



2019 Annual Report

Connecting Minnesotans with better government



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Foreword

By MNIT Commissioner and State CIO Tarek Tomes



This year, our annual report shares the many exciting things happening around the work we do at Minnesota IT Services for and with our business partners. This report highlights the new strategic planning, emerging technologies, and significant information technology projects that connect all Minnesotans to better government services.

Throughout this report, you'll also see evidence of our work to build a **Connected Culture** within our agency. This culture strengthens relationships

within our teams, with our business partners, and most importantly, with the Minnesotans that we all serve together. MNIT provides support across an incredibly diverse portfolio of capabilities, and that support enables Minnesota to keep the people we serve at the center of our IT solutions.

In 2019, we began our final wave of IT optimization — an effort to connect MNIT staff in our service desk, workstation management services, and some hosting services to provide consistent, efficient, and cost-effective support to our business partners. We are using our drive for collaboration to elevate Minnesota's Digital Estate — the 2,800+ applications that capture transactions and fuel service delivery to support Minnesota's government services. The collective data and information from these applications connects people to jobs, health care, Minnesota's great outdoors, environmental data, educational resources, and more.

One of the primary challenges we face is the cybersecurity threat to the IT infrastructure, data, and systems that support people and agencies across Minnesota. Although MNIT's cybersecurity strategy has, over the years, been refined to account for changes in the executive branch, maturity in the industry, and the evolving tactics of the adversary, no state is immune from these kinds of attacks. This year, legislative investment and the establishment of the Blue Ribbon Council Cybersecurity Sub-Committee have allowed MNIT to focus on making progress toward larger strategic objectives.

At MNIT, we understand the important role technology plays in providing state-run services. Our teams have begun to harness new advancements that will allow us to become an innovative partner and service provider in cloud-based services, artificial intelligence (AI), and robotic process automation. We've already partnered with the Minnesota Department of Health on several projects harnessing these emerging technologies, which center on the human experience, enhance decision-making, and ultimately provide better services for people.

As we focus the future of our work to support the priorities outlined in Governor Walz's One Minnesota Plan — children and families, equity and inclusion, thriving communities, fiscal accountability and measurable results, and Minnesota's environment — we make sure that the systems, networks, and hardware that we develop connect Minnesotans to a better government.



Who we are

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

In 2019, Minnesota was ranked the third [best state in the nation](#) according to U.S. News & World Report. Underpinning Minnesota's high ranking and excellent state services is a dedicated statewide network of technical professionals. 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. Together, Minnesota IT Services and our government partners connect Minnesotans who live and work in our great state to key services. Those Minnesotans are our friends and families, our neighbors, our colleagues and partners. They all benefit every day from the work we do to keep the business of government running.

- MNIT employs more than 2,300 people across 90 physical locations.
- Our partnerships with more than 70 agencies, boards, councils, and commissions help us meet their IT needs and strengthen the cybersecurity of the state every day.
- We serve Minnesotans in state, local, and tribal government, in education, and some nonprofit organizations.
- Through public-private partnerships, our team proactively protects the state's information systems and the private data of 5.5 million Minnesotans.

24 hours a day, 365 days a year, our teams develop, maintain, and safeguard state systems and data. Technology connects 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.

Digital government

Demand for digital government services continues to grow. Citizens are embracing the Internet of Things (IoT), connecting with mobile websites and online services to meet their needs more than ever before. That requires modern systems and applications.

- Some applications like [MNsure's online health insurance marketplace](#) help Minnesotans shop for affordable, quality health insurance.
- Others, like Workforce One, help job seekers, counselors, and employers connect and explore current opportunities in one web tool.
- MNIT partners with the Minnesota Pollution Control Agency to provide [online tools and resources](#) that help Minnesotans prevent pollution, build healthier communities, and live more sustainable lives. Our work with the Minnesota Department of Veterans Affairs allows housing and service professionals to more efficiently assess the needs of [veterans facing homelessness](#).

All our technology solutions for executive branch agencies are developed through strong partnerships — solutions developed by MNIT technologists, or solutions supported and maintained by MNIT technologists that have been developed in partnership with third-party vendors.

Minnesota's Network for Enterprise Technology (MNET)

Serving Minnesotans statewide

MNIT manages Minnesota's Network for Enterprise Technology (MNET), the statewide network that gives Minnesotans access to modern digital technologies and government services that are meaningful, timely, and cost-effective.

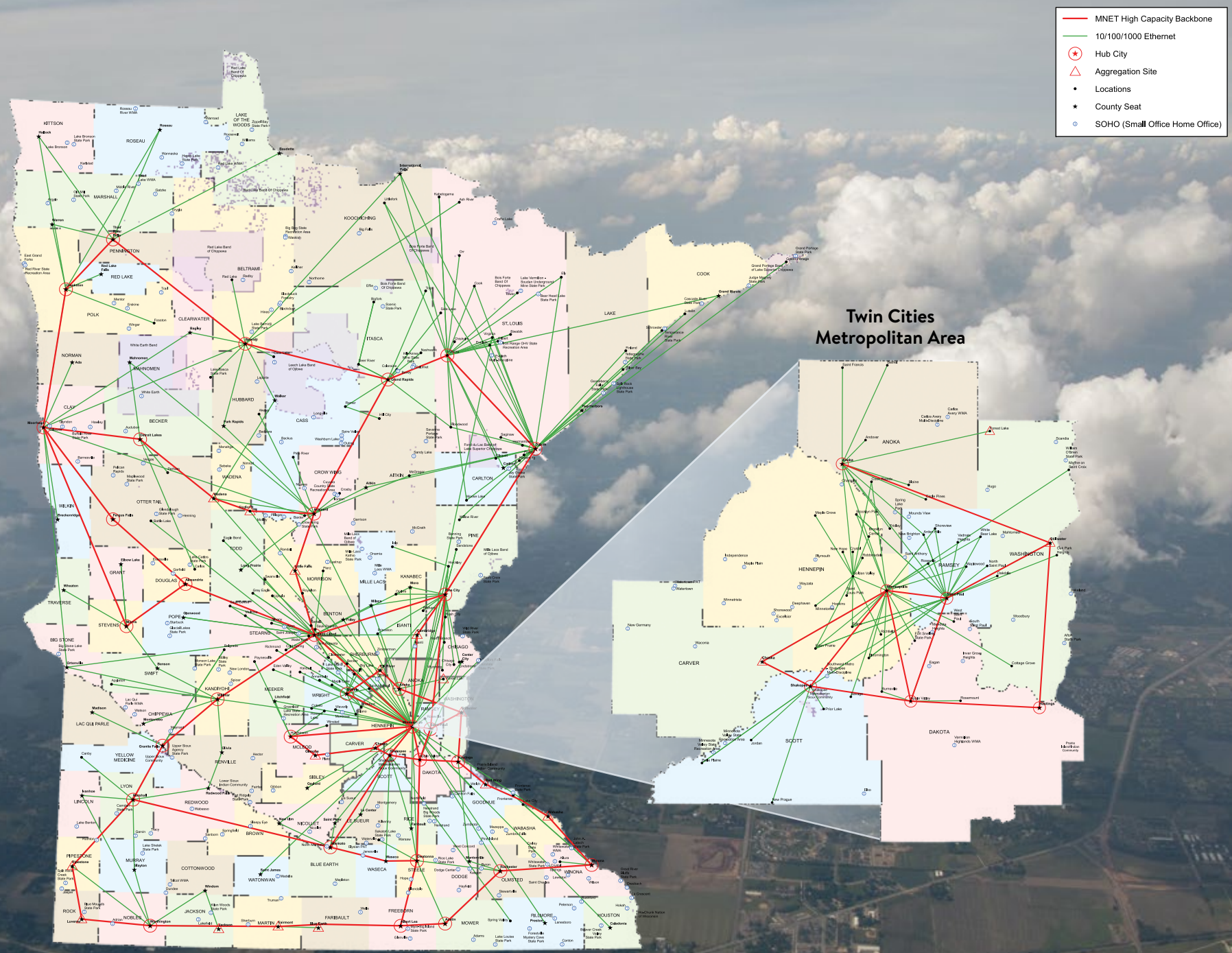
Since 1993, MNET has grown to support digital operations and connections in 300+ cities across Minnesota for more than 375 public sector partners. MNET connects all 87 counties, 300 cities, public safety, health care, Minnesota's tribal nations, K-12, education consortiums, and 200 public education and higher education campuses including the University of Minnesota, and Minnesota State Colleges and Universities. Services available on MNET range from basic phone service and call centers, to video conferencing that supports long-distance learning for students, and wireless and statewide broadband access.

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.



Planning

12-Month Tactical Plan

Minnesota IT Services' 2020 Tactical Plan is our agency's 12-month checklist, defining short-term priorities while we develop a larger, comprehensive Strategic Plan. It's focused on advancing tangible tactics to improve our business processes, collaboration, and relationships across the agency.

The Tactical Plan covers the timeframe from January 2020 through January 2021. While the goal is to accomplish each tactic by January 2021, this plan considers the fact that the worlds of government and technology are constantly changing, and tactics may evolve over time. The plan will be refreshed throughout the year as tactics are accomplished and the agency moves forward on long-term strategies.

This initial Tactical Plan is a culmination of Commissioner Tarek Tomez' first six months at MNIT. Conversations with leaders and staff across the agency and the executive branch, as well as recommendations outlined by the Office of the Legislative Auditor and Blue Ribbon Council, informed the tactics and implementation details of the Tactical Plan.

Photos:

This page: Employees ranking and categorizing goals and ideas in a planning session.

Opposite page: Graphic showing goal areas in MNIT's Tactical Plan.

Strategic Plan

The Strategic Plan is MNIT's vehicle to establish and work collectively toward long-term strategic objectives. To accomplish the agency's mission and vision, the Strategic Plan creates a roadmap for focus and action, creating space to define and measure strategic priorities and outcomes.

As part of Governor Walz's One Minnesota Plan, in spring 2020 MNIT will be releasing its Strategic Plan in tandem with other executive branch agencies. The Strategic Plan will be updated and presented biennially for the Governor and the Minnesota legislature, in compliance with Minnesota Statute. It provides the vision for MNIT's business strategy, leveraging the strengths and perspectives of stakeholders across the agency and the executive branch, to build upon current momentum and ensure our continued progress.





Emerging technologies

As change remains a constant force within the technology industry, MNIT works with its partners to research and implement emerging trends to deliver better results, data, and services for all Minnesotans.

Next Generation 9-1-1

Current 9-1-1 systems are facing challenges for users to quickly connect emergency management personnel with modern devices and technology. Minnesota's Department of Public Safety (DPS), in coordination with the MNIT Geospatial Information Office, is working to implement a new generation of 9-1-1 emergency call delivery and receipt systems that are IP-enabled and can respond to any device — anytime, anywhere.

In cooperation with DPS's Emergency Communications Network (ECN), the Geospatial Information Office is aiding local GIS data providers by hosting data, building data quality workflows, and enabling the sharing of geospatial data that helps get the caller to the right 9-1-1 call center more quickly and with more accuracy during an emergency.

User experience

Innovation around user experience (UX) allows MNIT to improve adoption and performance of the applications, technologies, and services that we provide. This requires our teams to learn and apply UX and human-centered design methods — gathering user insights throughout the entire service development process, and iterating on what they learn. As new guidance, processes, and frameworks evolve to improve our application development process, MNIT and our partner agencies are finding new ways to actively engage their user communities, streamline product adoption, and create positive digital experiences with government services.

At the Department of Human Services (DHS), MNIT is developing a research process that includes the development of personas to better understand DHS program beneficiaries and the services they use to move toward a self-service approach. Within the Minnesota Department of Labor and Industry, persona development and a UX approach helped stakeholders reimagine a workers' compensation technology solution. As more agencies launch self-service applications and products for Minnesotans, UX research, design, and strategy becomes an essential IT function. By involving the stakeholders that use the state's systems at every step of the development process, and prioritizing human-centered, accessible design, we can create better solutions that directly connect our agency partners to Minnesotans.

Advancing the cloud

Cloud-based technology is increasingly used in government services, and Minnesota has been a leader in the adoption of cloud computing among state governments. MNIT's journey to the cloud began in 2010, as the first state in the nation to adopt cloud-based email. While not all applications are the best fit for cloud-based solutions, MNIT is committed to providing this emerging technology to its partners and agency-based teams to ensure that we are providing the best technology solutions for all Minnesotans.

MNIT teams helped the Minnesota Department of Health (MDH) complete a cloud migration project in 2019, moving over 90 percent of its applications into cloud-based servers — 141 applications are now running across 156 cloud-based servers and 102 databases.

Redundant, high availability systems provide fast digital connections for mission-critical applications. Embracing cloud-based technology allows our project teams to more accurately predict finances so our partner agencies can better understand the cost of maintaining applications and databases. The cloud also aids in protecting the state from emerging security threats, as software updates and business requirements can be addressed swiftly on cloud-based servers.

With the MDH applications serving as a model, we are developing a strategy and process to move more applications to the cloud. This year, Amazon Web Services recognized MNIT as a winner of the City on a Cloud Innovation Challenge for a Medical PreCheck & Locator App project completed in partnership with MDH.

Photo:

Orville L. Freeman State Office Building.



**Percentage of applications
at the Minnesota
Department of Health
hosted in the cloud**



Connected and automated vehicles

The Minnesota Department of Transportation (MnDOT) continues to create strategies and policies around connected and automated vehicles (CAVs) that ensure the state is providing a safe and equitable transportation system. MNIT contributed to the state's Connected and Automated Vehicle Strategic Plan, which outlines 65 recommendations in preparation for mobility technologies. The plan includes key strategies that reflect MNIT's expertise in building security into networks, using CAV data to streamline operations, creating IT network management and security policies, improving work zone data sharing, and updating data stewardship and retention policies to manage increasing amounts of CAV information.

To aid in developing the state's CAV network, MNIT and our agency partners at MnDOT built a Connected Corridor, which shares data from MnDOT's traffic signals to connected vehicles to help build efficiency, sustainability, resiliency, and data management into the road system. In addition, MNIT, in collaboration with MnDOT and the Minnesota Department of Employment and Economic Development (DEED), are developing a comprehensive map of state-owned telecommunications assets to determine if state-owned property can be used to build out fiber optics to support connected vehicles, along with traveler safety, regional operations, and community fiber connectivity.



IT optimization

This year, MNIT teams engaged in a multi-phase initiative that optimizes the way we deliver enterprise services to all agencies. Optimization is designed to meet the user's technology needs and create related operational efficiencies, resulting in improved employee productivity, and service performance at a high level, which ultimately improves service processes between MNIT and our customers. IT optimization addresses the services, systems, and applications that are maintained and supported by MNIT.

Since the passage of the IT consolidation law in 2011, Minnesota IT Services has been working to optimize the delivery of commodity-type IT services. Our approach has been incremental and phased to move each agency, board, commission, and council that we serve into the suite of enterprise services — the services that may further enable the essential operations of agency-specific services.

IT optimization is a three-pronged effort: moving agencies into enterprise services and rates; optimizing and codifying our business processes; and realigning MNIT staff into enterprise support teams to better serve our partners. Over the past several years, MNIT completed the first two waves of optimization for network, firewall, workstation, service desk, hosting, and voice services. On July 1, 2019 Wave 3 optimization began for the final group of agencies and boards to move into enterprise workstation management, service desk services, and some hosting services.

Photo:

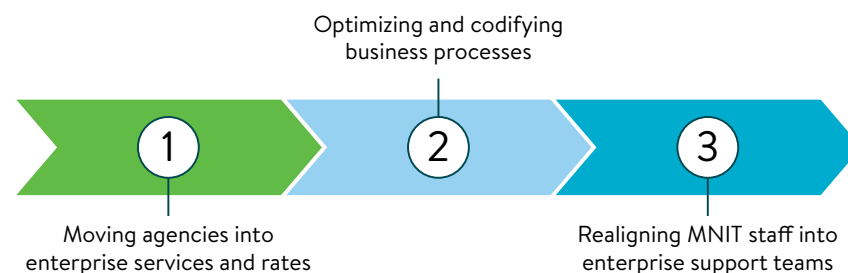
Opposite page: MnDOT connected and automated vehicle (CAV).

Service maturity

As the bulk of IT consolidation activities have been completed, we are turning our attention toward the activities necessary to mature the services delivered by the Enterprise Services team, which was formed over the past few years. In order to successfully provide enterprise level services, we must reimagine the processes necessary to meet the needs and expectations of our business partners.

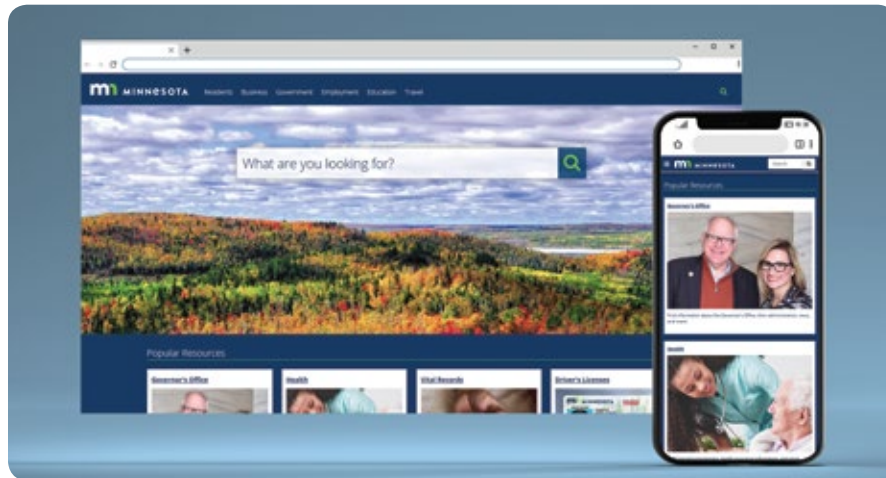
In 2019, new leadership joined MNIT with a fresh perspective on what services are being delivered, how they are being delivered, and even where they are delivered. The effort to improve the services provided by the Enterprise Services team will require tweaking and even re-engineering the service delivery processes. One example of that re-examination is in the workstation management service, where we have engaged with an outside consulting company to assess our current processes, help us identify process gaps, and make service maturity recommendations.

As we move into 2020, new metrics will be introduced to measure the performance of services such as desktop management, hosting, and project management. These new measurements will inform Enterprise Services and our business partners how successfully the services we provide are being delivered. Captured data will be leveraged in new dashboards that present data transparently for both internal and external consumption. This data transparency will allow Enterprise Services to set goals with our business partners to drive accountability and build trust.



Notable projects and milestones

Technology touches almost every aspect of the services that Minnesota state government provides. From health, the environment, transportation, to more efficient budgeting processes – MNIT provides the technology we all use to connect Minnesotans to better government. In 2019, we have achieved shared success with our agency partners to better serve Minnesotans.



Portal into the state

MNIT launched a new website design for the state of Minnesota's online portal, mn.gov, which serves as a front door to more than 500,000 web pages and documents found across a wide range of more than 70 Minnesota agency, board, council, and commission websites. The new design makes it easier, faster, and more intuitive for visitors to locate the information they're looking for by emphasizing a powerful search function. Improved site architecture, or the arrangement of content, allows visitors to browse related resources in a more intuitive way.



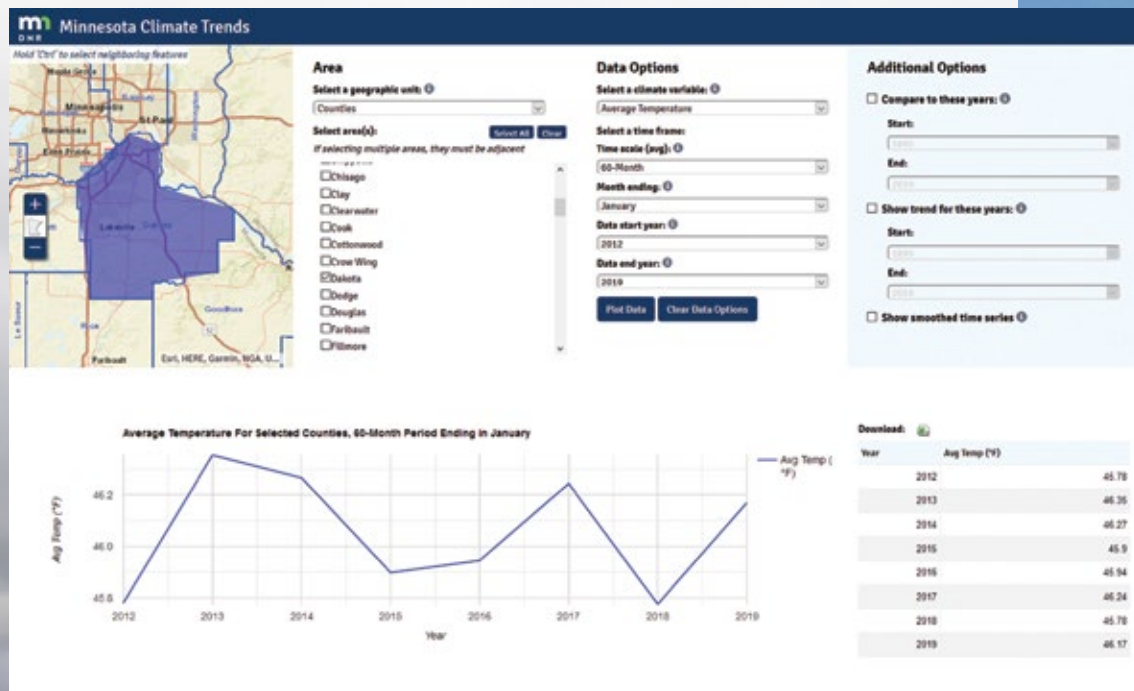
Connecting our business partners

As one of the largest agencies in state government, MnDOT has a large staff of contractors, full-time and part-time staff, and seasonal workers, that are subject to changing personnel information. MNIT worked with MnDOT to automate personnel information updates and create a self-serve password reset application, fostering greater efficiency within the agency. The new MnDOT Identity Manager (MIM) is automatic, accurate, and timely – even allowing for supervisors to more efficiently manage network access for consultants. The project eliminated manual, redundant processes, and replaced them with automated processes that increase productivity.

Image courtesy of the Minnesota Department of Transportation.

Visualizing the impact of climate change

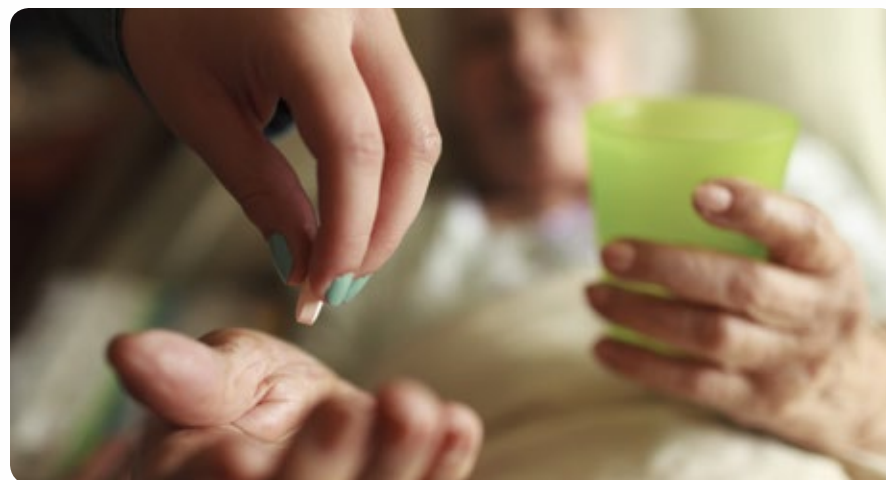
Utilizing historic geospatial and visualization technology, MNIT worked with the Minnesota Department of Natural Resources (DNR) to create a Climate Trends App that allows users to explore historic temperature and precipitation trends within the state. The application provides an engaging, up-to-date, easily accessible online space for Minnesotans to get valuable information. The efforts provide a greater understanding of the impact that historic changes in temperature and precipitation have across the state, and showcase the DNR's leadership on climate change issues in Minnesota.





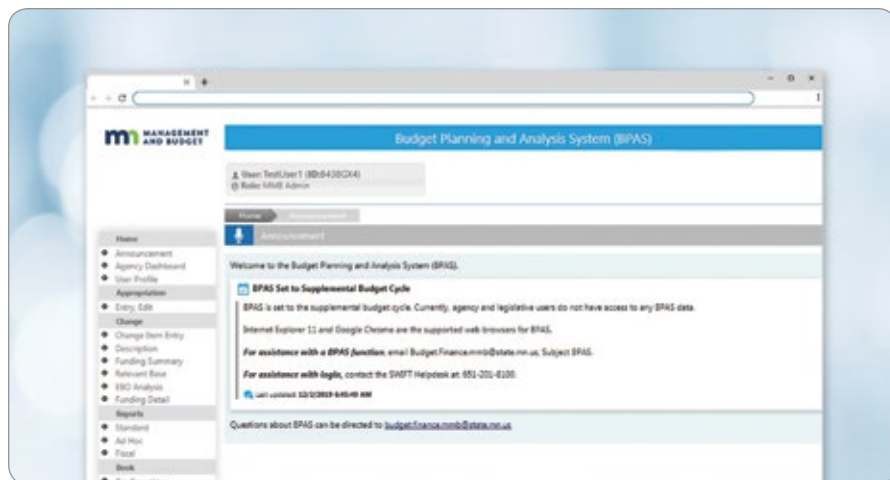
Tracking chronic wasting disease

Protecting Minnesota's deer population from chronic wasting disease (CWD) is a priority for the Minnesota Department of Natural Resources. MNIT created an online application that automatically refreshes and displays CWD testing results online to provide this critical information not only to researchers with the DNR's Wildlife Health Program, but also to hunters. The application streamlines the reporting process and increases government transparency, allowing Minnesotans to see the connection between state data and their needs. During the 2018-2019 hunting season, the application processed 8,040 total samples, with 38 deer testing positive for CWD, demonstrating how critical this information is to protect our wild deer population from this contagious disease.



Emergency response toolkit

Working with our business partners at Minnesota's Department of Health, MNIT created two applications that allow for rapid distribution of life saving medicine and treatments during a public health emergency. These applications allow for Point of Dispensing (POD) sites to serve Minnesotans faster, when efficient distribution of medications to an exposed population can save lives. With MNIT's partners at MDH, the teams created a POD PreCheck tool that allows users to complete online pre-screening forms, ensuring they receive a safe medication. The POD Locator finds the nearest point of distribution site for medication, public transportation routes to get there, and parking information. By developing an automated, self-service approach to meet the needs of all Minnesotans, we have helped to transform the digital delivery of services into an organized process that is clear, understandable, and maintainable. At even further benefit, the applications are built with modern technology and hosted in the cloud, ensuring that the applications are available even if online demand scales from zero users to thousands within minutes.



Better budgeting

The budgeting process for state government is both time-intensive and complex, as leaders at agencies juggle the needs of numerous departments, projects, new legislation or statutes, and differing tax bases. MNIT collaborated with Minnesota Management and Budget (MMB) to create a modern system that manages historical, current, and projected budget data, in addition to proposed state agency operating budget changes. The Budget Planning and Analysis System (BPAS 2.0) gives agencies access to all reports in real-time, improving efficiency and providing considerable cost savings. The successful project prioritized end user experience, accessibility, system performance, and cybersecurity to launch in time for the most recent biennial budgeting process during the 2019 legislative session.



Microsoft Office 365 and Windows 10 upgrades

MNIT is upgrading the state of Minnesota to Office 365 ProPlus and the Windows 10 operating system, which will bring the state up to date with the current versions. The upgrades are one of many steps MNIT is taking to bring employees state-of-the-art tools that enable each agency partner to be more productive and to provide accessibility features. Staying up to date also ensures that we are securing the state's data and systems when connecting to Minnesotans. Technologies are more vulnerable and at risk when they are old and outdated. The Office 365 upgrade will allow state employees to access updated tools for Access, Excel, OneNote, Outlook, PowerPoint, Publisher, Skype for Business, and Word. The Windows 10 upgrade has an intuitive interface with built-in accessibility features. The project involves coordinating upgrades across multiple agencies, ensuring the least amount of downtime, and training employees on the new applications. Many agencies received these updates in 2019, and more will continue to roll out over 2020.



Timekeeping improvements for Department of Veterans Affairs

MNIT worked with the Minnesota Department of Veterans Affairs (MDVA) to develop, test, and successfully deploy the Enterprise Scheduling and Timekeeping (EST) system for Minnesota Veterans Homes. EST improves the Homes' scheduling and timekeeping functions for both employees and management. MNIT worked with a cross-functional team of subject matter experts from across the state Homes and with MMB to define the complex business rules. The project integrated contract rules from four different unions, varying staff profiles, and complied with federal and state labor laws — ultimately impacting 1,400 employees across the state. Along with EST, MDVA and MNIT upgraded the physical infrastructure of timekeeping, incorporating biometric fingerprint technology to provide more secure access to Veterans Homes across Minnesota.

Embracing the needs of end users to improve adoption of the new system, the MNIT team utilized designated business experts to exhaustively test EST and provide staff with robust training tools — videos, webinars, support materials, and live trainings. EST replaced multiple manually-intensive systems to support a 24/7 business model, allowing employees to access their schedules, clock in and out, electronically request time off, and view their leave, among other activities.



Improvements to public health care programs

The Minnesota Eligibility Technology System (METS) determines the eligibility of nearly one million Minnesotans for public health care programs, including Medical Assistance, Minnesota Care, and tax credits to help pay for a private health insurance plan. Throughout the year, MNIT worked with DHS to release its quarterly updates of the METS system that provided new functionality to automate and streamline the verification process, improved notices, and made usability enhancements.

To prepare for the 2020 health care open enrollment season, MNIT also participated in one of the larger upgrades to the METS system — upgrading the shopping and enrollment platform of MNsure, making it easier for consumers to select the best coverage for their family. In a collaborative effort with MNsure and GetInsured, a private-sector partner, the project successfully improved MNsure's shopping and enrollment platform, giving Minnesotans an improved online enrollment experience, the ability to compare plans during shopping, more control over their accounts with better self-service options, and a new account dashboard to help them stay informed.



Increasing access to cash assistance

For the first time in 33 years, Minnesota increased its cash assistance for families in need. Effective February 1, 2020, the maximum cash grant standards will increase by \$100 for the 69,000 individuals served by the Minnesota Family Investment Program (MFIP), the Diversionary Work Participation (DWP), and the Refugee Cash Assistance (RCA). In June 2019, MNIT began working with its partners at the Department of Human Services, where all three programs are offered, to implement these changes. MFIP, DWP, and RCA program eligibility is determined by MAXIS, a computer system used by county and tribal workers to calculate appropriate benefit levels and to issue those benefits to participating households. The fact that all three programs reside within a mature, highly-automated system aided in the fast implementation of the statute changes, to be ready for a February 2020 install. MFIP is the largest beneficiary of the cash assistance, as over 31,000 Minnesotans apply for benefits every year.



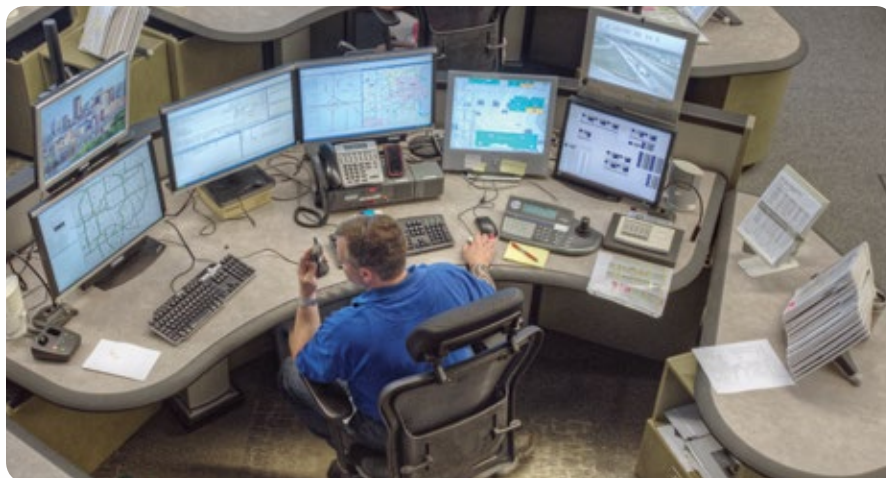
Upgrading the state's payroll, benefits, accounting, and procurement system

This year, MNIT co-sponsored an upgrade project with the Department of Administration and Minnesota Management and Budget that ultimately affected nearly 110,000 end users, including all state employees, and private sector vendors. The collaborative project upgraded and modernized two enterprise systems—SWIFT and Portal. SWIFT is the state's accounting and procurement system, used by more than 5,000 state employees and nearly 240,000 active vendors to process around 46,000 payments per week. Portal connects SWIFT and other essential systems, like Employee Self Service, which is used by all state employees for payroll and benefits.

MNIT's team provided project management, and developed an infrastructure that improved stability, security, performance, and user experience. The development incorporated accessibility and usability for all users and created standards that will improve software development for the state's IT projects.

Photo:

This page: Right: Minnesota IT Services and Minnesota Management and Budget staff at the SWIFT launch celebration event.



Maintaining the technical health of applications

Cybersecurity remains a critical concern for many of our business partners, including the Minnesota Department of Transportation. Aimed at keeping their agency-specific applications in good technical health, and less vulnerable to cyber threats and system failure, MNIT mapped a strategy and set up an ongoing program, the Application Preservation Program. The program analyzes the technical health of MnDOT applications, everything from identifying technical health issues, prioritizing results, and engaging agency partners in investment decisions, to staffing full-time, permanent teams to complete the technical renovations. The program is the first of its kind in Minnesota state government IT and involves a holistic approach to application maintenance that addresses security and risk management at the same time.

Photos:

This page: Left: Minnesota Department of Transportation RTMC control room. Photo courtesy of MnDOT.

Right: Team that worked on the MNLARS system.

Opposite page: Left: Team that worked on the POD Medical PreCheck & Locator App.

Right: Screenshot of the Minnesota Great Outdoors website.

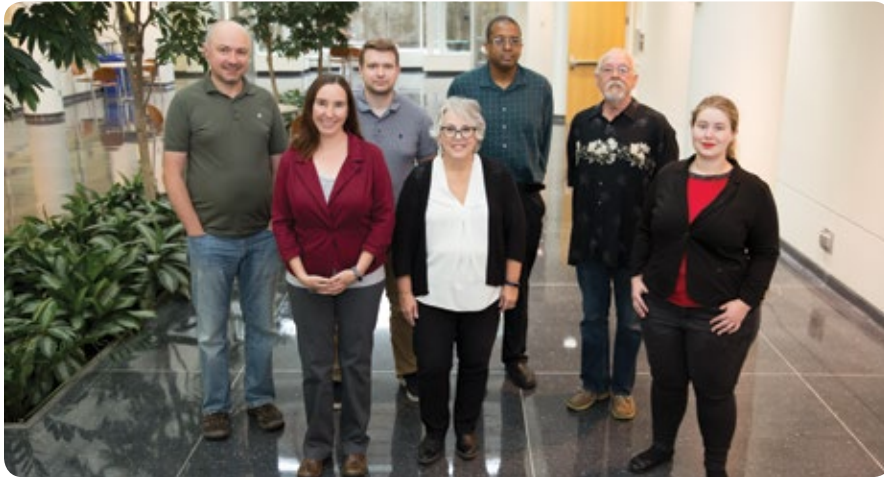


MNLARS successes and transition to MNDrive

Throughout 2019, MNIT and the Department of Public Safety completed multiple successful releases of the Minnesota Licensing and Registration System (MNLARS), which fixed bugs, allowed for more self-service, implemented fee updates based on statute changes, and increased usability of the system. Over the past year, the MNIT team increased monitoring of servers, databases, and third-party services to shorten the cycle time for service outages and to maintain MNLARS' high-availability for system users. The team continued best practices that began in 2018 to live-test MNLARS releases with deputy registrars to ensure that user feedback was incorporated into any changes. In May 2019, the MNLARS team was redirected to support the implementation of a new vehicle title and registration system, plan for the decommissioning of MNLARS, and continue maintaining the current system while the new system, known as MNDrive, is being implemented.

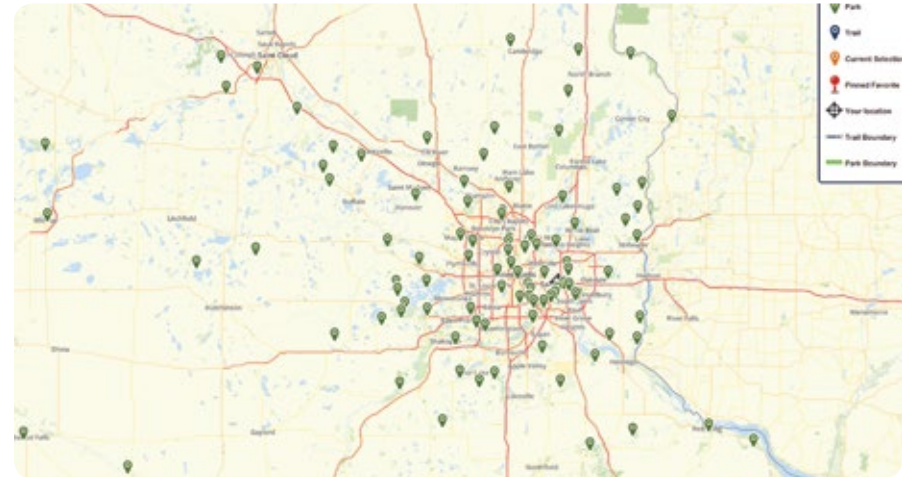
Achievements and opportunities

Minnesota IT Services is proud of our work and of our recognition by peer organizations across the country. Over the past year, MNIT and individuals within our organization were recognized as leaders in the industry, and received awards for work that provides excellent service that makes a difference for Minnesotans.



National Association of State Chief Information Officers (NASCIO)

For over 30 years, the NASCIO State IT Recognition Awards have honored information technology projects that have an impact, are transformational, and address needs within state government. In October 2019, NASCIO selected MNIT to receive a State IT Recognition Award in the “Digital Government: Government to Business” category for the project: “Preparing for Emergencies: Medical PreCheck & Locator App.” The winning project, completed in coordination with the Minnesota Department of Health, created applications that allow for rapid distribution of life saving medicine and treatments during epidemics or public health emergencies.



State Government Innovation Award

The Minnesota State Government Innovation Awards (SGIA) recognize the great work of state government entities and encourage an environment of experimentation and innovation in Minnesota. In 2019, two projects that MNIT collaborated on were recognized for the award. Our business partners at the DNR Parks and Trails Division received a State Government Innovation Award for “Parks and Trails for Everyone – The [Minnesota Great Outdoors Website](#).” The Department of Revenue also received an SGIA award for the [Sales Tax Rate Map](#).

Individual accomplishments

MNIT is made up of dedicated civil servants who excel at the top of their field. Over the past year, several staff members have been recognized for their services.



Stefanie Horvath

Chief Business Technology Officer (CBTO)

Stefanie was promoted from Colonel of the Minnesota National Guard to Brigadier General. She is the second woman to achieve the rank of Brigadier General in Minnesota.



John Israel

Security Operations Manager

John received the Visionary Security Operations Leader award from the Cyber Security Summit. The award honors those that have shown exemplary leadership to develop and foster strategies that protect critical systems and data.



Alison Slaats

Program Manager, Geospatial Information Office

Alison received the MN GIS/LIS Polaris Leadership Award for her leadership and technical skills as a member of the Minnesota geospatial community.



Northern Lights Award

The Minnesota Association of Government Communications (MAGC) presented the MNIT Communications team with a Northern Lights Award for its work on MNIT's first annual report. The MAGC is a peer organization of professionals dedicated to improving public-sector communications.

PROGRAM

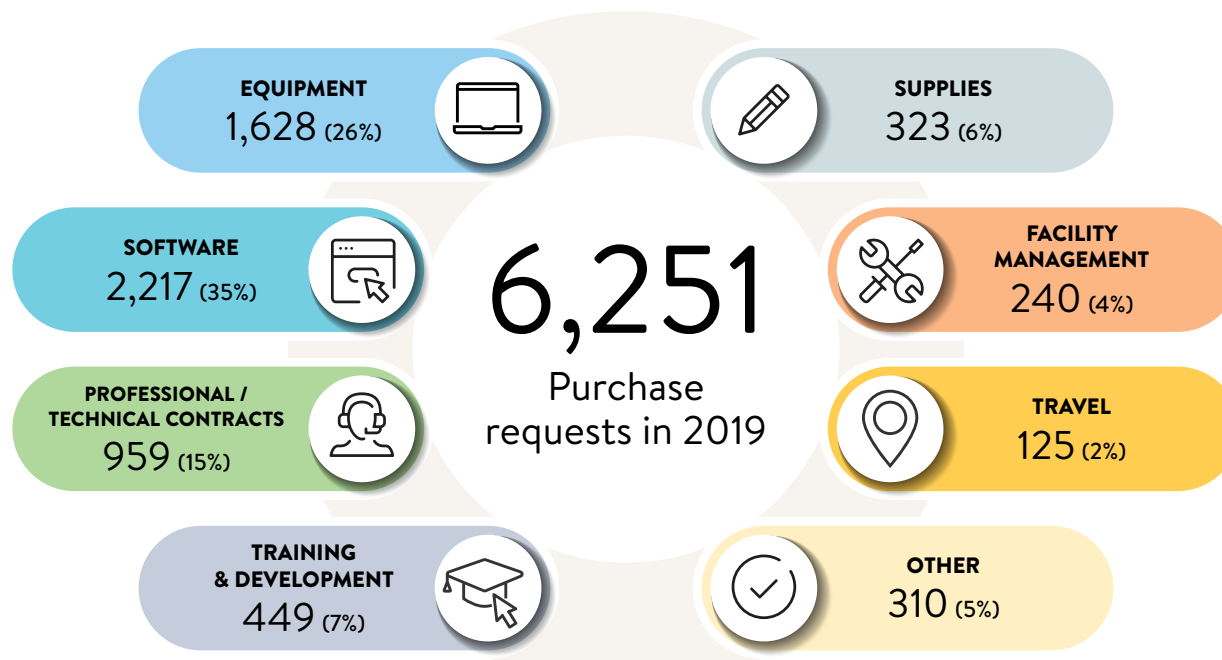
Procurement

MNIT brought together various purchasing functions to create the Procurement Division, all housed in a single location to encourage collaboration and improved internal processes. The division is responsible for processing all requests to purchase everything from IT hardware, software, and mobile devices, to contractors brought in to assist on projects. On the grand scale, MNIT participated with the Department of Public Safety and the Department of Administration to assist in negotiation of the MNDrive contract, which will replace the current Minnesota Licensing and Registration System (MNLARS) by 2022. Made up of four units — buyers, software license agreement managers, master contract staff, and professional/technical contract managers — the division processed 6,251 transaction requests in the 2019 fiscal year.

The Procurement Division also houses the sustainability coordinator within MNIT to ensure that purchases are driven toward sustainability efforts, in coordination with the Department of Administration's Office of State Procurement.

Risk assessment modernization

To comply with Minnesota Statute that requires an independent risk assessment on projects that are expected to cost over \$5,000,000, MNIT developed the Audit, Risk, Technical Review (ART) Master Contract Program. The program provides MNIT and our partner agencies with master contract vendors who can provide audits, risk assessments, and technical reviews of large and complex IT projects, including reviews for accessibility and security concerns. Vendors with ART have been vetted through the Office of State Procurement and MNIT's Procurement Division, streamlining the completion of this statutorily required assessment.





PROGRAM

Office of Accessibility

MNIT uses digital accessibility to make information more useful and usable. Not only does this comply with statute, but it gives all state employees, visitors, and residents the tools that they need to navigate state systems. The Office of Accessibility is charged with overseeing the implementation of accessibility standards for all executive branch employees and employers. In 2019, the office continued to expand its ability to provide resources that help ensure the accessibility of applications, websites, and documents. The Office of Accessibility's [Strategic Plan](#) highlights three key areas of focus:

- Building formal relationships with other entities that are part of the broader digital accessibility network.
- Providing state leaders with a better understanding of accessibility risks and countermeasures.
- Increasing the capabilities of accessibility across the state with tools, training, information, and other resources.

Photos:

This page: Person wearing a pin at the Accessibility Law Day celebration.

Opposite page: Top: People communicating through tactile sign language; Center: simulator showing how people experience vision loss; Bottom: former Representative Bill Hilty, Senator Ann Rest, and Mary Hartnett of the Minnesota Commission of the Deaf, DeafBlind & Hard of Hearing receiving awards at the Accessibility Law Day celebration.

Accessibility training

In 2019, as part of efforts to promote accessibility as a shared responsibility, the office made great strides toward re-training all state employees in accessibility practices. The Office of Accessibility created a requirement for all managers and supervisors to complete training for [accessible Microsoft Word documents](#).

The office increased the capacity of accessibility statewide by ensuring that more agency employees receive certifications for digital accessibility. The Office of Accessibility obtained online training licenses for state employees who wished to attain certification in accessibility from the International Association of Accessibility Professionals (IAAP). In the summer of 2019, four state employees held at least one certification. We are on track to certify 40 more state employees as accessibility professionals by the end of summer 2020.

Accessibility Law Day

The Digital Accessibility and Usability Law requires state government to develop and comply with a standard for delivering equal access to information for all Minnesotans. This year, the law reached a 10-year milestone. MNIT's Office of Accessibility celebrated key legislators and advocates who pushed for equal access to state services and programs.

To mark the occasion, accessibility advocates and state of Minnesota employees, led by Lieutenant Governor Peggy Flanagan and Commissioner Tarek Tomes, gathered at the Capitol Rotunda on May 7, 2019. They honored key legislators and advocates who were critical champions for the law. Senator Ann Rest, Senator Torrey Westrom, former Representative Bill Hilty, and Mary Hartnett, the Executive Director of the Minnesota Commission of the Deaf, Deafblind & Hard of Hearing, were all honored, along with key government leaders and advocates who helped frame the way the law works.



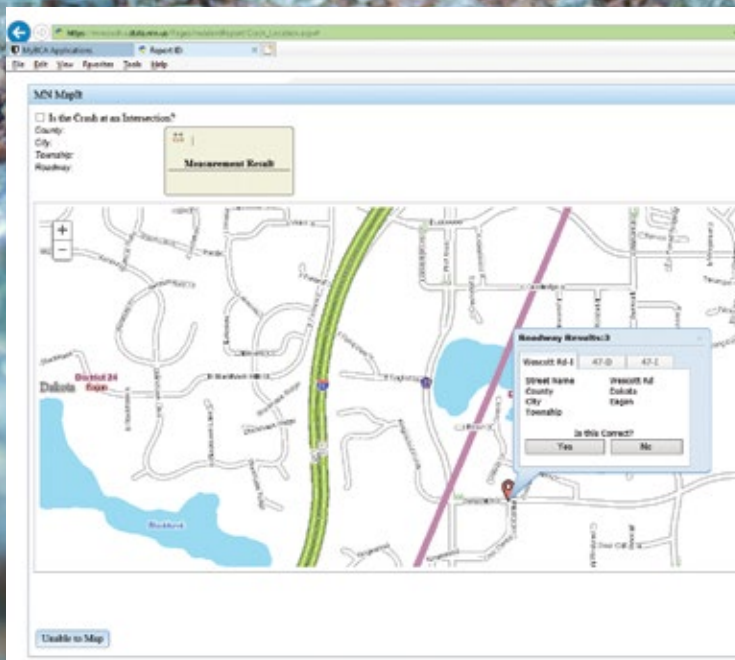
PROGRAM

Geospatial Information Office

The Minnesota Geospatial Information Office coordinates geographic information systems (GIS) within the state, creating connections between state agencies and other stakeholders from government and non-government organizations. Using geography to inform decisions and influence outcomes, it shapes public safety, transportation planning, access to health services, the preservation of our natural resources, and much more.

MNCrash

The Geospatial Information Office provided GIS expertise and developed web services for a multi-agency project, MNCrash. The new system provides a redesigned modern interface for Minnesota's crash records database and electronic crash reports. This interface is used by law enforcement officers to reduce traffic injuries and deaths. Working with the Department of Public Safety and Department of Transportation, the Geospatial Information Office created functionality within the application that allows officers to click on a map to capture the location information of a crash, rather than physically typing in the information to maintain consistent location names, which can vary. The MNCrash project also catalogues historical information of crashes into the new application, utilizing geospatial location information to provide more precise crash data. A second application and crash dashboard allow MnDOT to analyze and summarize the data to determine which intersections and interchanges have high crash rates, helping DPS and MnDOT to allocate resources effectively to make the roads safer for all travelers on Minnesota's roads.



Geo-enabled elections

Beyond the use of GIS data in emergency response systems and land use, the Geospatial Information Office completed a pilot project that leverages GIS data to ensure more effective and accurate elections. The office is partnering with the Office of the Minnesota Secretary of State to incorporate geospatial data and techniques into a voter audit. The audit will allow for more precise precinct assignments for voters and more accurate voter records. The data, also informed by information collected for the Next Generation 9-1-1 project and the upcoming 2020 Census, will allow the state to make better and more coordinated decisions across state services.

Other 2019 highlights

- **Parcel data aggregation:** The Geospatial Information Office, alongside MNIT teams partnering with the Department of Natural Resources, worked with counties to obtain, standardize, aggregate, and deliver statewide parcel information to state agencies. Due to this effort, parcel data — property boundary maps — are updated through an automated process twice a year.
- **Aerial imagery web services:** The office added to its shared imagery web services by incorporating new aerial imagery from Hennepin County, bringing the total number of imagery data resources available to the geospatial community to 82.

Photos:

Opposite page: Screenshots of the MNCrash system.
This page: People voting.





\$20M in legislative cybersecurity funding is helping to protect the data of Minnesotans.

PROGRAM

Security

Cybersecurity is a thread that connects the entire MNIT organization. We view it as something more integral than a top priority. It is not something that can be checked off a list, or solved for a period of time. Cybersecurity is a daily part of life at MNIT, it is “baked-into” our core services and we are making progress toward our goals to enhance protection for state systems and data. In 2019, MNIT and its Security Operations Center (SOC) worked with the public, legislators, and state employees to ensure that we have the capabilities to vigilantly monitor and respond to cyber threats.

Cybersecurity is a shared responsibility in Minnesota, and it is strengthened by our ability to connect all 87 counties, 300 cities, and 200 public higher education campuses across the state through MNET — Minnesota’s dedicated public sector network. In 2019, we continued to broaden our cyber defenses for our MNET partners through the Statewide Security Monitoring Initiative, of which 21 counties joined in 2019. Our security team performs regular vulnerability scans on over 75,000 networked devices to discover system weaknesses and initiate appropriate remediation. In 2019, our SOC detected or received reports of about 1,500 cyber incidents.

Legislative investment in cybersecurity

During the 2019 legislative session, MNIT received funding for further cybersecurity efforts over the next four years. The \$20M in funding will allow MNIT to, among other cyber investments, deploy cybersecurity tools that improve detection and blocking of attacks, create training that will help state employees spot phishing emails, and improve response time and awareness of cyber threats.

Photo:

Opposite page: Commissioner Tomes teaching kids about cybersecurity at the Boys & Girls Club in Saint Paul, Minnesota.

le all young people,
e who need us most
ential as productiv
responsible citizen



Cybersecurity Awareness Month

Cybersecurity does not end with MNIT, it is a shared responsibility for all state employees and the public to ensure that data is protected. In 2019, Governor Walz declared October to be Cybersecurity Awareness Month, timed with a national campaign to promote cybersecurity efforts across the public and private sector. Throughout the month, MNIT engaged stakeholders across the state to make sure that we are doing all that we can to keep data protected. MNIT staff held tabling events at state agencies, provided information to employees about reporting and phishing emails, and coordinated a student cybersecurity event at the Boys & Girls Club.

Protecting state emails

When protecting state data, ensuring that employee emails are not compromised is a major priority for MNIT. From July to October 2019, the Security Operations Center identified over 27,000 unique phishing and spam messages targeting state employees. To protect access to state employees' emails in 2019, we implemented geographic controls to limit access and identify compromised email accounts. To help users easily identify external emails, which are more likely to be a risk for phishing scams, we added a banner for all external email messages. MNIT is also adding two-step verification tools for Microsoft Office 365 users across the state, along with its already robust set of multi-factor authentication tools. This provides an extra layer of security for users accessing their emails while working remotely. By using multi-factor authentication, we help to keep cyber criminals from accessing state data, even if they can steal a password.

Photo:

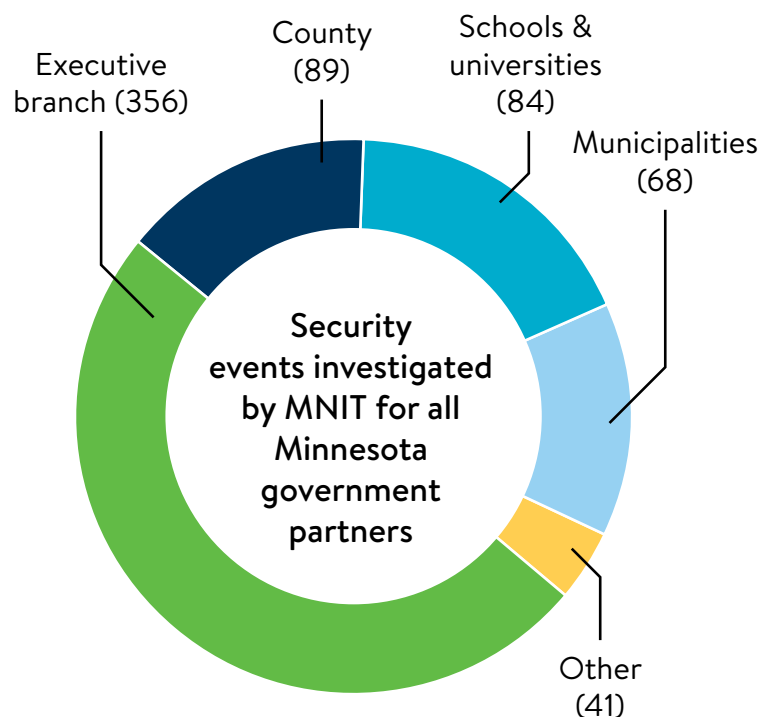
Warning banner identifying a phishing email as coming from an external source.

This message may be from an external email source.

Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

Web content protections

Cyber threats take many forms, but the most successful and frequent involve malicious emails and websites. To combat these ever-evolving threats, MNIT is deploying protections to all executive branch employees. The protections use domain name system technology to identify and block threats and apply web policy protections to all employees. The system replaces more than 13 separate web content protection solutions, allowing MNIT to quickly block malicious sites in seconds for all covered employees.



TYPE OF SECURITY INCIDENT	NUMBER REPORTED
Unauthorized access attempt	547
Malware	544
Forensic investigation	153
Network attack/scan	142
Copyright violation	35
Social engineering	10
Unauthorized access	8
Policy violation	5
Denial of service	5
Lost/stolen devices	5
Inappropriate use	2
Other	42

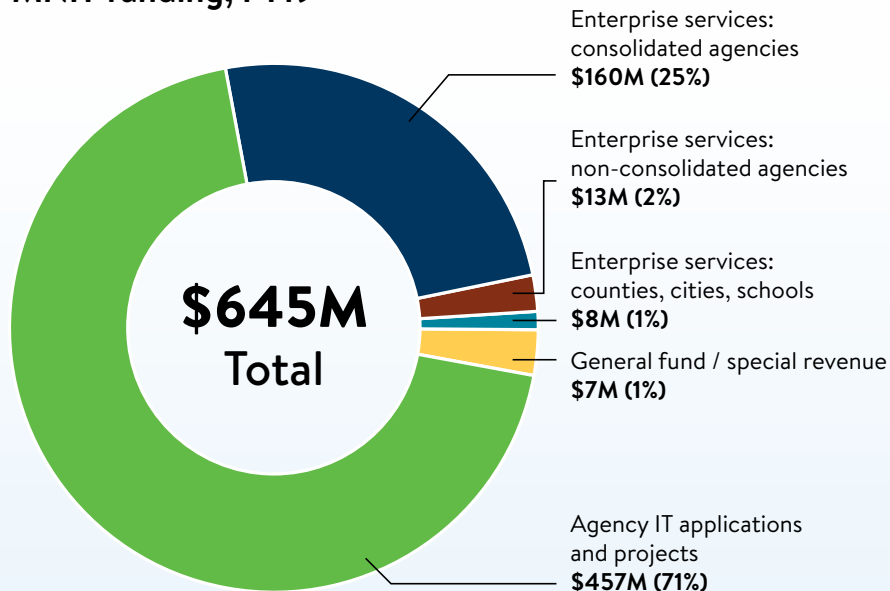
Security incidents detected by or reported to MNIT SOC.

Enterprise financial summary

How is MNIT funded?

Minnesota IT Services is primarily funded by revenue received from executive branch and non-executive branch entities for IT services. This funding includes enterprise rate-based services and pass-through funds for IT projects and applications. Only one percent of funding is from general fund appropriations and special revenue funds.

MNIT funding, FY19

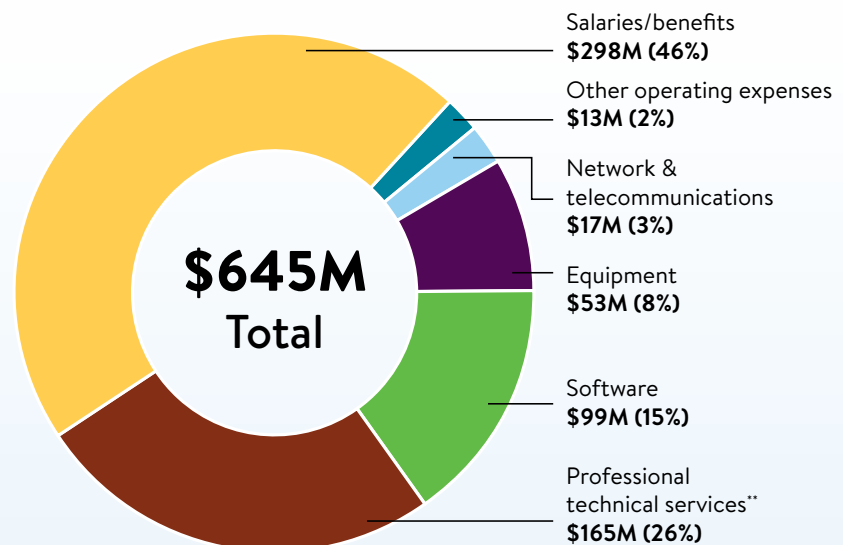


Note: Revenue and expense includes all DHS IT costs.

How are MNIT's funds spent?

In FY19 MNIT expenses across all customers were \$645M. State agencies that are subject to IT consolidation spent \$624M on technology or 1.7% of their \$37 billion total agency expenses. This means our IT spend is significantly lower than the industry benchmark for IT expenses in state/local government units with revenue greater than \$10 billion, which is 2.4% (Gartner Research).

MNIT expenses, FY19*



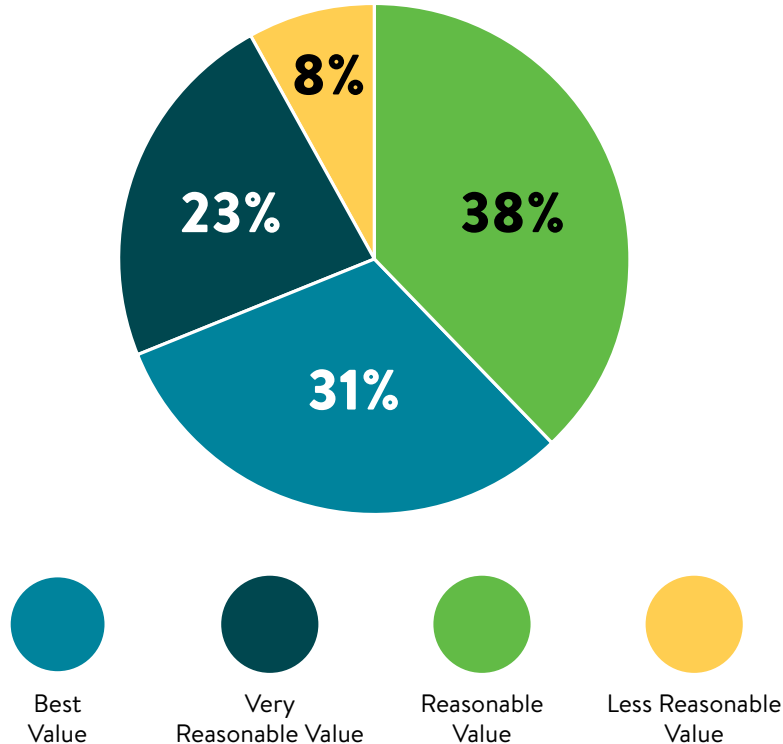
* Other operating expenses include space, utilities, statewide indirect, travel, supplies, employee development, and debt service.

** Professional technical services include both outside and state vendors.

MNIT rate satisfaction synopsis

92% of MNIT's FY20 service rates were rated Reasonable, Very Reasonable, or Best Value by Science Applications International Corporation, an outside consultant.

Results were based on benchmark data from 29 state government peers, representing multiple sizes and consolidation levels, as well as a private industry benchmark analysis tool. Benchmarks were representative of organizations similar to MNIT.



Service portfolio simplification

Making MNIT's services more understandable to customers continues to be a key focus. Part of our efforts include simplifying the service portfolio. Over the past several years, we've created enterprise service bundles and eliminated services no longer required. This reduced the number of service codes (also called rates) by 51%, from 368 in FY16 to just 180 for FY20.

Using business intelligence tools for financial data analytics

Understanding IT finances can be complex, and one of our efforts to help simplify that was the October 2019 launch of a business intelligence analytics tool to executive branch agencies. This tool provides online, mobile-friendly financial dashboards that presents IT financial data in visual ways that people understand.

The analytics provide a range of strategic information for MNIT Chief Business Technology Officers and agency Chief Financial Officers. Transparent analysis of monthly billing costs is now provided for program managers. End users can drill into layers of billing data to validate service usage and spending details. Charts and graphs provide high level trends and patterns, allowing service teams to monitor services and make necessary adjustments. Trend analysis shows changes over time, and helps predict future usage patterns. Predictive analytics are helping teams anticipate shifts in local and enterprise IT service usage.

With the tool, MNIT teams can make proactive business decisions based on real-time information. Agencies now have the tools to monitor their spending on a real-time basis, facilitating easier and more accurate budget preparation and spending forecasts.



Our staff

MNIT is the fifth-largest agency in state government with 2,394 active employees as of January 6, 2020. Approximately 95% of MNIT staff are IT professionals performing IT services and support. MNIT has grown by 21% since 2012. Over the past three years, MNIT has averaged 374 hires and 207 separations per year (8.5% turnover).

Employee recognition

The MNIT Employee Recognition Program promotes a workplace that takes pride in the accomplishments of its employees.

MNIT Annual Awards

Our annual award program recognizes outstanding work of employees, managers, teams, and projects. Nominated by their peers, recipients receive the highest recognition for their service excellence, and exemplary performance in fulfilling MNIT's mission, vision, values, and priorities.

Photos:

Opposite page: Hal Watson receives his award for "Manager of the Year."

Employee of the Year

Gabriella Marie Tsurutani

MNIT partnering with MnDOT

Manager of the Year

Hal Watson

MNIT partnering with DNR

Team of the Year

Major Application Support Team

MNIT partnering with DHS/MNsure

Project of the Year

Transportation Asset Management System (TAMS) Phase 2

MNIT partnering with MnDOT

Partner of the Year

Blue Ribbon Council on Information Technology



Peer-to-peer awards

This program is an ongoing, impromptu way for MNIT employees to recognize other MNIT employees for extraordinary service.

Length of service awards

MNIT acknowledges our employees and the value of their extended service at ceremonies twice each year.



Employee engagement and training

As part of our Connected Culture, MNIT created an Employee Engagement team, made up of 21 individuals, that hosted over 20 employee listening sessions, and submitted its Employee Engagement Action Plan to expand and improve individual and team engagement.

Our training team created a new “Employee Life Cycle” training which expands upon current internal trainings required of all managers and supervisors. This new training helps managers successfully navigate the entire employee life cycle: interviewing; onboarding/orientation; managing probation; employee development; assessment and performance management; and engagement/retention.



Photos:

Top: Group of MNIT employees at the length of service award ceremony.
Middle: Staff member shaking hands with Jeff Nyberg, MNIT CTO, at the length of service award ceremony.
Bottom: MNIT length of service pins.

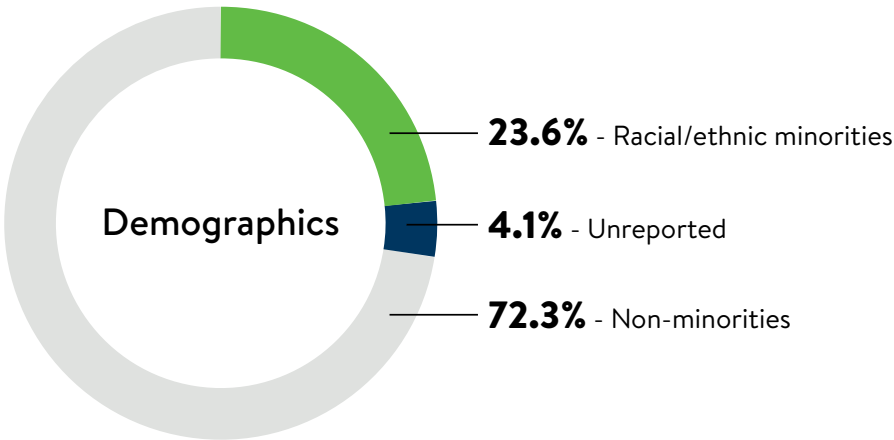
Diversity and affirmative action

MNIT is committed to Minnesota’s statewide affirmative action efforts. We provide equal employment opportunity to all employees and applicants in accordance with equal opportunity and affirmative action laws. MNIT’s Affirmative Action Plan outlines important information about our agency’s ability to recruit and retain diverse talent. The plan includes hiring goals and objectives tied to underutilization, timetables, recruitment methods, and retention strategies to create and maintain a workforce that reflects Minnesota. It also provides guidelines for employees and leadership to foster an environment of respect, courtesy, and cooperation toward fellow employees and the public.

Employee demographics

MNIT worked hard to achieve previously-set hiring goals that increased the percentage of racial and ethnic minorities to 24% and individuals with disabilities to 8%. By implementing several initiatives, MNIT improved recruitment and retention of racial and ethnic minorities, individuals with disabilities, and veterans. Initiatives included: launching the MNIT ITS Trainee program; requiring diverse, multi-person interview panels; ensuring that job candidates in minority groups and individuals with disabilities received proportionate opportunities for job interviews; previewing interview questions and scoring matrices to mitigate unconscious bias and ensure a fair, consistent selection process; and being both intentional and accountable in creating a positive and inclusive work environment for everyone.

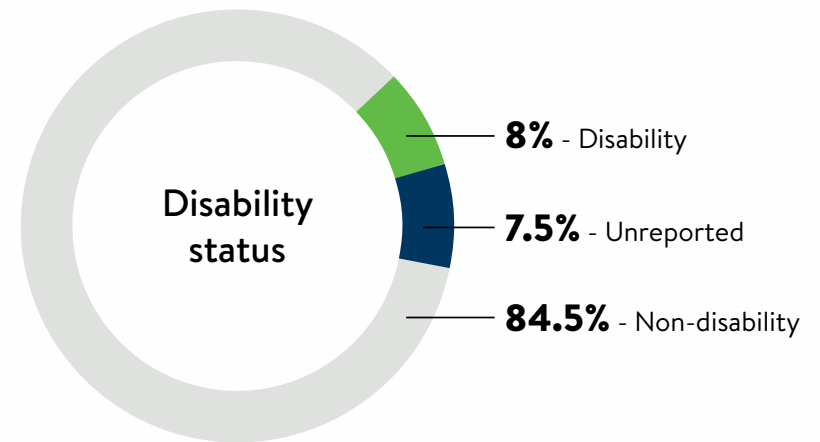
MNIT continues to outpace the marketplace in reflecting racial and ethnic minorities in IT professional positions.



RACE	PERCENTAGE OF EMPLOYEE POPULATION
American Indian	0.5%
Asian	14.3%
Black/African American	5.6%
Latino/Hispanic	1.9%
Multi-racial	1.1%
White	72.3%
Unreported	4.1%

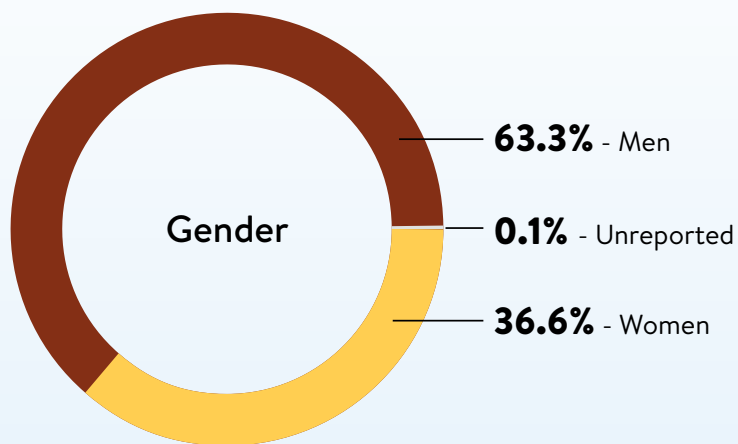
Disability status

MNIT staff collaborate with the disability community to reach its disability employment goals by removing barriers and establishing the inclusive environment necessary to recruit and retain a larger percentage of individuals with disabilities. MNIT will continue to use the Connect 700 program, which allows eligible individuals with disabilities the opportunity to demonstrate their ability to perform a specific position for up to 700 hours on the job. In October 2019, the Minnesota Department of Employment and Economic Development recognized MNIT for our [leadership in employing people with disabilities](#).



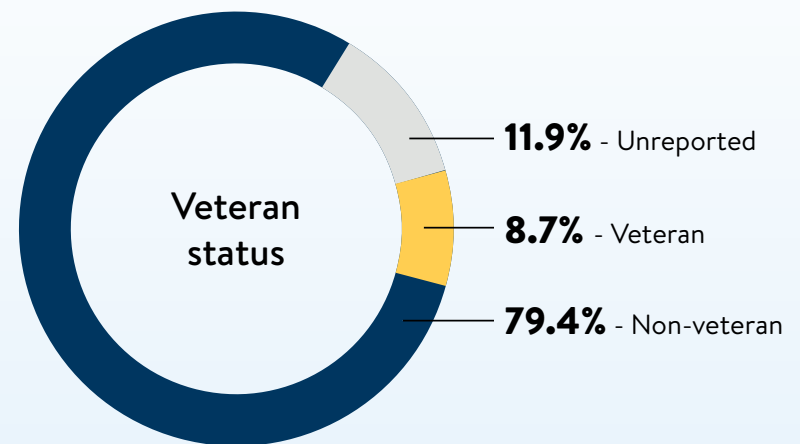
Gender

MNIT continues to outperform its IT peers when it comes to hiring and retaining women in the workplace. The agency proudly reflects or exceeds the number of women in leadership and IT professional staff.



Veteran status

MNIT aims to reach 10% veteran employment by August 2020. The agency has been able to recruit and retain a higher percentage of veterans than are represented in the executive branch overall in the greater Minneapolis-Saint Paul area, according to data from Minnesota Management and Budget.



Recruiting efforts and trends

MNIT's recruitment is closely tied with our diversity hiring efforts to address racial, gender or disability disparities in state employment. In 2018, MNIT launched the ITS Trainee Program to create and expand career opportunities for underutilized groups. This opened a talent pipeline that is necessary in today's competitive job market. Since its launch, 11 trainees have successfully transitioned to permanent positions at MNIT as Information Technology Specialist 1 classified employees.

Given the extremely tight labor market for IT professionals, with almost zero percent unemployment, MNIT has significantly expanded our recruitment efforts. We have posted job announcement videos, enhanced our LinkedIn company page, purchased additional functionalities to advertise jobs online, and improved our external-facing careers page to provide more information, including "Tips to Apply". Other efforts include attending career fairs, such as the People of Color Fair, Hiring our Heroes, Veteran's Career Fair, Minnesota State Fair, CyberCorps Scholarship for Service Fair, and numerous county CareerForce Centers throughout the Twin Cities Metro area. In addition, MNIT job openings are promoted through a weekly "Hot Jobs" digital newsletter that reaches more than 25,000 subscribers. MNIT's recruiter added a text to subscribe option this summer that significantly increased the newsletter's reach and engagement.

Photo:

People applying for jobs at the People of Color Career Fair in Minneapolis, Minnesota.





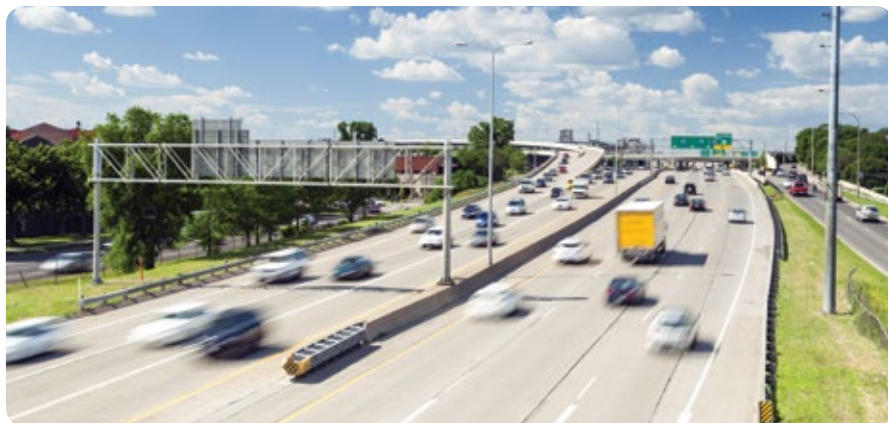
Legislative session achievements

The 2019 Legislative Session ended on May 20, 2019, followed by a special session that concluded with the passage of major budget bills during the early hours of Saturday, May 25, 2019.

Cybersecurity investment

Governor Tim Walz, House Speaker Melissa Hortman, and Senate Majority Leader Paul Gazelka agreed to a \$20M cybersecurity investment, which was passed in the special session. Over the next four years, this amounts to an increased investment of \$5M per year to support the state's cybersecurity program.

Minnesota IT Services is planning to use these resources to move toward the goals outlined in our [cybersecurity strategic plan](#).



MNLARS

The revised funding request for the replacement of the MNLARS system was funded in full as part of the transportation finance omnibus bill. Over the course of the upcoming biennium, this will enable the shift from a custom to a packaged software solution, now known as MNDrive, that will support continued innovation in the area of driver and vehicle services.

MNIT looks forward to working with the governor and legislative leaders to further promote a cooperative approach to tackling IT challenges and seizing the opportunities that technology presents for state government.



Blue Ribbon Council

On February 6, 2019, Governor Tim Walz established the Blue Ribbon Council on Information Technology with the signing of Executive Order 19-02. The members of the council include private and public sector information technology experts who advise Governor Walz, Lieutenant Governor Flanagan, MNIT Commissioner Tomes, and the state legislature on issues relating to cybersecurity, data management and privacy, and modernization projects.

The council provides advice on how to update and maintain the state of Minnesota's IT systems to ensure the best possible service. Members advise on the most efficient use of taxpayer dollars invested in IT projects, while keeping government data secure and protecting the state against cybersecurity threats.

Photos:

Opposite page: Minnesota State capitol quadriga.

This page: Left: Minnesota highway; Right: Members of the Blue Ribbon Council on Information Technology.



Looking ahead

From Commissioner Tomes

As we begin to reimagine how MNIT can best support services across the state, we are eager to take the right steps to quickly make a positive impact to government services. In the coming year, we will continue our work to collaboratively enhance MNIT's **Connected Culture**. Technology always works best when the culture of an organization embraces a new way of working — taking bold chances to innovate in spaces that carry risk with it.

By building on our Connected Culture to set up a culture of innovation, we will make Minnesota more than a state with simply stable technology infrastructure. Instead, we will emerge as a technology leader. Part of our 2020 Tactical Plan will establish a new framework in which MNIT emphasizes training that aligns with our priorities, incorporates essential skills, provides inclusion education, and develops implementation plans post-training. We will identify the programs, technologies, and services best suited for innovation. We will establish a research and development environment for lightweight technologies that enables free and open experimentation. We have already begun to establish communities of practice around emerging technologies. Our Connected Culture encourages and recognizes staff and teams that take time to experiment and play with innovation.

We can harness new advancements that will allow us to become an innovative partner and service provider: cloud-based services, AI, robotic process automation, and so much more. Using these technologies and lifting up our Digital Estate, we can continue as collaborative partners in shaping outcomes according to the priorities laid out in Governor Walz's One Minnesota Plan.

To fully realize this opportunity, we will focus on human-centered design so that new and different modes of thinking and problem solving will emerge. We will get comfortable in our discomfort, we will encourage ideation and actively pursue innovative best practices, improve them, and redistribute them as broadly as possible. When we can't find best practices to adopt, we will create them. We will strive to be strong co-creators and trusted advisors that reliably deliver innovative technology solutions, keeping people, partners, and organizations across the state at the heart of what we do.

Ultimately, we want to work with our partner agencies to build strong relationships, create a platform for bold action, and successfully serve the people of Minnesota, as true partners for One Minnesota. We will continue to gather input from our stakeholders, to optimize our business processes, and work toward modernizations that are essential to Minnesota state government. Technology empowers Minnesotans to connect with their government, and MNIT is committed to mirroring those connections within our own organization.



mn.gov/mnit

