MINNESOTA IT SERVICES

Q1 2020

Quarterly Report

Information Technology for Minnesota Government

──── Note from the Commissioner ────

Like many organizations and governments, Minnesota IT Services spent its first quarter going from business as usual to a rapid crisis response. In January, our priorities were the upcoming legislative session, our project portfolio, and to complete our Tactical Plan. In February, we started thinking about how COVID-19 could impact the state and its workforce, and in March we moved into full response mode. By the end of the quarter, almost 90% of our staff had transitioned to telework. Our teams were in an all-out sprint to ensure that Minnesotans had access to the services they needed, and state employees had the equipment, access, and information they needed to telework.

At the onset of the COVID-19 crisis, MNIT staff took bold and immediate steps to make sure that when Governor Walz declared a peacetime emergency, and encouraged employees to work from home, we were able to fulfill those needs. We formed responsive working groups with staff from security, network, voice, and more to quickly deploy over 1,500 additional laptops, increase capacity of the Virtual Private Network by over 200% to support up to 30,000 users, and increase service desk capacity to support a peak volume of 1,100 daily calls.

As we move into this next part of the state's COVID-19 response, we are continuing to see the ways in which technology can mark our path forward. We are using data and technology to inform actions that will help us to re-open the government such as contact tracing, symptom checking and tracking for business, and measuring social distancing impacts.

Contents

Tactical Plan

In January 2020, MNIT released its Tactical Plan and began work on implementation. Each tactic was assigned an owner, who formed a cross-agency, cross-functional work group to develop Tactic Action Plans. Each plan is going through a review and approval process in parallel with implementation.

As part of the Tactical Plan, MNIT coordinated a day-long retreat with Commissioners, Deputy Commissioners, and other leadership from around state government on March 2. The retreat created a space where state leaders could discuss the role of technology and MNIT in delivering services for citizens, and to reestablish the relationships necessary to make those services a reality.

Strategic Plan

By February, we were in full swing with our strategic planning process. The agency held two in-person, all-day planning sessions with the Senior Management Team, made up of service directors, Chief Business Technology Officers, and the CIO office. Our Planning Director also held multiple in-person and virtual open houses for all MNIT staff to provide feedback on the Strategic Plan.

Strategic Planning session attendees pose for a group photo with Lt. Governor Peggy Flanagan

Notable achievements, awards, and events

Veterans Award

The U.S. Department of Veterans Affairs presented the [Abraham Lincoln Pillar of Excellence Award](#) to the Minnesota's Veterans Application Tracking System (VATS), a joint project between the Minnesota Department of Veterans Affairs (MDVA) and Minnesota IT Services (MNIT). VATS transformed the way Veterans in Minnesota apply for and receive education benefits through the Minnesota GI Bill.

Prime Academy

MNIT partnered with Prime Academy's User Experience (UX) Design program to allow students to take a deep dive into a critical service that MNIT supports, the Minnesota Service Hub. The Prime Academy students interviewed users from around MNIT, developed a final report, and [presented their findings to MNIT](#).

Women IT ChangeMakers

MNIT is leading the way in addressing the disparities that women in IT face. Ellena Schoop, an enterprise data architect, and Dr. Annie Porbeni, assistant HR director, leveraged the statewide Employee Resource Group (ERG) to build a network of women — Women IT ChangeMakers. The resource group will begin the work to address conversations women in IT have been having for years: the difficulty women have moving from traditional business to IT, the lack of promotion opportunity and career pathways that support women in technology, and wage disparity, among others.

Emerging technology: artificial intelligence chat bots

Minnesota's response to COVID-19 focused on keeping citizens informed by providing access to critical information needed by citizens and our partner agencies One method for helping people get the information they need is through chat bots, an artificial intelligence (AI) software that can simulate a conversation (or a chat) with a user. Chat bots can serve one of three purposes: assist a service desk, conduct sales, or manage knowledge. MNIT implemented two different kind of chat bots during the COVID-19 response.
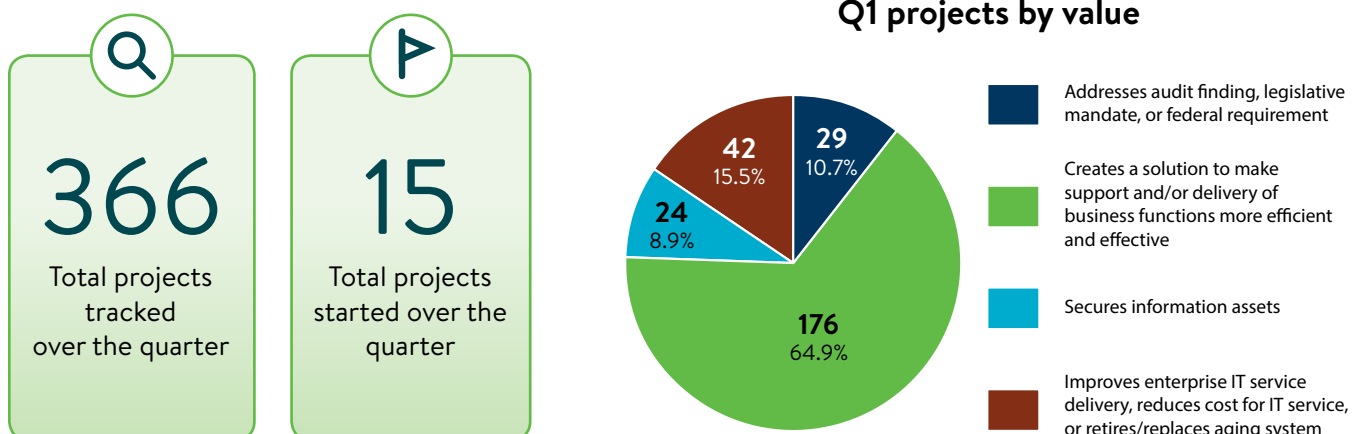
When the MNIT service desk call volume peaked at over 1,100 calls per day, versus a typical day of approximately 200 calls, the agency sought innovative solutions to manage request volumes. MNIT adopted voice and chat bots to assist with resolving remote access issues exacerbated by the rapid increase in teleworking.

MNIT added a virtual assistant, or knowledge management chat bot, to allow Minnesotans to access resources on the state's COVID-19 website through multiple means. The site has at least 4,000 pages of content, which over 45 percent of visitors access through a mobile device or tablet. The resources on the website provide valuable information on testing, new executive orders, health recommendations, and information for employees and businesses. The virtual assistant is a tool to answer questions in real-time, designed with real users in mind.

Agency updates

Project Management Office

Over the quarter, MNIT's Project Management Office (PMO) tracked the completion of 11 projects across nine executive branch agencies, boards, commissions, and councils. MNIT defines a project as "a temporary endeavor undertaken to create a unique product, service, or result. It has a start date, specific goals and conditions, defined responsibilities, a budget, a plan, and end date." These projects range from public-facing applications to internal-facing IT infrastructure endeavors.

366
Total projects tracked over the quarter

15
Total projects started over the quarter

Q1 projects by value

- **29 / 10.7%** Addresses audit finding, legislative mandate, or federal requirement
- **176 / 64.9%** Creates a solution to make support and/or delivery of business functions more efficient and effective
- **24 / 8.9%** Secures information assets
- **42 / 15.5%** Improves enterprise IT service delivery, reduces cost for IT service, or retires/replaces aging system

During the first quarter of 2020, Minnesota IT Services' work is most notably marked by the state's COVID-19 response. MNIT worked across state agencies, federal and local partners, and through public-private partnerships to deploy innovative solutions that ensured the technology needs of the state were uninterrupted while employees safely transitioned to working from home. As we ended the quarter, MNIT began its work on finding ways that technology could change the outcomes of the crisis.

Continuing state services in our new world

The ability for state employees to telework increased exponentially in response to COVID-19. This crisis has not only shown us the need to be prepared for large-scale workforce shifts, but it has been a catalyst for delivering swift results. MNIT quickly identified the number of people able to telework and their needs to access state systems while managing new supply chain constraints. We took bold action in the infancy of this crisis in Minnesota to deploy 1,500 laptops and 1,300 small office/home officer routers to ensure that state employees could provide services for Minnesotans, while staying safe at home. MNIT teams established connections through cellular carrier hotspots, wireless desktop cards, and extended network cables.

Our COVID-19 response has been one of real-time collaboration. MNIT quickly pulled together teams from across the agency to ensure that state employees had access to hardware, software, collaboration tools, video and phone conferencing services, and customer service. When MNIT employees saw that calls to our service desk increased rapidly as more employees worked from home, we quickly shifted employees within MNIT to increase service desk staff by 30 full-time employees (100% increase) over the past month to better meet the needs of state employees.

State employees are not only successfully working from home, they are using it as an opportunity to stay connected and increase outreach in a great time of need. The adoption of remote teleconferencing capabilities has reflected the rapid shift to remote work. From March 16 to April 6, the total number of unique users of Microsoft Teams across the executive branch of Minnesota state government increased by 81%, and had a 580% growth in interactions (calls, meetings, and chats). We have also trained 1,400 state employees in conferencing and collaboration tools. There have been days where state employees sent over 165,000 instant messages.

Meeting Minnesotans' needs during COVID-19

By rolling out the remote state workforce quickly, we were able to focus MNIT's efforts on meetings the needs of our most important customers – all Minnesotans. MNIT is ensuring systems are holding up under the increased traffic from Minnesotans who are looking for critical, actionable, and accurate information.
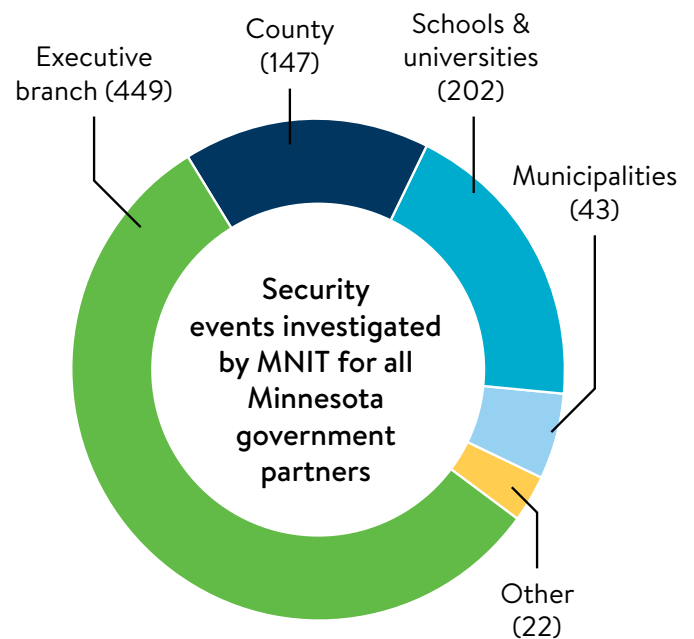
One system that has faced intense demand is the Unemployment Insurance (UI) system at the Department of Employment and Economic Development (DEED). MNIT added monitoring and service capabilities to the Unemployment Insurance website and call center at DEED to ensure it is functioning end-to-end, and ready to deliver benefit changes as quickly as possible. Minnesota scaled the infrastructure for Unemployment Insurance web service pages by adding more than double the server capacity, memory, and caching to handle an increase in traffic at over eight times than normal. Before the state's COVID-19 response, the UI system peaked around 4,000 concurrent users. By mid-April, the system handled over 27,000 concurrent users. The results of MNIT partnering with DEED and enterprise services' hard work translates to a UI system that had over 99.95% up time in March and April – which exceeds the industry standard.

Security

To keep state government running, and protect Minnesotans' private data, we must continually work to better secure Minnesota's IT systems. Cybersecurity is one of the most critical functions that Minnesota IT Services is tasked with, and it functions best when we are all working together, from the individual citizen, to our state agencies, and even to our legislators; that is how we can help protect the 35,000 users of our systems and 5.6 million Minnesotans who have private data secured by the state.

We serve Minnesotans by connecting all 87 counties, 300 cities, and 200 public higher education campuses across the state through MNET – Minnesota's dedicated public sector network. This network provides broad visibility into cyber activity occurring across the state. From January to March, our Security Operations Center (SOC) detected or received reports of 790 cyber incidents.

Type of security incident	# reported
Malware	307
Unauthorized access attempt	247
Network attack/scan	34
Forensic investigation	96
Copyright violation	17
Social engineering	15
Denial of service	7
Lost/stolen devices	7
Unauthorized disclosure	4
Policy violation	6
Inappropriate use	3
Other	47

Security events investigated by MNIT for all Minnesota government partners

Executive branch (449) · County (147) · Schools & universities (202) · Municipalities (43) · Other (22)
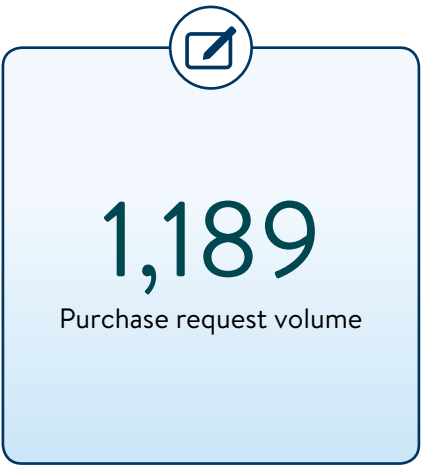
Security incidents detected by or reported to MNIT SOC.
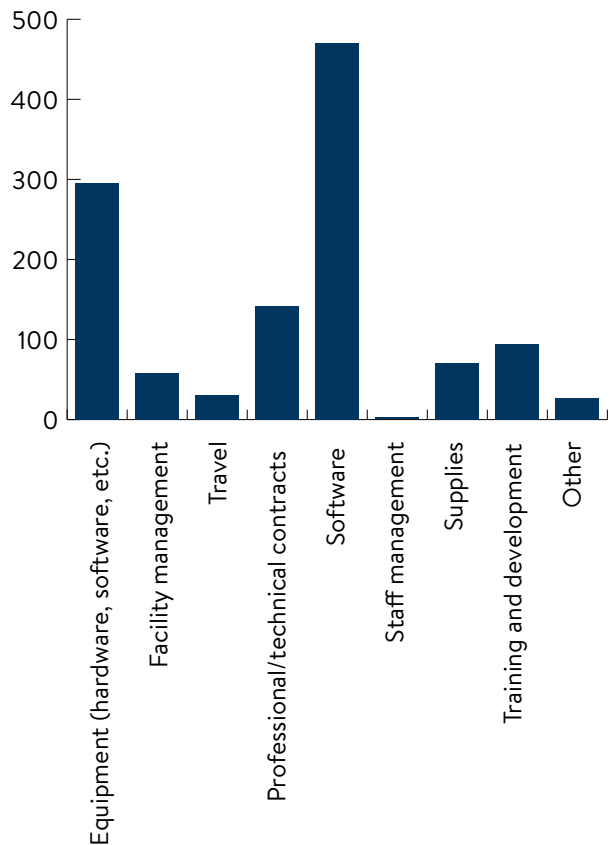
Secure network deployment

A data-driven approach was key to successfully helping state employees telework. Metrics allowed MNIT to understand where we need to shift our attention, inform our actions, and get ahead of service impacts. For example, we knew one critical need would be Virtual Private Networks (VPNs), which allow staff to connect safely with sensitive files and information. Once we understood the volume that we needed within the early days of the response, we could project the need for all of state government. In early March, MNIT had capacity to support 10,000 people connecting through VPN, and as of April 6, MNIT can support over 30,000 people who need to connect through VPN. In addition to VPN, accelerated multi-factor authentication deployment was a key factor for providing enhanced security as employees moved to connecting remotely. Over 90% of state employees now use multi-factor authentication – up from 33% prior to COVID-19.
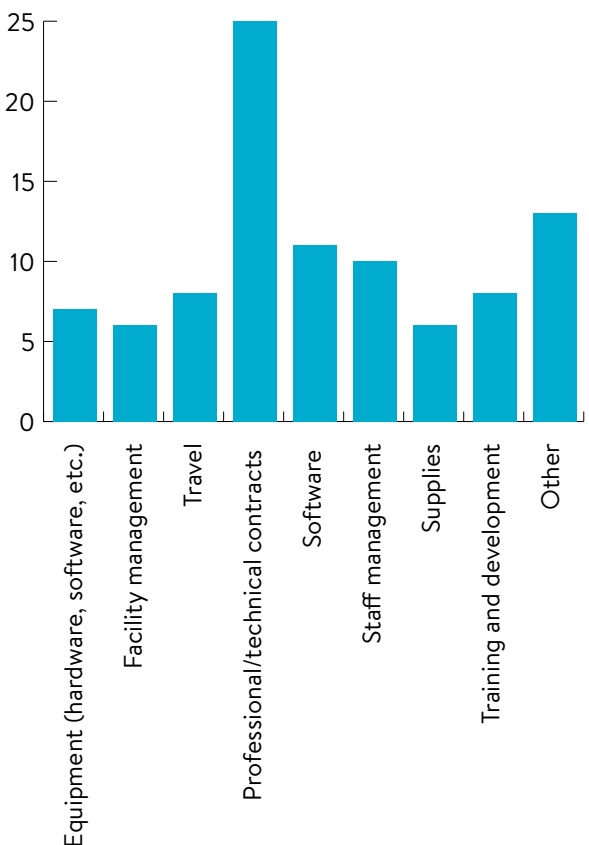
Procurement

The Procurement 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. Procurement follows a standardized purchasing process that can include administrative review, accessibility testing, vendor negotiation, open bidding and competitive RFP processes, among others.

1,189
Purchase request volume

11
Average purchase request processing time (days)

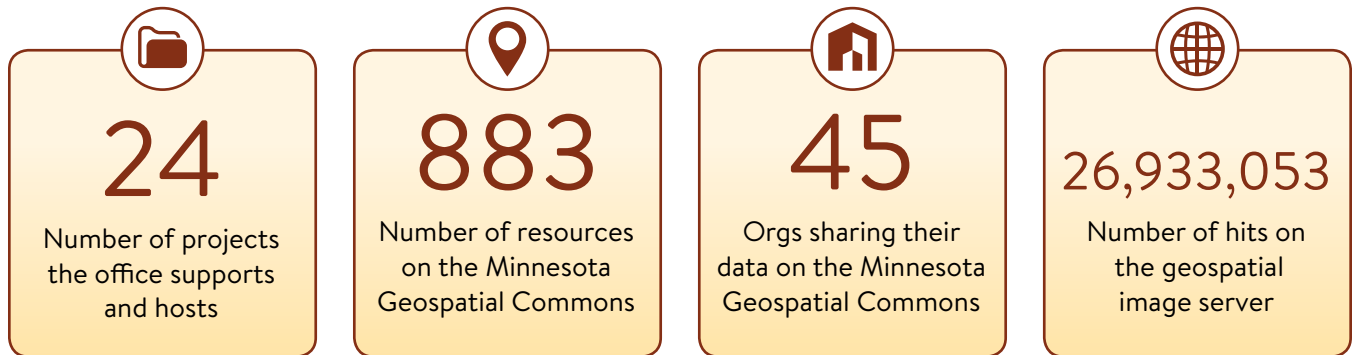## Number of purchase requests
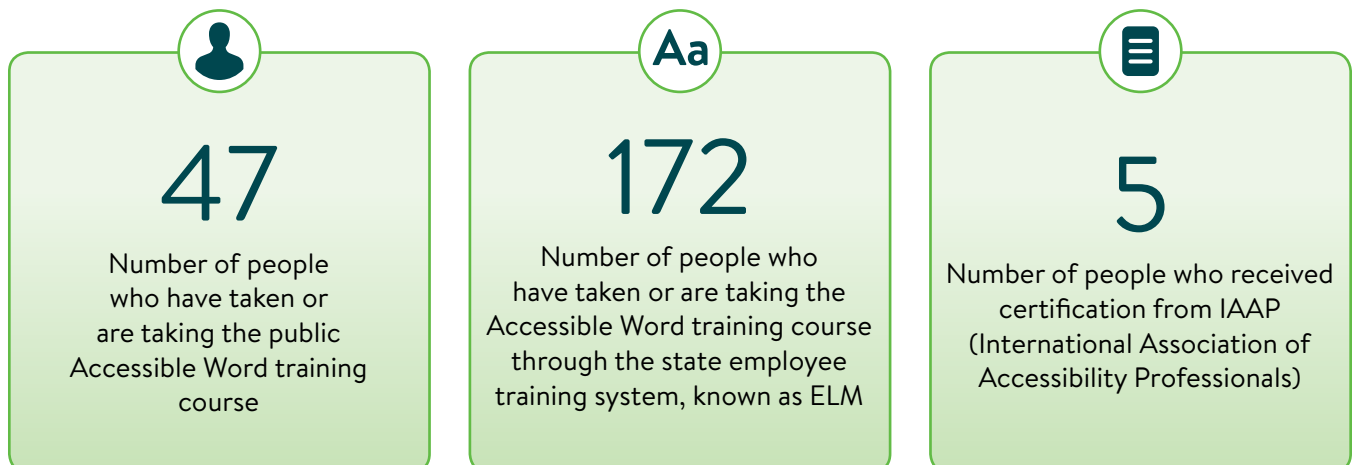

Average processing time (days)

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 preservations of our natural resources, and much more. The MnGeo team manages the Minnesota Geospatial Commons, a collaborative public website where publishers can share, and users can access geospatial resources – data, maps, services and applications.

24	**883**	**45**	**26,933,053**
Number of projects the office supports and hosts	Number of resources on the Minnesota Geospatial Commons	Orgs sharing their data on the Minnesota Geospatial Commons	Number of hits on the geospatial image server

Office of Accessibility

The Office of Accessibility is charged with overseeing the implementation of accessibility standards for all executive branch employees and state agencies.

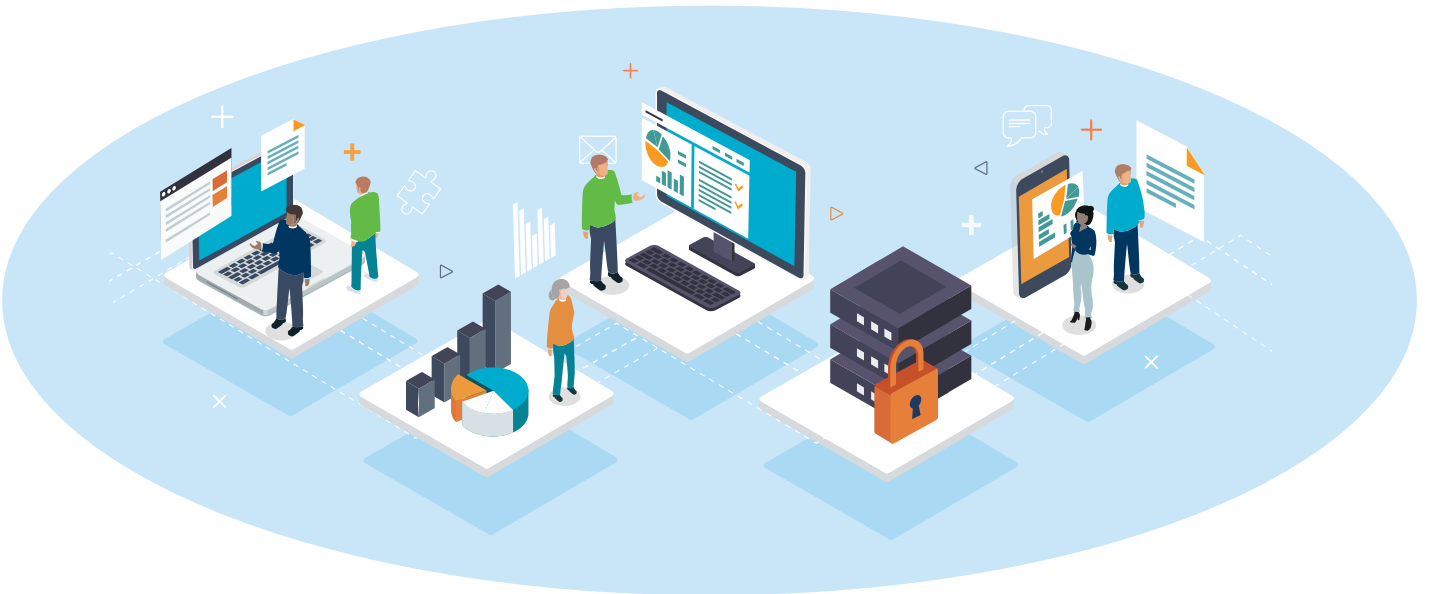|		
47	**172**	**5**
Number of people who have taken or are taking the public Accessible Word training course	Number of people who have taken or are taking the Accessible Word training course through the state employee training system, known as ELM	Number of people who received certification from IAAP (International Association of Accessibility Professionals)

Service desk

Our enterprise service desk provides 24/7 IT support and services for Minnesota state government: executive branch agencies, boards, councils, and commissions; non-executive branch customers, education, tribal governments, non-profits; and MNIT staff. As many state employees began working remotely at the end of this quarter due to the COVID-19 response, the service desk saw a significant increase in tickets in March.

81,763
Total volume of all service desk tickets across the executive branch

40,551
Number of those tickets resolved the same day

49.6%
Percentage of service desk tickets resolved in one day

IT optimization updates

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 provide key data about our service delivery. The 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.

Meet MNIT

Jeff Nyberg

Jeff Nyberg is the Chief Technology Officer for the state of Minnesota. In his role at Minnesota IT Services, he provides leadership for the state's information technology infrastructure, supporting the delivery of services to meet the evolving information technology needs of state agencies, counties, and public higher education institutions. Jeff and his team were instrumental in the ability for the state to respond to COVID-19. He quickly activated a cross-functional, cross-agency working group to make decisions. Relying on innovation, metrics, and initiative, he encourages his team to take the risks that ultimately lead to better service.

About MNIT

Minnesota IT Services, led by the state's Chief Information Officer, is the Information Technology agency for Minnesota's executive branch, providing enterprise and local IT services to over 70 agencies, boards and commissions. MNIT employs more than 2,000 people across 90 physical locations. Together, we build, maintain, and secure the State's IT infrastructure, applications, projects and services. MNIT sets IT strategy, direction, policies and standards for enterprise IT leadership and planning. We also serve Minnesotans by connecting all 87 counties, 300 cities, and 200 public higher education campuses across the state on the MNET network. Through public-private partnerships, our team proactively protects the state's information systems and the private data of 5.6 million Minnesotans.

Learn more

For questions, comments, and feedback on MNIT's quarterly reports, please reach out to MNIT_Comm@state.mn.us

You can also find more stories about the agency across our social media accounts: