STS - Cloud

- **Objective:** STS has adopted a "Cloud Smart" approach, leveraging a hybrid infrastructure model between on premise and the cloud. The COVID-19 pandemic has had a dramatic effect on our citizen's personal and business lives. Economically, the crisis has brought with it volatility, uncertainty, and complexity. And, for the State, the urgent need to change how we engage with citizens and employees. An accelerated approach to modernization and digitization of our citizen-facing applications is necessary. Our Cloud implementations focus on reducing costs where possible and developing capabilities that will help Departments better serve Tennessee businesses and citizens.

- **Cost:** The total cloud investment requested is $45,600,000.

- **Project Length:** Three Years

- **Temporary # of employees:** Contractors only

STS - Cloud

The Challenge:

The time it takes to purchase, take delivery, and install computing, storage and networking equipment resources has been the biggest driver of the immensely long lead time of IT projects today. We must shed our cultural debt, laden with legacy processes and prepare for an Operating Expense (OpEx) fiscal model versus the traditional Capital Expense (CapEx) model. What worked well in the past will not keep pace now.

The Benefits:

- Faster to Production
- Cost Effective
- Fewer Resources Required
- Scalable, flexible, and agile compute platforms
- More open competition
- Increased data sharing capabilities
- Increased security

Projects:

STS Cloud	
Agency Applications Cloud Modernization/Migration	$35,000,000
Migration of Edison to the Cloud	$3,000,000
Cloud Operations Tools	$800,000
Cloud Operations contractors to support rapid cloud migration	$3,000,000
Five Contract Project Directors (recurring)	$3,300,000
Application Assessment for Cloud Viability	$500,000
	$45,600,000

STS - Cybersecurity

- **Objective:** Increasingly during the COVID-19 there has been emphasis on improving the State's ability to securely manage data and access to data. With citizens, businesses and employees all requiring digital services, the States cyber risk posture changes. This bucket of requests ensures that we expand, and mature enterprise cybersecurity programs across state and local Tennessee governments by leveraging a trusted Federal review, and invest in the appropriate enterprise cybersecurity tools, technologies and education to best protect state data.

- **Cost:** The total cybersecurity investment requested is $50,955,000. This investment represents an intentional set of technologies and capabilities for risk identification, vulnerability reduction, threat reduction, cyber incident management, and internal process improvements.

- **Project Length:** Three Years

- **Temporary # of employees:** Contractors only

STS - Cybersecurity

The Challenge:

New cyber threats and competition demand an improved cyber strategy that can proactively respond to new realities, reduce vulnerabilities, deter adversaries, and safeguard Tennessee. If the State does not continue to invest significantly in cybersecurity, we open ourselves to many undesirable risks and consequences. The average cost of one data breach is $3.92M, plus many intangibles such as loss of privacy, decrease in citizen trust, and increased targeting by cybercriminals.

The Benefits:

- Ensures state services and operations remain secure and resilient

- Reduces and manages vulnerabilities of state networks and critical infrastructure, hardening them against attackers

- Bolsters security and creates a safer environment in which Tennessee businesses and citizens can safely interact with the State of Tennessee

- Mitigates consequences from cybersecurity incidents if/when they occur

Projects:

STS Cybersecurity	
Air-Gapped Data Backup and Recovery / Retention	$4,500,000
Cloud Access Security Broker (CASB)	$3,000,000
Liability Insurance	$1,200,000
Cybersecurity Training for Local Governments	$3,000,000
DMARC Technology	$500,000
National Cyber Security Review Assessments (locals)	$16,000,000
Funds to support Cybersecurity Council mandates	$3,000,000
Self-Healing Monitoring	$500,000
Three Contract Project Directors	$1,980,000
Upgrades to South Data Center Security War Room	$750,000
Virtual Desktop Implementation	$3,000,000
Web Application Firewall	$1,000,000
Identity and Access Management	$3,750,000
Test data management	$2,025,000
IT Academy Expansion to Local Governments	$1,000,000
Paid Information Technology Interns	$750,000
Privileged Access Management	$2,000,000
Resiliency Assessment (statement of work)	$1,000,000
Upgrade Egress Firewalls	$2,000,000
	$50,955,000

TN

STS – Enterprise Data Analytics (EDA)

- **Objective:** Decision-making with accurate data has been essential to management of Covid-19's impact to Tennessee citizens, business, and government. Acceleration of the state's Enterprise Data Analytics (EDA) program in order to build an inventory of data sharing opportunities and business use cases is imperative for our State leaders to have the right data, with the right quality, at the right time. The project requests within this bucket will put the State on a trajectory to meet that goal.

- **Cost:** The total requested EDA investment is $11,920,000. This investment includes the infrastructure and technology tools required, research and training, and operational costs for implementing selected and approved data sharing instances.

- **Project Length:** Three Years

- **Temporary # of employees:** Contractors only

STS - Enterprise Data Analytics (EDA)

The Challenge:

Our state has access to a significant amount of data, including approximately 17 PB of data storage, 93k network connections, 3.3k servers supported, and over 3k dashboards. This data, and the insight it can provide, needs to be better connected, analyzed, and visualized so that it can be used to achieve both enterprise and Department-specific goals.

The Benefits:

- More informed decision-making

- Centralized data

- Improved data quality and access to data

- Increased data sharing and collaboration

- Improved customer satisfaction

Projects:

STS EDA	
Data profiling tool	$1,500,000
Data virtualization tool	$3,000,000
Enterprise Service Bus	$2,700,000
Master data management tool	$2,400,000
Two Contract Project Directors	$1,320,000
Specific funding for an opioid use case that would involve cross-agency data sharing*	$1,000,000
	$11,920,000

STS – Business Process Automation (BPA)

- **Objective:** BPA is a solution for creating labor capacity and reducing organizational workload, allowing employees to focus on higher value work while 'digital assistants' perform standard repetitive work. F&A/STS has made an initial investment in our BPA capability. We have laid the groundwork for investment in select *citizen-facing digital services* that are digitized, thus not require in-person meetings or paper to be filled out – allowing our citizens to remain *socially distant* while conducting State business instead of queueing in a line waiting for their turn.

- **Cost:** The requested investment of $20,000,000 focuses on automating business processes across shared services agencies with enterprise-wide impact, and selected citizen-facing business processes.

- **Project Length:** Three Years

- **Temporary # of employees:** Contractors only

STS – Business Process Automation (BPA)

The Challenge:

Based on recent research conducted by McKinsey, the largest area of opportunity for Teneessee was in Customer Experience and Business Process Efficiency. The State of Tennessee has more than 380M annual service interactions across 930 discreet services delivered by state departments. While 60% of these services are digitized to some degree, extensive opportunities for process reimagination remain (ex: simplification, orchestration, digitization, and automation).

The Benefits:

- Automates workflows, increases productivity and improves customer service

- Increases quality of outcomes and reduces human error

- Digital assistants run 24/7, not just "9am to 5pm"

- Reduces employee workload and reclaims human capacity to focus on higher value work

- Reduces operating time and costs

Projects:

STS BPA	
FY2021/FY2022	$10,000,000
Continued expansion of Process Automation	$20,000,000
	$30,000,000

STS – Infrastructure & Modernization

- **Objective:** The State of Tennessee depends on the continuous and proper functioning of critical systems to provide our Citizens with access to fundamental services to support the economy, security, and quality of life. COVID-19 has put a strain on the availability of state networks and applications due to the distributed nature of our citizens, businesses, and workforce. These components are subject to disruptions (e.g., manmade accidents, malevolent attacks, or natural disasters) that could affect their performance, and thus, have direct consequences on Tennessee communities, citizens, and the State workforce. Modernization is essential for Tennessee to keep pace with the fast-paced changes in our computing ecosystem and to handle the variable demands that are place on our systems due to the pandemic.

- **Cost:** The requested investment of $68,330,000. $43,000,000 of this investment request is specifically earmarked for the modernization of the TDOC Offender Management System which is currently running on a legacy mainframe environment.

- **Project Length:** Three Years

- **Temporary # of employees:** TBD

STS - Infrastructure & Modernization

The Challenge:

Many IT business applications require significant enhancement or total replacement. Legacy modernization and infrastructure operations are expensive, but essential for Departmental business and mission strategies to be successful.

The Benefits:

- Delivers foundational improvements in enterprise technology; enables increased shared services and removes barriers to collaboration.

- Reduces the overall cost of IT infrastructure.

- Eliminates the dependency on outdated mainframe technologies.

- Improves the speed, flexibility, and service delivery of technical operations.

- Creates the foundation for a virtual workforce for the 21st century.

- Creates a model environment within state government that positions TN as the employer of choice.

Projects:

STS Infrastructure & Modernization	
TDOC Offender Management System	$43,000,000
Acceleration of MyTN enhancements and applications	$1,800,000
STS Program Management Office	$14,000,000
Increased bandwidth for Day Reporting Centers	$1,000,000
Microsoft Teams enhancement and adoption	$1,000,000
Remote imaging for workstation deployment	$500,000
Development of a Tennessee Digital Government Strategy	$1,000,000
Infrastructure Automation and tools	$1,350,000
Six Contractors to support the Admin and Procurement	$2,700,000
Three Contract Project Directors (recurring)	$1,980,000
	$68,330,000

STS - Summary

The Opportunity:

COVID-19 has been a transformational event requiring new or improved technologies to support the business of Tennessee. With approval of the requested projects, our State can speed up the adoption of new or improved technologies that are essential to meeting the new demands that COVID-19 has placed on Tennessee's cybersecurity, infrastructure and applications — delivering essential services to impacted citizens.

The Benefits:

- Enterprise-wide impact-–moves the state forward in a number of critical areas

- Creates an environment in which Tennessee businesses and citizens can safely interact with the State of Tennessee

- Creates the foundation for a virtual workforce for the 21st century.

- Leverages Federal investment vs State investment as many of the projects requested would have been requested in out-year budget requests

Summary of Investment Request

Cloud	$45,600,000
Cybersecurity	$50,955,000
Enterprise Data Analytics	$11,920,000
Business Process Automation	$20,000,000
Infrastructure & Modernization	$68,330,000
	$196,755,000