

# 2020-2024 | State Strategic Plan for Information Resources Management



*Advancing the Next Generation  
of Technology in Texas*





## ABOUT THIS PLAN

The Information Resources Management Act (Texas Government Code, Section 2054.91-094) requires the Texas Department of Information Resources (DIR) to prepare a state strategic plan for information resources management each biennium.

The plan identifies technology goals for state government over the next five years and guides agencies as they develop their agency strategic plans.

Note: For the purposes of this report, the term “state agency” is used to indicate a state agency or a state funded institution of higher education.

The 2020-2024 State Strategic Plan is available on the Department’s website at [dir.texas.gov](http://dir.texas.gov).

Texas Department of Information Resources  
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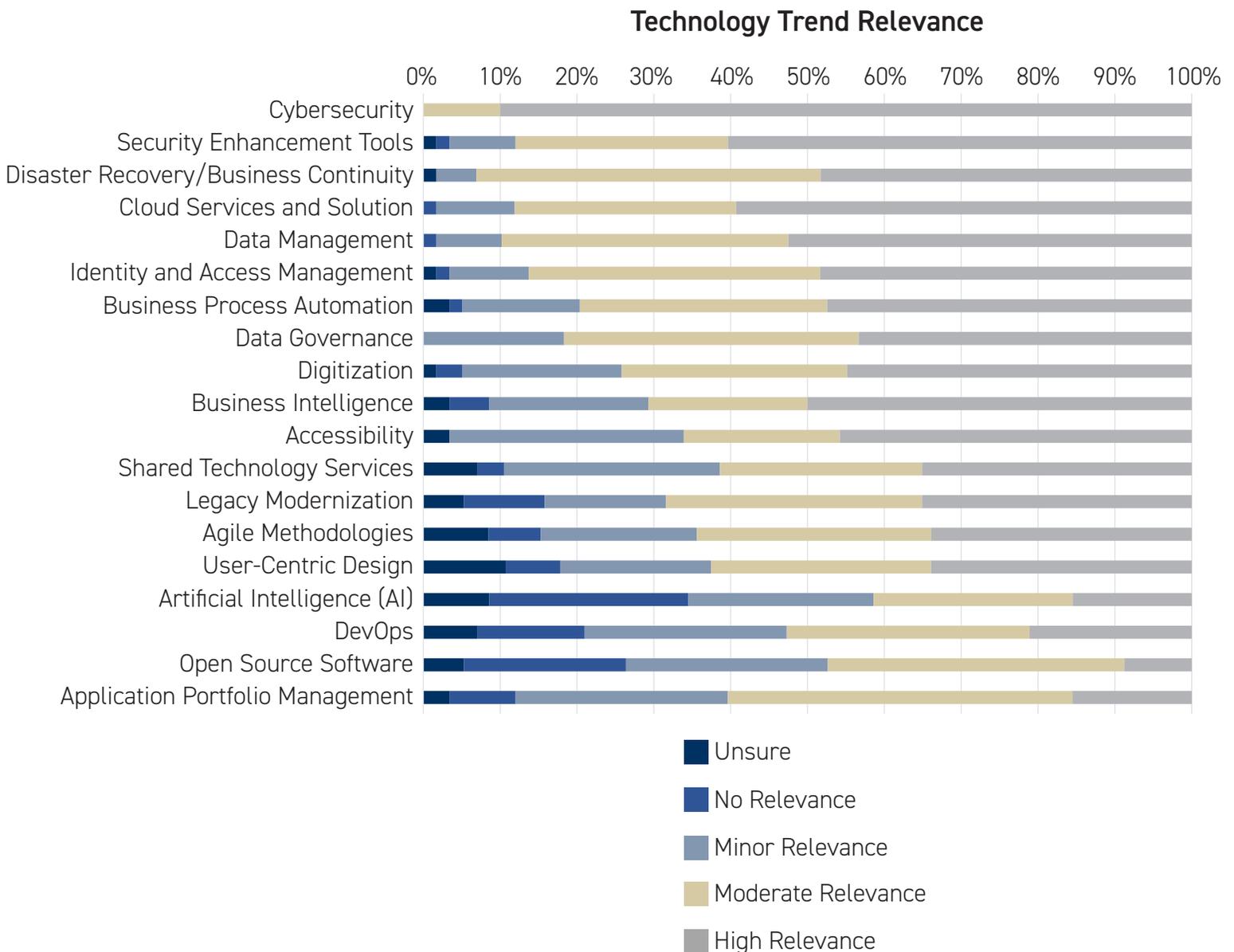
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## TECHNOLOGY TRENDS AT A GLANCE

In the 2019 IT Planning Leadership Survey, technology leaders and executives in Texas state agencies and institutions of higher education were asked how relevant the technology trends listed below will be to their organizations and operations in the next two years.



# 2020-2024 State Strategic Plan for Information Resources Management

## *Advancing the Next Generation of Technology in Texas*

## VISION

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The State of Texas will lead in delivering a secure, digital government through well-designed, innovative technology solutions.

## INTRODUCTION

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Information Technology (IT) has become a crucial element in the state's overall ability to deliver quality services to citizens and continues to promote the relationship between Texans and their state government.

Yet, as technology advances, so do the citizen expectations for easier, more secure, and constantly connected access to government services.

Because of these expectations, how Texas prioritizes and invests its resources in IT then becomes even more critical. For Texas agencies, innovation requires careful consideration of their current and future business needs.

The 2020–2024 State Strategic Plan for Information Resources Management was developed to help advance Texas government toward the next generation of technology. It aims to help agency leaders evaluate technology initiatives that can improve services to the citizens and workforce they support.

Each agency should carefully consider how the three strategic goals outlined in this plan align with agency needs. The goals within this plan map to actionable objectives that agencies may use in their own strategic planning.

Technology is already enhancing the business of government and how the state of Texas serves Texans. Proper planning, investment, and resource management can help IT leaders prepare for and take full advantage of the future of technology statewide and the rapid change that is inevitable.

The Texas Department of Information Resources (DIR) presents this plan for agencies to continue to leverage IT statewide goals to drive reliable, secure services and to advocate for modernization within their programs. The next generation of technology is already here. Texas is and will continue to be well-poised to lead the way.

Goal 1: Secure IT Service Delivery

Goal 2: Advanced Data Management & Digital Services

Goal 3: Agile & Automated IT Strategies

## Goal 1: Secure IT Service Delivery

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### Objectives

1. Evaluate and deploy cost-effective security enhancement tools.
2. Routinely improve and test business continuity plans.
3. Consolidate and centralize identity and access management across applications.
4. Prioritize legacy modernization efforts.
5. Utilize an application portfolio management solution.

## Goal 2: Advanced Data Management & Digital Services

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### Objectives

1. Implement fundamental data management, governance, policies, and best practices.
2. Explore mobile and digital methods.
3. Spur change with data driven decisions supported by business intelligence.
4. Ensure the procurement and deployment of digital services provide accessible electronic information resources.
5. Focus on the customer's needs and preferences with user-centric design applications.

## Goal 3: Agile & Automated IT Strategies

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### Objectives

1. Consider agile procurement methodologies.
2. Leverage shared technology services.
3. Utilize open source software applications.
4. Explore and prioritize business process automation.
5. Initiate testing of artificial intelligence (AI) solutions.
6. Adopt modern development approaches.
7. Utilize an application performance management solution.

# Goal 1: Secure IT Service Delivery

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Agencies must provide secure information and services to both the citizens they serve and the workforce they support.

As the need to provide digital services to citizens grows, the public sector continues to be an attractive target for cybersecurity attacks.

Agencies are trusted with the most sensitive and confidential information of the citizens they serve and are responsible for ensuring information is not compromised.

For government to run effectively, the state must protect data, ensure it is used appropriately, and keep in compliance with state and federal regulations.

## CHALLENGES

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Increasing sophistication of threats, limited availability of security professionals, and the potential catastrophic impact of breaches have kept information security in the spotlight in Texas and across the nation.

Competition for skilled professionals and limited resources have placed a burden on the public sector's ability to address these issues.

Agencies must be strategic in their approach to information security and the deployment of security tools to ensure reliable and secure access to information.

## DESIRED OUTCOMES

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- Substantial resources to effectively manage agencies' security programs and to reduce risk and vulnerability of the agencies information systems.
- Continued protection of private and confidential information, diligence to minimize exposure to cyberattacks, and a mature risk-based security program.
- Repeatable, adaptable methodologies to address legacy system modernization, and to reduce risk of system compromise and data breaches.
- A proactive approach for managing IT that redirects savings to other priorities and needs, improved capacity for improving security and ongoing monitoring of potential threats, and better application efficiency.

# OBJECTIVES

## 1 Evaluate and deploy cost-effective security enhancement tools to improve the identification and detection of threats.

As ransomware and other cyberattacks continue to rise, state agencies must focus their efforts on ensuring that organizational and constituent data is as secure as possible.

To gain greater visibility, decrease response time, and increase effectiveness against malicious attacks, state agencies should optimize IT security with a combination of security tools and strategies.

To prevent and detect malicious actions, useful security enhancement tools should include automated technology installed on endpoints such as: user/entity behavioral analytics, multi-factor authentication, endpoint detection and response, options for monitoring and reporting suspicious activity, and host intrusion prevention and protection systems.

## 2 Routinely improve and test business continuity plans to optimize effectiveness, including use of cloud services as a mechanism for secure and immediate business continuity and disaster recovery.

State agencies must be prepared to quickly restore government operations and services in the event of a disaster or disruption of services.

As the utilization of cloud services is becoming more prevalent, it is imperative for agencies to consider implementing cloud-based solutions for business continuity and disaster recovery planning.

A properly maintained disaster recovery solution is beneficial in helping agencies restore their infrastructures and enable them to get critical systems back online much more quickly and efficiently than traditional recovery methods.

An analysis of improved business continuity and security effectiveness should include annual security and disaster recovery assessments and testing.

## OBJECTIVES (continued)

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### 3 Consolidate and centralize identity and access management across applications to realize efficiencies and streamline access.

Using identity and access management solutions to combat growing security concerns is an effective way for agencies to help safeguard privacy and improve the protection of critical agency and citizen information.

Agencies should identify opportunities to centralize the administration of identity and access management across systems and applications to reduce duplicative efforts and ensure more timely and accurate access management across the organization.

Consolidating identity and access management also provides the organization with a better understanding of the access landscape from a single platform and enables agencies with the ability to define and manage roles and access privileges to protected agency resources.

Identity and access protections should be based on documented risk assessments of the information systems and applicable regulatory and security policy requirements.

### 4 Prioritize legacy modernization efforts to strategically transform agency IT infrastructures and improve mission performance.

To keep up with growing citizen demands for faster and more efficient government services, state agencies are faced with the task of modernizing their old legacy systems and aging IT infrastructures.

By leveraging enterprise architecture and strategic principles, the prioritization of modernization efforts will enable agencies to phase out legacy systems that are inefficient, costly to maintain and operate, may

no longer be supported, and are also susceptible to cybersecurity vulnerabilities.

In addition to meeting citizen demands, modernizing also gives agencies opportunities to realize cost savings, assess and improve overall data quality, increase agility and operational efficiencies, and reduce dependency on legacy skills sets.

(continued)

# OBJECTIVES (continued)

**5** Utilize an application portfolio management solution to accurately inventory business applications and the resources required to provide operational support of those applications over their lifetimes.

Implementing an application portfolio management solution can be a valuable tool in helping state agencies evaluate their current IT infrastructure and make more informed decisions about how they can accomplish a successful digital transformation.

When used effectively, application portfolio management can help agencies to develop IT road maps by identifying business applications that are redundant or are no longer used, can be consolidated into a single application, have increasing security risks, or ones that are too costly or complex to maintain and can be retired.

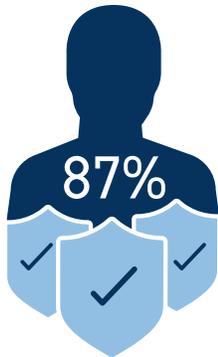
## GOAL 1 STATS



*of security budgets predicted to be allocated to **rapid detection and response**<sup>1</sup>*



*of government entities are in process or completion of **modernization of IT systems**<sup>2</sup>*



*of CIOs utilizing **Multi-factor Authentication** initiatives<sup>3</sup>*

Source: 1) Gartner, Inc.; 2) 2019 Gartner Legacy Modernization Survey (Base: Government); 3) 2018 Deloitte-NASCIO Cybersecurity Study

## Goal 2: Advanced Data Management & Digital Services



Data is one of the state's most valued strategic assets, with the ability to inform agency business processes and decisions. Implementing strategies to obtain greater benefit from data will provide cost savings and efficiencies.

Agencies can look to digital services and the incorporation of automation to extend government services beyond traditional in-person operations to better serve the citizens of the state with easier access to resources.

Digital services provide opportunities for agencies to improve and transform services by creating automated processes and workflows to allow organizations to focus on effective and innovative delivery of government services.

### CHALLENGES

As volumes of data increase, so do the challenges that agencies face when managing that data.

Often organizations do not have a complete picture of their existing data, making it difficult to fully realize the potential of the data they house.

Furthermore, privacy and security concerns can lead to hesitations in sharing and integrating data.

Without proper data management, agencies lack the consistency and interoperability needed to move toward automation and digitization.

### DESIRED OUTCOMES

- Improved business decisions, reduced costs, and the ability to automate processes.
- Efficient use of time, money, and improved service to customers through informed decisions and increased data quality throughout the enterprise.
- Accessible and dynamic solutions that support various types of technology users so that communication is not contingent on a single sense or ability.
- Operational efficiency and improved business relationships through a robust digital ecosystem with routine and complex processes.
- Increased opportunities for agency data sharing to address topics that impact the state.

# OBJECTIVES

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## 1 Implement fundamental data management, governance, policies, and best practices across the organization, including dedicating personnel to managing and maintaining the organization's data.

The vast amount of data within an organization is one of its most vital resources.

Making the most of agency data requires a functional data management and governance program to address issues such as improving data standards, quality, longevity, and effectiveness.

Understanding what kind of data is within an agency, where it is stored, and how it is protected and secured is key in

implementing a good data management and governance framework.

Promoting a culture of data stewardship can help drive consistent data governance compliance.

Ensuring that an agency has talented, capable staff acting as stewards of this data is the best way to ensure that it will remain secure while also being utilized to its full potential to serve the agency's mission.

## 2 Explore mobile and digital methods to provide more convenient and efficient ways to serve customers.

The demand for quick, efficient, and effective government services is a continual challenge for state agencies.

To meet these ever-growing demands, agencies should consider increasing their digital capabilities.

By digitizing services, processes, and decisions, agencies can provide a seamless end-to-end digital experience.

Not only will this improve customer satisfaction, but it will also enable agency employees to work more efficiently with constituents, streamline processes, increase productivity, and realize cost savings.

Digitization can help to classify important data, eliminate manual processes, enable continuous compliance, and deliver effective customer services.

## OBJECTIVES (continued)

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### 3 Spur change with data driven decisions supported by business intelligence.

Business intelligence enables anyone within an organization to analyze and transform raw data into usable information for any business need.

Using business intelligence tools can provide agencies with a variety of benefits including improved productivity, cost reduction, and operational efficiencies.

Whether it is evaluating security threats, assessing the utilization of customer services, or tracking expenditures, data analytics can help state agencies make more informed business decisions while enhancing their relationship with citizens at the same time.

### 4 Ensure the procurement and deployment of digital services provide accessible electronic information resources to all individuals regardless of their abilities.

State agencies must ensure that websites, applications, and services are accessible by employees and customers of all abilities.

In today's digital environment, citizens access state agency websites for numerous reasons including renewing a license, submitting applications, researching policies and regulations, and corresponding with agency employees.

Incorporating accessibility features can make these tasks more efficient and accommodating for users of all abilities.

Ensuring accessibility is a factor in procurement and designing with accessibility in mind at the outset is a beneficial approach that it helps reduce the risk of agencies providing tools or services that are not usable by all.

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# OBJECTIVES (continued)

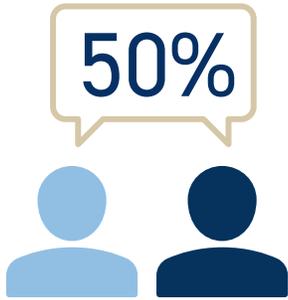
## 5 Focus on the customer's needs and preferences with user-centric design applications.

In order to keep up with the convenient, efficient services citizens have become accustomed to using in the private sector, state agencies must focus on understanding the value of user-centered design.

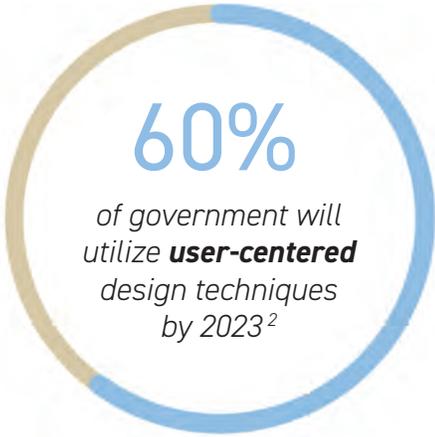
Modern user-centered design techniques allow a tool, service, or solution to greatly improve the customer experience in state government.

By understanding customer needs and preferences at the forefront of design, state agencies can improve customer-to-agency interactions, increase the potential for more engagement opportunities, and reduce costs through realized efficiencies by utilizing modern design techniques.

# GOAL 2 STATS



*of agency leaders agree **Business Intelligence** will be **highly** relevant to their organizations in the next **two years**<sup>1</sup>*



Source: 1) 2019 IT Planning Leadership Survey; 2) Gartner, Inc.; 3) 2019 Accenture Citizen Survey

## Goal 3: Agile & Automated IT Strategies

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Agencies are facing the next step in modernizing IT systems to move toward a more collaborative, agile, and interoperable state government.

As agencies transition to the next generation of innovative solutions, they will need to consider the scalable services of cloud and the efficiencies of automation.

Additionally, the rapidly changing IT environment necessitates changes in the way agencies procure technology services, plan for IT projects, and engage with their IT workforce toward more agile methodologies and processes.

### CHALLENGES

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Public sector entities are accountable for the investments they make and sometimes this accountability comes with lengthy procurement timelines and processes.

The move to more agile approaches for the procuring and planning of automated IT implementation requires a change in organizational culture and buy-in from key stakeholders, including executive and state leadership.

Agencies must make the case that innovative solutions like cloud, shared technology, and automated testing and deployment will yield expected efficiencies while ensuring minimal operational and security risk.

### DESIRED OUTCOMES

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- Readiness for advanced technologies and fast-moving trends brought on by machine learning, artificial intelligence, and robotic process automation.
- Reduced risk, sound procurement and project management practices, and proven results for future IT investments.
- A proactive approach for managing IT, shifting focus on using emerging technologies effectively.
- Faster time to deployment and increased functionality at reduced cost.
- Better usage of IT-as-a-service, enabling full utilization of IT resources and opportunities for innovation and new initiatives.

# OBJECTIVES

## 1 Consider agile procurement methodologies to determine best value of the solutions.

The emerging trend of agile procurements in state government is pushing agencies to focus on adjusting their own traditional procurement models.

Agile is an iterative approach that leads to best value awards in shorter periods.

From developing the solicitation in a series of sprints to having a series of vendor demonstrations and discussions throughout the procurement phase, agile procurements are yielding significant results and better technology solutions.

Agencies can also remediate problems with individual modules or vendors without jeopardizing the success of an entire project.

The benefits of agile procurement when applied to technology procurements include reduced risk of non- or subpar delivery, greater transparency throughout the development process, and higher-quality products delivered on time and within budget constraints.

## 2 Leverage shared technology services to gain the benefits of cloud elasticity and availability.

Shared services enable organizations of all sizes access to cost effective managed IT-as-a-service, allowing state agencies to focus resources on supporting their mission and business functions rather than directly managing IT services.

The goal of shared services is to efficiently combine resources and systems within and among organiza-

tions with similar needs to improve the quality, timeliness, and cost effectiveness of service delivery to customers.

By taking advantage of shared services, state agencies can be effective in eliminating redundancies, delivering savings, and mission efficiencies.

## OBJECTIVES (continued)

### 3 Utilize open source software applications to generate broader opportunities for workforce and flexibility of contracts.

The use of open source software has been prevalent in the private sector for the past several years and is now gaining momentum in state government.

In today's technology environment, an agency should consider an open source software solution when custom code is needed.

Agency technology staff can become more effective programmers with the ability to find and reuse open source software that is highly efficient and reliable.

With the adoption of open source software, agencies can align their goals and make the most of external resources.

### 4 Explore and prioritize business process automation to expedite processes and improve quality.

Agencies should consider exploring more opportunities for business process automation to reduce manual processes.

Automating business processes allows agencies to save time, streamline decision making, benefit from cost reductions, and reduce workloads

on existing staff, allowing them to handle high priority transactions more efficiently.

With business process automation, agency customers can be provided with more upfront efficiency, faster service delivery, and convenience.

### 5 Initiate testing of artificial intelligence (AI) solutions to drive new interaction and services with the public.

AI has had a transformative impact on information technology.

Embracing the use of AI can generate opportunities for state government to create efficiencies and improvements in the work agencies perform and services they provide.

Agencies can enhance human-performed tasks by integrating AI technology, such as robotic process

automation and machine learning, to automate or augment typical work tasks like data entry, analyzing vast volumes of data, or communicating with a customer through a call center.

Deploying AI in state agencies can result in additional time for employees to focus on more critical tasks, faster delivery of services, and potential cost reductions.

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## OBJECTIVES (continued)

### 6 Adopt modern development approaches to foster continuous delivery of applications and services.

To enable the rapid delivery of quality government services in a digital environment, state agencies should consider moving away from traditional approaches and drive towards more innovated development exemplified by agile development methods and modern DevOps methods of deployment.

Collaboration is the foundation of agile, DevOps, and other modern development processes.

Having developers, operations staff, and actual users work together on

a project eliminates the siloed environments that can contribute to inefficiencies, miscommunications, or incomplete requirements.

The value in modern development approaches is that they allow for quicker development timeframes, reduce the risk for errors, and by working with operations staff, developers can gain a better understanding of how an application really needs to work.

### 7 Utilize an application performance management solution to understand performance and true end-user experience for critical business applications.

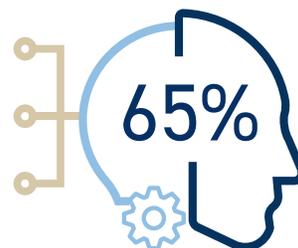
Implementing an application performance management solution can prove valuable in helping state agencies accurately understand real-time system performance, as well as end-user experience.

When used effectively, application performance management solutions can help identify opportunities to improve end-users' experiences as well as identifying the root cause of performance impacting issues – accelerating both problem identification and remediation.

## GOAL 3 STATS



Almost three-quarters (71%) of IT professional organizations report using **agile** approaches sometimes, often, or always.<sup>1</sup>



In 2019, 65% of state CIOs believe **AI and robotic process** automation will be the most impactful emerging technologies within the next three to five years.<sup>2</sup>

Source: 1) Project Management Institute; 2) NASCIO 2019 State CIO Survey

## AGENCY SPOTLIGHTS

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### Secure IT Service Delivery

#### Texas A&M Division of IT

##### *Aggie LIFE: Cybersecurity Awareness Game*

The "Aggie LIFE" website/game was created for National Cyber Security Awareness Month (NCSAM) to educate the Texas A&M campus community on the importance of cybersecurity with a new online game.

Every day, the Texas A&M network is hit with thousands of malicious attacks, many of which originate from compromised student accounts caused by phishing email scams.

In "Aggie LIFE," players participated in a "digital board game" that took them through graduation and a random career.

Players also encountered various "life events" throughout the game, from winning contests to car repair.

Scores increased when a player correctly answered a cybersecurity question or landed on a positive life event.

The 2018 campaign saw a major increase in visitors and players. "Aggie LIFE" had over 56,000 visits compared to the 12,000 visits of the 2017 offering over 42,000 game completions, compared to 7,000 completions in the previous campaign.

#### Texas A&M University Corpus Christi

##### *Multi-Factor Authentication Implementation in Higher Ed*

Over a two-year period, Texas A&M University-Corpus Christi (TAMU-CC) successfully implemented multi-factor authentication for all faculty, students, and staff, adding an extra layer of security for over 20,000 accounts.

Post implementation, compromised account investigations decreased from two-five per week to only two incidents in total. TAMU-CC credits cross-functional collaboration paired with clear, actionable communication for achieving user buy-in across campus.

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## AGENCY SPOTLIGHTS (continued)

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### Advanced Data Management & Digital Services

#### Texas General Land Office

##### *Texas Integrated Grants Reporting (TIGR)*

In August 2017 Hurricane Harvey devastated Texas with catastrophic flooding that caused billions of dollars in damage across 60 counties.

The federal government's \$5 billion dollars for recovery in Texas came in the form of grants from the Department of Housing and Urban Development for housing recovery and flood mitigation, which are administered through the Texas General Land Office (GLO).

Due to the months-long delay in federal aid, the GLO team was under pressure to provide a solution to process funds quickly.

The Texas Integrated Grants Reporting project (TIGR, pronounced "tiger") is the web-based grant management solution implemented to help citizens gain access to housing recovery benefits.

It allows for submission of scanned documents, provides reporting, has a secure design and runs in a certified secure cloud.

TIGR enforces stringent federal requirements while still maintaining usability for citizens – and has speeded grant deployment by several weeks or more over paper forms.

#### Texas Department of Public Safety

##### *Advanced Analytics Data Mart: The SPART-N Application*

The Texas Department of Public Safety's (DPS) Intelligence and Counterterrorism (ICT) Division developed a modern and technologically innovative analytical data mart called SPART-N (State Police Analytical Tool – Networked).

The SPART-N application was developed to help accurately facilitate among the approximately 30 systems analysts who coordinate to complete an investigation. ICT prioritized and incorporated 11 data sources as part of the first phase, with more in the pipeline for the future.

DPS took an innovative approach to including complex, structured and unstructured DPS data, pushing it through a robust Extract, Transform, and Load (ELT) process using a series of open source tools, then completing a custom entity resolution algorithm to resolve entities across data sources.

SPART-N provides analysts a data platform with sophisticated data visualization capabilities that enables them to obtain results from a number of large data sets in a user-friendly, proficient, accurate, and expedient manner on a continuous (24-hour/7 days-a-week) basis.

## AGENCY SPOTLIGHTS (continued)

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### Agile & Automated Strategies for IT

Texas Department of Health and Human Services Commission (HHSC)

*Texas Integrated Eligibility Redesign System (TIERS)*

HHSC's integrated eligibility determination system transitioned to a fully agile software development methodology in January 2017.

The massive system offers 60 types of assistance including food, cash, medical, and community care services to over 8 million Texans in need annually and is a cornerstone of HHSC's eligibility modernization strategy.

HHSC's TIERS Program was seeking a way to be more responsive to business changes to the system than the 13-month delivery cycle under waterfall allowed.

After running a successful agile pilot on three legislatively mandated time-sensitive projects to

gather data, the program developed a strategic plan to gain agency approval, and developed the tools, processes with clearly defined roles and responsibilities, training, and contract changes needed to implement agile across a large-scale organization with 30+ agile teams.

To maintain an agile practice at scale, built-in real-time assessment and escalation of risks, removal of blocking issues, and team and program level feedback loops are used to gather data and pivot the processes to implement continuous improvement.

# DIR PROGRAM SUPPORT

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The mission of DIR is to serve Texas government by leading the state's technology strategy, protecting state technology infrastructure, and offering innovative and cost-effective solutions for all levels of government.

Agencies can look to the Texas Department of Information Resources for support and assistance in meeting the goals outlined in this state strategic plan.

This section highlights just a few of the enterprise services DIR provides that are critical to the efficiency of state government.

For more information, search for these topics on [dir.texas.gov](http://dir.texas.gov) or call 1-855-ASK-DIR1.

## Bulk Purchase

### *Desktops, Laptops, Tablets, Software, and Other IT Equipment*

DIR coordinates technology bulk purchases to leverage statewide purchasing power.

The Bulk Purchase initiatives simplify the procurement process because state agencies are not constrained by purchasing thresholds.

In fiscal year 2017 and 2018, based on information provided to DIR, customers realized over \$10M in additional savings through the bulk purchase agreements for computer and software purchases.

## Cloud Services

### *Infrastructure, Platform, Software, Broker, and Assessment Services*

For agencies considering cloud services, DIR offers introductory resources to help guide decision makers in evaluating available options and moving forward with an implementation strategy.

Once state agencies have developed a cloud strategy and are ready to move forward, DIR has several offerings available.

These services include infrastructure, platform, software, broker, assessment, and miscellaneous cloud services.

Cloud services are available to state agencies through DIR Cooperative Contracts and Shared Services.

## DIR PROGRAM SUPPORT (continued)

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### Data Coordination

#### *Texas Chief Data Officer, Texas Open Data Portal, Texas Data Management Framework*

The Texas Open Data Portal, data.texas.gov, hosted on the state's official website, Texas.gov, promotes government transparency, citizen participation, and the efficient use of public resources.

The portal has over 320 publicly assessible datasets and has received over 95,000 views since the program initiated in 2014.

The Texas Data Management Framework (TDMF) is based on the core principles of the Data Management Association (DAMA) Data Management Body of Knowledge (DMBOK).

The DAMA-DMBOK core principles have been modified for Texas state government and represent the best practices associated with building and maintaining an agency's Enterprise Information Management program.

### Enterprise Solution Services (ESS)

#### *Application Portfolio Management, Application Delivery Decision Framework, Legacy Modernization Guide, Texas Cloud Tiger Team*

ESS provides agencies with strategic information technology guidance built on enterprise architecture, standards, collaborative communities, and technology initiatives.

ESS provides technology assessments to agencies at no cost.

ESS drives technology adoption by conducting proof of technology/proof of value sessions to help state agencies achieve business agility and value in a fast-changing technology landscape.

Workshops, interest groups, and discovery sessions with state agency business programs lead to interagency collaboration.

ESS also guides state agencies to support enterprise architecture, artificial intelligence areas including robotic process automation, machine learning, natural language processing initiatives, and cloud adoption.

The Texas Cloud Tiger Team is led by ESS to help accelerate cloud adoption through collaboration and by supporting agencies to develop cloud centers of excellence.

### Innovative Procurement Lab (IPL)

#### *Improving Information Technology Procurement and Contracting*

DIR established the Innovative Procurement Lab (IPL) to help agencies streamline Information Technology (IT) procurements and provide best value solutions through demonstrated vendor performance.

Through the IPL, DIR partners with participating customers to experiment with innovative procurement methods aimed at improving IT procurement and contracting practices and to influence IT procurement practices at a statewide level.

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# DIR PROGRAM SUPPORT (continued)

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## IT Commodities and Services

### *Hardware, Software, Seat Management, and Staffing Services*

Through the Cooperative Contracts program, DIR provides state agencies access to a wide range of products, services, and vendors.

DIR negotiates pricing for IT services and commodity items such as hardware, software, personal computers, and printers.

Technology services include seat management, staffing augmentation, training, maintenance,

and subscription services. DIR contracts are used as a benchmark across the country for their aggressive discounts and exceptional service levels.

Over 700 IT commodity contracts are in place for products and services, providing a competitive and robust marketplace for customers.

## IT Education and Guidance

### *Project Management, IT Accessibility, Information Resource Manager (IRM) Continuing Education, Policy, and Rules*

It can be challenging to navigate the state laws and rules covering technology. DIR provides education, guidance, training, and technical assistance to help agencies stay in compliance when implementing technology initiatives.

## Network Commodities and Services

### *VoIP, Internet, Data Plans, Wireless Devices*

Texas agencies have access to a portfolio of data, voice, and video services through DIR enterprise contracts. Voice over IP telephone services, data circuits, Internet, and mobility solutions are also available through DIR.

The DIR-managed Texas Agency Network program provides network connectivity for the state's private network. DIR's shared Internet bandwidth is 20-gigabit (two 10-gigabit) diverse connections.

DIR has a 100-gigabit private network in place which allows for sufficient bandwidth as agencies' bandwidth needs increase.

Also, to ensure customer agency data is secure, the DIR Network Security Operations Center provides multilayer security protection for Internet traffic, securing, processing, monitoring, and analyzing 25 terabytes of traffic per day.

## DIR PROGRAM SUPPORT (continued)

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### Online Payment Services

#### *Licenses and Registrations, Permits, and Records*

Texas.gov provides payment processing for state agencies and eligible local governmental organizations to conduct online business with constituents.

The Texas.gov payment solution is a secure, Payment Card Industry-compliant product that

allows Texas.gov customers to process online and over-the-counter payments for services such as licenses and registrations, property taxes and records, permits, and vital records.

### Security Services

#### *Assessments, Penetration Testing, Cybersecurity Framework, SPECTRIM Portal, Managed Security Services, Training*

DIR offers a wealth of security products, services, information, and training to equip agencies in protecting state agency networks and private citizen information.

DIR has negotiated contracts for security services and tools meeting the new standardized statewide Cybersecurity Framework standards.

The Office of the Chief Information Security Officer provides guidance and leadership to improve agency security posture.

It also uses incident reporting to allow up-to-the-minute, on-site cyber threats to help agencies guard against potential network breaches.

Agencies can manage governance, risk, and compliance on the SPECTRIM portal, and use the Cybersecurity Framework to document security status. Managed Security Services include security monitoring and device management, incident response services, risk and compliance services, and threat analysis.

### Shared Technology Services

#### *Data Center Services, Texas.gov, Managed Application Services, Managed Security Services, Open Data Portal*

DIR Shared Technology Services delivers proven, scalable, integrated Information Technology services to solve the business problems of the state's agencies, institutions of higher education and local governmental entities.

The Shared Technology Services offered are a combination of services that are personalized to your business and can be consumed incrementally.

## STATE STRATEGIC PLAN PROCESS RECAP

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Issued by DIR, the State Strategic Plan (SSP) provides direction to state agencies and institutions of higher education for the use of information technology. The SSP is a five year rolling plan that is developed every two years with insights from state agencies, other governments, and industry.

The strategic goals outlined in the SSP provide a roadmap for agencies to follow when developing the Information Technology components of their Agency Strategic Plans. Collaboration is a key factor in helping determine the Statewide Technology Strategic Goals.

Here's how we do it:

- DIR is required to appoint an advisory committee that consists of representatives from state agencies, institutions of higher education, the public, local government, industry, and federal government.
- Through a collaborative, facilitated discussion, the appointed advisory committee discusses the technology trends affecting agencies now and in the next two to five years, the ideal technology environment, and strategies to address those technology trends and move toward the ideal environment.
- Conduct in-depth research and analysis of top technology trends and priorities impacting both government and the private sector around the country.
- Survey CEOs, CIOs, and Information Resource Managers (IRMs) in state agencies and institutions of higher education.
- Consult multiple stakeholders and subject-matter experts to help narrow the focus areas of the SSP.
- Determine the final statewide technology strategic goals to address in the SSP.
- Deliver the SSP to State Leadership on November 1, 2019.

## ACKNOWLEDGEMENTS

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The 2019 State Strategic Plan Advisory Committee was approved by DIR's governing board on January 25, 2019. Thank you to the committee for their leadership, time, and commitment to this project.

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