



Transforming Agriculture Licensing and Permitting: Milking Enterprise Innovation for Streamlined Processes

July 2021 - May 2023

NASCIO Award Category: Digital Services – Government to Business

Submitting State: State of Tennessee, Department of Finance and Administration, STS

Contacts: Addy Newsom, Project Coordinator State CIO Office &
Donna Odom, Business Domain Director - Resource and Regulation



Background

Tennessee Department of Agriculture's (TDA) [Consumer and Industry Services \(CIS\) Division](#) is dedicated to two main objectives of agricultural product quality and consumer protection. Responsibilities of the division include:

- Sampling the quality of feeds, seeds, and fertilizers.
- Protecting animal and plant health.
- Registering pesticides.
- Ensuring food safety.
- Inspecting processing establishments with a specialized technical services laboratory to support regulatory efforts.

CIS also monitors agricultural raw materials, products, and services to assure quality, consumer protection, public safety, a fair marketplace, and a safe and wholesome food supply. Statutes provide direction for responsibilities on registering, licensing, sampling, and inspecting items related to human and animal health safety, consumer protection, truth in labeling, and free movement of plants and animals.

Before implementing the Enterprise Licensing & Permitting (L&P) system, TDA was using an antiquated system that could not be upgraded and presented daily challenges due to system outages and the need for frequent break fixes. TDA desperately needed an integrated and reliable system using the cloud's latest technology to enhance enterprise standard policies and procedures, management, and controls and improve the utilization of resources.

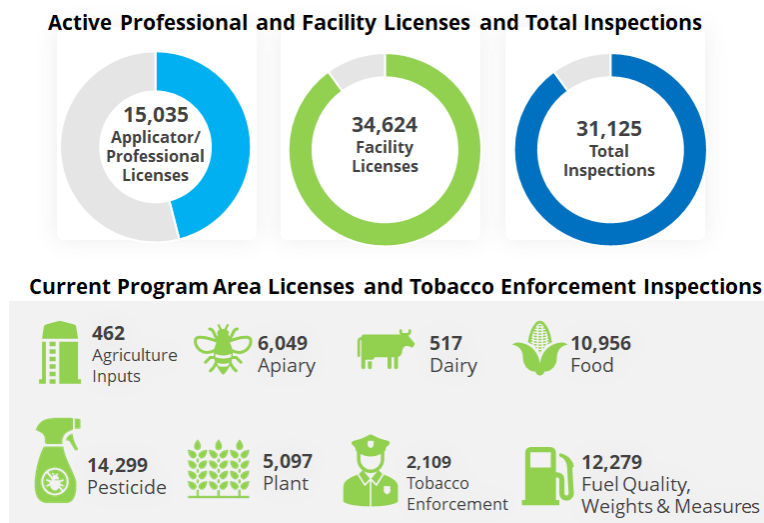
Accordingly, TDA worked collaboratively with the Tennessee Department of Finance & Administrations technology division [Strategic Technology Solutions \(STS\)](#) to procure and implement an enterprise licensing and permitting (L&P) system that automated and improved the efficiency of the licensing, permitting, and payment processing for the businesses of Tennessee. The system also enhanced and streamlined the work processes for TDA's CIS Division staff. Collaboration between the STS Direct IT support team, Operations, Information Security, Infrastructure, Security, Central Procurement Office (CPO), and Legal resulted in a plan for a solution that was deemed the L&P Implementation Project. The project included all 12 CIS Divisions' Program areas: Agriculture Inputs, Apiary, Dairy, Food Safety Manufacturing, Food Safety Retail, Hemp, Metrology, Pesticides, Plant Certification, Produce, Tobacco, and Weights & Measures.

This project was considered a highly complex "Megaproject" due to the number of program areas involved with the lifecycle crossing over multiple years and a multi-million-dollar budget. Other factors that played into the complexity were the external partners needed for development and rollout and the requirement for historical data conversion from disparate systems, including multiple interfaces required to pass lab and financial data with a citizen-facing component for business owners of Tennessee.

The image below illustrates the enormous number of professional and facility licenses issued since the beginning of the fiscal year and the total number of inspections the CIS division conducted over the first three quarters. These activities generate approximately **\$12,000,000** in revenue annually for TDA. The numbers below represent from the start of the fiscal year, July 1, 2022 – March 24, 2023, when the data conversion was completed. When annualized, the license and inspection numbers increase by approximately 25%.

Licenses and Inspections

The graphic below represents the Active Professional and Facility Licenses and Total Inspections as of March 24, 2023. After this date, the data from the legacy system for phase 1 began migrating into CoreOne LCP. All data from the four phases will be fully migrated to the new CoreOne LCP system on May 24.



Requirements and Design

Finding a state-of-the-art cloud-hosted system that integrates with 12 program areas within the CIS Division and provides centralized invoicing was critical to the project's success. STS facilitated product demonstrations with top candidates and those candidates' preferred solutions and then worked in lockstep with TDA's Executive team. Once approval was granted, STS led the procurement process utilizing a [National Association of State Procurement Officials \(NASPO\)](#) Statewide Comprehensive Cloud Solutions Contract.

NASPO ValuePoint (NVP) contracts offer states unique benefits, including:

- Pre-negotiated price reductions, creating cost savings that can be reallocated to meet other needs. Volume discounts and improved terms and conditions make NVP the best value in cooperative contracts.
- Expertly crafted solicitations and contracts developed by highly trained and knowledgeable state procurement officers.
- Lowest administrative fees of any cooperative with no impact on supplier pricing.
- Ability to customize contracts to include state-specific terms and conditions.
- Targeted supplier development, engagement, and training programs assist contractors in understanding government procurement.

Once all the approvals were issued, STS Resource and Regulation Business Domain's (R&R), Project Management Office (PMO), and Business Intelligence (BI) team partnered with all 12 of TDA'S CIS Division Program Area Administrators to gather system, application, and data requirements to incorporate into the implemented design. There were 50 categories of Business Requirements covering approximately 460 requirements, as each CIS Program area has vastly different processes. These requirements were necessary to implement an effective enterprise solution successfully. This project tightly aligns with the Governor's strategic initiatives to design, deliver, and maintain IT solutions that enable the department to provide citizen services, achieve business goals, make decisions based on data-driven facts, and maintain security and regulatory compliance.

The team set expectations of success with the vendor partner, Trace First (TF), that included delivery goals and a strict project deliverable timeline of the 4 phases of the new application build, CoreOne LCP and CoreOne LCP Field Edition. The CoreOne Field Edition is used when in rural areas where an internet connection is not available. This is essential as site visits and inspections are performed in rural areas throughout Tennessee.

A comprehensive historical data conversion was also included going back five years to include sample history, violation history, and permitting and licensing dates. In addition, a sophisticated, bi-directional, clinical laboratory interface was needed to handle samples taken by the CIS Program Areas' inspectors and test results provided by TDA's Technical Services Lab.

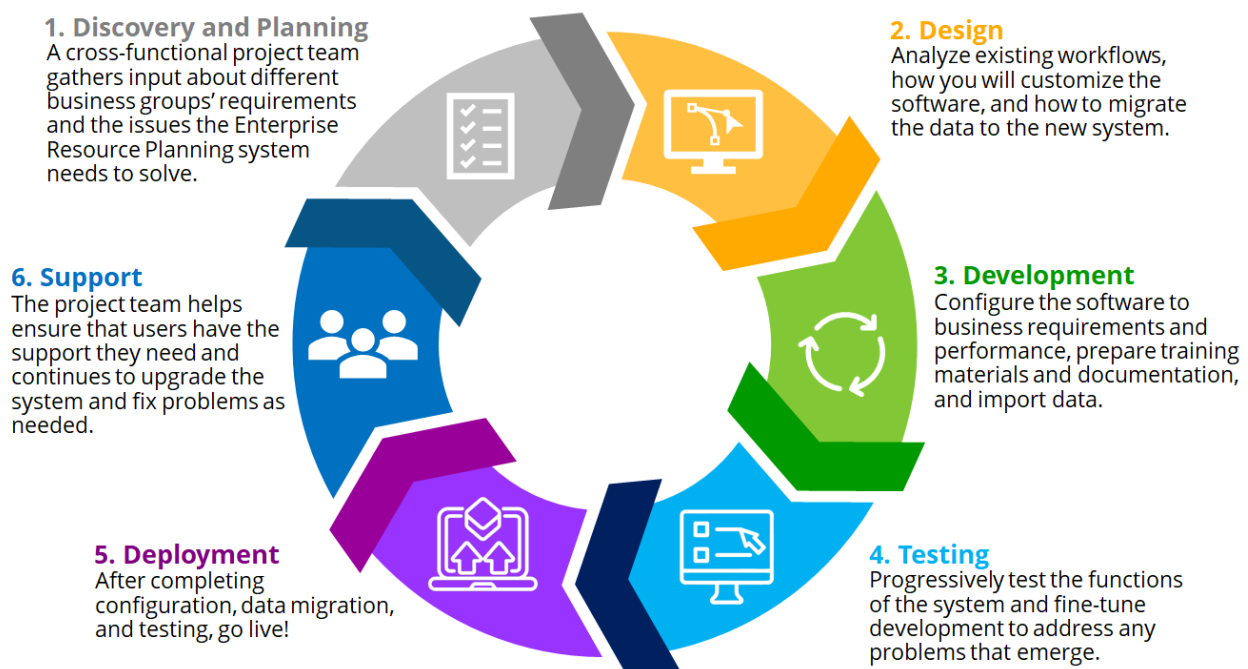
The design of CoreOne LCP provides a highly configurable, role-based solution for TDA staff. Process workflows have been configured for all activities needed for each Program Area. These workflow definitions are a hallmark feature of the system guiding the staff through each step of their processes until the workflow is complete. The workflows also utilize a "Next Update Due", with tolerances before and after, for activities such as inspections and renewals of permits and licenses to ensure TDA staff meet the regulations around these activities. These workflows also generate and send invoices to businesses/citizens. The calculations of fee amounts are performed by the system and communicated out via email, print, or regular mail.

As an added convenience to TN businesses, they can conveniently view and pay their invoices via the secure TDA CoreOne LCP Payment Portal. Options are offered for payment via credit card and eCheck or by check through the mail. Also, business owners can view their issued license and print a duplicate, if needed.

Implementation

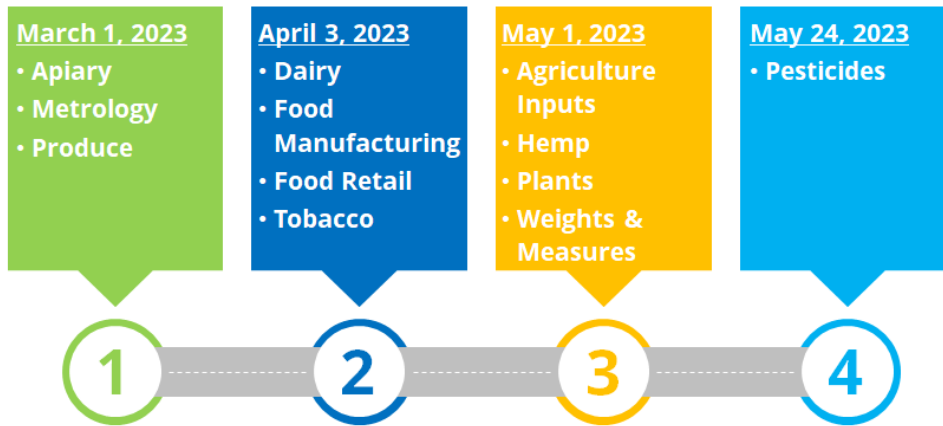
The project team adopted an enterprise implementation approach divided into six major stages over the lifecycle of the project to manage the multiphase rollout.

Enterprise Implementation Stages



The implementation was a phased rollout approach based on the 12 CIS program areas. These areas were grouped from least complex to the largest, most complex in nature. The Enterprise L&P application, CoreOne LCP with the CoreOne Field Edition, was deployed as follows:

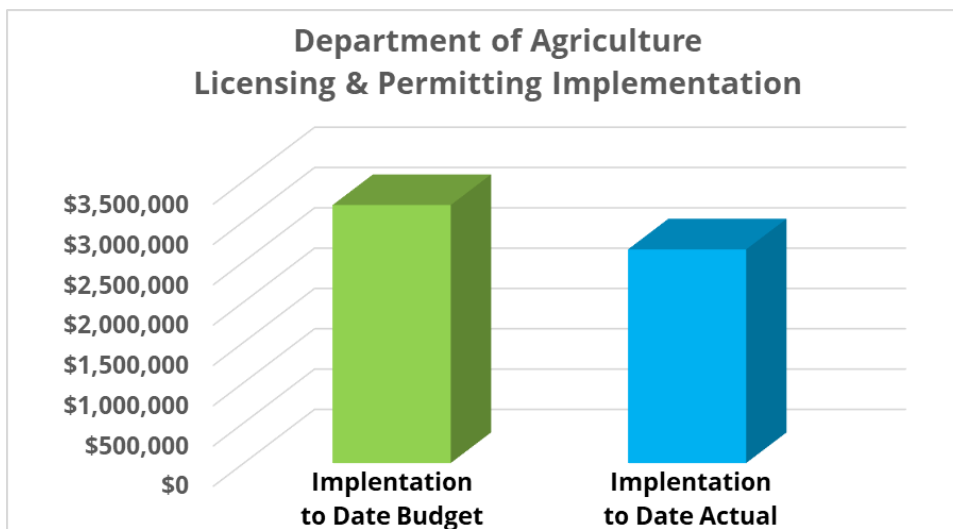
CIS Program Area: Phased Approach Go Live Timeline



The overall CoreOne LCP product design and development was completed in February 2023. From that point, the focus was on the refinements needed for each program area within that phase. Each deployment was staggered approximately one month apart to support TDA staff and citizens adequately. The detailed deployment plans were executed, accounting for all tasks and associated timing for a smooth transition into the production system.

In parallel, the BI team worked to extract and map the historical data from the legacy system for each program area. Data extraction and mapping were based on governing rules for data retention to convert to the new CoreOne LCP product. They were a critical component as all process workflows trigger off the timing from the last permit or inspection date.

TDA's total budget for the project was \$3,195,055.00 across FY2021-2023 which represents both vendor cost to develop a state-of-the-art system and STS personnel costs that assisted throughout the lifecycle of the project. With the project team's hard work and dedication, they successfully met the deployment timeline under budget. The project team regularly went above and beyond what was required. This was a coordinated effort with our vendor partner, TDA staff, Laboratory partners, Edison, and Fidelity National Information Services, Inc (FIS) teams.



One of the most important aspects of obtaining approval and buy-in from stakeholders was clearly communicating the benefits of the new system which included increased efficiency, improved data accuracy, streamlined processes, and better data integration between various partners.















Each stakeholder group had different needs and concerns, and therefore required tailored messages that address their specific needs. Messages targeted at TDA leadership and staff focused on how the new system will help them save time and reduce errors, while messages for license holders highlighted how the system will help them get licenses and permits more quickly.

To reach a wide range of stakeholders, it was important to develop a variety of communication channels. This included emails, webinars, social media posts, and in-person training sessions. These channels were tailored to the needs of each stakeholder group and provided regular updates on the progress of the new system.

To further build buy-in and ownership, the team asked for feedback on system design and functionality, conducted user testing, and involved stakeholders in the development of training materials. Adoption of the new system depends heavily on the quality of the training provided to users. The comprehensive training plan included both in-person and online training options, as well as on-demand resources such as user guides and FAQs.

Key Achievements

The success criteria for the L&P Implementation with CoreOne LCP and the CoreOne Field Edition were achieved before the project deadline of October 2023.

Success Criteria: Implementation Key Achievements	
 Deployed into production, licensing, permitting, and inspections to twelve (12) CIS Program Areas	 Historical Data Conversion
 Barcoded Field Samples	 Lab Interfaces
 Consolidated Billing	 Payment Interfaces
 Data Analytics	 Payment Portal
 Enhanced Business/Citizen Communications	 Repository for Continuing Education Units (CEU)
 Field Application	 Single Sign-On
 Geographic Information System (GIS)	 Violation History

As business processes, forms, and correspondence change, those with access rights can easily make the necessary modifications. Giving the application configuration control back to the agency is a major advantage and significant cost savings.

Impact

Since the first L&P deployment **on Wednesday, March 1, 2023**, completed workflows are at an impressive 62,000, with 3,000 in progress. The numbers directly correlate to increased efficiency for CIS permitting licensing and inspections.

Businesses with multi-locations or that cross over multiple Program areas are experiencing the convenience of a single invoice with easy payment options with standardized State of Tennessee branding.

Another benefit of the new cloud-hosted application is the vastly improved system stability and reliability. There have been no system outages experienced hosted on the Amazon Web Service (AWS) cloud, which has a direct positive impact on the TDA CIS staff performing critical functions for State of Tennessee businesses. CoreOne LCP scalability is now easily accommodated with any legislation passed. A new Program Area can be created, or new functionality added and configured with ease.

In summary, it is safe to say that the TDA L&P Implementation project has significantly impacted TDA Leadership, CIS staff, and State of Tennessee businesses alike by streamlining internal business operations and data collection, enhancing system reliability on the latest technology, and improving the overall external customer experience. This solution has provided a state-of-the-art system for the Department of Agriculture that allows for future expansion in a secure and reliable environment.

The CIS Food and Dairy Regional Supervisor has experienced many positive benefits noting the increased speed with CoreOne over the previous product for performing inspections and other enforcement documents. Also, the search functions are much easier to use and will systematically trigger inspections, so they are performed at the appropriate time.

Danny Sutton, TDA Assistant Commissioner Consumer and Industry Services, provided the following statement on the L&P Implementation with CoreOne LCP.

"This is a long overdue upgrade to the data and service capabilities of the CIS Division of the Tennessee Department of Agriculture. As customer numbers rebound from the economic slump caused by the Covid event and the population continues to grow in Tennessee, this project is setting the standard for a State Government Team to meet the needs of its customers and implement the needs of a modern, efficient Government Agency. To meet procurement standards and protect the agency involved, STS is required to be engaged at every level with the vendor and department. As the first enterprise solution for a department in Tennessee with a very diverse set of needs, STS and the vendor have stepped up to create and control this vast implementation. This will have a great impact on the ability to serve, respond, inform, and control service, customer interaction, data, and financial tracking."

TDA's enterprise-wide vision for a more reliable, scalable, and flexible IT structure provides a blueprint for Tennessee's future solutions and state IT systems as we move into the next era of technology.