How the State of Vermont Built and Delivered a Pandemic Unemployment Application—in Just 11 Days

The Tireless Effort to Digitally Modernize an Aging Unemployment System and Help Vermonters Stay on Their Feet During the Early Days of the Pandemic

State: Vermont

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Executive Summary

In early March 2020, the state of Vermont's Department of Labor (DoL) was accepting and processing unemployment insurance claims in the same way it had been for years. Claimants would call the Claimant Assistance Center 800 number, speak to a representative, and have their claim processed over the phone. At that point, Vermont's weekly unemployment claims were considerably lower than the national average, and its unemployment rate was one of the lowest in the nation.

On March 13, 2020, in response to the burgeoning COVID-19 pandemic, Governor Phil Scott declared a State of Emergency and implemented state-wide pandemic mitigation measures. Similar to other states, that declaration marked a sudden and shocking shift toward lockdowns that would quickly change Vermont's unemployment landscape.

Fortunately for Vermonters and other Americans, the United States Congress was already working on legislation that would authorize states to expand unemployment benefits to more citizens. Based on this legislation, the Vermont DoL created its Pandemic Unemployment Assistance (PUA) program, which extended unemployment benefits to workers not normally eligible for unemployment.

But while increasing the pool of people eligible for unemployment assistance significantly benefitted the people of Vermont, it also put an enormous strain on the DoL, which suddenly had to process an unprecedented number of claims. By late March, Vermont's unemployment rate had risen to 3.2 percent—an increase from the previous month's 2.4 percent.

By the beginning of April, the state was processing 40,000 to 50,000 claims over a two-week period—the same number of claims the Vermont DoL typically processes in an entire year. Those numbers would rise even more in the following weeks. To put this in perspective, the population of Vermont is around 625,000 people. That means about 8 percent of Vermonters were filing for unemployment at that time.

The DoL initially struggled to meet the demand. As of early April, tens of thousands of claims had yet to be processed, leaving those who were suddenly unemployed without income. The call center was so backed up a person could theoretically stay on hold for 48 hours—and still not get through to a customer service representative. Many people never even received call backs because the phone team could not work through the backlog with any type of accuracy.

The state needed to create and implement a solution to alleviate the stress on the call center, reduce the backlog, make it easier to file for unemployment insurance and, most importantly, deliver much-needed money to Vermont constituents. They needed to do this rapidly and in the middle of a crisis, understanding that Vermonters literally could not afford to wait months to receive unemployment benefits.

In only 11 days, the state's Agency of Digital Services (ADS) created the Pandemic Unemployment Assistance (PUA) application—a mobile web app that allowed residents to file for unemployment assistance, upload supporting documentation, and complete weekly certifications via their smartphones, tablets, and laptops. No longer would they need to sit on hold or wait for a return call; Vermonters could simply sign on, enter their information, get verified, and receive their payments.

By mid-May, thousands of Vermonters were receiving PUA, and the state had successfully stood up a program that proved to all states that true digital transformation could be achieved in just days.

Project Narrative

Laying the groundwork for the PUA

The groundwork for this remarkable achievement didn't start at the beginning of the pandemic, however. The ADS began creating the roadmap that would eventually result in the creation of the PUA application in 2017.

The state understood it needed to significantly streamline its technology infrastructure and make operations simpler and more efficient. To that extent, Governor Scott created a centralized IT agency that included all executive branch IT managers from throughout the state.

That agency—the ADS—would eventually be responsible for creating the PUA application. Back then, however, its primary directive was to reduce the number of applications the state relied on, bring IT operations under one roof, enable sharing of resources across the state's Executive Branch, and think strategically about ways to modernize the state's technology.

The ADS team began by assessing the number of applications in use. They discovered 1,500 applications across all state agencies—an impossibly large number to manage successfully or cost-effectively. This equated to about one unique application for every 6 state employees.

The team consolidated those applications into a handful of "best of breed" technologies across different capability tiers. After a series of exhaustive searches, the agency chose various technology partners for different capabilities.

As the consolidation and modernization work commenced, the team also looked at ways to improve the way it processed and issued unemployment claims. They initially partnered with other states as part of a U.S. DoL-mandated consortium effort designed to help states become more efficient by sharing common platforms.

But those partnerships did not yield the outcomes the State of Vermont expected. So, just prior to the pandemic, ADS decided to go its own way and instead use funding from the federal government to apply to their own unemployment insurance system modernization.

This was in February 2020. No one knew what was coming. But the decision to go it alone and use government funds to build a new unemployment insurance application turned out to be the right choice.

Creating the concept

The nearly three years of streamlining, strategizing, and modernizing put the ADS team of 389 technology experts in a position to react quickly once the governor issued the State of Emergency. They had worked hard to build a combination of processes and tools that would allow them to create and deploy applications in a highly agile manner. With the government shutting down, and phone lines becoming overwhelmed, it was time to put all of that planning into action.

The first step was to create a more efficient and easily accessible claim application system. Like many states, Vermont had become overly reliant upon legacy systems for its claims processing—not just phone lines, but also a 52-year-old mainframe application that simply could not handle the swell of applications. This old system was inefficient and lacked the screen real estate and data storage capacity to add new federal and local programs that were created to assist Vermonters. Plus, the mainframe was not powerful enough to manage the complexity involved in determining benefit eligibility and processing checks at a fast enough rate.

The team wanted to replace these antiquated systems with a simple yet powerful application that allowed citizens to bypass the phone lines and submit claims via smartphones, tablets, and laptops. Claimants were already under enormous stress, so the application needed to be easy to use, accessible from any device, reliable, and always available. And it needed to be developed and deployed within an extremely compressed period.

At the time, the United States Congress was working through the parameters of the expanded unemployment benefits. To ensure the state's program aligned with the federal government's guidelines, the team engaged in daily conversations with representatives of the U.S. DoL to better understand eligibility requirements. Those conversations helped shape the components that would ultimately be included in the State of Vermont's PUA application to determine an individual's eligibility.

The ADS team also needed input from State of Vermont executives to ensure the application met the needs of every constituent. To that end, they created a governance board comprised of the Commissioner of the Department of Labor, Governor Scott's deputy chief of staff, and the ADS's deputy secretary.

The governance team worked tirelessly in the days following the issuance of the State of Emergency. From a home base at the Vermont DoL, the group batted around ideas: What information needed to be included in the application? How many fields should it have? How do we make it as simple as possible? How do we keep it flexible enough so that it could be easily adjusted to meet shifting requirements and programs? How can we build it quickly and get it out to users?

Building the application

The governance board relayed directives and desired objectives to the ADS's technology partners. Fortunately, the agency had already been cultivating strong relationships with these partners since the 2017. The partners understood how the ADS worked and knew how to help the agency quickly build, deploy, and support the PUA application.

The key technology partners included:

- **Salesforce** for the application build
- **MuleSoft** for integrating the application and data
- **Hyland OnBase** for business process and content management
- **PowerBI** for data dashboard visualizations

While these providers are very proficient at what they do, building an unemployment insurance processing system is a very complicated affair. The backend workflows that powered the application had to follow certain rules and paths unique to unemployment systems.

Very few people understand the complexity involved in creating such a backend. Fortunately, the ADS team had an IT professional skilled in unemployment applications. This individual had long ago moved on from supporting the DoL, but due to the centralization of IT staff, ADS was able to deploy him and others to support this critical effort.

They reworked the backend to be compatible with the new PUA application, working long shifts in the agency's data center to ensure the application's datasets and workflows were properly aligned and functioning. The work was meticulous and painstaking, requiring the person to work line-by-line to bring structure to unstructured data.

This individual's work exemplifies the commitment of the broader ADS team, which worked tirelessly with their technology partners to create and deliver a complete user-friendly application. While everyone from ADS (about 389 employees) was engaged in responding to the pandemic, less than 20 were directly involved with supporting VDOL.

The work went well beyond crafting a simple and straightforward user interface. It also included modifying the aging core UI system to the extent possible to determine applicants' eligibility and supporting that system with key ADS platforms to help share the load, manage data, process payments, and report progress.

Launching the application in 11 days

On April 22, 2020, the State of Vermont launched the PUA application after only 11 days of development work. Instead of sitting on the phone for hours or waiting days to get through to a call center representative, Vermonters began inputting their information into a simple, step-by-step form and receiving their unemployment insurance payments within less than a month.

Figure 1: *The State of Vermont's PUA application is accessible from any device and features a step-by-step guide and easy-to-complete forms.*

Thanks to the PUA application and the modified backend system, the state was able to automatically delineate which applicants were eligible for the expanded unemployment assistance. The new Salesforce claims system became the front door for all claims regardless of program eligibility; a legacy backend system confirmed that applicants were not eligible for general unemployment insurance. Collating this information manually would have taken hundreds of hours and placed additional burden on already exhausted DoL representatives.

Figure 2: *The application made it easier to determine which applicants were eligible for expanded unemployment assistance.*

The Impact on Vermonters, From Citizens to Government Employees

The launch of the PUA application had a profound and positive impact on both Vermont citizens and government employees.

Vermont became one of the first states to deliver expanded unemployment benefits to its constituents and did so in a very short period. The efforts of the ADS team and its partners helped keep Vermonters on their feet during a stressful and difficult time.

Government employees from the state house to the DoL had a weight lifted off their shoulders, too. Within days, calls to both the DoL's call center and to the governor's office substantially decreased. Instead of flooding the phone lines and waiting on hold for hours, people were completing online applications in just a few minutes. This took enormous pressure off beleaguered state employees who were also dealing with the impact the pandemic was having on them—including, for many, a sudden shift toward remote work.

Over the next several months, the volume of claims continued to remain at record high levels. The modernized system handled the volume with aplomb and the state was able to continue to send out payments at a fast pace.

By the fall, the state was distributing millions of dollars in unemployment benefits to tens of thousands of Vermonters.
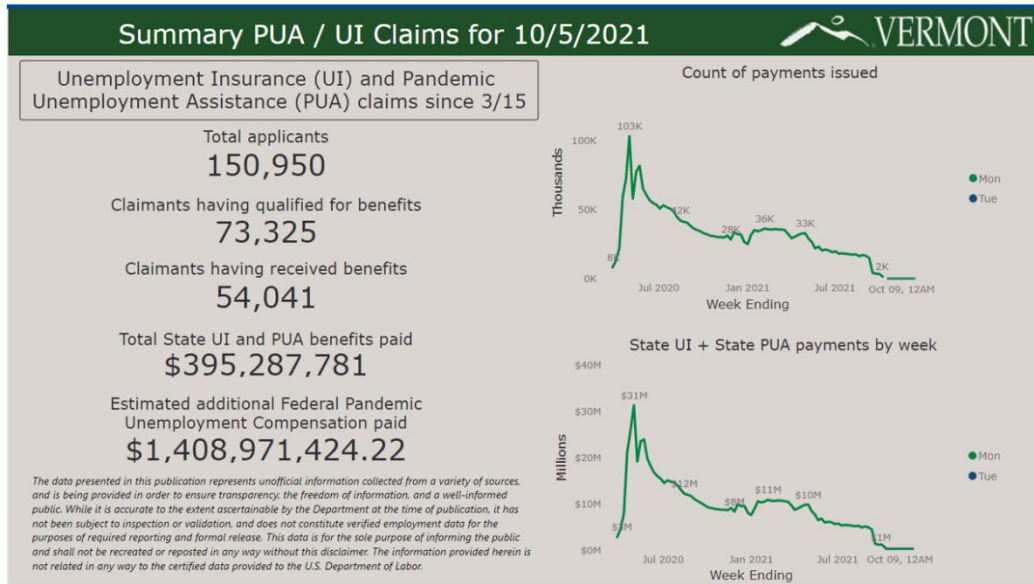

Figure 3: *The PUA application dashboard shows the number of applicants, claimants receiving benefits, total benefits paid, and more.*

What's next for the State of Vermont

The success of the PUA application project, and the speed at which it was implemented, gave the team at ADS the proof-of-concept they needed for additional modernization projects. Today, the ADS is planning to replace the state's aging mainframe system in favor of a more modern architecture that can better support all the state's digital initiatives—including the DoL's unemployment assistance efforts. The ADS has received $33 million for this project.

Much of the success of these efforts can be attributed to the forethought that went into forming a centralized ADS team in 2017. The cohesive unit gives the state the flexibility to both think strategically and react quickly. This allows the organization to create much-needed solutions that provide Vermonters with the services they deserve and serves as a model for other states.

To learn more about the ADS approach you can read our strategic plan at:
https://digitalservices.vermont.gov/sites/digitalservices/files/doc_library/ADS-StrategicPlan2022-2026.pdf
and review our Ecosystem at:
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