Service Transformation Program (STP)
OLIVR: Oregon License Issuance and Vehicle Registration

Award Category: Business Process Innovation

Oregon Department of Transportation
Driver and Motor Vehicle Services Division

Project Initiation: July 2017
Project Completion: July 2020

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Executive Summary

In the middle of a global pandemic, Oregon Driver and Motor Vehicle Services Division (DMV), part of the Oregon Department of Transportation (ODOT), completed its Service Transformation Program (STP) by replacing its core legacy systems and introducing several new and innovative online self-service options for customers and business partners. This technology initiative enabled a series of business process improvements making the DMV much more efficient. It has also made the DMV more effective, by moving to one comprehensive software solution, rather than using many legacy systems. Leveraging new technology to become a more flexible and nimble agency, DMV is now able to respond to ever changing customer needs, various requests from the legislature, and be a forward thinking, continuous improvement, state agency.

These business process improvements, driven by the system modernization, were needed for a number of reasons. The many legacy systems no longer met the needs of the DMV and its customers and were difficult to support. Front line staff had a hard time learning these older systems. Significant changes in laws, both state and federal, were difficult to incorporate, and customer expectations demanded services similar to the private sector: quick, efficient and online.

Once implemented, DMV found that the system modernization and associated business process changes came just in the nick of time to help DMV serve its customers during the global pandemic and an intense Oregon wildfire season. The new system improved the customer experience, by not requiring them to come into a field office to receive services. This transformation effort was cost-effective, too, because it allowed many services to be processed electronically without human/manual intervention.

These improvements definitely take DMV to the next level. The adoption rate by customers of the new online options is encouraging and provides a direction for future enhancements. With core legacy systems replaced, DMV is ready to offer an expanded portfolio of services meeting the ever changing needs and preferences of its customers.

DMV also automated all of its existing interfaces and added new ones to meet both State and Federal requirements. Replacing outdated systems with a single solution is a best practice and allowed DMV to provide focused training for technology specialists.

This system transformation, with associated business process improvements, supports the *2022 State CIO Top 10 Priorities of Digital Government/Digital Services*, and *Legacy Application Modernization/Renovation*. Since implementation, DMV has shared lessons learned and best practices with other state agencies, both in and outside Oregon. This large effort, recently completed, brings Oregon DMV successfully into the 21st century!

Idea: Description of Project

The system modernization was mission critical for Oregon DMV due to the many legacy systems from the 60's and 70's that were difficult to maintain, even with experienced COBOL programmers. Responding to changes from lawmakers was slow and costly. The agency had few online services, many manual processes and manual interfaces, and extreme challenges connecting with modern technology (e.g., credit/debit card readers). DMV's COBOL programmers were a scarce commodity, with many soon to retire, and newly hired developers had little or no experience with older programming languages.

Learning how to use "green screen" software was difficult for DMV front line employees, as well, especially newly hired millennials. It wasn't what they were used to, and training was time consuming, lasting several months. DMV staff relied too much on paper processes and human oversight. DMV customers demanded better services, similar to their experience with banking, healthcare, and retail services. In 2015, DMV only accepted cash and checks at its 60 offices. While stand-alone ATM machines were available in most offices, they were prone to theft (entire units were stolen from offices), and they had to be restocked frequently. Also, some key services, badly needed by customers, took weeks to process. For these reasons, a critical change was necessary!

DMV's Service Transformation Program (STP) was a way to significantly improve the DMV services offered to Oregonians. The DMV is how many customers, new to Oregon, first experience state government. Millions of transactions are conducted annually by DMV employees. STP was implemented to fundamentally change the way DMV serves its customers, by replacing obsolete technology and allowing DMV to significantly improve its business processes. The STP addresses NASCIO 2022 State CIO Priorities: *Digital Government/Digital Services* and *Legacy Application Modernization/Renovation.* It also drastically improved the citizen experience.

This project is innovative and distinct in that it addresses all of the following objectives:

1. Provides more services online and improves overall customer experience;
2. Helps DMV staff to be more efficient so they can better serve customers;
3. Allows for easy adjustments to the system as Federal and State laws change;
4. Ensures better protection of financial and ownership interests in vehicles by interfacing with various systems; and
5. Creates real-time access to data and information to better serve customers, business partners, and other key stakeholders.

From the very beginning, Oregon DMV treated this effort as a business improvement project, redesigning how it serves its customers. They named the effort the Service Transformation Program because of the focus on DMV customers and how services are delivered to them. Delivering excellent customer service in the way customers want, and is something that all DMVs across the country strive to achieve.

Implementation: Innovating the Operation of Government Services

In 2014, a consulting firm conducted an analysis and drafted a report on Oregon DMV's technology environment. At that time, the systems used obsolete technology and it took hundreds of hours to do even simple programming changes. The report or "roadmap" called for a full replacement of DMV's core system, and provided strategic direction for system modernization, and comprehensive business process improvements. As a result, OLIVR, a core system replacement project, a major component of STP, was launched in 2017.

DMV purchased a commercial off-the shelf (COTS) software package from FAST Enterprises, Inc. With help from FAST, DMV's project team led the project from start to finish, and implemented the vehicle portion in January 2019. In July 2020, the rest of the system, including driver transactions, was implemented. Both rollouts were done on time, on budget, and with the desired project scope. Utilizing VB, .NET and C# technology, they have been in full operation since July 2020. The STP budget was $50 million for the software improvements, DMV used 50 staff members, and it took 36 months to complete. DMV followed the Project Management Institute (PMI) Project Management Methodology to guide the project, using an iterative approach. Project governance was extensive and included oversight by the DMV Management Team, the ODOT Executive Steering Committee, and a Legislative Oversight Task Force. The new system was named OLIVR (Oregon License Issuance and Vehicle Registration).

Replacing 50 year old legacy systems was not easy. DMV converted millions of records from COBOL systems to the new software and faced the redesign of a significant portion of its business processes. DMV used its own staff, from all parts of the organization, as Subject Matter Experts, to help configure the new system, and reshape business practices. This included implementing new secure interfaces and business rules to allow transactions are performed electronically, in real-time, without being reviewed by another individual, ensuring state/federal statutes and laws were followed.

Strong Organizational Change Leadership was key in helping DMV staff prepare for the change and get buy-in. The creation of a change network, made up of managers and change agents across all 60 field offices and DMV Head Quarters, helped staff prepare for the many system and process changes. This included providing tools and training to "Change Agents" so they could be ready to directly support their fellow employees.

DMV addressed the needs of its many stakeholders, including Oregon drivers and vehicle owners; oversight groups such as the Oregon State legislature and the Oregon Transportation Commission; beneficiaries like DMV business partners, new and used car lots, and other state agencies (State Police, Elections Division, and Vital Statistics). Another important stakeholder was the DMV employee, a primary user of the system, who faced hundreds of customers a day and needed better technology to support them.

Impact: Substantial and Measurable Change resulting from the Project

Objectives Met: The newly implemented Service Transformation Program (STP), OLIVR system, and redesigned business processes, was successful and achieved all of its objectives:

1. **Provide more services online, improving the overall customer experience** *(ex: vehicle registration cards are printed right there, on demand, in the field office, rather than having to wait for the registration card to arrive in the mail);*
2. **Make DMV staff more efficient so they can better serve customers** *(ex: based on business rules, 65% of title transactions are auto-approved, reducing the time it takes to approve title changes;*
3. **Allow for easy adjustments to the system as Federal and State laws change** *(ex: social distancing required DMV to pivot and implement appointment scheduling to ensure field office lobbies did not exceed 75% capacity);*
4. **Ensure better protection of financial and ownership interests in vehicles by interfacing with various systems** *(ex: the State to State interface helps DMV determine if a customer has a valid license in another state); and*
5. **Create real-time access to data and information to better serve customers, business partners, and other stakeholders** *(ex: before system modernization, data wasn't accessible until the next day for law enforcement; now it's available immediately, in real time).*

Additional Goals Met: Replacing the core systems, offering more online services, adding interfaces, and redesigning business processes - all of the original STP and OLIVR project goals were achieved. In addition, the following goals were also realized:

- Drastic reduction in paperwork. Key documents are imaged right in the field office instead of mailed to the central office. Also, documents are signed electronically.
- Online services are available for use on PCs, laptops, tablets, and smart phones.
- A modern Gateway interface management tool, for connecting 3rd party vendors and other government agencies, was created.
- Instead of batch jobs, DMV now offers web-service interfaces for real-time access to data, allowing car dealerships to process new car sales weeks faster, so citizens can get license plates and possession of their vehicle sooner.
- A built-in customer relationship manager allows DMV to track what has already been communicated, helping customers complete their transactions sooner.

Online Services: Oregon DMV now provides better customer service at a time when it is needed most. New online services being offered include:

- Self-Service Appointment Scheduling
- Check if I Need a Real ID
- Pay Reinstatement Fees
- View My DMV Profile
- Replace My Card
- License/Permit/ID Pre-Application
- Where's My New Card?
- Purchase My Driving Record
- Request a Hearing or Review
- Upload My Medical Examiner Certificate
- And more.

Since going live with the new driver system in July 2020, DMV has seen an immediate and significant increase in the adoption of its online services. The example below compares data for a similar time frame, before and after the launch of STP, as well as what's happening today.

Online Service	Before July – Dec. 2018 (6 months)	After July – Dec. 2020 (6 months)	Recent Jan. – Dec 2021 (12 months)
Appointments scheduled	0	730,640	791,635
Addresses changed	94,132	160,045	231,668
Driver licenses / ID cards replaced	0	79,901	111,100
No. of reinstatement fees paid	0	25,646	37,438
Driver records purchased	0	39,063	52,316
Vehicle registrations renewed	190,284	387,854	699,964
Driver licenses / ID cards renewed	0	0	176,088

Interfaces: With the system modernization effort, Oregon DMV improved and added more interfaces (including those required for the Federal Real ID Act) and moved away from batch processes, utilizing instead, web services. These new interfaces improved DMV's ability to verify information and validate credentials. They include:

- **Problem Driver Pointer System (PDPS)** identifies if the customer's credentials are suspended, revoked, or canceled in another jurisdiction.
- **State Pointer Exchange Services (SPEXS)/State-to State (S2S)** checks to see if the customer holds a credential issued by another jurisdiction.
- **Social Security On-Line Verification (SSOLV)** verifies the customer's SSN.
- **Systematic Alien Verification for Entitlements (SAVE)** verifies documents issued by the U.S. Citizenship Immigration Services.
- **United States Passport Verification System (USPVS)** verifies U.S. passports and passport cards.

Customer Survey: A recent DMV customer survey showed an increase in positive comments, as shown below.

"They are always helpful and being able to do things online lately, has been really great, thank you."

"Having an appointment made the experience so much easier than the long waits I have experienced in the past."

"This was the best DMV visit I have ever had. In and out in a reasonable time. Staff was friendly instead of mad."

"Scheduling appointments in advance seems to be much faster and more efficient for everyone."

"My experience was awesome."

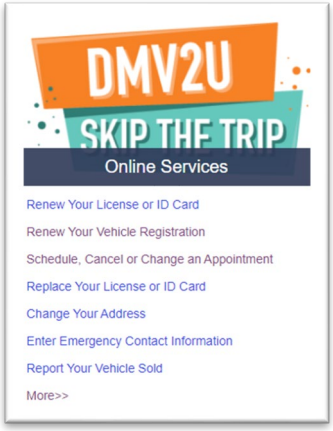
"Please continue to have appointments for service."

Responsive Technology: The need for online, self-service options came to light when field offices had to close for ten weeks during the early days of the pandemic. Online services were greatly utilized, including online registration renewals which increased by 300%. DMV also implemented self-service appointment scheduling which allowed DMV to permit an acceptable number of customers in the office at one time, and reduced wait-times from over an hour on average, to less than 20 minutes. Also, in 2020, during unprecedented wildfires in the Pacific Northwest, and the need for hasty evacuations, many Oregonians lost or had damaged credentials including driver licenses. The technology implemented during this project, allowed them to simply go online and order replacement licenses or ID cards, and receive it by mail at the address of their choice.

One Integrated Solution: Upon completion of the project, 69 legacy applications were replaced by either the commercial-off-the-shelf system or other supporting applications implemented at the same time. Overall, the ODOT/DMV application portfolio was reduced by 70%, including the elimination of all mainframe legacy systems. Oregon DMV can now focus its IT support on maintaining integrated systems and critical interfaces, while also understanding and using newer technology. The COTS solution is configurable and programming changes due to legislation take far less time to complete.

Nimble and Adaptable System: During the pandemic, many DMV employees had to work from home. The new technology implemented through this project enabled DMV to redesign business processes, so that a greater portion of staff than ever before could telework. This would not have been possible if the legacy systems and paper intensive processes were still in place. Leveraging technology to improve DMV business practices allowed DMV to meet the ever increasing demand placed on its services.

Give the people what they want: During the pandemic, most state agencies were closed and struggled to provide services to customers. However, due to the system modernization and redesigned business processes, DMV was able to meet customers where they are and provide many new, self-service options online. Based on the overwhelming response, Oregon DMV is making plans to introduce more online services. There will always be a need for a DMV field office, however, allowing customers to conduct more routine business from home gives DMV employees time to focus on the more complex transactions. Also, new online services keep customers off the roads, thus reducing their carbon footprint.



Helping DMV Employees: DMV employees are able to learn the new system in a few weeks, rather than 18 months. Technology staff find it easier to understand the modern technology and are more successful supporting fewer systems.

Going Forward: With STP in place, and the success of OLIVR, expectations are high. DMV now offers more self-service options including online Driver License renewal (May 2021), self-service kiosks (coming in 2022) and online proctored knowledge testing (coming in 2023). Oregon DMV is now a place of innovation and continuous process improvement, and initiates engagement from its employees and stakeholders, to better understand its future direction. New technology implemented through this project enables Oregon DMV to triumphantly enter the 21st century.