



Tennessee Alcoholic Beverage Control Commission (TABC)

NASCIO Category: **Digital Experience: Agency/Program Solutions**

Project Title: **Tennessee ABC Hemp-Derived Cannabinoid Licensure System**

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Executive Summary

In 2025, the State of Tennessee faced an urgent legislative mandate to regulate the rapidly growing hemp-derived cannabinoid (HDC) market—an industry that had expanded with limited oversight, creating risks to consumer safety, youth access, and product integrity. The Tennessee Alcoholic Beverage Commission (TABC), with no existing infrastructure to support this function, was tasked with standing up an entirely new statewide regulatory program by January 1, 2026.

To meet this challenge, Tennessee developed the Mockingbird system, a modern, cloud-native platform that enabled rapid implementation of licensing, compliance, and enforcement capabilities for HDC suppliers, wholesalers, and retailers. Delivered in under nine months by a lean in-house team, the system transformed what would have been a fragmented, manual process into a centralized, scalable digital solution that supports both industry compliance and regulatory oversight.

Since launch, Mockingbird has driven immediate and measurable impact. Within months, the State processed over 500 license applications, issued nearly 300 licenses, and supported enforcement efforts that identified approximately 650 unlicensed businesses across more than 4,400 establishments. These outcomes demonstrate a rapid shift from reactive enforcement to proactive, data-informed regulation.

Most importantly, the system enabled Tennessee to transition a largely unregulated “gray market” into a structured, accountable industry grounded in traceability, transparency, and public safety. By ensuring that businesses are licensed, products are tested, and compliance is verifiable, Mockingbird helps protect consumers while establishing clear expectations for industry participants. The Mockingbird system exemplifies how state government can respond to emerging industries with speed, innovation, and measurable impact. It provides a replicable model for other states seeking to implement modern regulatory frameworks that balance economic activity with consumer protection and accountability.

Idea

Tennessee faced an urgent and unprecedented challenge as hemp-derived cannabinoid (HDC) products—such as Delta-8, Delta-10, and THCa—rapidly proliferated across the marketplace with limited regulatory oversight. This created significant risks related to consumer safety, youth access, inconsistent product quality, and lack of accountability. In response, the Tennessee General Assembly enacted legislation mandating the creation of a comprehensive regulatory framework, including new license types for suppliers, wholesalers, and retailers, and shifting oversight responsibilities to the TABC.

This mandate required more than policy implementation—it required standing up an entirely new statewide regulatory program from the ground up. At the time, TABC had no existing business processes, systems, staff, or infrastructure to support hemp-derived cannabinoid licensure and compliance. Without a purpose-built solution, the state would have faced fragmented manual processes, delayed program rollout, limited enforcement capability, and increased exposure to public health and safety risks.

To address this need, the Mockingbird system was conceived as a modern, cloud-native platform designed to rapidly operationalize the new regulatory framework. What made this approach particularly innovative was the decision to adopt a first-of-its-kind technology stack within the Tennessee Division of Strategic Technology Solutions (STS), leveraging a serverless, cloud-based architecture built on Amazon Web Services (AWS), combined with modern development frameworks such as React, React Native, and TypeScript. While this approach introduced risk—particularly given the aggressive six-month timeline, small development team, and lack of prior implementation experience—it enabled significantly faster development, greater scalability, and improved flexibility compared to traditional approaches.

This strategic decision allowed the state to move with the speed required by the legislative mandate while also laying the foundation for a modern, maintainable, and extensible platform. Mockingbird not only supports licensing and compliance for a newly regulated industry, but also introduces enhanced capabilities such as mobile access, real-time notifications, integrated identity management, and scalable cloud infrastructure—features that would have been difficult to achieve within legacy systems.

This approach is highly relevant for other states facing similar challenges with emerging industries and rapidly evolving regulatory requirements. Mockingbird demonstrates how governments can balance risk and innovation to deliver critical public safety systems under compressed timelines. By leveraging modern cloud-native technologies and in-house development expertise, Tennessee created a scalable, future-ready solution that protects consumers, enables industry accountability, and provides a replicable model for agile government transformation.

Implementation

Roadmap and Timeline

The Mockingbird system was delivered under an aggressive, legislatively driven timeline, requiring the state to stand up a fully operational regulatory platform in less than one year. The project formally kicked off in early 2025 and progressed through rapid, iterative development cycles, with active sprint planning, backlog grooming, and product demonstrations occurring as early as June 2025.

Development accelerated through the summer and fall with continuous stakeholder engagement and weekly working sessions. By December 2025, the system reached deployment readiness, with production launch occurring in late December and full operational use beginning in January 2026. The timeline reflects a highly compressed delivery schedule for a net-new statewide system, requiring parallel workstreams across policy, development, and operations. The accelerated roadmap ensured the state met its legislative mandate without delay, allowing regulatory oversight and consumer protections to be in place as the new law took effect.

Project Management Approach

The project utilized an agile, sprint-based delivery model with frequent iteration, continuous feedback, and rapid prioritization of work, including

- structured sprint planning sessions (Sprint 1 through Sprint 9),
- regular retrospectives and product demos,
- ongoing backlog refinement,
- and frequent “Dev/Data” working sessions to align technical and business requirements.

Daily and weekly touchpoints enabled real-time issue resolution, including active bug tracking, prioritization lists, and post-deployment issue management. Leadership updates and executive summaries ensured alignment at all levels throughout the project lifecycle. This approach allowed the team to respond quickly to evolving legislative requirements, emerging risks, and user needs—ensuring the system remained aligned with policy while maintaining delivery speed.

Stakeholders and Agencies Involved

The project required close coordination across multiple stakeholders, including:

- Tennessee Alcoholic Beverage Commission (TABC) program leadership and business owners,
- Strategic Technology Solutions (STS) development and architecture teams,
- executive sponsors and agency leadership,
- external integrations such as the Secretary of State for business verification,
- and alignment with the Tennessee Department of Agriculture’s prior regulatory model.

There was consistent engagement through working sessions, demos, and leadership briefings, ensuring both technical and regulatory perspectives were incorporated throughout development. Effective cross-functional collaboration ensured that the system accurately reflected statutory requirements while remaining operationally practical for enforcement and licensing teams.

Adoption and Communication Efforts

Adoption was supported through continuous stakeholder engagement during development, including:

- regular product demonstrations,
- iterative feedback loops with business users,
- executive leadership briefings,
- and post-go-live issue tracking and resolution.

The system was designed with user accessibility in mind, including mobile and web support, real-time notifications, and user-friendly interfaces to support license applicants and regulators. Post-launch monitoring and rapid response to issues ensured a stable transition into production. Early and ongoing engagement reduced adoption barriers and ensured the system was usable and effective from day one, supporting a smooth rollout of a brand-new regulatory program.

Staffing and Resources

The project was delivered with a highly lean team, including:

- a small in-house development team (notably as few as two developers at key points),
- STS shared and dedicated personnel,
- and business stakeholders embedded throughout the process.

Despite limited staffing, the team maintained rapid development velocity through strong coordination, reuse of shared services, and disciplined prioritization. Delivering a statewide regulatory platform with a small team demonstrates exceptional efficiency and highlights the importance of leveraging modern tools and focused execution to maximize impact with limited resources.

High-Level Architecture Overview

Mockingbird was built as a cloud-native, serverless application leveraging AWS services, modern web and mobile frameworks, and integrated identity and data management capabilities. The architecture supports:

- scalable licensing and record management,
- secure user authentication and access control,
- real-time data processing and notifications,
- and integration with external systems for business verification.

Rather than relying on legacy systems, the state adopted a modern, flexible architecture capable of rapid deployment and ongoing enhancement. The architectural approach enabled the speed, scalability, and flexibility required to deliver the system within a compressed timeline, while also positioning the state for future expansion and continuous improvement.

Impact

The Mockingbird system enabled the state to successfully operationalize a brand-new regulatory framework for hemp-derived cannabinoid products (HDCPs), transforming what had been a rapidly expanding, lightly regulated “gray market” into a structured, accountable, and enforceable program focused on consumer safety.

TABC began regulating the HDCP industry following the passage of PC 526 (2025). The new law required the TABC to begin regulating HDCPs on January 1, 2026. Since then, the TABC provided an online application portal for HDCP suppliers, wholesalers, and retailers to comply with state licensing requirements. Since the licensing went online, there have been 543 applications submitted (supplier, wholesaler, retailer), with 298 applications issued to date. In addition, TABC agents have canvassed over 4,400 businesses, finding approximately 650 selling HDCPs without a license.

These outcomes demonstrate immediate, measurable impact: within months of launch, the state established a functioning licensing ecosystem, enabled large-scale compliance tracking, and supported enforcement efforts across thousands of businesses statewide. The system provided regulators with the visibility needed to identify unlicensed operators and take appropriate action, shifting enforcement from reactive and fragmented to proactive and data informed.

This transformation reflects a broader shift described in industry analysis as moving “from a gray market to a regulated industry.” Prior to implementation, intoxicating hemp products were widely available with inconsistent potency, questionable purity, and limited age controls—conditions that posed risks such as accidental ingestion, inconsistent dosing, and contaminated products.

Tennessee’s new framework, enabled by Mockingbird, establishes clear expectations: businesses must be licensed, products must be tested, and compliance must be verifiable.

A central outcome of this approach is the creation of traceability and accountability across the supply chain. By linking licensure, product handling, and enforcement authority, the state can now identify who manufactured, distributed, and sold products, and whether they complied with regulatory requirements. This level of transparency is critical in a market where product safety and consistency directly impact consumer health.

"We want the Tennessee consumer buying one of these products to be able to walk into a store and know that what they are buying is coming from responsible businesses and that it's been tested. They want to know that it is legal, and that it is safe. That starts with businesses that make, distribute and sell these products to have a license, and have regulatory oversight, and that these products are tested."

Russell Thomas,
TABC Executive Director

The system directly supports these outcomes by enabling licensure, providing a centralized platform for compliance, and supporting enforcement workflows that ensure only qualified businesses participate in the market. It also reinforces requirements for product testing and transparency, helping protect consumers from contaminants such as heavy metals, pesticides, and residual solvents, while increasing confidence that products on store shelves meet state standards.

The impact also extends to enforcement and accountability. The TABC will focus law enforcement efforts on identifying and penalizing unlicensed operators, with an emphasis on ensuring products comply with

state law. Selling HDCPs without a license is a class A misdemeanor, which typically carries a sentence of up to 11 months and 29 days in jail and/or fines up to \$2,500. Thomas went on further to say,

“There is no excuse for operating without a license,” TABC Executive Director Russell Thomas said. “Licensure has been required for more than two years, and we have provided clear guidance and an accessible online application process. Any business that wants to sell these products legally can visit our website and find step-by-step instructions on how to comply. We expect businesses to follow the law, and we will hold accountable those who choose not to.”

By combining accessible digital services with strong enforcement capabilities, the state created both a clear pathway to compliance and meaningful consequences for noncompliance. This balance is essential to establishing credibility in a newly regulated industry and ensuring long-term success.

Ultimately, the Mockingbird system delivered measurable, statewide impact by:

- enabling rapid implementation of a legislatively mandated program,
- supporting hundreds of license applications within months of launch,
- providing visibility into thousands of businesses across Tennessee,
- strengthening enforcement capabilities,
- and advancing a regulatory model centered on safety, transparency, and accountability.

This project demonstrates how modern technology can enable governments to respond quickly to emerging industries, protect consumers, and establish effective regulatory oversight at scale—creating a model that is both sustainable and replicable for other states facing similar challenges.