



Information Services

Quarterly report

FY 2019, Quarter 2

The road to technology modernization in state government is not without its bumps. From updating our liquor laws, to optimizing mainframe operations, to standardizing training for agency employees, all of these projects took dedicated staff and time — in fact over two years to complete.

Modernizing Oklahoma liquor laws

On Nov. 8, 2016, Oklahomans approved State Question 792 amending the Oklahoma Constitution to allow grocery and convenience stores to sell wine and high-point beer.ⁱ

While the updated amendments were not slated to take effect until Oct. 1, 2018, the Oklahoma Alcoholic Beverage Laws Enforcement Commission began seeing changes in its operations almost immediately. To add to the complexity, from Nov. 8 2016, and the end of legislation on May 31, 2018, there were approximately 36 additional proposed modifications to SQ 792.ⁱⁱ

The ABLE commission worked closely with the Office of Management and Enterprise Services. From July to September, the team completed several steps to transform the licensing application.

Once the new license types and combinations were established, the OMES team began adding the license types to the server where the data is stored. This may sound simple, but it requires data coding and server configuration to get the license data in place.

“The ABLE Commission is currently collecting revenue at a record pace since the October 1, 2018, law changes. Year-to-date collections are 114% greater than the same period a year ago.” —Keith Burt, ABLE Commission director.

The front-facing application for citizen use also was updated with new information to be compliant with the new licensing regulations. OMES and the ABLE Commission worked with the vendor to ensure this was completed. The receipt system license application was also updated. Lastly, current licenses were updated with the new naming systems in the server.

Once all updates and information were ready, a final testing of the system took place on Monday, Sept. 10. With minor issues the licensing application was complete and updated 14 days before the Oct. 1 deadline.

Optimizing the state’s mainframe

Around since the 1960s, mainframes are a reliable and secure data processor, capable of processing millions of instructions per second for high-volume transactions.ⁱⁱⁱ They are so reliable they are able to run for very long periods with the mean time between failures measured in decades.

With this level of processing and reliability, state governments continue to use mainframes for supporting legacy applications and providing stability for mission-critical operations.

However, because the technology has been around for more than 50 years, mainframes are often seen as older technology and state and local technology directors cite the following three dominant reasons they are considering moving applications off of mainframe technology:

- Increasing cost of continued mainframe operation.
- Staffing issues to maintain the outdated technology.
- Availability of alternative solutions and concerns over long-term viability of mainframe operations.

Oklahoma faced similar considerations concerning its mainframe system. Thankfully Oklahoma had already done its due diligence in 2014 when it unified five mainframe computers into one updating integral services for the Oklahoma Department of Human Services, Oklahoma Department of Transportation, Department of Public Safety, State Treasurer, Oklahoma ABLE Commission and the Oklahoma Tax Commission. Changing from five mainframes to one mainframe, the unification saved an estimated \$14 million over the past five years.

By 2017, OMES had over 75% of its staff that supported the mainframe eligible to retire during the next five years. This put mainframe operations at a high risk of being impacted should this occur. Not to mention a huge loss of institutional knowledge should staff leave.

Because the new mainframe was facing end-of-life, a new one needed to be purchased at an estimated \$2 million in upfront costs for the agencies.

“Once we realized we could provide an improved mainframe solution with no drastic increase in cost, we jumped at the opportunity. The knowledge and expertise of our OMES team working to make the right decisions at the right times is what made this work.” —Bo Reese, CIO

Adding to that were increasing costs to maintain the aging mainframe hardware. When technology like the mainframe faces end-of-life support, security risks are increased for any agency using the system.

In 2017, after evaluating the results based on compliance, constraints and cost, Ensono was chosen as the optimal vendor for the mainframe.

Optimized staffing and workload flexibility

Ensono provides a unique solution where the mainframe and agency data physically stay at the OMES data center, but the augmented staff plan ensures we have mainframe support staff in place for years to come. The augmented staff plan has the flexibility to scale down as workloads move off the mainframe and add staff as needed for special mainframe projects.

Improved performance and data recovery

With the replacement of the old mainframe hardware came an upgraded mainframe platform including new hardware, storage and tape and no upfront costs to agencies for replacement. In addition there were better tools added for monitoring and automation.

For disaster recovery the new solution provides an off-site disaster recovery center with improved recovery times from 72 hours to less than 24 hours before the system is up and running. It also provides improved data recovery from a 24-hour-old data availability to a minutes-old data availability in times of disaster. For the average day the mainframe is available at 100 percent capacity, meaning our agencies whose systems run on the mainframe can always retrieve data when needed.

Risk mitigation and compliance

The mainframe houses some of our agencies most important systems and data. The new solution meets several federal compliance measures that our agencies must follow to comply with various audit and grant requirements. Ensono maintains compliance with standards and certifications of the Internal Revenue Service, Health Insurance Portability and Accountability Act and the Social Security Administration, and maintains all necessary background checks and training for mainframe employees. Meeting this compliance helps to mitigate security risk of a data breach.

The project was completed in the fall of 2018, and the agencies whose data reside on the mainframe did not pay upfront costs, nor did they see a change in their monthly rate.

Investing in Oklahoma state government workforce

When OMES started the project to modernize its training to the new Oracle Learn platform we quickly realized we were launching a tool that would affect every state employee. Learn is a platform to standardize, document, coordinate and update training plans for all employees. Employee training for learning new technology tools and new skills is noted as a key factor for empowering employees and preparing them for change.^{iv v}

OMES launched the new Oracle Learn platform on Aug. 20, 2018. Learn provides a platform for centralized state learning to all public employees and helps track mandatory supervisory training requirements for all state supervisors and managers. In the past, each agency worked in its own learning management system, creating data redundancy, security risks and lack of collaboration between state agencies.

Oracle Learn offers state agencies the following:

- The ability to allow employees to self-enroll with supervisor approval.
- Access for employees to view and print their own transcripts.
- Supervisor access to assign learning and track employee training.
- Training records management.
- Class enrollments maintenance.
- Online interactions between instructors and learners.
- A platform for online and social learning.
- Certifications and skills tracking.
- A variety of standard and custom reports.

“By showing that you are invested in your employees’ professional and personal lives, you are encouraging engagement.” —Liz Brandon, director of OMES Statewide Learning Services.

The Learn platform improves the ability to provide training via webinar to state employees. In-state mileage expenditures for all state agencies, excluding Higher Education, totaled nearly \$10 million in FY 2018.^{vi} Cost savings could be realized if more training was completed online versus traveling to a classroom.

Agencies can also adopt Learn for their internal training programs by creating a Learn Center. There they can design their own learning environment to offer training, customize messages and build webpages specific for their agency.

The Oklahoma Health Care Authority, the Department of Corrections and Department of Environmental Quality worked nonstop to stand up their own Learn Centers immediately after the product was launched to begin their own internal training programs. Oklahoma State Department of Health is expecting to have their Learn Center deployed this summer.

Approximately 34,000 training tasks have been completed since the system went live in August 2018. To learn more about Learn, the state’s learning management system, and view training resources, visit the [OMES Learn webpage](#).

ⁱ State Question Number 792, SJR 68, 2016 Regular Session, Oklahoma Legislature (Nov. 8, 2016) http://webserver1.lsb.state.ok.us/cf_pdf/2015-16%20ENR/SRES/SJR68%20ENR.PDF.

ⁱⁱ Baker, Steven A. "The Murky Waters of Modernization." ABLE Commission News, February 2018, accessed June 18, 2019, https://web.archive.org/web/20180708124634/https://www.ok.gov/able/ABLE_Commission_News/index.html.

ⁱⁱⁱ "State Government's Mainframe Dilemma: Should It Stay or Should it Go?" National Association of State Technology Directors, August 2018, accessed June 19, 2019, https://higherlogicdownload.s3.amazonaws.com/NASTD/5d6c1d2a-df06-4b31-bf05-51026be46366/UploadedImages/2018_NASTD_State_Mainframe_Strategy_Survey.pdf.

^{iv} Craig, William, "Making Strategic Investments In Employee Development Is Crucial For Success," *Forbes*, July 31, 2018, accessed June 20, 2019, <https://www.forbes.com/sites/williamcraig/2018/07/31/making-strategic-investments-in-employee-development-is-crucial-for-success/#5aea05d140cb>.

^v Courtney, Fionnuala, "Change Management: 3 Reasons Why Training Supports Organizational Change," eLearning Industry, April 6, 2016, accessed June 20, 2018, <https://elearningindustry.com/change-management-3-reasons-training-supports-organizational-change>.

^{vi} State of Oklahoma, "Serving the citizens of a 69,000-square-mile state," Oklahoma Checkbook, accessed June 20, 2019, <https://stories.opengov.com/oklahomastate/published/nV-GJsafQ>.