STATE OF CONNECTICUT

Department of Administrative Services

NASCIO State IT Recognition Awards

Opioid Settlement Data Management & Reporting Application

Data Management, Analytics & Visualization • 02/17/2025 to 5/29/2025

Department of Mental Health and Addiction Services

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Entry Snapshot

Project title	Opioid Settlement Data Management & Reporting Application
Award category	Data Management, Analytics & Visualization
Submitting agency	State of Connecticut, Department of Administrative Services
Partner agencies	Department of Mental Health and Addiction Services
Project dates	02/2025 to 05/2025
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Executive sponsor	Christopher McClure, Chief of Staff Department of Mental Health and Addiction Services
Submission owner	Mark Raymond, Chief Information Officer

EXECUTIVE SUMMARY

The opioid overdose crisis has resulted in significant settlement funding for states, including Connecticut. These funds create an important opportunity to support treatment, recovery, prevention, and harm reduction. As part of the settlement agreement, Connecticut must track and report how these dollars are distributed in a transparent and accountable way. Before this project, that work was handled manually through spreadsheets, emails, and shared folders, which made it difficult to organize information and limited public visibility. To address these issues, the Department of Mental Health and Addiction Services (DMHAS) and the Opioid Settlement Advisory Committee (OSAC) developed a single system to manage projects, track funding, support public meetings, and display real-time results for staff, leadership, partners, and residents.

The system was delivered through short, focused sprints, with work planned in Azure DevOps and built using .NET, Angular, and Power BI. It includes secure features such as Azure AD token-based authentication, role-based access, reCAPTCHA, and application-level auditing, while also following WCAG 2.2 accessibility guidelines. Close coordination between the business and IT teams helped the project move quickly and replace manual processes. Today, the system manages 21 active projects totaling more than $185 million, records public meetings, and shares financial, project, and outcome information through a real-time public dashboard. Overall, the project created a more organized, reliable, and transparent way to oversee opioid settlement funding.

IDEA

What problem or opportunity does the project address?

Connecticut is responsible for managing more than **$600 million** in opioid settlement funds over the next 18 years, with spending expected to continue for decades. DMHAS and OSAC oversee most of this funding, including about **$112 million** already in use. Because many partners depend on this process, including state agencies, local governments, tribal nations, service providers, and people with lived experience, the state must clearly show how funds are tracked, spent, and aligned with priorities such as prevention, treatment, recovery, and harm reduction.

Before this project, staff relied on spreadsheets, emails, shared folders, and other disconnected tools to manage projects, finances, approvals, documents, and public reporting. This made it difficult to keep information accurate, track changes, collect annual spending reports from municipalities and tribal nations, and provide real-time public updates. As funding and reporting needs continued to grow, these manual methods were no longer sustainable. DMHAS needed one reliable system to centralize information, support oversight, manage hundreds of projects over time, and give residents a clear view of how settlement funds are being used.

Why does it matter?

Connecticut must manage the opioid settlement money in a clear and responsible way. The funds must be used wisely and allow anyone to see how the money is spent.

The new system helps the state avoid mistakes that can happen when work is done by hand. It also helps the workforce by removing hours of manual work and replacing it with a simple and consistent process.

The public dashboard makes it easier for residents to understand how the money supports prevention, treatment, recovery, and harm-reduction programs. People can see real-time updates instead of waiting for reports. This helps build trust and gives communities confidence that funds are being used in fair and meaningful ways.

Overall, the project supports Connecticut's goals around transparency, accessibility, safety, and responsible spending. Every dollar is now traceable, and every project can be followed from start to finish.

What makes it different?

Before this project, information was scattered across spreadsheets, emails, and separate tools. Staff had to piece everything together manually, which took time and created errors. Nothing was connected, and it was hard to get a complete view of each project or financial record.

What makes this system different is that everything is now in one place. Project details, financial data, documents, approvals, and reporting all live in a single platform. Staff can see updates in real time, and the system can track hundreds of long-term projects without breaking down.

The system also includes built-in financial tracking, automated checks, role-based access, and audit logs. The public dashboards are modern and interactive, powered by Power BI, and show information in ways people can understand quickly. Municipal and tribal reports can be organized and reviewed in a structured way instead of relying on email attachments.

Unlike many standard government tools, this platform was built specifically around the needs of the OSAC process. It supports the state's rules, responsibilities, and oversight requirements while still being easy to use. It is designed to last through the entire 18-year settlement period and beyond.

What makes it universal or transferable?

Other states, agencies, and towns that manage grants, long-term funding, public health programs, or community projects could benefit from a system like this.

The structure is reusable: defined places for project tracking, financial data, documents, and public reporting. The workflows, dashboards, and data models can be adapted to other types of programs without starting from scratch.

The system is built with common tools and clean architecture. Across the country, states that also receive opioid settlement funds could use the same model to increase transparency and reduce risk. The approach offers a clear path for building a system that works for staff, leadership, and the public.

IMPLEMENTATION

What was the roadmap?

Roadmap table

Phase	Timing	Major activities	Decision or deliverable
Phase 1 – Sprint 1: Project Setup & Authentication	Feb 17, 2025 – Mar 7, 2025	Requirements (2/17); Development (2/17–2/28); SIT (3/3–3/7)	Authentication, access control, and setup completed
Phase 2 – Sprint 2: Project Management Features	Mar 10, 2025 – Mar 28, 2025	Requirements (3/10); Development (3/10–3/21); SIT (3/24–3/28)	Project management functionality validated
Phase 3 – Sprint 3: Fund Tracking & Dashboards	Mar 31, 2025 – Apr 12, 2025	Requirements (3/31); Development (3/31–4/11); SIT (4/14–4/18);	Fund tracking and dashboards approved

		UAT + Sign Off (4/21–5/2)	
Phase 4 – Sprint 4: Performance & Recommendation Data	Apr 21, 2025 – May 26, 2025	Requirements (4/21); Development (4/21–5/2); SIT (5/5–5/14); UAT + Sign Off (5/15–5/27)	Performance measures & reporting completed; Phase 1 launched (5/29)
Phase 5 – Sprint 5: Public Meeting Management	May 14, 2025 – Jun 2, 2025	Requirements (5/14–5/16); Development (5/19–5/22); SIT (5/23–5/27); UAT (5/28–5/30)	Public meeting module completed; Phase 2 launched (6/2)

Who was involved?

Business Team
Christopher McClure – Chief of Staff DMHAS: Executive Sponsor; Barnat, Luiza – Opioid Services Director: Business Owner; Sarah Messier-Smith - Opioid Settlement Program Manager: Opioid Settlement lead

IT Team
Viraj Senaratne – Information Technology Manager, Architect; Keshwar White – Technical Lead and Lead Developer; Andrew Matsis – Report Developer ; John Pilisky – Business Analyst ;Shoba Chalasani – DBA

How did you do it?

The project was managed through phase-based planning with Agile sprints; allowing long-term milestones while improving the solution as it was built. All sprint work was managed in Azure DevOps, which we used for backlog management, sprint planning, code repositories, testing, and deployment pipelines. This structure helped both the business team and IT stay aligned and work together in a coordinated way.

Methods and Collaboration

Regular communication between the business team and IT throughout the project. Requirements were reviewed at the start of each sprint. The business team provided quick clarifications and validated completed functions during UAT, while the IT team handled technical design, development, testing, and release activities. This steady loop helped us catch issues early, reduce rework, and keep the project moving forward.

Architecture and Technology Choices

We built the application using .NET for the backend and Angular for the front end. The system follows a domain-driven, clean architecture approach, which helped separate the core business logic from the UI and infrastructure. This made the solution easier to maintain and ready for future enhancements.

Integration, Authentication, and Security

For authentication, we used Azure AD token-based security, and the public-facing areas included reCAPTCHA to protect against automated misuse. Role-based access was built into the application, ensuring each user only sees what they are allowed to. Audit logging and activity tracing were included at the application level so that actions can be tracked clearly and responsibly.

Data Practices and Privacy

We kept data handling simple and responsible. No PHI or sensitive medical information was stored. Data was organized in a structured model that reflects OSAC processes, making information easy to search, report, and maintain. Audit trails ensure transparency, and access controls support privacy and responsible use.

Accessibility

The front end was designed to follow WCAG 2.2 accessibility guidelines. This included attention to color contrast, keyboard navigation, proper labeling, and compatibility with assistive technologies. The goal was to make the application usable by as many people as possible, without adding unnecessary complexity.

Training and Communications

Training was done in a hands-on way. We provided walk-throughs to business users, covering how to enter information, manage approvals, and use dashboards. We also supplied support material such as quick-start guides and short reference documents. Communication stayed open throughout the project, with updates shared at sprint reviews and regular check-ins.

What risks or barriers did you manage?

- Tight Timelines - To stay on track, work done in small sprints and focused on important features first.
- Small team - Stuck to a clean, domain-driven architecture and using technologies the team already knew well, such as .NET and Angular. This allowed us to move faster without cutting corners.
- Budget and procurement were kept simple by using tools and services already available.
- Planned accessibility upfront to prevent retrofitting later.
- Ensured adoption by keeping communication open, reviewing features with users during each sprint, and giving business users early access so there were no surprises.

IMPACT

What did the project make better?

Before we built this system, the business team was managing everything by hand. They tracked projects in spreadsheets, searched emails for updates, and spent hours pulling information together. There was no simple way to see where money was going or how projects were progressing. Public visibility was limited because nothing was updated in real time.

After the system went live, the work became far more organized and manageable. The team can now track all projects, funding, approvals, and documents in one place. Updates happen quickly, and information flows smoothly between staff. As of today, the business is managing **21 active projects totaling over $112 million**, across **seven strategies and five core priorities**, directly inside the application.

Public meetings are now scheduled, tracked, and documented through the system instead of through email chains. The public can see what is happening through a **real-time Power BI dashboard**, which gives full visibility into spending, project status, and outcomes. This eliminated delays and made the entire process more transparent.

Overall, the project replaced a slow, manual workflow with a clear, reliable system. It helped the business stay ahead of deadlines, reduced the chance of errors, and gave the public direct access to current information, something that was not possible before. The team can now focus on decisions and oversight instead of chasing down data.

How do you know?

Challenges	Before	After	Evidence
Project Tracking	Manual spreadsheets and emails	All projects tracked in one system	• System now tracks **21 active projects** in one place • Supports **$112M+** in funding across **7 strategies** and **5 core priorities** with capacity to handle in excess of $600M
Time to Find Information	Often hours to locate data	Information available instantly	• Users report hours saved each week, especially during OSAC preparation
Financial Visibility	No real-time view	Real-time updates dashboard	• Business team can now check financials anytime without waiting for reports
Public Transparency	No real-time public reporting	Dashboard updated automatically	• Residents can filter by strategy, year, priority area, and project • Public visibility now matches OSAC reporting requirements • Multiple community groups have praised the new openness
Public Meetings	Tracked through email chains	Managed inside the system	• Reduces mistakes and keeps a clean record for review
Error Rate	High risk from manual entry	Reduced mistakes with structured data	• Structured roles and audit logging prevent unauthorized changes
Oversight & Reporting	Manual and inconsistent	Fast, unified reporting	• Oversight reviews now begin with complete, accurate data • Staff preparation time reduced significantly • Reports generated in minutes instead of days
User Feedback	Frustration with manual work	Strong positive feedback	• Business owner testimonial confirms ease of use and accuracy • OSAC members reported smoother meeting preparation • A neighboring state praised Connecticut's dashboard as superior to their own • Several groups noted that the dashboard "shows everything clearly"

Impact metrics table

Measure	Before	After or current	Evidence source
Cycle time	Staff spent 30–60 minutes searching for one update or document; reporting often took days.	Information available instantly; reports generated in minutes.	User reports; system usage data; OSAC preparation time reduction.
Volume served	Projects tracked across scattered spreadsheets and emails.	21 active projects totaling over $112M tracked in across 7 strategies and 5 priorities.	System data; project portfolio dashboard.

Cost or effort	High effort due to manual entry, repeated data handling, and email-based tracking.	Significant time savings; no duplicate entry; hours saved weekly during preparation cycles.	Staff testimonials; time-saving estimates; reduction in manual work.
Customer or employee experience	Frustration with manual processes, slow access to information, and frequent errors.	Strong positive feedback; faster preparation; praised by OSAC and external groups.	User feedback; meeting prep outcomes; testimonials.
Risk, compliance, or security	No audit trail; inconsistent data; high chance of manual errors and outdated information.	Full audit logging; role-based access; reduced errors; secure authentication.	System logs; security configuration; audit controls.

What now?

At this stage, no additional capabilities have been planned for immediate release on the platform other than internal canned reports. Because this system is expected to serve DMHAS for the next 18 years, our focus now shifts toward long-term sustainability, maintainability, and strong data and application governance. These areas are essential to ensuring the platform remains reliable, secure, and adaptable over time.

DMHAS has already standardized coding practices, design patterns, and architectural approaches using a Modern technology Stack. The application is built on stable, well-supported platforms including .NET Core for the backend and Angular front-end. On the infrastructure side, our mature Data Center provides robust management for SQL-based data storage along with a reliable disaster recovery model.

All architecture, design specifications, and user guides have been extensively documented to support future teams and ensure easy onboarding, troubleshooting, and feature expansion. In addition, our continued use of Azure aligns with our long-term sustainability and modernization strategies.

Going forward, key considerations will include defining governance processes, identifying future funding needs for enhancement and maintenance, and capturing lessons learned to streamline future development efforts. This foundation positions the platform for stable operation today and flexible growth in the years ahead

OPTIONAL SUPPORTING CONTENT

User stories or testimonials

Testimonial from business sponsor Christopher McClure – Chief of Staff DMHAS: Executive Sponsor

“Viraj and his team created an easy-to-use and simple to navigate dashboard for the state’s Opioid Settlement Advisory Committee that allows committee members and the public to access information regarding funding, projects, and an assessment of meeting our needs. Since going live, the dashboard has been lauded by several groups and has joint successes of providing accurate information to the public and meeting our reporting requirements. Recently, a neighboring state was effusive in their praise of Connecticut’s dashboard relative to their own.”