MINNESOTA IT SERVICES

2018 Annual Report

The business of government... powered by MNIT

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Foreword

The Minnesota IT Services (MNIT) 2018 Annual Report is designed to give a behind-the-scenes look at the work our agency does, and how it affects the daily lives of the citizens of Minnesota. Minnesota IT Services makes sure government technology runs properly on a daily basis, 365 days a year. We diligently and successfully complete hundreds of complex IT projects and we do critical work for our agency partners.

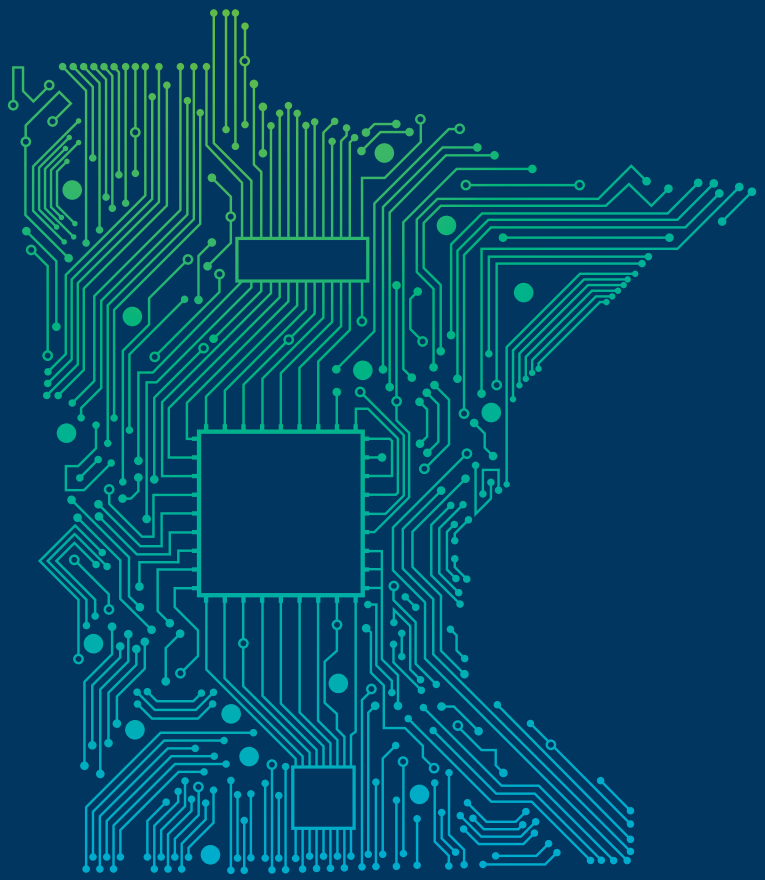
Our important role in government service delivery is validated and recognized nationally. It is underpinned by our very dedicated statewide network of more than 2,300 IT professionals.

In 2017, Minnesota was named the "Best Run State in America" by 24/7 Wall Street. Additionally, Politico named Minnesota the second strongest state in the nation. In 2018, Minnesota received an A- in the Digital States Survey — the most comprehensive review of digital technologies that serve state residents and streamline operations — and earned a top-five national ranking for exemplary work in emerging technologies, innovation, finance, and administration.

Minnesota's high ranking in these reports is often the result of services and applications, from health care to quality of life, that meet the missions of state agencies. They are powered by MNIT's technology, our IT experts, our commitment to better government, and our determination to deliver the very best service to our fellow Minnesotans.

Much of the time, people are unaware of MNIT's role on behalf of state government. This first-ever Annual Report highlights our collaborative role and our partnerships. It demonstrates how we share our expertise, technology, data, and support to provide full, rich, modern experiences to more Minnesotans every day.

We are Minnesota IT Services. We're here for Minnesotans — behind the scenes, everywhere, to make the business of government run.



SECTION 1

Who we are

Minnesota IT Services is the information technology agency for Minnesota's executive branch.

Led by the state's Chief Information Officer, MNIT sets IT strategy, direction, policies, and standards for enterprise IT leadership and planning. We build, maintain, and secure the state's IT infrastructure, applications, projects, and services.

We deliver enterprise and local technology solutions for Minnesota state agencies that transform how government brings services to the people of Minnesota.

- MNIT employs more than 2,300 people across 90 physical locations.
- Our partnerships with more than 70 agencies, boards, and commissions help us meet their IT business needs and strengthen the cybersecurity of the state every day.
- We serve Minnesotans statewide by connecting all 87 counties, 300 cities, and 200 public education and higher education campuses across the state on the MNET broadband network.
- Through public-private partnerships, our team proactively protects the state's information systems and the private data of 5.5 million Minnesotans.

Photos:
This page: Minnesota IT Services professionals
Opposite page: Minnesota Great Outdoors website

SECTION 2

Working for Minnesota

Technology is involved in nearly every aspect of the services that Minnesota state government provides, including health care data and services, air and water quality reporting systems, and preparations for public health emergencies.

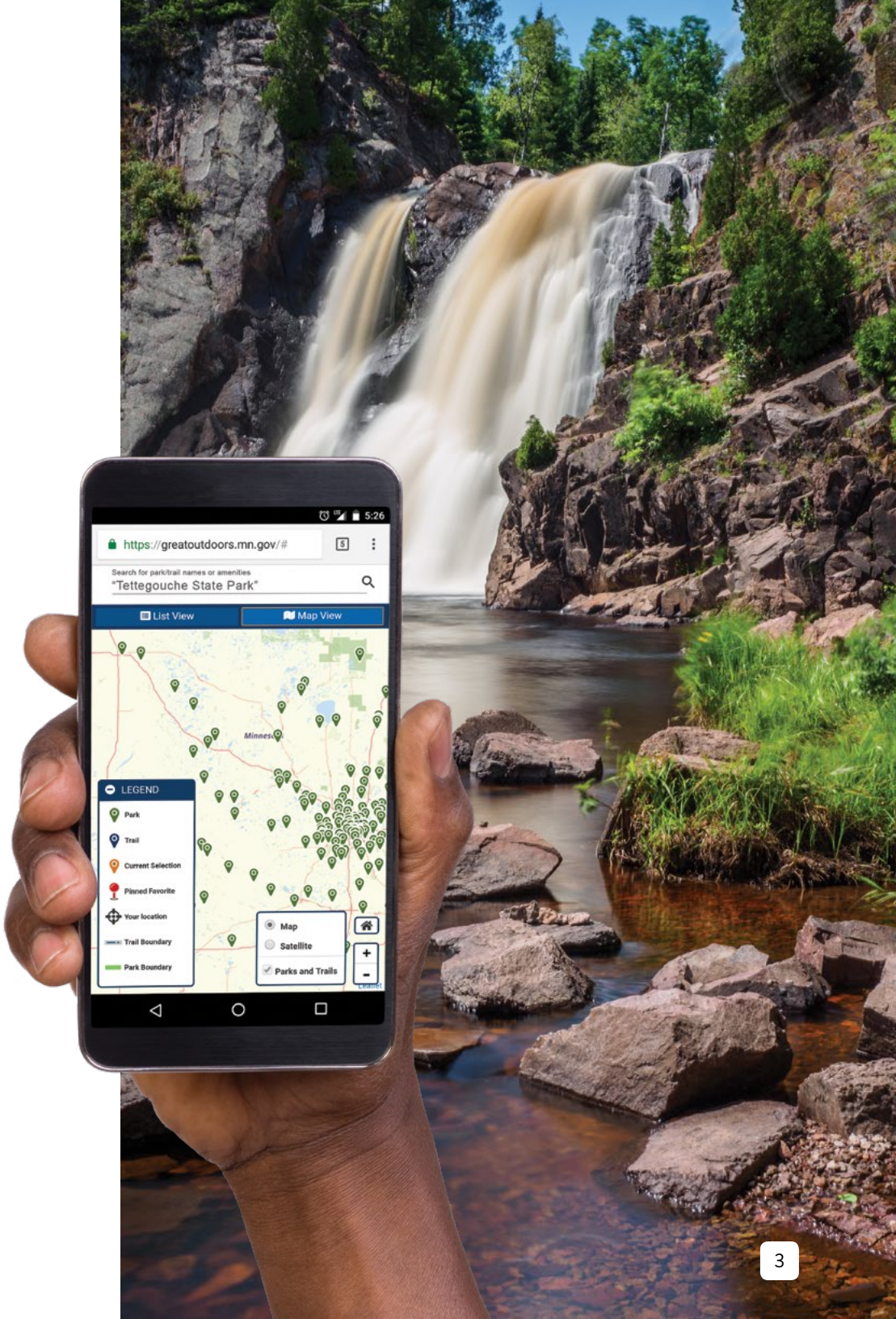
We do much more than what you see. Wherever you look, MNIT is behind the scenes, making sure the business of government runs and never stops. 24 hours a day, 365 days a year, our teams develop, maintain, and safeguard state systems and data. In 2018 MNIT supported and maintained 2,800+ applications that helped Minnesotans:

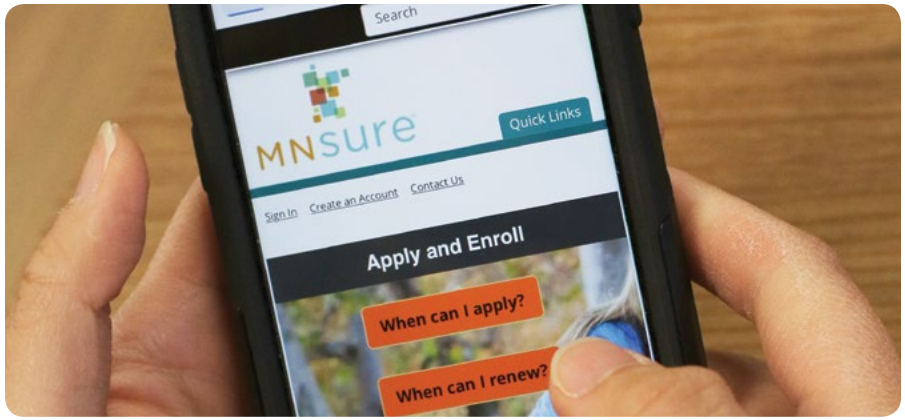
- Search for jobs – 389,736 job seekers had accounts on the MinnesotaWorks.net website.
- Access health care – 123,731 Minnesotans signed up for private health coverage through MNsure.
- Enjoy the great outdoors – 132,030 camping and lodging reservations were made online.
- Access these services and more online – Minnesota state websites received over 31,000,000 visits.

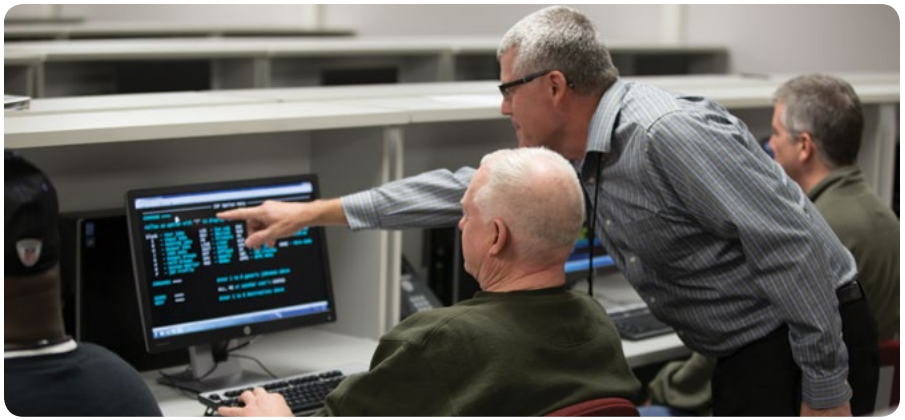
The list is endless, and MNIT supports it transparently.

Together, Minnesota IT Services and our government partners bring services to Minnesotans who live and work in our great state. Those Minnesotans are our families and friends, our neighbors, our colleagues and partners. They all benefit every day from the work we do to keep the business of government running.

Where is Minnesota IT Services at work for you?







Your health

MNIT partners with agencies to provide IT solutions that help meet their missions to protect, maintain, and improve the health and wellness of Minnesotans so they can achieve their highest potential. These digital technologies help consumers and healthcare professionals access the important health information they need.

1. Anyone can Find Health Care Providers using this MNIT-supported application that locates Minnesota's licensed, registered, or certified health care providers in three simple steps.
2. MNIT helps to make sure that individuals and families can shop, compare, and choose health insurance coverage that meets their needs on MNsure, Minnesota's health insurance marketplace website.
3. The MN Public Health Data Access portal provides data on over 20 health and environment topics, like childhood lead exposure, Lyme disease, and drinking water quality. The Cancer Surveillance System tracks occurrences of cancer and the Comprehensive Cancer Control Program strengthens efforts to decrease the negative effects of cancer.

Photos:
This page: The mobile responsive website for MNsure, Minnesota's health insurance marketplace; MNIT disaster recovery exercise
Opposite page: Minnesota Department of Health lab technician using MNIT technology

Your safety

From emergency management to driver and vehicle services, MNIT is working hard with our agency partners to make sure Minnesotans stay safe, and that our state is ready for the future.

1. Next Generation 9-1-1: This nationwide move to a faster, more resilient system will allow citizens to get 911 help using mobile/digital phones, photos, video or text messages. MNIT's Geospatial Information Office is partnering with the Minnesota Department of Public Safety, Emergency Communication Networks division to collect, standardize, and aggregate geospatial datasets — necessary components that will route emergency calls to the correct Public Service Answering Point.
2. Crash information is recorded quickly with the MNCrash system to clear crashes faster and restore safe traffic. The crash data helps our partners at the Departments of Public Safety and Transportation track problem areas, prioritize locations, and proactively provide solutions that can save lives.
3. MNIT partnered with the Anoka Metro Regional Treatment Center (AMRTC) to implement a system for two-way, hands-free wireless communications for 175 staff across the entire facility to improve incident response and safety for patients and staff.

AGILE

Your education

Minnesota is taking the lead on connecting family information with data about state education and workforce, and MNIT is there on the IT front. Minnesotans are now able to access and analyze comprehensive data to make informed policy and spending decisions for the future of our children.

1. MNIT, the Department of Education (MDE), the Department of Health (MDH), and the Department of Human Services (DHS) collaborated to build an integrated system that relied on sharing data between agencies. The system displays data on a public, user friendly website — the Early Childhood Longitudinal Data System (ECLDS). ECLDS tracks students from birth to pre-kindergarten and from K-12 to see how children are doing as they move through our publicly-funded programs and systems.
2. How is Minnesota doing in education? MNIT supports MDE's Data Center and the Data Reports and Analytics that provide a wide array of reports that illustrate Minnesota's data-driven approach to improving education. Parents can use the Minnesota Report Tool to compare schools.
3. MNIT supports the Minnesota Office of Higher Education's state clearinghouse for data, research and analysis on postsecondary enrollment, financial aid, finance, and trends. The Statewide Longitudinal Education Data System (SLEDS) system correlates data from education and the workforce to help create a more seamless and informed system for all Minnesotans.

Photos:
This page: Early Childhood Longitudinal Data System website; MNIT staff that partner with Department of Education
Opposite page: Traffic control room at Department of Transportation

Your money

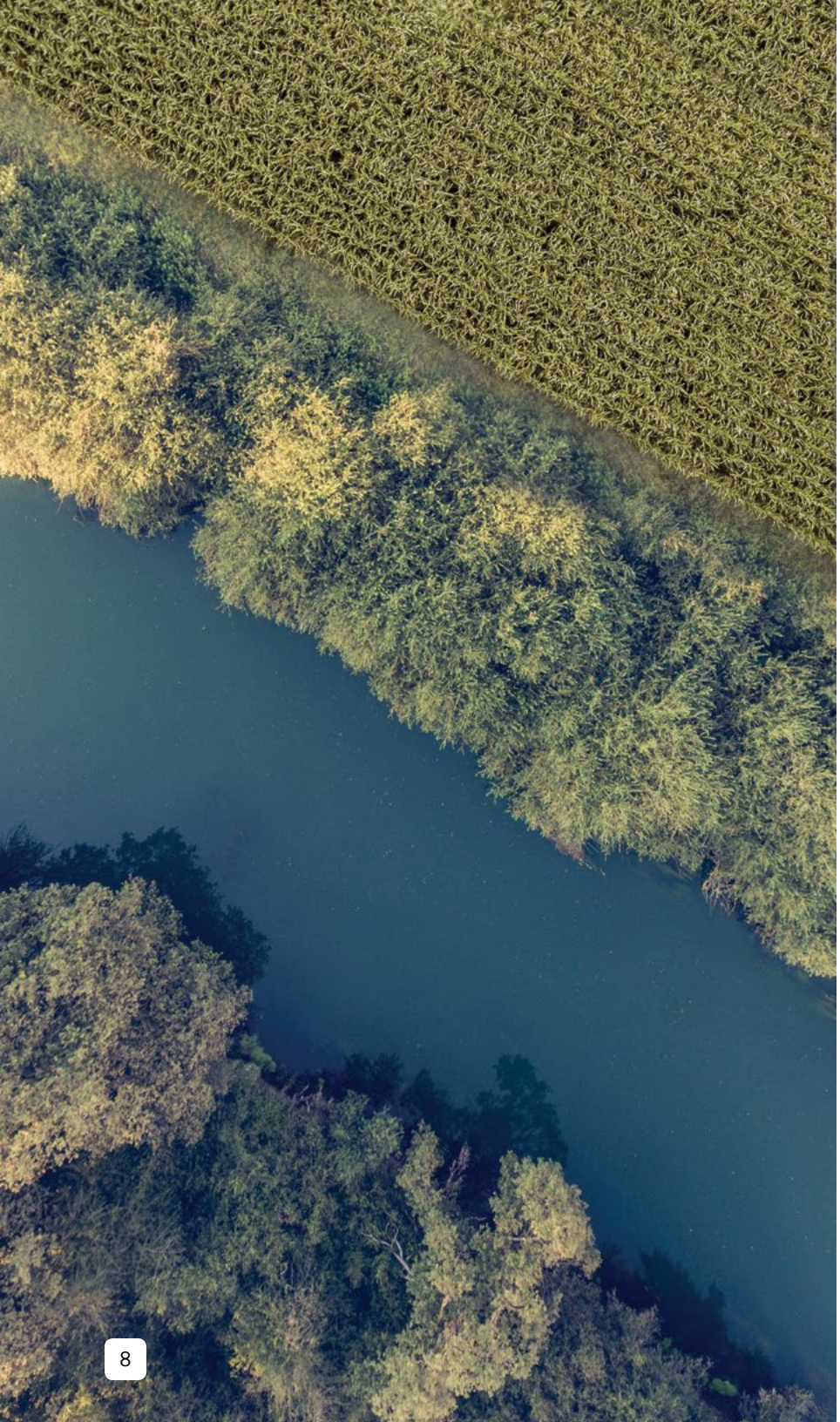
MNIT works with our partners at the Department of Revenue (DOR) to leverage technology that provides information, education and digital services to individuals, businesses, and tax professionals throughout the state.

1. MNIT supports Where's my Refund?, a tool many Minnesotans use every year to check the status of tax refunds.
2. With our DOR partners, MNIT developed a framework that supports several secure communications services for Minnesota taxpayers, including Revenue's Virtual Audit Room, Transaction Room, and the new electronic certificate of real estate value (eCRV).
3. Need tax help? eServices is a one-stop shop for individuals, businesses, tax professionals and local government. Behind the user-friendly web design, MNIT builds, maintains and supports the robust technologies that manage complex exchanges and transactions to help get your tax work done fast.

Your travel

MNIT is a strategic partner with the Minnesota Department of Transportation (MnDOT) across many modes of transportation, from aeronautics, bridges and waterways, to roadways, transit and rail, and even bike and pedestrian paths across the state. Our technologies help travelers reach their destinations and enjoy the great state of Minnesota.

1. MNIT's applications and data-driven services aid MnDOT's mission and decision making. Our integrated devices collect data for design, construction, the scanning and monitoring of structures above and below water, inspections, permitting, land management, and the maintenance of transportation assets, products and services. For example, MNIT configures, hosts, and supports MnDOT's AASHTOWare system which is used to manage the agency's approximately $1 billion construction program.
2. MNIT information technologies help MnDOT provide real-time information so travelers can make informed travel decisions, reduce crashes, congestion, and to provide more reliable travel times.
3. MNIT's applications process and analyze data from devices that no cold weather state should be without. Our work helps MnDOT capture on-the-ground conditions, to increase the efficiency and effectiveness of snow and ice removal, to prevent incidents, and improve safety, so Minnesota travelers reach their family, work, entertainment, and other destinations safely. MNIT partners with MnDOT to support R/WIS, the Road and Weather Information System, that collects, processes, and distributes weather and road surface information to key systems like the 511 traveler information system that leverages private sector partners.



Your environment

Access to knowledge about our environment can help Minnesotans prevent pollution, build healthier communities, and live more sustainable lives. MNIT works with multiple agency partners to provide digital tools and resources that help you stay informed.

1. What's In My Neighborhood provides a searchable map of potentially contaminated sites, permitted facilities, emergency management activities, and pollution prevention projects.
2. MNIT partners with the Minnesota Department of Commerce to offer an interactive "Assessing Your Home" virtual house tour to see how you can save energy in your home. State agencies are also committed to reducing their energy consumption. The Department of Natural Resources (DNR) uses public, dynamic charts to display their efforts.
3. MNIT supports and maintains applications that keep you informed. What's in your water? Public Drinking Water Protection Electronic Submittal and Access improves the accuracy of public drinking water supplies and shares that information across a network of operators and citizens. How's my Lake or Stream is an intuitive app that gives the overall condition, water clarity, recreational uses, and fish consumption advisories for hundreds of bodies of water. The DNR's Buffer Mapping Project engaged MNIT teams from the DNR, Board of Water and Soil Resources, and Geospatial Information Services. The buffer protection map and the Buffer Compliance map display data gathered from the Buffer Compliance and Tracking tool.
4. Air quality monitoring is serious business, and MNIT helps its agency partner support that. You can get daily updates, alerts and forecasts on the Minnesota Pollution Control Agency website, sign up for emails, or download the Minnesota Air mobile app that received a Minnesota State Government Innovation Award for its use of artificial intelligence to gather weather information.

Photos:
This page: Corn field and buffer zones adjacent to a river
Opposite page: People enjoying Split Rock Lighthouse State Park

5. MNIT partnered with the Department of Agriculture to develop the Minnesota Runoff Risk Advisory Forecast tool that uses location-specific data to help farmers find the best time to apply manure to minimize the impact to lakes and streams.

Your enjoyment

In today's world, people need digital access to information, especially when they are on the go and looking for ways to enjoy Minnesota's unique leisure opportunities. MNIT works with our agency partners to provide accessible, responsive digital access anytime, from anywhere.

1. The Minnesota Great Outdoors website provides easy access to information about Minnesota's parks and trails. This collaborative effort between four entities (MNIT, DNR, the Metropolitan Council, the Greater Minnesota Regional Parks and Trails Commission) consolidated geospatial information that existed in dozens of places into a single website. Now it's easier for Minnesotans to find the outdoor options that might be just beyond their back door, or near a favorite destination.
2. MNIT and DNR took the DNR's public website to the cloud with mobile-friendly information that meets digital accessibility standards, and features improved security and DDoS (distributed denial of service) protections. Minnesotans can buy a fishing, hunting or trapping license, browse maps, and find information about state parks and events to enjoy the beautiful seasons in Minnesota.
3. MNIT designs, maintains and supports the State of Minnesota website (mn.gov), that includes MN Connect — a collection of apps and mobile websites to help you search for your next great adventure: Find lakes near you and around the state. Where can you see the best fall colors this weekend? Take a virtual tour of state parks without leaving home. Discover recreational areas where you can experience the unique Minnesota nature. You'll want to check the traffic before you go.

Your work

If you're looking for a job or changing careers, MNIT is there building access to digital information that keeps you working.

1. MNIT partners with the Minnesota Department of Employment and Economic Development (DEED) to provide a wealth of information for job seekers at any stage of their career, with links to thousands of listings statewide.
2. MNIT also works with our DEED partners to provide Labor Market Information for job seekers, career explorers, employers and news media, including useful information from Minnesota Economic Trends to Export and Trade Statistics. The data tools site offers a wide array of statistics to answer many questions regarding job opportunities and economic development.
3. Minnesota offers great opportunities for state employment. MNIT works with our partners at Minnesota Management and Budget to provide an easy to use Careers MN website that helps job seekers find the right fit.

Your business

If you're starting a new business or operating a business of any size, MNIT helps our business partners at many agencies build, maintain, and support modern technologies that make it easy to find the information and resources you need.

1. The Minnesota Department of Revenue strives to meet the needs of businesses, and MNIT is there to help with technology like the eServices for Businesses online system. Businesses can file returns, make payments, communicate with the department, and view account information. You can also find information you need to know about starting a business in Minnesota.
2. Food Business Licensing and Food Safety Wizard, a multi-agency collaboration between the Departments of Agriculture and Health, is an online app designed and powered by MNIT. The step-by-step wizard directs entrepreneurs exactly where they need to go for licensing and inspections of permanent and mobile retail food businesses. It's available in four languages (English, Spanish, Somali, and Hmong).

Your government

Ever wonder what your tax dollars pay for? Or how public policies are formed, and laws enacted? MNIT partners with agencies to develop data gathering tools and applications that deliver digital information to citizens.

1. The Transparency MN website is a single site designed to provide access to information about how your tax dollars are being spent to support state government programs. Supported by MNIT, it makes Minnesota's state government finances and operations more transparent and accountable to citizens. The 2018 "Follow the Money" Report rated Minnesota as a top 10 state, citing this newly overhauled website that improved the user experience.
2. Minnesota Management and Budget enlisted MNIT to produce the Open Checkbook app that provides government transparency. Minnesotans can find state agency budgets and payments, state employee salary information, Minnesota tax expenditures, state agency audits, state financial reports, and local government and school district finances.
3. The Minnesota Department of Transportation's Re-Thinking I-94 project uses an interactive online mapping tool supported by MNIT to crowdsource citizen feedback about the I-94 corridor. Citizens can read about the project, visit the map, and add a comment to a spot on the map. Citizens can also read other comments by clicking on "pins" in the map.

We make the business of state government run.

SECTION 3

From Ada to Zumbrota, Minnesota IT Services is everywhere

At MNIT, we understand the important role technology plays in providing state-run services. MNIT provides support across the IT spectrum, enabling Minnesota's state agency partners to connect with the Minnesotans they serve and carry out day-to-day business. Our services manage and support the systems, networks, and hardware that keep Minnesota government running.

Digital government

Demand for digital government services has exploded over the last few years, and it continues to grow. Citizens need mobile websites and online services more than ever before, and that requires modern systems and applications.

Some digital apps, like BuffCAT, help citizens and government comply with state law and Governor's initiatives.

Others, such as the Veteran's Affairs LinkVet and Statistics Mapping tool help meet the state's commitment to homelessness prevention and employment for veterans.

MNIT's work helps support families and children. The new Minnesota Child Support Online app has processed 53,000+ payments for a total of more than $26 million.

Some state applications are developed by MNIT, and others are developed by third party vendors and supported by MNIT.

Number of online services that citizens can access from Minnesota state agencies

Our services

Minnesota IT Services provides a wide range of services.

CONNECTIVITY

Network, telecommunications, and conferencing services that make it possible for our partners to stay connected and carry out day-to-day business.

END USER SUPPORT

Hardware, software, services, and tech support for computers and mobile devices, available in cost-effective bundles.

INFRA-STRUCTURE

Secure virtualized hosting solutions in the state's data centers and mainframe for legacy applications and systems.

PLATFORM

Platform services allow partners to develop, run, and manage their database, electronic document management and middleware applications with ease.

SOFTWARE

Cloud computing services that host data and applications which are made available via the internet.

MNIT operations by the numbers:

2,300+
Employees

2,800+
Number of applications supported

898,000+
Number of customer interactions in 2018

350+
Active IT projects in 2018

89
Number of websites we host and support

Minnesota's backbone network: MNET

Minnesota's Network for Enterprise Technology (MNET) is the statewide network that provides a business-oriented, telecommunications strategy to address the full range of telecommunications services used by state agencies and local government customers. Services available on MNET range from basic phone service and call centers, to telecommuting support for state employees, and video conferencing services that support long-distance learning for students. The strategy also provides wireless and statewide broadband access to the internet, making it possible to provide Minnesotans with access to modern digital technologies and government services in an effective, timely, and cost-effective manner.

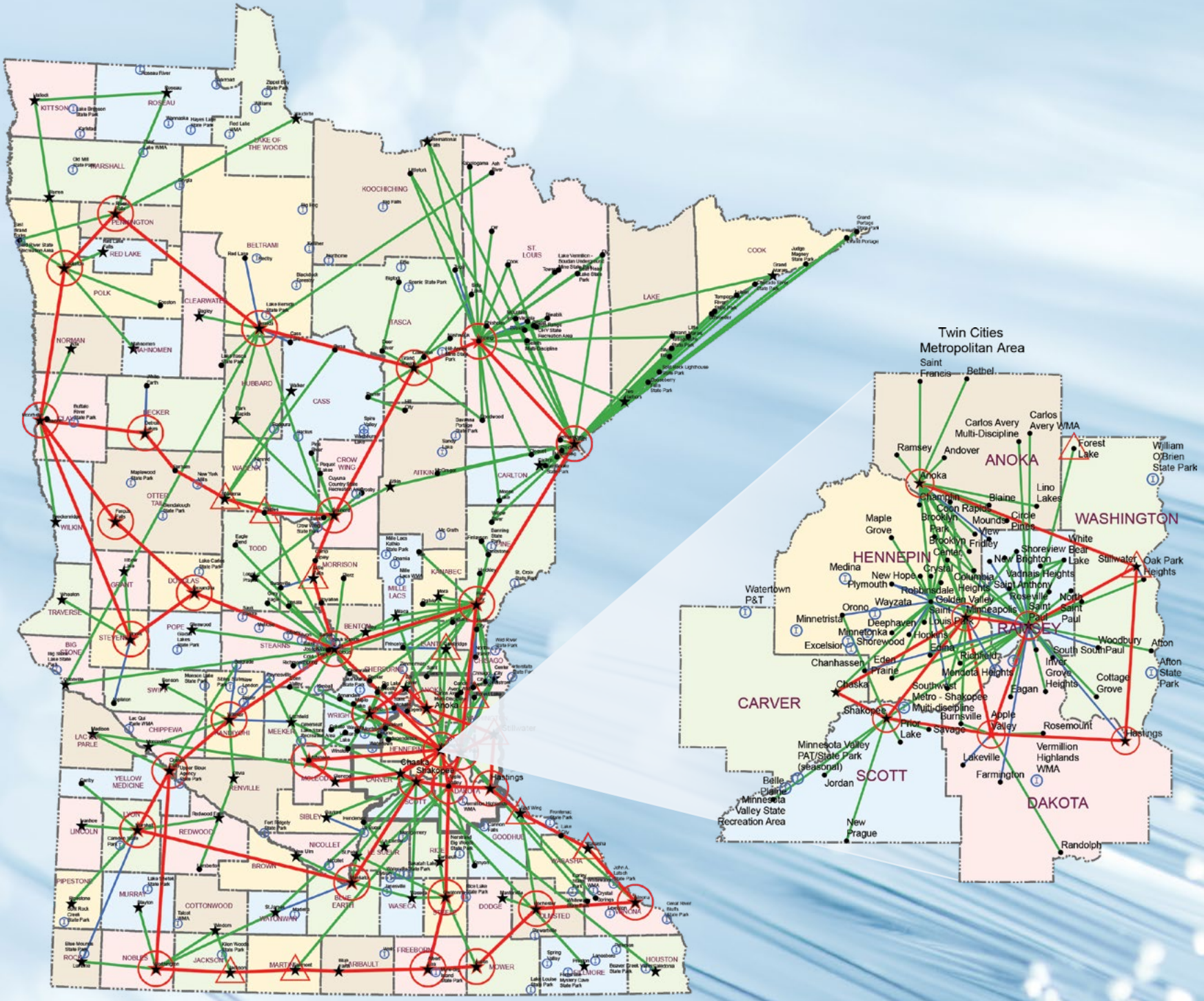
If a picture is worth a thousand words, the MNET map says it all. Since 1993, MNET has supported digital operations and connections in 300+ cities across Minnesota for more than 375 public sector partners:

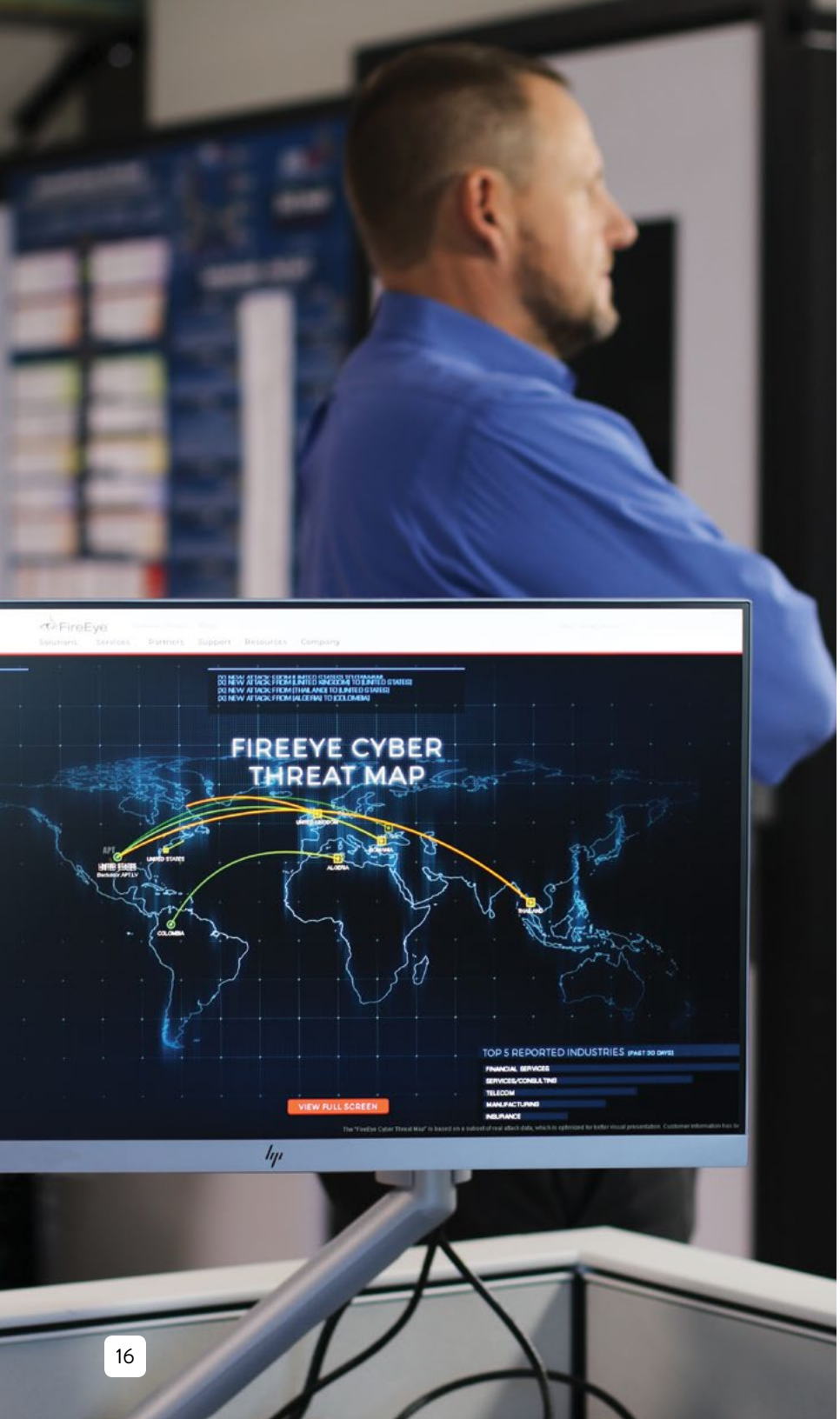
- Executive, legislative, and judicial branches of state government
- All 87 counties and some cities
- Public safety, libraries, and health care
- Education, including K-12 education consortiums, the University of Minnesota, and Minnesota State Colleges and Universities

MNET by the numbers:

SERVICE	REACH
WAN	Connecting over 1,700 locations in 300+ cities to MNET.
LAN	Managing 1,200+ locations and support for 6,500 LAN and 2,300 WLAN devices.
Voice	Supporting 35,000 phones and 2,000 contact center agents in 55 contact centers.
Firewall	Protecting over 1,200 state office locations and the two main state data centers.
Conferencing	Providing video and audio collaboration in more than 500 locations.

Photo:
Opposite page: Map of Minnesota's network, MNET


Twin Cities
Metropolitan Area
ANOKA
WASHINGTON
HENNEPIN
RAMSEY
CARVER
SCOTT
DAKOTA
Saint Francis
Bethel
Carlos Avery Multi-Discipline
Carlos Avery WMA
Ramsey
Andover
Forest Lake
William O'Brien State Park
Anoka
Champlin
Coon Rapids
Brooklyn Park
Brooklyn Center
Maple Grove
Blaine
Mounds View
Fridley
Lino Lakes
Circle Pines
White Bear Lake
Shoreview
New Brighton
Stillwater
Oak Park Heights
Medina
New Hope
Plymouth
Crystal
Robbinsdale
Columbia Heights
Vadnais Heights
Saint Anthony
Roseville
North Saint Paul
Watertown P&T
Orono
Wayzata
Golden Valley
Minneapolis
Saint Paul
Minnetrista
Deephaven
Saint Louis Park
Minnetonka
Hopkins
Shorewood
Excelsior
Edina
Richfield
Woodbury
South South Paul
Afton
Chanhassen
Eden Prairie
Mendota Heights
Inver Grove Heights
Afton State Park
Chaska
Southwest Metro - Shakopee Multi-discipline
Eagan
Cottage Grove
Shakopee
Burnsville
Apple Valley
Prior Lake
Savage
Rosemount
Hastings
Minnesota Valley PAT/State Park (seasonal)
Lakeville
Vermillion Highlands WMA
Jordan
Farmington
Belle Plaine
Minnesota Valley State Recreation Area
New Prague
Randolph



SECTION 4

Programs and governance

Cybersecurity

Cybersecurity is a top priority for MNIT and for Minnesota's government. MNIT manages all information technology security practices for the State of Minnesota. It is our duty to protect the information entrusted to us by Minnesotans. While MNIT exceeds standard security measures, we remain vigilant. We are aware of cyber-criminals who seek to gain unauthorized access to state systems. Because of this, we are on duty all day, every day keeping state data secure. MNIT's strategic approach has three main areas:

1. **Develop a long-range strategic plan and put it into action.**

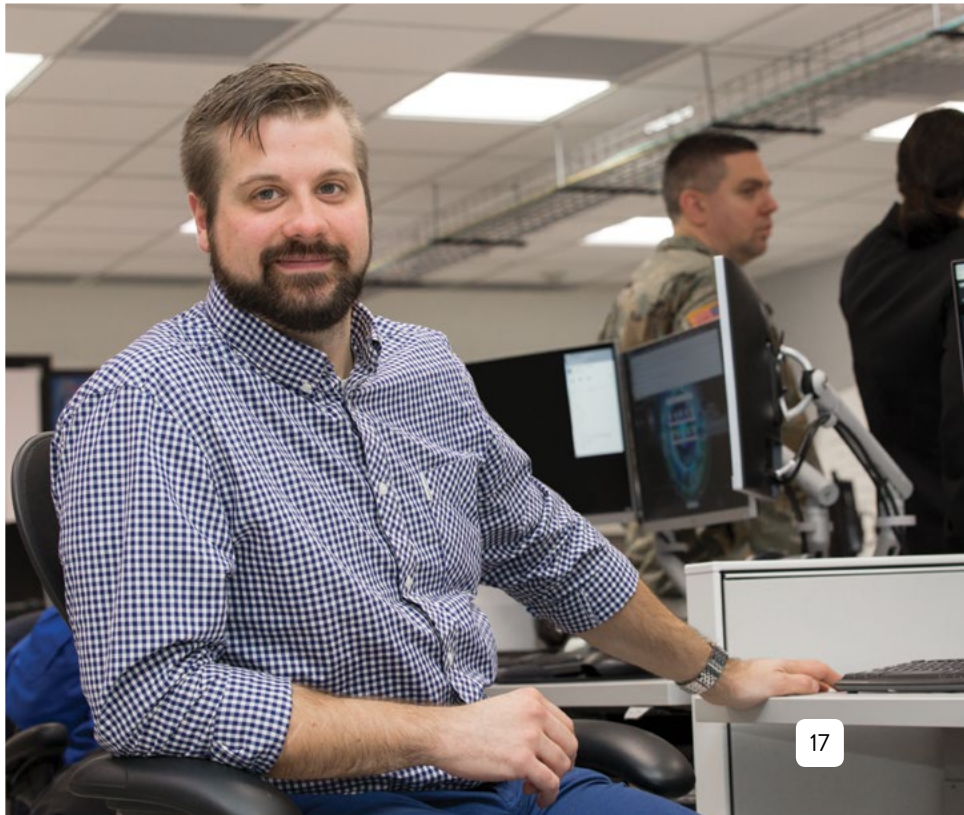
   MNIT's Information Security Strategic Plan does not specifically call for more spending to make security "bigger," but it outlines steps that must be taken to make security "better." This plan prioritizes the initiatives for the management, control, and protection of the state's information assets. It identifies 18 major strategies that Minnesota IT Services hopes to achieve over the next five years, resources permitting. The plan also highlights specific milestones for the ensuing year, things that MNIT expects to accomplish with existing resources.

2. **Inventory the state's technology using Security Risk Scorecards for business partners.**

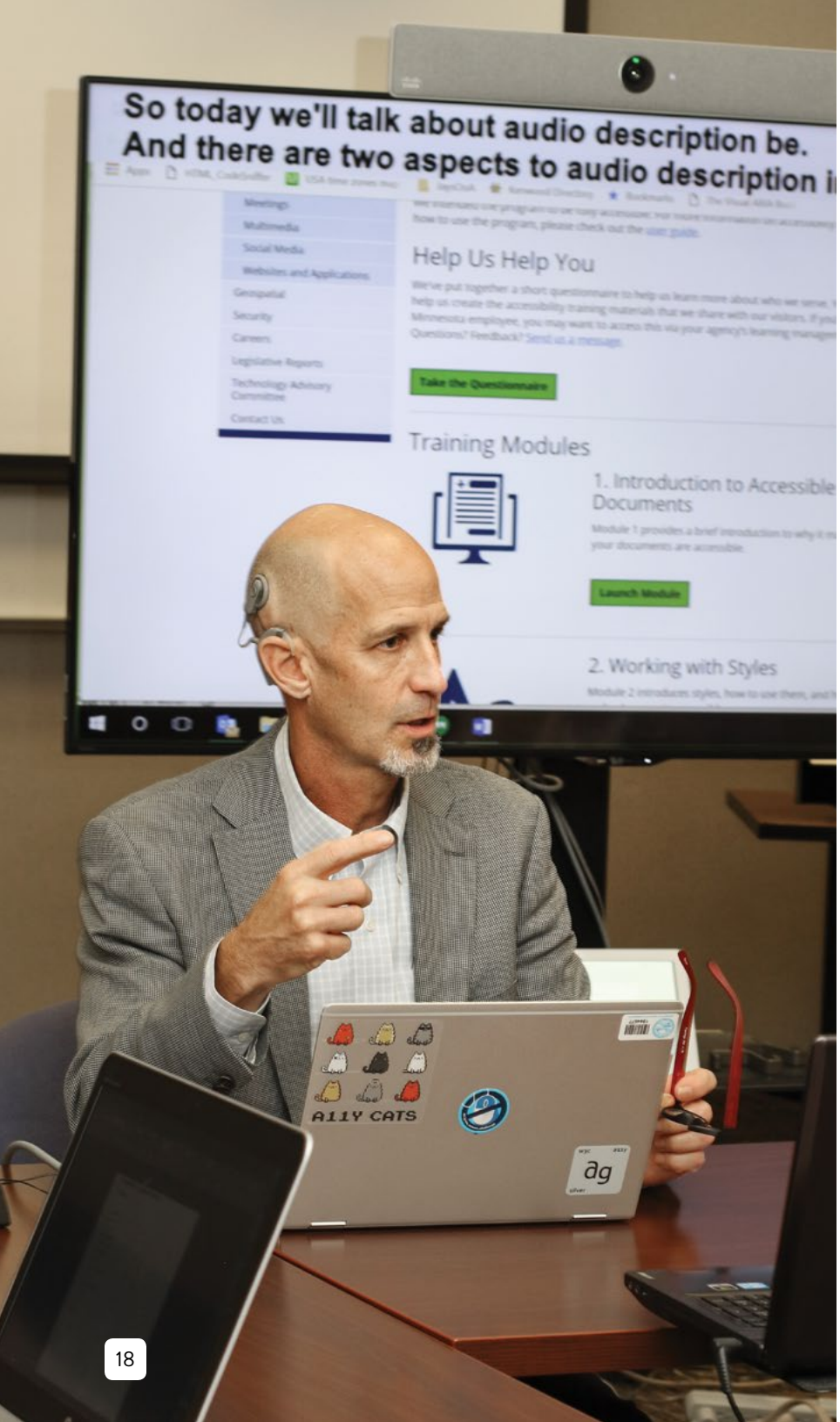
   We help our business partners know exactly what information and technology they have, what the security risks are, and how their business decisions and investments impact those risks. Our Scorecards are now embedded into operations, and they are improving the security of information and information technology systems for Minnesota state government. Knowing agency business needs and constraints allows MNIT to reprioritize, escalate or postpone IT projects, making us more effective and efficient business partners.

3. **Build robust security features into our centralized services as a standard for all state government partners.**

   To ensure secure systems for all government, MNIT has built-in security services for all services offered by MNIT, including Access Control, Identity Access Management, Business Continuity and Risk Management, Intrusion Detection Prevention, Threat and Vulnerability Management, Forensics, Security Information Event Management, Boundary and Endpoint Defense, Security Incident Response, and Security Training and Awareness.



Photos:
Opposite page: Threat map shown in Minnesota's Security Operations Center (SOC)
This page: Top: Stefanie Horvath, MNIT's Executive IT Director, coordinating a joint Minnesota National Guard / MNIT cybersecurity exercise
Bottom: Staff member performing cybersecurity threat detection



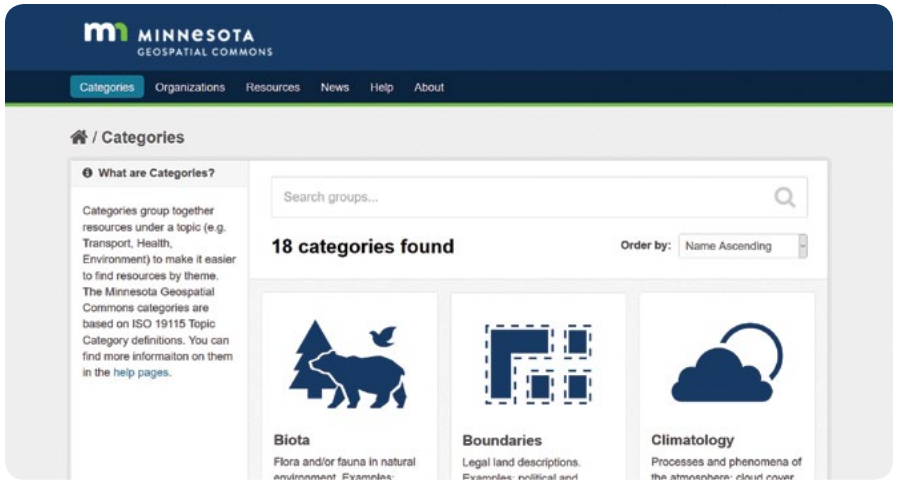
Office of Accessibility

Whether an agency is planning an application or website implementation, has questions about captioning, or needs to create accessible documents, they can find helpful information and resources created by our Office of Accessibility. The Office of Accessibility was created by statute, and is led by the Chief Information Accessibility Officer (CIAO). By statute, MNIT's Commissioner oversees compliance with the accessibility standard for state agencies (16E.03, subd 9), and all executive branch employees are expected to support and adhere to the accessibility standard. The Office of Accessibility is charged with providing guidance, support, training, and resources for state agencies to help make their operations and services accessible and usable. At MNIT, accessibility is embedded in our culture — as of January 2015, all MNIT position descriptions included accessibility as a responsibility.

IT procurement and staffing

MNIT co-manages the state's IT procurement and contracting programs with the Department of Adminstration's Office of State Procurement. Eligible entities can purchase standard IT hardware, software, mobile devices, and accessible meeting services using specially designated state contracts that leverage the combined buying power of Minnesota's state agencies, local governments, educational institutions, and other government entities. They have partnered with the Office of Accessibility to create the Accessibility MN Master Contract Program to support the state's objective to maximize accessibility for all Minnesotans by providing end-users with cost effective captioning, remediation, and document/template creation and conversion services.

MNSITE (Minnesota Seeking IT Expertise) is the latest enterprise master contract for IT staffing, a streamlined, automated program for state agencies and members of the state's Cooperative Purchasing Venture. Eligible members may secure highly-skilled IT professional contractors and consultants for staff augmentation or deliverable/fixed cost services.



Minnesota Geospatial Information Office

The Minnesota Geospatial Information Office was established in May of 2009 with a legislatively defined responsibility to coordinate geographic information systems (GIS) within Minnesota. Guided by state agencies and other stakeholders from government and non-government organizations, its coordination activities focus on six core activities including community outreach, communications, geospatial data and technology coordination, data and web services, training, and technical guidance.

The program team manages the Minnesota Geospatial Commons, the multiple award-winning collaborative public website where publishers can share, and users can access geospatial resources — data, maps, services and applications. Designed to meet the long-term needs of the geospatial community, the Geospatial Commons is available to the public for individuals and organizations with interests in GIS resources and knowledge.

Governance

Enterprise governance sets a common destination for state information technology by identifying the priorities and projects that will move Minnesota forward.

Technology Advisory Committee

Since 2011, the Technology Advisory Committee, part of a larger state IT governance structure, helps to ensure that all constituencies have input into the direction of the enterprise. The Technology Advisory Committee is charged with advising the State CIO on development and implementation of:

- A state IT strategic plan
- Critical IT initiatives for the state
- IT architecture standards
- Identification of business and technical needs of agencies
- Strategic IT portfolio management
- Project prioritization
- Investment decisions
- MNIT's performance measures and fees for service agreements with agencies
- Management of state enterprise technology revolving fund
- Efficient and effective operation of MNIT

Photos:
Opposite page: Jay Wyant, Minnesota IT Services' Chief Information Accessibility Officer, addressing a cross-agency group of accessibility coordinators
This page: Minnesota Geospatial Commons website

Enterprise governance teams

Five teams work closely with Minnesota's Chief Information Officer to plan for the future of the state in today's digital landscape.

Financial Team: forecasting, budgeting, and expending

Purpose

- Budget and expend to enable IT operations
- Provide transparency
- Maximize time available to make spending decisions

Responsibilities

- Match spending levels to reflect priorities
- Communicate spending budgets and expenditures
- Adjust level of spending to reflect priorities
- Proactively work with other sub-teams to ensure financial efficiency
- Maintain a close working relationship with the Service sub-team

Service Team: align shared services

Purpose

- Govern shared services
- Define and select shared services
- Set delivery terms and performance standards

Responsibilities

- Align shared services to increase business value
- Select and provision as centralized, decentralized or hybrid
- Develop and maintain value metrics
- Develop and maintain service levels
- Charter sub-teams for solution matching
- Maintain a close working relationship with the Financial sub-team

Standards Team: oversight of IT standards

Purpose

- Align IT standards with business process
- Ensure consistency in standards and policies
- Communicate to all stakeholders

Responsibilities

- Align IT standards with enterprise polices and strategies
- Communicate standards and strategies to appropriate stakeholders
- Charter ad hoc and standing teams to address specific issues

Steering Team: decide, oversee, govern purpose

Purpose

- Key decision-making body
- Provides oversight and steering to governance teams
- Charter sub-teams to manage specified IT operations
- Establish a process for assigning issues and requests

Responsibilities

- Develop and communicate a statewide strategic IT plan
- Determine how IT is used by the business/agencies
- Set direction for internal operations

- Direct investments
- Develop legislation to align IT capabilities
- Communicate IT decisions and directions
- Charter additional sub teams
- Ensure IT staff is available

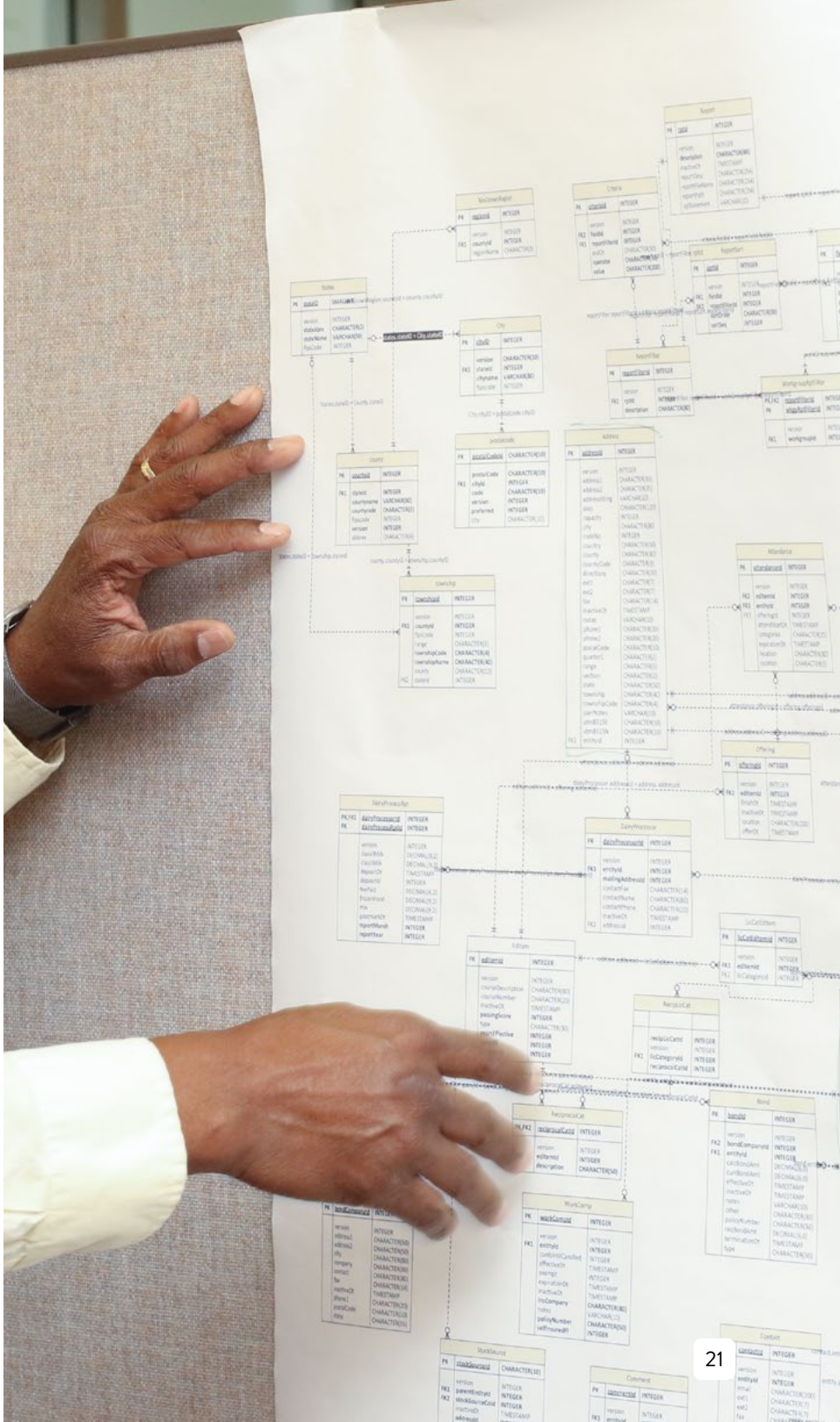
Strategy Team: plan IT investment

Purpose

- Develop IT strategies to support business strategies
- Align investment to meet business needs and add value
- Keep strategies updated

Responsibilities

- Align investment with agency strategies
- Develop, validate, and maintain IT strategies
- Prioritize IT investment
- Charter ad hoc and standing teams

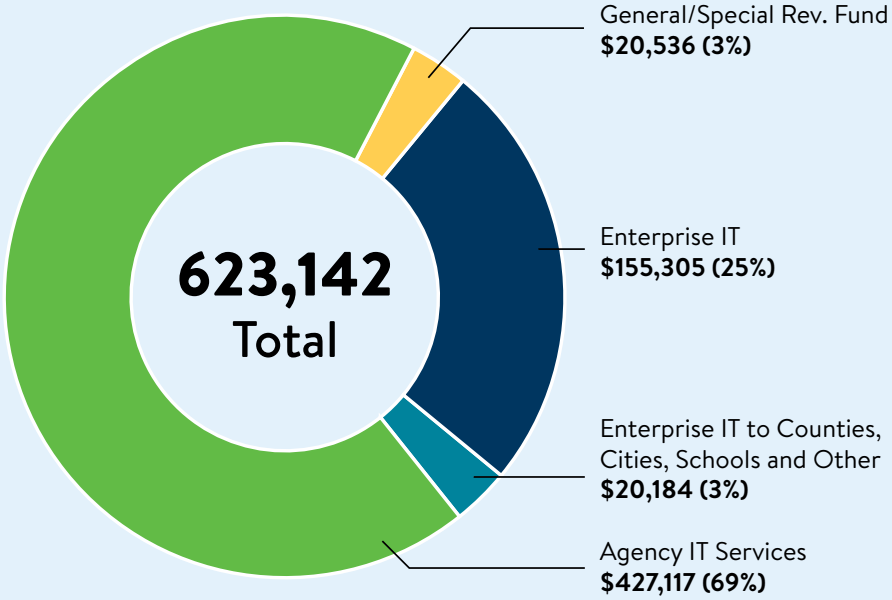


SECTION 5

Fiscal year financial summary

How is MNIT funded?

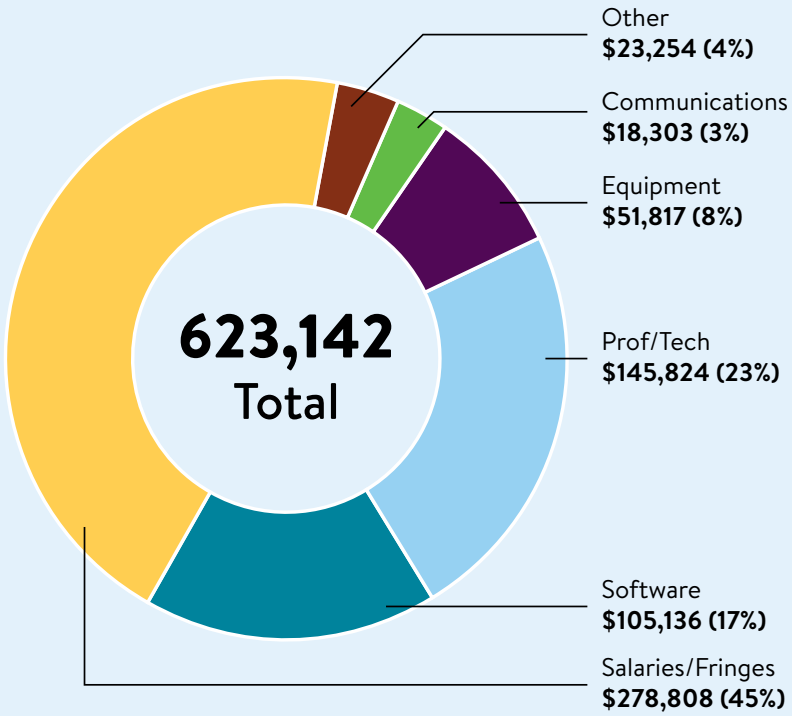
MNIT funding source, FY18 actual (in thousands)



Agency IT Services: Mainly agency apps and projects (pass-through)
Enterprise IT: Rate-based services, including Master Lease
General/Special Rev. Fund: Leadership, BIT, Odyssey (ITA), BUY.IT, TAM, E-Licensing, Homeland Security

How are MNIT's funds spent?

MNIT expense by account class, FY18 actual (in thousands)



Prof/Tech: Includes outside and state vendors
Other: Includes Other Operating, Space and Utilities, Statewide Indirect, Travel, Supplies, Employee Development, Federal Liability, Working Capital, Debt Service

MNIT maintains low IT spend

IT spend is the amount an organization spends on IT (including grants, aid and subsidies) compared to the total of all expenses. At MNIT, we look at this from an enterprise perspective. Minnesota agencies that are subject to IT consolidation had a total of $35 billion in expenses. Of that amount, IT expenses for only those agencies accounted for $603 million, or 1.7 percent of their total expenses.

Gartner Research states that the industry benchmark for IT spend for state/local governments with revenue of greater than $10 billion is 2.4 percent. MNIT maintains a much lower IT spend at 1.7 percent through introducing enterprise services that bring down unit costs for rates, aggregating the buying power of the state, and economies of scale that reduce costs for services like workstation management.

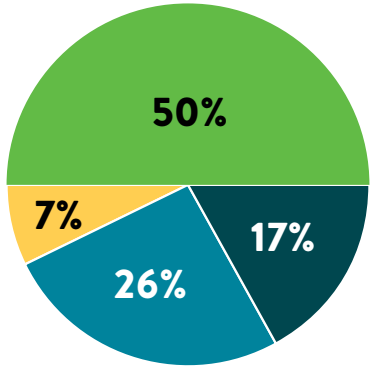
MNIT rate satisfaction synopsis

93% of MNIT's FY18 service rates were rated "reasonable," "very reasonable," or "best value" by Science Applications International Corporation (SAIC®), an outside consultant, compared to 31 other states.

Results were based on available benchmark data from 31 state government peers, representing multiple sizes and consolidation levels, as well as a private industry benchmark analysis tool. Benchmarks were representative of organizations with similar constraints and challenges inherent to MNIT. Rates were included in the synopsis if at least two comparable benchmarks were discovered.

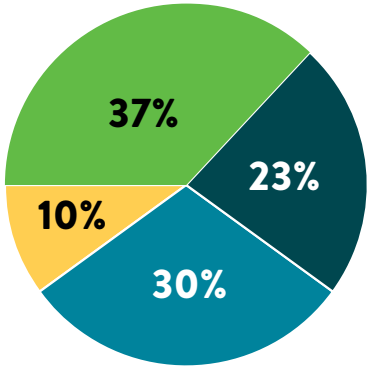
All services assessed against state benchmarks

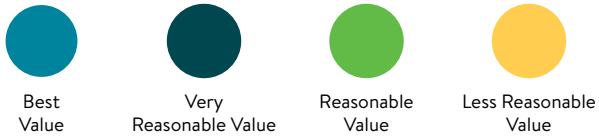
93 percent of the MNIT rates analyzed were found to be "Reasonable" to "Best Value"



All services assessed against both state and private vendor benchmarks

90 percent of the MNIT rates analyzed were found to be "Reasonable" to "Best Value"





SECTION 6

2018: Accomplishments and opportunities

Grade A

Minnesota received an overall grade of A- in the 2018 Digital States Survey, up from a grade of B+ in 2016. Under the Digital States criteria, an "A" grade reflects states that are trending sharply up, showing improved results across all survey categories, including adaptive leadership and innovation in digital technologies, service delivery — programmatic impacts and transformation, citizen experience with government, and emerging technologies/innovation and collaboration.

Only ten states received an "A" grade in the 2016 Digital States Survey, and in 2018 Minnesota joined the list of top performers. According to the Center for Digital Government, top states use modernization to achieve operational efficiencies and strategic priorities under nimble leaders, and they widely adopt strong performance measures and metrics as they work to provide services to their citizens. In addition to its top grade, Minnesota is recognized as "Top 5" for its exemplary work in Emerging Technologies/Innovation (3rd Place) and in Finance and Administration (4th Place).

Building a talent pipeline

To obtain a qualified, diverse IT workforce of tomorrow, MNIT looks at innovative ways to open doors to careers in technology today, and to address racial, gender, or disability disparities in state employment, as well as career pathway and mobility opportunities for current state workers. MNIT needs diverse talent and skilled employees to help us succeed in our mission to deliver the IT services that Minnesotans need, not just now, but into the future.

In September, the State of Minnesota welcomed its first cohort of six IT trainees to the MNIT-MNPathways program, a program to create internships and entry level job opportunities with MNIT. Selected candidates receive the specialized training, skills, and knowledge to prepare them for permanent, classified employment with MNIT.

This year we also hosted 10 student participants of the National Science Foundation's CyberCorps Scholarship for Service program. This national initiative has opened career opportunities in cybersecurity, and also provided a unique opportunity for MNIT to recruit and build the next generation of professionals that protect the government's critical information infrastructure.

Photo:
Opposite page: MNIT's Enterprise Service Desk team

Strength in diversity

Numerous studies have shown that diversity in a workplace creates a higher potential for innovation, creativity, flexibility, analytical capabilities, and productivity. MNIT committed itself to ensuring that interview pools closely mirrored qualified applicant pools. We diversified our recruitment strategies, analyzed all interview questions and scoring criteria against qualifications; standardized forms and justifications for non-affirmative hires; and trained every hiring manager in best practices to mitigate the effects of unconscious bias and ensure equal opportunity for every applicant. The result? Minnesota IT Services has significantly diversified its workforce, and is proud to announce that its current staff makeup within the 2,300+ person agency is:

- 37 percent women
- 23 percent racial/ethnic minorities:
    - 0.6 percent American Indian
    - 13.8 percent Asian
    - 5.6 percent Black
    - 1.8 percent Hispanic
    - 1.1 percent Multiracial
- 8 percent persons with a disability
- 9 percent veterans

MNIT exceeds comparisons nationally and locally — only 25-27 percent of IT professionals nationally and locally are women; in the metro area, racial/ethnic minorities make up 19 percent of the IT workforce.

By expanding hiring pools and promoting fairness and equality, we are building a workforce that is not only poised to tackle the toughest IT challenges, but better reflects the state we serve with our partner agencies, and makes our shared communities stronger.

Cybersecurity outreach and partnerships

MNIT maintains MNET, and the Security Operations Center (SOC) constantly monitors key cybersecurity events around the state — it's like having a private "Minnesota Cloud." This keeps us informed about any IT security issues facing law enforcement across the state. We work with counties on the Homeland Security Grant to shore up county IT defenses. At the state level, during the recent election, we bolstered the SOC with extra staff from the National Guard.

MNIT engaged younger audiences at several events during the year, including the MS-ISAC Kids Safe Online national poster contest, STEM Day at the Minnesota State Fair, and led activities for elementary and middle school-aged students and their families as part of The Works Museum's Explore IT! Series in Bloomington, Minnesota. Our creative team introduced students to cybersecurity vocabulary and asked them to think about using hard-to-guess passwords that can help to keep everyone safe. Families posed by our "selfie wall," created "codes" with a cipher, played security-themed Jenga, and burned off some extra energy by running around to act out a computer mainframe under attack.

The Minnesota government cloud

One of the largest cloud migrations in the past two years was the move to O365 Government Cloud. In the first six months of 2017, MNIT migrated the State of Minnesota to Microsoft Office 365 government cloud (O365). This included more than 40,000 Identity, Skype, Outlook, OneDrive, and SharePoint accounts and sites migrated on concurrent schedules. The work continued in other projects, like the Software Defined Data Center (SDDC) project that advanced the hyper-converged infrastructure, creating a new standard for the State of Minnesota's infrastructure deployment. Moving from 53 individual environments to a vCloud Foundation environment provided a way to deliver services to the partner agencies in a consistent and secure manner, constructing private data centers that match public cloud capabilities.

Minnesota continues to decrease our physical data center footprint. In 2010, the state's data centers were extremely complex, difficult to maintain, at high risk of failures and increasing in cost beyond the norm. In just eight years, we've reduced the original 36+ data centers and more than 70 data storage facilities to 16 data centers at the end of 2018.

Photo:
MNIT's enterprise data center

Recognizing excellence

Two MNIT professionals were awarded 2018 Visionary Leadership awards from the Cyber Security Summit. Stefanie Horvath, MNIT's Executive IT Director, was presented with the Governance Champion Visionary Leadership Award, and Neal Dawson, MNIT's Vulnerability Management Director, was presented with the Security Operations Visionary Leadership Award, for an individual who "champions and implements innovation, inspires collaboration, is focused on improving service, and demonstrates a personal commitment to advancing the professional and career development of him/herself as well as others in their agency."

Each year, the Golden GOVIT Awards recognize government agencies and other public sector institutions that have advanced government technology through collaboration, innovation, and service. This year, MNIT employee Bruce Zimmerman received the Individual Leadership award that recognizes an individual who "champions and implements innovation, inspires collaboration, is focused on improving service, and demonstrates a personal commitment to advancing the professional and career development of himself as well as others in our agency." A 2018 Golden GOVIT Award for Collaboration was awarded to the MNScreen project, a partnership between MNIT, the Minnesota Department of Health, vendors, and Newborn Screening subject matter experts from the short-term follow up, laboratory, and operations units. MNScreen is an electronic reporting system that allows hospitals to send pulse oximetry and hearing screening results to the Newborn Screening Program, reducing manual entries, time, and errors.

Optimizing business processes

The organizational structure for IT in Minnesota makes it unique among other states, because all IT functions and staff are managed under a fully-consolidated model under the direction of the State CIO. This model afforded both challenges and successes. Smaller state agencies are able to leverage the benefits and efficiencies of enterprise-level IT services. This has proven particularly valuable when an agency is faced with security incidents, system outages, or other unforeseen events.

At the same time, some agencies continue to struggle to afford the enterprise-level IT services MNIT provides. When the IT consolidation mandate was put into law in 2011, no new funding was provided to enable the development of centralized services or assist small agencies who could only afford sub-standard IT. In addition, IT budget dollars have continued to be appropriated directly to individual agencies, limiting MNIT's ability to leverage the savings achieved through consolidation to accelerate the pace of centralization or assist agencies operating under tight budgets.

Despite these constraints, we are proud of the significant progress made through the IT consolidation initiative in areas such as data center consolidation, enterprise hosting, enterprise licensing agreements, IP telephony, and network services — despite the lack of new funding.

We are also proud of the improvements made in IT billing processes that have yielded greater transparency and reporting capabilities through the introduction of Microsoft Power BI (Business Intelligence) tools. MNIT developed a series of dashboards that blend traditional financial metrics with service usage metrics to provide useful, bottoms-up, detailed financial analysis in the context that agency executives need to make evidence-based, strategic IT budget and service decisions.

Challenges

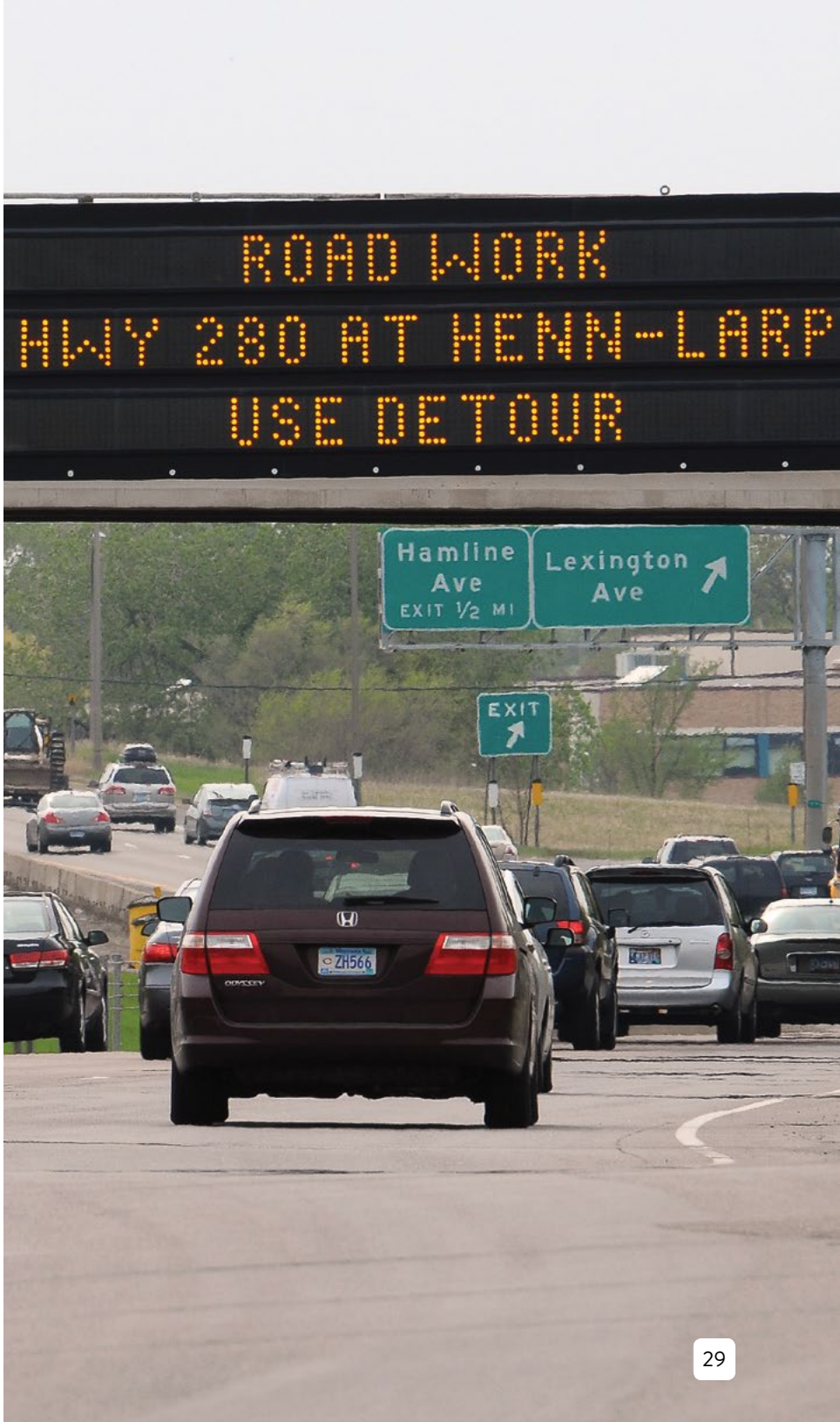
In technology, systems, applications, computers and servers offer daily challenges. If you own a personal computer, you know what it's like when you start it up and get the awful blue screen that means you've got a problem, and probably a trip to the computer repair shop. Now imagine that potential for thousands of computer users. That's what our support teams deal with on a daily basis. It's our job to make sure everything is up and running perfectly so state workers can do their jobs, and so citizens can get the services they need.

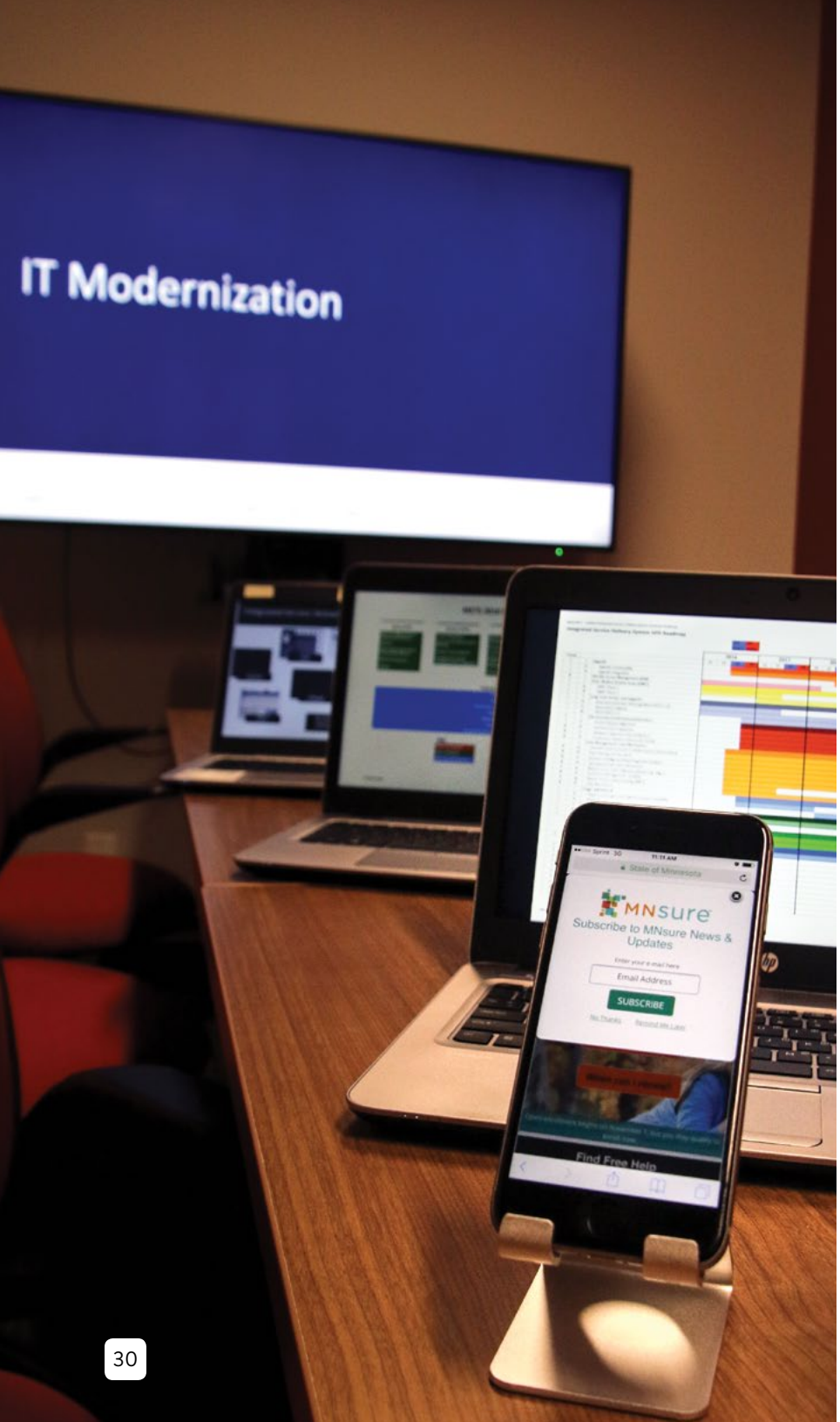
Sometimes things don't go as planned, and problems with a lack of modern equipment or software, or a complex project can affect millions of Minnesotans. In 2018, we saw that happen with the Minnesota Licensing and Registration System (MNLARS) for driver's and vehicle licensing. When MNLARS was released in mid-year, many problems caused immediate public and legislative outcry. And rightly so.

Now, MNIT and the Department of Public Safety have a roadmap, and are making significant progress. The MNLARS system is successfully completing millions of transactions.

MNIT introduced the use of data analytics to report progress on the implementation of the statewide Minnesota License and Registration System (MNLARS). In a series of mandated legislative reports, MNIT uses the data analysis to visualize improvement trends in fixes applied to gaps and defects, reduction in the backlog of vehicle title applications, and turnaround times for titles.

Photo:
Minnesota highway





SECTION 7

Where we're headed: emerging technologies

User Experience: UX

MNIT strives to improve the user experience (UX) through outreach, knowledge sharing, and integration of usability and adoption best practices, because we know that a good user experience is a successful metric. We are committed to ensuring that state employees get the most from enterprise technology tools, and that Minnesotans have rewarding digital experiences.

Our teams connect power users and enthusiast networks to improve user adoption, share knowledge and find champions eager to pilot projects and put our designs to the test.

As a result, UX, usability, user adoption, and prototyping methodologies, processes, and services are becoming a growing part of MNIT projects with all our agency partners.

MNIT continues to innovate by building capacity for UX work at the enterprise level, and at agencies like the Department of Human Services, Labor and Industry, Transportation and many others. This is how we work to ensure that all Minnesotans have positive user experiences.

Photos:
This page: User experience and testing acceptance lab
Opposite page: MNIT Partnering with DHS UX team

MINNESOTA

Xcel Energy
EASY MILE
3M Science. Applied to Life.™
First Transit
e210

Blockchain

Blockchain technology is the talk of the cybersecurity world. It's easy to jump onto one of the fastest-growing new technologies, but it is essential to being good stewards for Minnesotans that we first understand where using blockchain is practical and where it's not. It may not be a suitable replacement for where centralization is needed (or at least where there is no added benefit to decentralization), or where transaction malleability is needed.

Minnesota state agencies are moving forward with planning that incorporates blockchain technologies, and MNIT will be there to help. In the advancement of e-Health, the Department of Health submitted a statewide coordinated response to the Draft Trusted Exchange Framework proposing the use of blockchain software to improve patient matching. Department of Human Services is evaluating blockchain to provide flexibility and modularity in the applications supporting patients.

Automated and connected vehicles

Minnesota Department of Transportation is currently researching automated and connected vehicles to meet the objectives established by Executive Order 18-04. MNIT leadership sits on the Governor's Advisory Council on Connected and Automated Vehicles, which studies, assesses, and prepares for the transformation and opportunities associated with the widespread adoption of automated and connected vehicles. In the future this ecosystem will expand and evolve as the world around us becomes more internet-enabled with artificial intelligence. Our work in IT services will continue to advance with new innovations in security, connectivity, analytical tools, data storage and management as autonomous vehicles and other internet-enabled devices integrate into the highway system.

Advancing the cloud

As MNIT advances as the state's leading cloud services broker, the governance is broadening around commercial cloud service providers to tailor cloud services to support unique state agencies application and data storage requirements. MNIT is adapting governance to optimize shared service delivery through a hybrid cloud environment.

To initiate continuing cloud projects, MNIT's tool assists state partners in developing a strategy and standardized process to move to the cloud. The cloud readiness assessment is the first part of a cloud service governance framework, also developed by MNIT. Integral to the hybrid cloud management that MNIT supports, the cloud readiness assessment is a questionnaire meant to stimulate an informed conversation for making a state agency application requirement a feasible course of action using a cloud service provider or MNIT as the enterprise service provider. MNIT is expanding its knowledge base on cloud service providers to help guide state agencies on a path to cloud services.

Photo:
Opposite page: Department of Transportation's autonomous shuttle on Nicollet Avenue in Minneapolis

MINNESOTA
IT SERVICES

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