications delivered in three months, not three years

- 70 percent reduction in application costs

- Increase in data managed as an enterprise asset

The ability to develop new tools and services quickly forces you "to think about how to do business differently," Sheridan said. "How do we build good practices? How do we build a good development contract with global service providers?"

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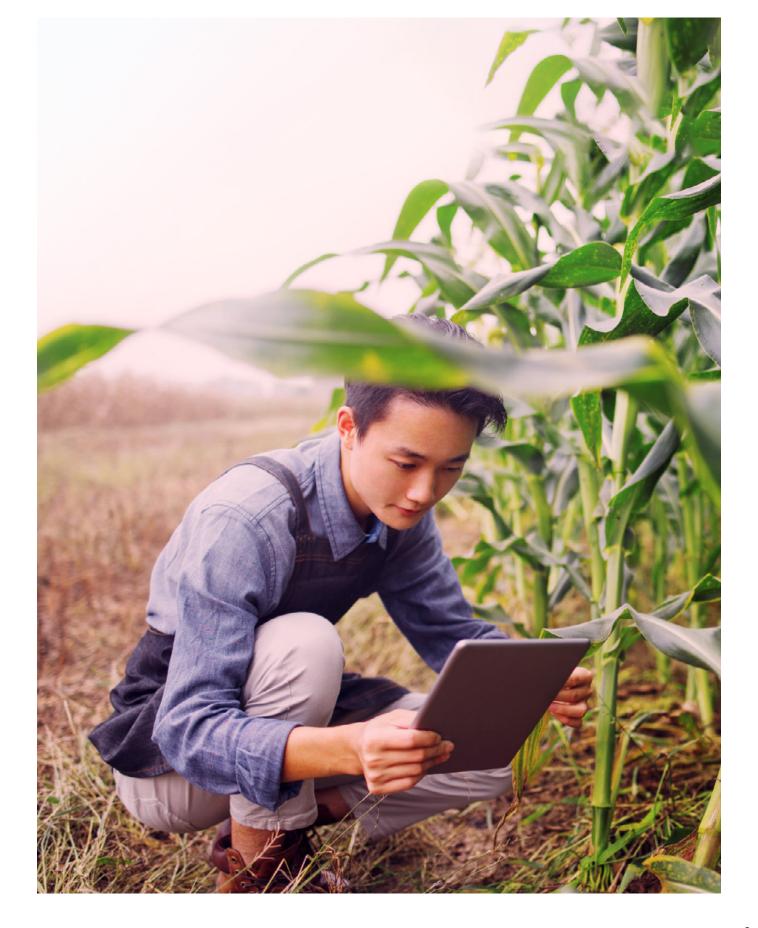>
> **–Chad Sheridan**

One way that's working for Sheridan at Farm Production and Conservation is by having a Salesforce platform architect working directly with Sheridan, independent of his development team.

"I have that person in my corner to check what my contracted developers are doing so we're not building things that are going to cause us a lot of technical debt," he explained. "I remind my partners, if you're not using Salesforce to help you in your development, then you're doing it wrong."

Sheridan also advises that agencies need to be prepared for the longer-term transformation and what's involved in getting there.

"We've all talked about agile for years and years. What we found is now we've got to bring some discipline in how you scale out that model. That's an even bigger transformation – to scale up your agile development – than it is to go from waterfall to agile," he said.

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