# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message from the CIO</td>
<td>3</td>
</tr>
<tr>
<td><strong>Goal: Operational Effectiveness</strong></td>
<td>4</td>
</tr>
<tr>
<td>More Transparency and Financial Goals</td>
<td>4</td>
</tr>
<tr>
<td>Leveraging the Cloud</td>
<td>5</td>
</tr>
<tr>
<td>Developing our Workforce</td>
<td>6</td>
</tr>
<tr>
<td>Improve Enterprise Strategic IT Planning</td>
<td>6</td>
</tr>
<tr>
<td><strong>Goal: Innovate the State</strong></td>
<td>7</td>
</tr>
<tr>
<td>Enterprise Data Management</td>
<td>7</td>
</tr>
<tr>
<td>Advancing the eGovernment Program</td>
<td>7</td>
</tr>
<tr>
<td>Gov2Go</td>
<td>8</td>
</tr>
<tr>
<td>Enhancing Self-service and Automation</td>
<td>8</td>
</tr>
<tr>
<td><strong>Goal: Enhance Cybersecurity</strong></td>
<td>9</td>
</tr>
<tr>
<td>Vulnerability Management Program</td>
<td>9</td>
</tr>
<tr>
<td>Cyber Disruption Response Operational Plan</td>
<td>9</td>
</tr>
<tr>
<td>Cybersecurity Workforce Development</td>
<td>10</td>
</tr>
<tr>
<td>Multi-factor Authentication</td>
<td>10</td>
</tr>
<tr>
<td><strong>Goal: Strategic Collaboration</strong></td>
<td>11</td>
</tr>
<tr>
<td>Expanding Centers of Excellence</td>
<td>11</td>
</tr>
<tr>
<td>Communication</td>
<td>12</td>
</tr>
<tr>
<td><strong>Conclusion: Executing the Plan</strong></td>
<td>13</td>
</tr>
</tbody>
</table>
Message from the CIO

The 2018 Statewide Strategic IT Plan marks a truly exciting time for the State of Wisconsin state IT community and the agency businesses it serves. Our most recent biennial IT plans outlined key investments in our base of IT operations and essential initiatives designed to improve our transactional efficiency. We discussed our strategies for implementing our enterprise resource planning system, consolidating IT infrastructure services, wiring the state through BadgerNet, and establishing cyber response teams. We came through on those efforts, thanks in large part to the willingness of state agency IT professionals and business leaders to embrace the changes, utilize expertise in their departments, and work collaboratively. What is the next step now?

I believe the answer is clear: Our future is the data. As we have improved the efficiency and standardization of what we do on a transactional basis, we are sitting on a mountain of data – data that will be an invaluable resource for state government serving taxpayers more productively and proactively. The predictive element can’t be overstated – with access to large amounts of standardized, readable data, we can uncover previously hidden patterns and correlations, and provide reliable answers to the questions of elected officials and policymakers. And, with data-driven answers available, officials can ask progressively more targeted and precise questions, enabling them to design innovative solutions to public-sector challenges BEFORE they become excessively expensive and unmanageable. Anticipating and addressing citizen needs before problems arise – that is what effective government looks like, and now we have the foundation to support it.

Understanding the potential of the data is one key thread. The other is protecting the data – employing robust cybersecurity and data security measures to ensure citizens’ sensitive information is kept confidential and safe. So, as we creatively ask questions and leverage data-sharing mechanisms, we always look over our shoulders, conscientiously monitoring our systems and diligently complying with the array of federal, state, and local standards and regulations in place for data processing security. Meanwhile, we undertake multi-jurisdictional and public/private partnerships that help us reinforce our cybersecurity capabilities.

Ultimately, the threads of valued data and protected data converge, into fortified systems that can anticipate future needs and allocate public resources more efficiently. Achieving that convergence is the next great challenge before us. As this strategic plan describes, through enhanced operational effectiveness, innovation, and strategic collaboration, Wisconsin is on a course to take that next major step of maximizing the value of our data. It’s been my distinct privilege to work with IT professionals and business managers throughout our enterprise to help build a resilient IT infrastructure foundation. Now, along with our agency partners, I look forward to pursuing data-driven opportunities to develop innovative solutions and transform government service delivery.
Goal: Operational Effectiveness

One of Governor Walker’s key priorities for the State of Wisconsin is ensuring an efficient and accountable government that works for taxpayers. The state’s IT community has applied that priority as the driving principle for designing and implementing strategies for moving forward. The state’s fully implemented enterprise resource planning (ERP) system – STAR (State Transforming Agency Resources) – provides the foundation for cost-effective shared services and data-driven decision making. A consolidated state data center has reduced the costs and complexity of IT infrastructure services and produced a resilient, modernized architecture. With these pieces in place, the Division of Enterprise Technology (DET) can work with its agency partners to implement innovative technology solutions to further improve government efficiency and service delivery.

More Transparency and Financial Goals

In addition to ERP implementation and consolidating IT infrastructure assets into one state data center, DET and its agency partners worked together to establish an enterprise disaster recovery site; created and implemented a comprehensive cybersecurity strategy and framework; and launched more than a hundred new eGovernment services. Those are significant achievements that set the stage for more meaningful and collaborative enterprise activities. Specifically, the current state IT environment calls on DET to construct and implement transparent policies and practices related to prioritization, governance, communication, resource management, and internal standards for operational activities, including performance management and financial controls.

This is not a new realization. Beginning in 2015, DET focused on enhancing customer service from the perspective of increased responsiveness and reliability in day-to-day service delivery. Customer survey metrics clearly indicated positive impacts from this approach, as survey data reflected improvement in each service delivery category measured over a three-year period. Survey data also showed DET customers want increased communication and transparency with enterprise operations, in order to better align DET activities with customer and enterprise priorities.

IT governance is a natural starting point. In 2013, Governor Walker established the interagency Information Technology Executive Steering Committee (ITESC) to ensure the effective deployment of enterprise IT services that serve the state’s strategic business needs. This governance mechanism instilled a layer of accountability for both DET and agency IT programs. The next step is to utilize DET leadership to ensure that processes, procurement, and implementation decisions around enterprise priorities are established transparently and collaboratively. DET leadership will provide focus on enterprise goals and priorities, with road maps to accomplish them. Ultimately, the mission will include applying policies and making decisions related to enterprise IT project prioritization and oversight, with specific attention placed on producing quantifiable results for enterprise IT activities.

As DET institutes an enhanced prioritization model, the division also will design a formal and meaningful performance management program that drives behavior and accountability for DET’s activities. DET will collaborate with agency partners to fully understand which metrics and indicators will be most valuable to them and create automated reporting to be published
and shared. This reporting will include performance dashboards and scorecards with metrics and indicators focusing on the customer experience, service delivery, infrastructure and application availability, project management, financials, and staff utilization. Services will have service level expectations set, reviewed with stakeholders, and tracked with metrics to improve current service levels. DET communications will be constructed to ensure timely and frequent reporting of performance results and plans of action to customers, employees, and stakeholders.

Because of the recent successes in pursuing an efficient, enterprise approach to state government IT, Governor Walker followed up in May 2018 with an executive order that directs state agencies to work with the STAR Program Office to identify, save, and realize the benefits of an ERP system in procurement, finance, human capital management, and IT. The executive order also calls for any IT purchases more than $150,000 to be submitted to the Department of Administration (DOA) for approval. These activities will generate greater insight into the state’s IT spend, while promoting license optimization and usage management across multiple agencies. But just as important is the opportunity for DOA and DET to move beyond traditional service provision and into the role of a true strategic partner. Further, to fulfill the intent of the executive order, DET will need to work closely with agency partners to ensure and verify that DET is delivering responsive services and support functions.

“DET leadership will provide focus on enterprise goals and priorities, with road maps to accomplish them.”

Leveraging the Cloud
Cloud computing and Software as a Service (SaaS) constitute areas of high opportunity for operational improvements and cost savings. DET will serve as a consultant and broker for all cloud services utilized by the enterprise and individual agencies, enabling DET to consistently provide an integrated, cost-effective cloud service that leverages both the statewide private cloud based in the state data center as well as public cloud solutions. To support this function, DET has also established the position of Enterprise Cloud Architect, who will work closely with agencies to manage cloud adoption planning, cloud application design and deployment, and cloud platform monitoring.
Developing our Workforce
An IT workforce capable of connecting trends and acting quickly on industry developments will help drive long-term business productivity and sustainability. The State of Wisconsin will work to ensure its IT workforce has the necessary skills to meet business demands and is agile in the execution of its duties in a collaborative environment. Recent strategic plans all have cited the need for more effective recruitment, training, and retention efforts, and those challenges remain. The difference now is the state can employ more sophisticated analytical tools to identify and measure the gaps between current workforce skill sets and those needed to deliver IT services with emerging technologies and methodologies. When we better understand the nature of and reasons for the gaps, the state will be in an improved position to facilitate the connection between business opportunities and workforce proficiencies.

Retaining those skilled, trained workers is just as important as assembling that workforce. State agencies will recognize successes and excellent customer service in performance assessments, and design paths for advancement, to encourage technical talent to plan their careers around state service. Directly connecting worker talents and aspirations to business strategies and goals creates an environment where organizational success and personal success can thrive in tandem.

“The State of Wisconsin will work to ensure its IT workforce has the necessary skills to meet business demands.”

Improve Enterprise Strategic IT Planning
In order to more effectively collaborate across agency lines and align resources with business and enterprise goals, DET and its customers need to improve their insight into enterprise-wide IT development and project activity. DET will work with agencies to refine the annual agency IT planning process and other statutorily-based activities to help evaluate and prioritize IT investments for maximum enterprise benefit. At the same time, business leaders increasingly are finding it necessary to regularly assess and re-prioritize projects to accommodate new requirements and faster rates of change. To meet this need, DET will form a team that will work with agency business and IT leaders to assist with uncovering solutions that meet their goals and align to overall enterprise strategies.
Goal: Innovate the State

The ultimate goal of improving operational effectiveness, maximizing the benefits of IT planning, and ensuring a skilled state IT workforce is to transform the way citizens interact with government – to make those interactions more convenient, collaborative, and transparent. Innovating the state means harnessing creativity and technology to redefine fundamentally how government serves citizens. By leveraging data and partnerships that can fuel the state’s eGovernment program, Wisconsin can deploy more responsive and cost-effective services, and help citizens take control of their government interactions.

Enterprise Data Management
Over the past 20 years, data has evolved from being thought of as a byproduct of a project or activity into being recognized as a strategic asset – in many cases, data is THE strategic asset. By applying context to data, organizations create actionable information to generate data-driven decisions.

Wisconsin intends to create a framework for agencies to leverage data to make government more effective, improve on organizational and programmatic performance, and continue Governor Walker’s commitment to making state government more transparent for citizens. This framework will be built on best practices relating to information management, including governance, quality, security, business intelligence, and analytics. A key result will be a data platform that will store, analyze, and manage data, allowing the state to employ self-service data-sharing and visualizations within and among agencies. Such a platform will reduce operational barriers, protect the needs of data stakeholders, help to build standard, repeatable processes, and, most importantly, enable better decision-making.

Advancing the eGovernment Program
Since the state’s partnership with its self-funded portal vendor began in 2013, the eGovernment Program has launched more than 100 new applications and services. Some notable recent examples include the Wisconsin Public Meeting Notices and Minutes website (https://publicmeetings.wi.gov/), which provides a comprehensive system for constituents to find information on upcoming public meetings and their outcomes, in accordance with the Governor’s executive order. The Agency Performance Dashboards website (https://performance.wi.gov/) offers public access to key performance measures from cabinet agencies in a single location. The One Stop Business Portal (https://openforbusiness.wi.gov/) presents an easy step-by-step process where job creators can find the requirements and tools they need to start a business. After going through the website process, the new business is registered with all the appropriate state agencies. The Wisconsin enhanced Prescription Drug Monitoring Program (https://pdmp.wi.gov) collects valuable information about controlled substance prescriptions from pharmacies licensed in Wisconsin and presents the relevant data in meaningful ways to enable health care professionals, law enforcement agencies, and public health officials to work together to reduce the misuse, abuse, and diversion of prescription drugs.
These services highlight the flexibility and agility of the eGovernment Program, which provides efficiency and transparency to both government and online service users. During the next two years the eGovernment program will build on its successes, with additional focus on:

- Technology advancements, including high-availability architected services and exploration of microservice architecture.
- Expansion of the eGovernment Program to identify new partners, including additional state agencies and local governments.
- Breaking down existing data silos to allow services to stretch across departmental lines.
- Exploration of emerging technologies such as chatbots and home assistant devices.

Gov2Go

The program’s emphasis on using digital services to promote citizen engagement has brought it to the next major step: deploying Gov2Go, a personal assistant for a citizen’s interactions with government. Gov2Go is an opt-in, citizen-centric mobile platform that empowers users to more efficiently interact with their government. It anticipates the citizen’s needs, sending notifications of upcoming deadlines. Citizens rely on it to remind them what to do and when to do it and find out about new government services as they become available.

Gov2Go has been launched for select Department of Transportation and Department of Natural Resources services, and its use will be expanded and promoted. Gov2Go improves citizen engagement by allowing them to interact with government as much as they want on the platform of their choice. The many vehicle types in Wisconsin are spread out and managed by different departments, but Gov2Go will allow ATV owners and SUV owners alike to receive timely electronic reminders and link them directly to the resources and systems they need to process renewals.

Enhancing Self-service and Automation

Increased automation and self-service capabilities are essential to Gov2Go and other eGovernment applications. But the principle also extends to improving the execution of IT tasks and process workflows. Automation can augment or replace previously manual-intensive IT processes, allowing staff to spend their time on other value-added activities. There are several obvious benefits of this transformation, including faster responsiveness to customer and market demands, cost and efficiency, reliability, and risk mitigation.

As outlined above, innovating the state will require practices that increasingly involve public cloud services, data analytics, and mobile friendly applications. Less time can be spent managing IT infrastructure and more will have to be devoted to facilitating digital transactions. DET will work with its agency partners to automate as appropriate the provisioning of infrastructure and services so that they are available on a timely basis. With more automation and monitoring being incorporated into infrastructure and operations, the state will be better positioned to optimize DevOps – the practice of operations and system development teams participating together in the entire service lifecycle, from design through the development process to production support. This integrated approach will drive a state IT environment characterized by innovation and efficiency, one that can quickly respond to business, customer, and citizen demands.
An ongoing imperative for the State of Wisconsin IT community is to protect valuable information, sensitive data, and the computing infrastructure from unauthorized access, compromise, and corruption, while allowing information systems to remain accessible and productive for their intended users. This is a complicated challenge that will be with us for the foreseeable future. The state will continue—and in some areas, accelerate—its commitment to developing state cyber-response capabilities with local and federal partners, sharing information during incidents, raising cybersecurity awareness, and developing public/private partnerships to better protect critical infrastructure from cyber threats. The state also will establish and improve processes to prepare for and respond to cyber events.

Vulnerability Management Program
Vulnerability management programs address the inherent security issues presented by software vulnerabilities, identifying where vulnerabilities exist and providing responsive remediation solutions. DET is working with each agency to review their business requirements for vulnerability management in order to roll out an enterprise-adopted vulnerability management program, with an end goal of utilizing consistent assessment and reporting tools for the enterprise.

Cyber Disruption Response Operational Plan
Collaboration, communication, and engagement between the public and private sectors and across state and local jurisdictions are essential to maximize our abilities to detect and identify, protect against, respond to, and recover from cyber incidents. With this approach in mind, DET is producing a Cyber Disruption Response Operational Plan for the State of Wisconsin. This plan will outline activities that, in the case of a cyber disruption, help achieve the goals and objectives of the current Wisconsin Cyber Disruption Response Strategy, including:

- Organizing cybersecurity efforts among critical infrastructure and key resource partners.
- Providing for the coordination of resources for response to cybersecurity incidents.
- Establishing specific procedures for information sharing as well as effective and resilient communications systems and protocols to ensure continuity of communications during and after cybersecurity events.
Cybersecurity Workforce Development
Maintaining robust cybersecurity capabilities means taking the long view, and over time nothing is more important than having skilled professionals to lead the efforts. There is a shortage of qualified cyber workers in both the public and private sectors – there will be a 1.5 million cybersecurity worker shortfall nationally by 2020. The shortage stems from a variety of factors, such as high experience requirements; an aging security workforce; and a lack of opportunities for high schoolers, technical school, and college-level students, as well as women and minorities. In addition, governments have to compete with the private sector for skilled staff.

How can we attract, train, educate and retain the necessary cyber workers? Through internships and rotational programs that involve high school students, college graduates, military personnel, and mid-career workers. Public sector organizations will need to hire for the attitude and train for the skills, increasing workers’ knowledge and abilities.

There are many ways to accelerate the supply of Wisconsin cyber workers, including new and expanded academic programs in the K-12 grades, technical and community colleges, and private and public universities. State government will inform students and teachers of online certification programs, scholarships, internships (in the private or public sectors), and training in the National Guard. The state will produce an informational cyber degree website as a resource for a more defined career path, which can generate additional interest in this high-demand field. The net result of these efforts is for students to have multiple routes for obtaining the knowledge and developing the cybersecurity skills that employers can immediately use. The state can also look to identify IT, business, and legal workforce members who are looking to transition to security jobs, and leverage internal training programs to develop these individuals as security professionals.

Multi-factor Authentication
The state has launched an enterprise strategy to build and implement an authentication service using Multi-factor Authentication (MFA). DET will continue to work with agencies to facilitate MFA, which combines two or more independent credentials: something you know (e.g., password) and something you have. MFA makes it more difficult for an unauthorized party to access physical locations, computing devices, networks, or databases, and is one of the most effective investments to mitigate end-user risk. MFA also will help to accommodate the growing use of mobile and cloud computing.
Goal: Strategic Collaboration

It’s clear that the “secret sauce” to successfully achieving enterprise objectives, while simultaneously delivering on the distinctive needs of each business customer, is strategic collaboration. By collaborating and communicating with customers in a consistent and transparent manner, priorities can be aligned, optimized, and more effectively delivered.

This is the direction for DET and its agency partners going forward. The same focus and dedication used to enhance day-to-day service delivery can be leveraged to create collaborative, transparent, and effective strategic partnerships. DET will benefit from identifying areas to collaborate with agency partners to most effectively utilize resources and expertise. By encouraging cooperation and collaboration across agency IT organizations, the statewide IT community can best recognize areas to unify common processes and activities and integrate enterprise technology solutions.

That collaborative approach is already at work in several key areas. In the fiscal year 2019 IT plans submitted to DOA by state agencies, application modernization and business intelligence (BI) initiatives were the two most frequently mentioned top IT goals. Those are two areas for which the enterprise now has active interagency collaboration groups.

Expanding Centers of Excellence

Leveraging centers of excellence doesn’t just mean stockpiling expertise and skill sets in a single agency – increasingly, it means having mechanisms where expertise throughout the enterprise can be pooled, identified, and shared effectively.

In 2017, IT managers from throughout the enterprise established the Application Modernization Collaboration Center (AMCC) to help break down silos between agencies and inspire innovative strategies for modernizing business processes. The AMCC brings toolsets and new ways of doing business to IT and program area staff through mentoring, resource sharing, collaboration, product awareness, and demonstrations. The AMCC promotes tools and enterprise offerings to make application development quicker, more scalable, and more technically stable in the long term. There is momentum and enthusiasm for this initiative and it has become a valuable resource for crowdsourcing expertise in agencies.

An immediate example of the AMCC’s benefit is the formation of a cross-agency group to look at issues around security in the application development process. AMCC members realize this is an increasing challenge, and the difficulties in tackling this independently. Instead, the AMCC is assembling a team to define a set of objectives, desired time frames, and next steps in developing an application development security template. The template can then be used as a starting point for each agency to customize a program that meets their agency’s specific needs. The key is incorporating collaboration at the earliest steps to eliminate duplication of effort and provide agencies with the benefit of sharing their collective knowledge.

Business intelligence presents another opportunity. In early 2018, the state agency IT community formed the Business Intelligence Collaboration Center (BICC), which promotes and advances new ideas for how data can be used to drive decision making, through data management, sharing, and integration. The BICC is a forum for sharing collective experiences across the entire spectrum of data development and data management. The BICC aims to be a resource for business intelligence leaders throughout the enterprise and will produce a yearly report-out on progress and upcoming plans; benchmarks to be established and tracked over time; and a portal for scheduling, marketing, and archiving resources.
Communication
Strategic collaboration places significant responsibility on DET as the central IT organization. Accordingly, DET has launched efforts to improve its communication activities with state agencies, including more systematic use of face-to-face meetings with business and IT managers in agencies. DET’s assistant administrators will schedule regular meetings with individual agencies to discuss their specific customer needs. Expanded communication activities also will include development and delivery of tools and guidance for agencies to better understand what they can do internally to ensure DET can effectively plan and provision agency projects and service requests.

“By encouraging cooperation and collaboration across agency IT organizations, the statewide IT community can best recognize areas to unify common processes and activities and integrate enterprise technology solutions.”
Conclusion: Executing the Plan

A multi-year, enterprise-oriented strategic plan such as this one can only convey the high-level vision and goals. Successful execution relies on mobilizing the ideas and leadership of professionals throughout the state IT community. DET will utilize agency IT leadership, centers of excellence such as the Application Modernization Collaboration Center and Business Intelligence Collaboration Center, business stakeholders, and, importantly, its own staff in formulating the detailed roadmaps that take us from strategy to a more agile and responsive IT environment.

DET has gathered staff input for developing objectives and specific initiatives for achieving the goals in this strategic plan and aligning to the goals of the Department of Administration. Along with the feedback from agency partners, these objectives and initiatives will be used to design roadmaps for going forward, based on the SMART framework – each objective constructed to be Specific, Measurable, Assignable, Realistic, and Time-Related.

The Measurable aspect is key. Metrics for each objective will be articulated, tracked, and published on quarterly dashboards for all partners to see on the DET Portal. DET will likewise integrate the objectives into its performance management program, becoming part of bureau, section, and individual performance metrics and performance evaluations. Meanwhile, DET assistant administrators and other leadership members will continue their periodic face-to-face meetings with customers to verify that enterprise projects and DET services are in line with agency business needs.

This combination of enterprise collaboration and transparent reporting will drive execution of the 2018 Statewide Strategic IT Plan. The result will be cost-effective IT services and solutions that enable state government to analyze information more efficiently and generate insightful decisions for serving Wisconsin businesses and residents.