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

Category: Business Process Innovations
Oregon Department of Transportation - Driver and Motor Vehicle Services Division

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Executive Summary

Recently, Oregon Driver and Motor Vehicle Services Division (DMV), part of the Oregon Department of Transportation (ODOT), completed a major rollout of its Service Transformation Program (STP), by replacing its core legacy systems and introducing several new and innovative online self-service options for customers. This technology initiative enabled a series of business process improvements that made the DMV more efficient. Moving to one comprehensive software solution, rather than supporting a multitude of legacy systems, has made the DMV more effective. Leveraging new technology to become a more flexible and nimble agency, DMV is now better able to respond to ever changing customer needs and legislative requests.

These business process improvements driven by the system modernization were needed for a number of reasons. Legacy systems no longer met the needs of the DMV, and were difficult to support. Front line staff had difficultly learning how to use older systems. Significant changes in laws 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 time to help DMV serve its customers during the COVID-19 Pandemic and Oregon wildfire season. The new system improved the customer service experience, by not requiring them to come into a field office to receive services. This transformation effort was cost-effective, because it allowed many services to be done electronically without human/manual intervention.

These improvements take DMV to the next level. The adoption rate of new self-service options is encouraging, and provides a direction for future enhancements. With the core legacy system replaced, DMV is now equipped and ready to provide an expanded portfolio of services that meet the ever changing needs and preferences of its citizens.

DMV also automated all of its existing interfaces and added new ones to meet both State and Federal legislative requirements. Replacing outdated systems with a single solution is a best practice and allowed DMV to provide focused training for technology specialists. Having fewer systems also reduced the number of systems that have to be supported by those individuals.

This system transformation, with associated business process improvements, supports the 2021 State CIO Top 10 Priorities of Digital Government/Digital Services, and Legacy Application Modernization/Renovation. Since implementation, DMV has been ask to share lessons learned and best practices with other state agencies, both in and outside Oregon. This large effort, recently completed, brings Oregon DMV into the 21st century!

Idea: Description of Project

The system modernization was mission critical. Oregon DMV had 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 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 new hires having little or no experience with older programming languages.

Learning how to use "green screen" software was difficult for employees, especially newly hired millennials. It wasn't a technology they were used to, and training was time consuming and lasted several months. DMV 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 field offices. While stand-alone ATM machines were in most DMV offices, they were prone to theft (entire units were stolen from offices), and had to be restocked frequently. Also, some key services, badly needed by customers, took weeks to process. For all of the reasons above, a critical change was necessary!

DMV's Service Transformation Program (STP) was a way to significantly improve the 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 2021 State CIO Priorities: Digital Government/Digital Services and Legacy Application Modernization/Renovation, and 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. Makes DMV staff 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 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, is something that all DMVs across the country strive to achieve.

Implementation: Roadmap, Participants, Resource needs and delivery

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 took hundreds of hours to do even simple programming changes. The report 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, the 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 delivered the desired project scope. Utilizing VB .NET and C# technology, they have been in full operation since July 2020. The STP budget was $90 million, DMV used 50 staff members, and it took 36 months to complete. DMV followed the Project Management Institute (PMI) Project Management Methodology to run the project, using an iterative approach. Project governance was extensive and included oversight by the DMV Management Team, 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 had millions of records to convert from COBOL systems to modern technology, 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 redesign business practices. This included implementing business rules for the system that would allow most transactions to be performed in real-time, without being reviewed by another individual, to ensure statutes and laws were followed.

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

DMV had to address the needs of its many stakeholders, including end users like Oregon drivers and vehicle owners; oversight groups such as the Oregon State legislature and the Oregon Transportation Commission; beneficiaries like DMV business partners, vehicle dealers, and other state agencies (State Police, Elections Division, and Vital Statistics). Another important stakeholder was the DMV employee, an end user of the system, who faced hundreds of customers each day using outdated technology.

Impact: Substantial and Measurable Change resulting from the Project

Objectives Met: The newly implemented Service Transformation Program (STP), OLIVR system, and redesigned business processes, allow DMV to have a successful implementation and achieve 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 it can better serve customers** *(ex: based on business rules, 65% of title transactions are auto-approved, reducing the time it takes to approve a title change from weeks to days);*

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 had 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. Documents can be signed electronically.
- Online services are more accessible on PCs, 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 modern web-service interfaces for real-time access to data. This allows vendors like car dealerships to process new car sales weeks faster, so citizens can get license plates and take 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
- Go to My DMV Profile
- Replace My Card
- License/Permit/ID Pre App
- Where's My New Card?
- Purchase My Driving Record
- Request a Hearing or Review
- Upload My Medical Examiner's Certificate

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 frames, before and after the launch of STP.

Online Service	Before July – Dec. 2018 (6 months)	After July – Dec. 2020 (6 months)
Appointments scheduled	0	730,640
Addresses changed	94,132	160,045
Driver licenses / ID cards replaced	0	79,901
No. of reinstatement fees paid	0	25,646
Driver records purchased	0	39,063
Vehicle registrations renewed	190,284	387,854

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 2020 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. Use of online services increased dramatically, and registration renewals went from 27% to 70%. DMV also implemented self-service appointment scheduling. This 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, last year during unprecedented wildfires in the Pacific Northwest, and the need for hasty evacuations, many Oregonians had lost or 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 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 legislative changes 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: Based on the overwhelming response to online services, including self-service appointment scheduling, Oregon DMV is making future plans to introduce more online services. While there will always be a need for a DMV field office, allowing customers to conduct business from home gives employees time to focus on more complex transactions. New online services also 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 the new STP in place, and success of OLIVR, expectations of Oregonians, the Legislature, and DMV management are higher. DMV is now planning for more services including online Driver License renewal and online proctored knowledge testing. With new technology realized, they are implementing an imaging-up-front business process that will reduce reams of paper used at DMV HQ, and allow staff to process transactions electronically, wherever they may be. Oregon DMV is now a place of *continuous process improvement*, and initiates engagement from all of 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.