



# **AUTOMATING OUR WAY TO THE TOP:**

## The Evolution of Tennessee's Business Process Automation Program

FY 2022 – FY 2024

**NASCIO Award Category:** Business Process Innovations

**Submitting State:** State of Tennessee

**Contacts:** Addy Newsom, Special Project Coordinator State CIO Office

Jerry Imsand, Executive Director of Enterprise Shared Solutions



## Idea

Over the past three years, the State of Tennessee has pursued automation and advanced technology to reinvent government operations. The initiative was one of Strategic Technology Solutions' (STS) top five strategic initiatives. The goal was to improve service delivery for citizens, generate efficiencies, and allow employees to focus on high-value activities. By automating over 140 processes across 23 agencies, over 108,000 hours are saved annually. Process times are reduced by 68% on average, and employee satisfaction has increased by 52% overall. The initiative has positively impacted citizens in many ways, with a few examples being firefighters getting certified quicker, increased overdue fee collection, and standardized FMLA benefit awareness.

**140+**  
PROCESSES  
AUTOMATED

ACROSS  
**23**  
AGENCIES

**-68%**  
REDUCTION IN  
PROCESS TIMES

**108k+**  
HOURS SAVED  
ANNUALLY

**+52%** INCREASE IN EMPLOYEE  
SATISFACTION

## Problem

As the State population continues to grow rapidly and as technology advances exponentially, the service demands from citizens increase while at the same time State IT systems age. In order to reduce the burden of these problems, STS sought to implement technology that could work with current systems, speed up processes, reduce backlogs, and free up time to enable the State's workforce to better focus on more complicated tasks and provide additional hands-on help for Tennesseans.

## Why It Matters

In today's fast-paced, technology-driven world, both citizens and employees have high expectations for their service and work experiences. They anticipate that organizations, including government entities, will leverage cutting-edge tools to streamline processes and enhance efficiency.

### **FAILING TO MEET THESE EXPECTATIONS CAN LEAD TO A HOST OF CHALLENGES:**

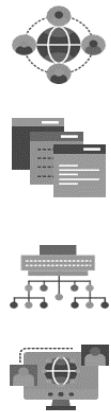
- **Citizen dissatisfaction:** When services are difficult to obtain due to tedious and lengthy processing times, citizens become frustrated and lose faith in the government's ability to meet their needs effectively.
- **Knowledge retention concerns:** As the workforce ages and employees retire or move on to other opportunities, valuable institutional knowledge can be lost, leading to decreased productivity and continuity issues.
- **Employee retention challenges:** Mundane, manual tasks can lead to job dissatisfaction and higher turnover rates, particularly in a competitive job market where employees seek stimulating work and exposure to new technologies.
- **Inefficient use of resources:** When employees are bogged down by everyday manual processes, they are unable to focus on high-value, strategic tasks that truly matter to the organization and its stakeholders.

**Each of these issues can be improved by implementing automation and advanced technologies.**

## IDEA

### How TN's Approach Is Different

When states deploy automation and advanced technologies, they typically target one Agency or Division at a time in small pockets of opportunity. Tennessee took a unique and ambitious approach. With the Governor's operational goal of transparent and efficient government, STS's vision was to deploy automation and advanced technologies across all 23 executive agencies concurrently through a scalable and efficient centralized model. This was achieved through several unique actions:



- **Use Cases:** Executed a robust and flexible use case identification process where the team was able to adapt how they identified use cases based on each Division and Agency need – approaches included federated, workshops, and self-submission.
- **Standardization and Reusability:** Focused on standardization and reusability where use cases were identified across divisions and Agencies and quickly developed and deployed – identifying standard use cases reduced the time to develop and support by 50-60%.
- **Scalable Technical Infrastructure:** Built a cost efficient and highly scalable centralized infrastructure that leverages a high-density configuration, enabling a 70% reduction in infrastructure hardware costs to support use cases across the entire State.
- **Focused Marketing Campaign:** Implemented an executive-led marketing campaign with videos, a dedicated site for program information, process owner testimonials, and video demos of processes that have been automated.

**50-60%**  
reduction in time to develop and to support

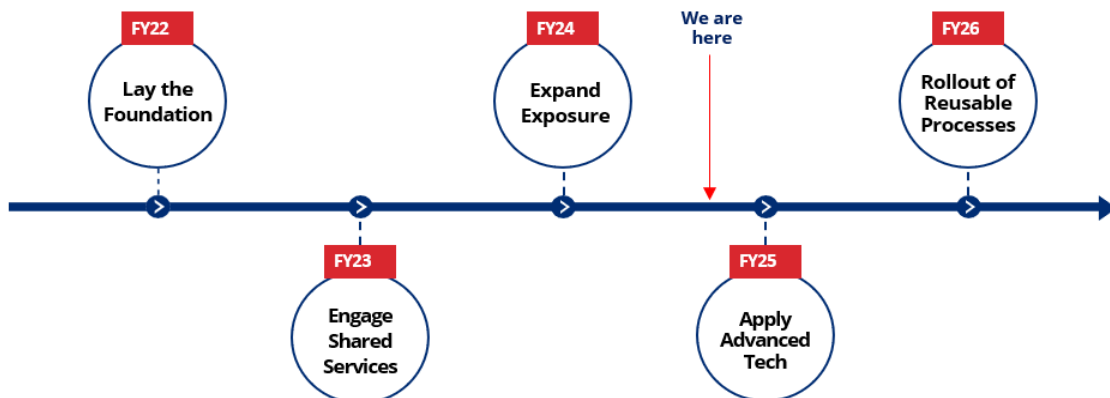
**70%**  
reduction in infrastructure hardware costs

Combined, this enabled Tennessee to quickly stand up a Center of Excellence (COE), engage with the various Divisions and Agencies, identify impactful use cases, and implement use cases efficiently and apply standardization.

### How It Is Universal

All states are faced with increasing workloads, limited resources, a retiring workforce, aging technology, and a desire to improve citizen interactions. Implementing automation and advanced technologies enables an organization to quickly standardize and speed up their processes – ultimately improving citizen and employee satisfaction. With a turnaround time of 7-14 weeks to implement, the benefits of an automated use case can be realized immediately once deployed. As observed by Tennessee, once a use case is in production, processes move faster, resiliency and accuracy are built into the process, new activities can be accomplished, and citizen and employee satisfaction improves.

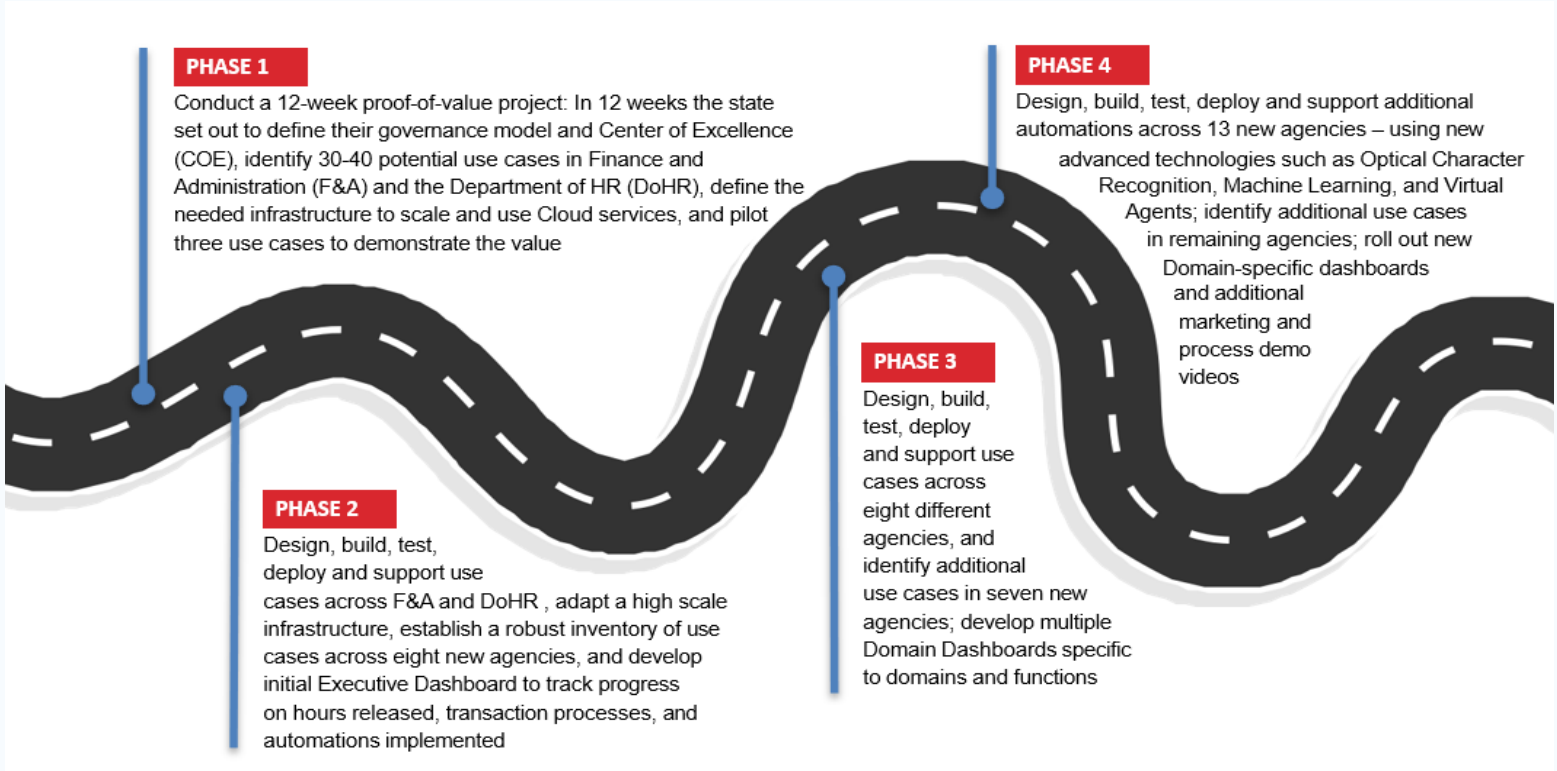
With Artificial Intelligence/Machine Learning/Robotic Process Automation being the NASCIO State CIO 3<sup>rd</sup> Top Priority for 2024, Tennessee has embraced these capabilities and laid out a successful roadmap for others to follow when starting this journey.



# IMPLEMENTATION

## Roadmap

As part of the STS IT strategic plan in 2021, Tennessee set out on a five-year journey to stand up and deploy automation and advanced technologies across all 23 Executive Branch Agencies. Working with EY, they rolled out this program in multiple phases, focusing on governance, infrastructure, use case identification, use case deployment, and new technologies. The program is currently completing Phase 4.



## Key Involvement

For a program of this size and magnitude, the governance model has been critical to its success. The objective was to make the model highly inclusive horizontally and vertically across the different Agencies, Divisions, and functions. With State Leadership providing the initial \$12M funding for the program, the initial phase included setting up the governance structure. Tennessee worked with EY to identify the key stakeholders, establish a RACI chart for signoffs and approvals, establish key meetings and checkpoints throughout the delivery lifecycle, and organize key meetings to review and monitor progress, issues and risks.

<b>Executive Stakeholders</b>	<ul style="list-style-type: none"> <li>Helps market the program</li> <li>Delivers value unlocked through automations</li> </ul>
<b>Steering Committee</b>	<ul style="list-style-type: none"> <li>Fosters accountability</li> <li>Promotes collaboration</li> <li>Resolves program challenges</li> </ul>
<b>Center of Excellence</b>	<ul style="list-style-type: none"> <li>Engages the business</li> <li>Develops automations</li> <li>Tracks metrics</li> </ul>
<b>Agencies</b>	<ul style="list-style-type: none"> <li>Supports opportunities</li> <li>Identifies and manage risk</li> <li>Supports business engagement</li> </ul>
<b>Support Functions</b>	<ul style="list-style-type: none"> <li>Provides support and tracking of automations</li> <li>Provides break/fix when automations experience issues</li> </ul>

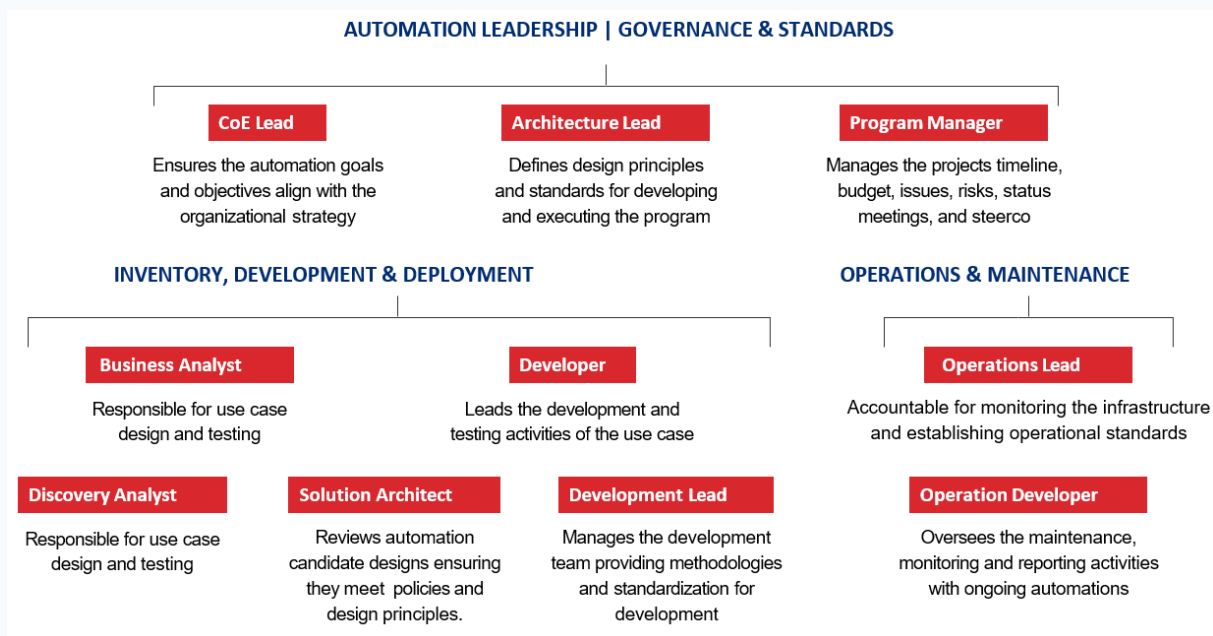
## Communication and Marketing

Communication and marketing has been another important component to making the program a success. This has included a spectrum of communication channels across the different stakeholders. Key activities include:

- **Assembling State Cross-Organizational Liaisons:** Tennessee leveraged the role of the Business Domain Directors to assist with coordination across agencies, provide insights into key initiatives and help address issues and risks when they occurred.
- **Aligning Agency Leadership:** COE Leadership proactively reached out to Agency leadership to share the benefits of the program and how to get engaged, as well as identify key process owners that might be interested in getting involved.
- **Within the State IT Community:** COE Leadership engaged different associations such as the IT Professionals Association (ITPA), as well as the Business Analysts Community of Practice (BACoP), held quarterly open-discussions, and video demos of automated processes to help generate ideas.
- **Across Agencies:** The creation of the Automation Executive and Domain Dashboards, marketing and instructional videos, intranet process automation website, Agency-specific use case demonstrations, and agency kickoff events engaged multiple levels throughout the enterprise.

## How Did We Do It?

**COE GOVERNANCE MODEL:** The COE governance model and technology infrastructure were key to scaling this program from three initial use cases to over 140 use cases. The COE was made up of three distinct parts (Leadership, Inventory/Delivery/Deployment, and Operations and Maintenance) that worked closely together to align on strategy, use cases, value, and support the automations – enabling a 98% ongoing success rate for the automations, which is 6% points above industry average. The COE was made up of the following roles:



**TECHNOLOGY:** In addition to the COE, a robust infrastructure that was cost-effective has been key to the growth of the program, enabling scalability and stability. The solution footprint leverages leading-edge technology and concepts and is entirely Cloud-based, where the automations run on virtual machines within AWS. The Process Automation orchestration and attended automations run in a SaaS model operated on Azure. There are no on-premise servers, thereby avoiding any environmental or carbon footprint. The solution adheres to the cybersecurity compliance required by the State.

# IMPACT

## At A Program Level

Since the inception of the program in 2021, the goals of process efficiency and standardization to benefit the citizens and State employees have always been in the forefront. The phased approach has enabled the State to achieve significant progress and benefits.

### OVERALL STATISTICS AT THE END OF FY24



## At The Agency, Division, Employee, and Citizen Level

At this level, the impact of the automations can be seen in very specific ways: improving citizen's lives, increasing state revenue, and rolling out standardized processes across agencies to highlight benefits available to employees. Three highly impactful examples are outlined below:

### IMPACT

### Improving Citizens' Lives Through Public Safety

#### Making It Better

The Tennessee Department of Commerce and Insurance (TDCI) serves their customers through balanced oversight of insurance and regulated professions while enhancing consumer advocacy, education, and public safety. This includes activities like issuing Fire Prevention Fire Fighter Certificates – certificates required to be a firefighter in the community, as well as conducting school inspections.

#### Approach

Working with process owners, several processes were identified as potential use cases based on volume, backlog, and routine activities. Within 13 weeks these processes were designed, developed, and deployed into production.

#### The Result

By implementing the six automations, a 12-month backlog for certification tests was eliminated; turnaround time for grading the certification tests went from an average of one month to three days; firefighters were able to obtain additional certifications faster; safety was enhanced for our community; and school inspection data was made more accurate.



*"This project has been extremely beneficial to TDCI, and more specifically Fire Prevention and Fiscal. Transactional activity has increased substantially in the last year, and process automation has allowed us to keep up with the demand while providing great customer service."*

**Paul Hartbarger, TDCI**

**IMPACT**

**Enhancing State Benefit Realization Through Standardization**

**Making It Better**

Due to higher priorities and full workloads, the Tennessee Department of Environment and Conservation (TDEC) did not have enough time to follow-up with customers on overdue fees.

**The Result**

With the power of automation, penalty statements could quickly be generated and sent to customers with overdue fees on a regular basis. This has allowed staff to collect overdue fees going back several years. To date, this automation has helped the agency increase their collection of revenue a significantly. Automating the penalty statements has reduced stress, increased morale, and enabled the team to focus on individual accounts in depth, especially older accounts, as well as engage with more customers on overdue fees.

**Approach**

Working with the Process Owners, the process was documented, developed and put into production in 11 weeks.



**~700**  
Hours saved annually



**150%**  
Increase in employee satisfaction



**99%**  
Reduction in time to create penalty statements

**IMPACT**

**Enhancing State Benefit Realization Through Standardization**

**Making It Better**

Each Agency has a different process for determining which employees qualify for FMLA Special Leave, and there are situations where Agencies do not do this at all due to workload. By standardizing and automating this process, the program was able to design one automation and roll it out to 13 different State Agencies, enabling them to quickly determine which employees may qualify for FMLA Special Leave and then notify the employee via email and update HR Coordinators leveraging consolidated listings.

**The Result**

Employees who were not even aware of this benefit have now enjoyed this benefit since this use case went live. In addition to enabling visibility to existing benefits, this use case is giving the HR organizations over 11,500 hours back to do other tasks such as answering more state employee questions, focusing on new hire training, and one agency has been able to focus their time on starting the Revenue University – a large-scale learning initiative that will train employees on standardized revenue processes across the state.



**~11,500**  
Hours saved annually



**~\$720k**  
Annual cost avoidance



**13**  
Agencies standardized

**Approach**

Working with the process owners, the use case was initially defined and implemented for one agency, and then demonstrated for other agencies to adopt. This has been implemented across 13 agencies, including agencies that did not previously have time to identify this benefit for employees.

*The automated process for identifying leave usage by employees and comparing it to the Case Management System (FMLA/PPL Portal) has been an enterprise-wide success. All agencies using this automated process have reported a significant savings in time/hours of work identifying employees that may not have reported a need for FMLA. This keeps the state and all agencies more compliant with the Federal FMLA laws."*

*-Lori Bogaerts, Protected Leave Division of DOHR*