Oregon Vehicle Registration Renewal System
Category: Digital Government: Government to Citizen (G to C)

Executive Summary
The Oregon Vehicle Registration Renewal System, located at www.OregonDMV.com, brings true e-government services to the drivers of Oregon by providing online access to the vehicle registration renewal and change of address processes.

Developed and administered by the Oregon Department of Transportation Driver and Motor Vehicles Services Division (Oregon DMV), the online registration renewal is among the first e-government services created under the ‘DMV from Home’ strategy, and one of Oregon’s many efforts at regulatory streamlining. It also is part of our effort to maintain good customer service in an era of tighter budgets with a smaller workforce.

The Vehicle Registration Renewal System provides drivers with the convenience of renewing vehicles from home and using a credit card for payment. In addition to registration renewal, an improved address change capability allows drivers to update their address via the web. Drivers were previously able to submit address changes online, but those changes then had to be manually entered into the legacy system by DMV staff. Changes are now processed in real-time.

Response to the new system has been extremely positive. Of the hundreds of anonymous users who provided positive feedback online, three drivers said:

“Good site, good process. State government at its best!”

“It was very nice and effective to be able to renew my tags via the ‘net. Thank you for saving me lots of time, and the time of the people at the local DMV office.”

“It was easy to use and I appreciate not having to take a number and using precious time. Thank you for going online.”

Through improved customer service, processing and functionality, the Oregon Vehicle Registration Renewal System has provided financial benefits and overall value to the State. The system has opened a service delivery channel not previously available to Oregon residents. The risk, cost, and time to deploy the system was reduced dramatically by leveraging a flexible, customizable framework solution. The use of emerging technologies plus leveraging existing technology investments benefited the State by assuring that Oregon DMV did not get locked into a single technology or vendor, allowing the system to continue to evolve over time.

Not only does the Oregon Vehicle Registration Renewal System help the Oregon DMV meet its business and economic goals, but the system significantly enhances the experience citizens have in interacting with their government. Oregon’s improved vehicle registration capabilities provide simple and convenient services that drivers truly appreciate because it saves them time.
Description of project

Oregon Department of Transportation (ODOT), Driver and Motor Vehicle Services Division (DMV), recognized that opening a web-enabled service delivery channel would offer a cost-effective alternative to conducting business in field offices. Oregon taxpayers insist on convenient and efficient government services, and to access information using the Internet. Citizens are expecting these services regardless of economic and political pressures. At the same time, the information systems under ODOT and DMV must facilitate collaboration and information sharing with other agencies and organizations, such as with the Department of Administrative Services (DAS). They must also adhere to federal mandates and to the American Association of Motor Vehicle Administrators (AAMVA) standards.

Just about every citizen and business in Oregon relies on DMV for recording vehicle ownership, registering vehicles, and licensing drivers. DMV recognized that many of its services could be delivered to customers online using an Internet Service Delivery Channel to relieve some of the challenges the agency and customers were facing. Some of the challenges faced by the Oregon DMV agency, field offices, and citizens included:

- More complex and time-consuming transactions in local offices
- Old technology resulting in expensive maintenance
- Fraud and security issues
- More workload for fewer employees
- Absorbing operational cost increases within flat budgets
- Delays in processing renewals resulting from too many steps in document workflow

In order to successfully and efficiently complete the analysis, design, development, testing and implementation of the Oregon Vehicle Registration Renewal System, Oregon DMV partnered with Covansys. During the life of the project, Oregon DMV staff and Covansys collaborated to ensure that all user needs and processes were taken into consideration as the system was designed and developed.

The Oregon Vehicle Registration Renewal System was fully deployed in February 2004 as a web-based vehicle registration renewal and change of address system that provides Oregon DMV customers with the capability to renew their vehicle registrations and change their addresses over the Internet. Customers are able to obtain these services 24 hours a day, 7 days a week, from the convenience of their home or anywhere internet access is available. The system interfaces with the DAS e-commerce system, which was implemented to provide all Oregon State agencies with a single payment solution for acceptance of credit cards over the Internet. The system can be found at www.OregonDMV.com.

Oregon’s new Vehicle Registration System was developed using J2EE technical architecture and IBM WebSphere Internet infrastructure software. It was deployed in an IBM Z/OS environment and was integrated with legacy DMV applications as well as
IBM’s Payment Manager for credit card payment approval and processing. To help ensure predictable results and deliver the project on time, Covansys also utilized the IBM Rational Unified Process®, or RUP® methodology, for customized software development process guidance.

Throughout the 8-month project considerable focus was placed on delivering an intuitive, easy to use interface that guides the user through each step of the renewal process. As one of the first significant applications provided under the State of Oregon’s ‘eGovernment’ initiative, the application would have high visibility within the state. Extensive focus was put on ensuring the completeness and quality of the entire solution – both business and technical. The project team members included representatives from all affected internal DMV teams and ODOT sections, as well as external agencies including DAS and the Department of Treasury.

DMV and Covansys staff worked closely together with ODOT data center staff, and DAS e-commerce staff to define the application architecture, and to prototype and validate the integration mechanisms with DMV’s legacy mainframe systems and the DAS’s implementation of IBM Payment Manager. ODOT data center staff installed and learned the mainframe (Z/OS) version of IBM’s WebSphere Application Server. These prototyping efforts were done early in the project to eliminate what were considered to be the highest areas of risk.

During system construction, Covansys developed and tested the WebSphere application in increments to allow early review and feedback from DMV staff. Concurrent with the web development, DMV and Covansys staff added and modified components in the legacy system. This was done to integrate the daily registration renewals into the existing batch streams, to process online address changes in real-time through CICS, and to support ‘back office’ tracking of the new Internet delivery channel. At the same time, Covansys worked with the DMV staff to provide knowledge-transfer on the relevant Internet technologies, the web application architecture and the WebSphere development environment to support turnover and ongoing maintenance by DMV.

**Significance to the improvement of the operation of government**

The following operational improvements have been realized as a result of the Oregon Vehicle Registration Renewal System:

- Oregon DMV customers are empowered with the capability to complete certain DMV transactions via the Internet, 24 hours a day, 7 days a week, from the convenience of their home. This improvement has demonstrated user satisfaction on both the citizen and government staff side.
- The system interfaces with the Oregon Department of Administration System (DAS) and the Oregon Department of Transportation Information System (ODOT IS) to ensure compliance with established information technology standards and practices to enhance accuracy, streamlined workflow, and remove any duplication of effort.
• The system conforms to Oregon DMV system performance and availability standards to ensure customers have access to the service when needed. In addition, it conforms to federal mandates, including ADA, American Association of Motor Vehicle Administrators (AAMVA), and World Wide Web Consortium (W3C) standards.

• The system integrates with existing business processes, eliminating, whenever possible, manual work processes to better utilize existing staff in field offices and headquarters.

Benefits realized by service recipients, taxpayers, agency or state

The following critical benefits have been realized as a result of the Vehicle Registration Renewal System:

• The system provides timely and reliable access to data and services for authorized users
• DMV customers are able to complete vehicle renewal and change of address transactions via the Internet, 24 hours a day, 7 days a week. Customer Service support is available for the application during normal business hours. Technical / on-call support is provided for the application 24 hours a day, 7 days a week.
• The system provides safeguards to protect against unauthorized modification or destruction of data stored on DMV information systems
• Transactions are processed with a high degree of accuracy
• System provides safeguards to ensure customer information is not disclosed to unauthorized persons, processes or devices
• The online system integrates with the DMV technical infrastructure, as well as with the DAS payment, authentication and settlement solution.
• The system is scalable and stable, requiring minimal DMV support and maintenance after implementation.
• Customers find the service convenient and use it to process DMV transactions, as suggested in the sample feedback listed below
• www.OregonDMV.com assures that citizens who have disabilities, etc. can access and use the system in that it conforms to the ADA/W3C level 1 standards.

In order to continuously improve the application and services provided, DMV added the capability for users to provide comments after completing their transactions. The responses have been overwhelmingly positive. Below are some examples:

“This was soooo easy and fun to do. I live pretty close to a DMV office but never seem to get in there to take care of my business. I am glad to see this site and see how user friendly it was to use. Thanks again.”

“Great idea and method of payment. Saved me countless time in the sometimes open DMV office.”

“Very easy to use. I liked trying it this time.”

“This was so incredibly easy! The total process took less than 3 minutes!!!”
“It was easy to use and I appreciate not having to take a number and using precious time. Thank you for going on line.”

“Thank you for having a way to do this with my computer. I am at the same residence, but the address was put on wrong when I got the license. I needed it to be right for many things.”

“This is a great service. It was easy to navigate around and is very organized. Good work!”

“Good site, good process. State government at its best!”

“What a treat to be able to renew online as we are winter visitors to Arizona from October to May each year. Thank you so much for this convenience.”

“This is absolutely wonderful and great to be able to renew online! Thanks for providing this service.”

“Thank you so much for putting this renewal process on line! It was a great way to renew and I felt the layout and the steps to renew were very understandable. The catching of entry mistakes worked great and I loved the fact that I could renew more than one vehicle at the same time. Great job!!”

Return on investment, short-term/long-term payback

The Oregon DMV expects a long-term financial return on its investment, but it is still too early to determine the monetary payback. The online registration renewals and address changes have helped improve service levels, reduced systems complexity, and lowered the cost of doing business. The system has improved service delivery to citizens while staying within a limited budget; reduced the cost of operation and improved service delivery; created new workflow and business processes; and reduced risk, cost, and time to deploy with a flexible, customizable framework solution; and uses emerging technologies while also leveraging existing technology investments. The Oregon DMV avoided getting locked into a single technology or vendor, which is a good long-run strategy for maintaining e-government applications.

Funded by the State Highway Funds, the planned budget for the Oregon Vehicle Registration Renewal System project was $1.242 million, and the actual cost to implement and deploy the system came in below budget $1.228 million, broken down as follows (dollars in thousands):

- IS Personnel: $335
- Equipment/Software: $13
- IT Contractors - Covansys: $558
- Consulting – Other: $18
- Quality Assurance: $70
- DMV Business Personnel: $234

The following list sums up the improvements and savings that have already started to occur or are anticipated to occur as the system is utilized more:
For April 2004 8% of eligible address changes and 5.5% of eligible registration transactions were done online.

One FTE resource has been saved by electronic processing compared to manual processing related to address changes.

Less than one percent of transactions result in a customer inquiry. Of the customer comments received, 90% are positive.