



**Q3 2021**

# Quarterly Report

# — Note from the Commissioner —

After over a year of rapid response and incredible change due to the COVID-19 pandemic in Minnesota, the way we work at Minnesota IT Services (MNIT) has also changed – and for the better. We have honed efficiencies in online collaboration, worked to improve communication, and provided flexible opportunities for staff in ways that help all of us to bring out the best in the services we provide across the executive branch – to our colleagues and, ultimately, to all Minnesotans.

I am proud of the work our teams have done to adapt, grow, and problem-solve. In August, four MNIT projects were announced as finalists for 2021 State IT Recognition awards from the National Association of State Chief Information Officers (NASCIO), and since that time, MNIT has received additional recognitions from its peers across the IT industry here in Minnesota.

While we know that the way we work will continue to evolve as we adopt new technology and flexible approaches, MNIT is not the only organization that has been on this transformative journey with its workforce. More than ever, the Minnesotans we serve are also working from new places or adapting to new ways of interacting with companies and organizations that embrace remote working environments.

Now, the call we must answer is to align that workforce evolution with our own evolution of government services.

The technology that supports government services is vital to the people who rely on it. As Minnesotans work with greater flexibility, government services should in turn match their needs for flexibility, reliability, security, and ease of use.

We also know that as we continue to improve on strong and secure IT solutions for the executive branch and as we strive to meet the needs of the people we serve where they are at, we must also stay vigilant against the threat of cyber-attacks. These threats also continue to evolve, and we must confront that challenge by taking an intentional and strategic approach to the way we protect our systems and information. It is everyone's role to stay vigilant against these threats, and to stand ready to respond and react when new challenges come our way. With a culture of innovation, we can continue to meet that threat to keep our technology systems secure for the people we serve.



# Contents

Planning .....	1
Notable achievements, awards, and events.....	1
Agency Updates.....	4
Project Management Office.....	4
Security.....	8
Procurement.....	9
Geospatial Information Office (MnGeo) .....	10
Office of Accessibility .....	10
Service Desk .....	11
IT Optimization Updates .....	12
Meet MNIT .....	13
About MNIT.....	13



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# Planning

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## Tactical Plan

MNIT prepared to launch the 2022 Tactical Plan, which covers a 14-month time frame from October 2021 through January 2023.

There are 26 tactics spread out amongst five goals defined by MNIT's Strategic Plan (PDF). 223 staff members signed up to participate in the 2022 Tactical Plan.

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## Notable achievements, awards, and events

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## MNIT Commissioner Tomes Finalist for National CIO of the Year Award

The State of Minnesota's Chief Information Officer (CIO) and the Commissioner of Minnesota IT Services (MNIT), Tarek Tomes, was named a finalist for the [2021 National Nonprofit/Public Sector CIO of the Year® ORBIE® Award](#).

Commissioner Tomes received the 2020 Twin Cities Nonprofit/Public Sector CIO of the Year® ORBIE® Award in September 2020, after which he was nominated for the National CIO of the Year® ORBIE® Award alongside ORBIE winners from the InspireCIO Leadership Network chapters across the U.S.

The CIO of the Year® ORBIE® Awards recognize technology executives for outstanding leadership and the business value created by technology innovation. Finalists and award winners were celebrated during a virtual award ceremony on Thursday, July 22, 2021.

## MNIT Projects Recognized as Finalists in NASCIO State IT Recognition Awards

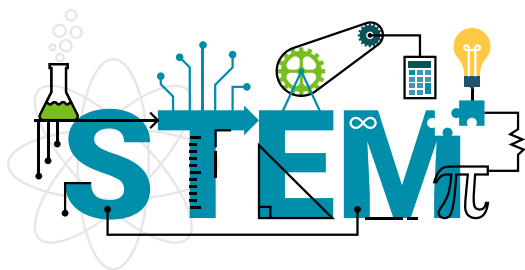


Four of MNIT's projects were selected as finalists for 2021 the National Association of State Chief Information Officers (NASCIO) State IT Recognition Awards.

- Securing State Payment Card Data for Minnesotans
- Piloting Secure Self-Service for Minnesota's Benefits
- Communicating P-EBT Benefits to Families When Schools Closed
- Innovation Informs Minnesotans about COVID-19 Resources, Risks, and Guidance

NASCIO selected 30 finalists across 10 categories for the projects and initiatives from NASCIO member states and territories. NASCIO members served as volunteer judges to review over 100 submissions, narrowing the nominees down to three finalists in each category.

The award nominations showcase innovation and excellence in the use of information technology in state government. Read about all the [2021 projects submitted for NASCIO awards](#).



### STEM Day at the State Fair

Commissioner Tomes virtually presented the proclamation for STEM Day at the Fair on August 25, 2021. The 11th Annual STEM Day at the State Fair inspired students to envision their successful future in an increasingly digital workplace.





## Emerging Technology: CAV-X and Cybersecurity

As technology evolves and our systems become increasingly connected, the transportation sector is looking to emerging technologies like connected and automated vehicles (CAV) to advance a safer, more equitable, and sustainable society. Minnesota IT Services is building secure CAV foundations to ensure the state of Minnesota can support this important technology, while also maintaining important public safety goals.

### **Our role is to protect many aspects of the system:**

- Confidentiality of the information processed by the technology.
- Integrity of the data inside the system.
- Availability of the system for use by the traveling public.

Our approach – Security by Design – works to protect CAV systems by applying trusted information security principles from the [Open Web Application Security Project \(OWASP\)](#) to a proven and familiar transportation framework used by our transportation partners—the [National Architecture Reference for Cooperative and Intelligent Transportation \(ARC-IT\) version 9.0](#).

It is important that we protect CAV systems because they will touch many aspects of our daily lives as we make routine trips in tomorrow's vehicles. To prepare for this future, the CAV Office and Minnesota IT Services hosted a tabletop exercise to map the journey of various personas interacting with a CAV-ready world. We modeled these personas based on existing traveler research and people who rely on our system, like people who commute to work, parents who drop children off at daycare, or a truck driver making deliveries. We traveled with them virtually through their day and analyzed how they interact with CAV systems, asking:

- How will this persona access our services?
- What security measures will we need to protect those connections?
- What vulnerabilities could bad actors try to find in our systems?
- How might these connections be exploited to access our data or disrupt our systems?

Connected and automated vehicle technologies are our future, and that future is coming faster than we may even understand. While private industry is rapidly developing and deploying these technologies, it is important to test the security of CAV systems while we can still plan and design around them. MNIT will work with the transportation professionals in the CAV Innovation Alliance to build even more realistic testing scenarios. Our exercise with these personas will inform and focus these efforts, resulting in a more secure system.

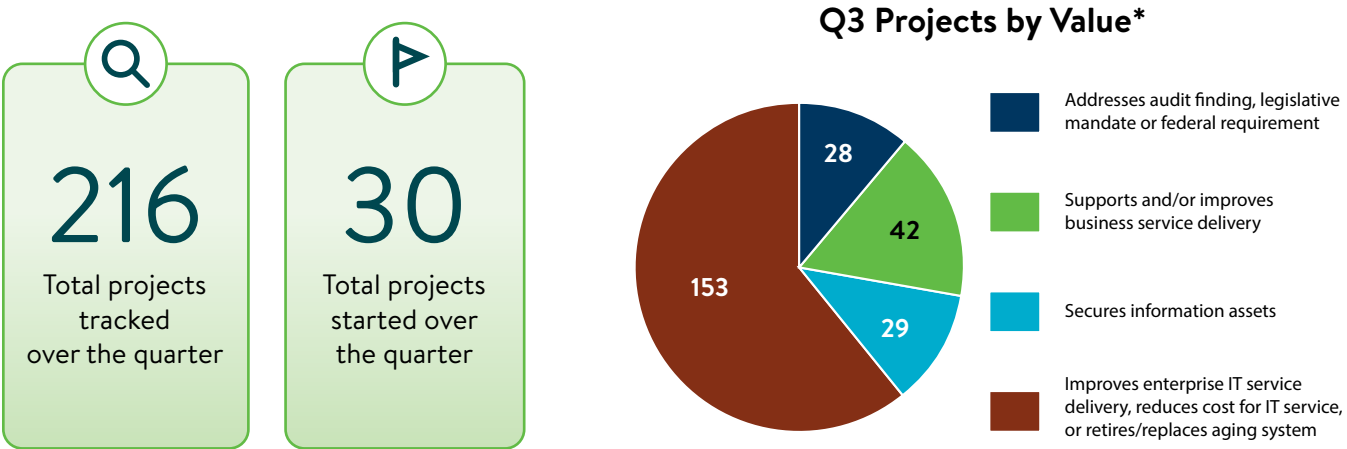
Testing these technologies and our cybersecurity framework will be accomplished using State of Minnesota fleet vehicles, and lessons learned will be incorporated into the 2022 CAV Strategic Plan.

MNIT’s mission is to deliver secure, reliable technology solutions to improve the lives of all Minnesotans. We make that real by partnering with MnDOT and the CAV Innovation Alliance to build a future transportation system that is safe, equitable, accessible, efficient, healthy, and sustainable. We are with them every step of the way.

# Agency Updates

## Project Management Office

Over the quarter, MNIT’s Office of Transformation and Strategy Delivery tracked the completion of 31 projects across Minnesota’s executive branch agencies, boards, commissions, and councils. These projects range from public-facing applications to internal-facing IT infrastructure endeavors.



*\*Some projects may provide value for more than one category while others’ value may fall outside of these categories.*

## NOTABLE PROJECTS

### Statewide Employee Management System (SEMA4) Upgrade Models New Modernization Playbook

This IT project at Minnesota Management and Budget (MMB) upgraded SEMA4 (Statewide Employee Management System) the state's payroll, human resources, and benefits system and ELM (Enterprise Learning Management) the state's learning management system to new hardware and software version. The upgrade improved accessibility and user experience and included changes to Employee Self Service. The project budget of \$4.6M involved multiple statewide agencies and more than 55+ MNIT, 20+ MMB staff and 5 consultants working on this project for more than year and half.

This project was a first for MMB where the new modernization playbook project methodologies introduced by the Blue Ribbon Council and MNIT's Transformation Office were incorporated into a

state IT project. These new methodologies allowed this complicated and time intensive project to move from concept to execution and completion with all levels of project governance appropriately involved, MNIT and agency teams interacting freely and cooperatively, and funding was acquired, tracked, and communicated across agencies with agreements and confidence of accuracy at every phase. All of these efforts contributed to a project that was completed on the original timeline, within budget, and a go live with very minimal issues that were resolved in the pre-planned warranty period. This project is a model example of how the state's modernization playbook methodology ensures success from both MNIT and business partner perspectives.







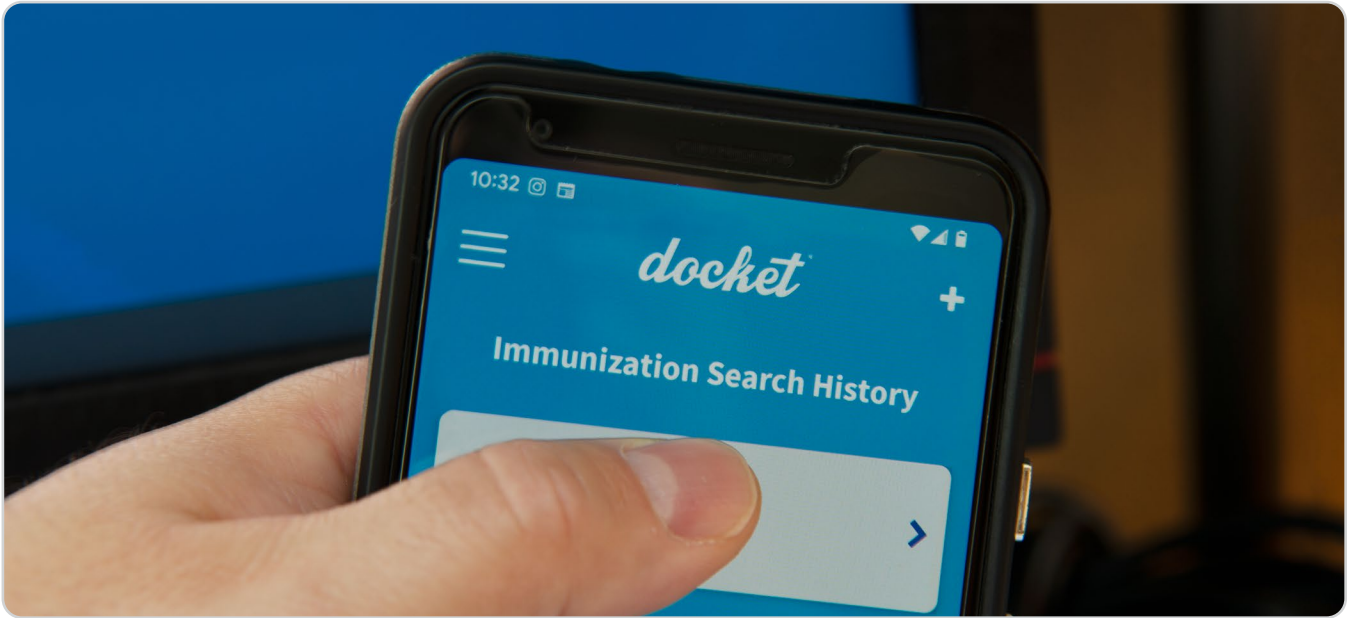
## P-EBT Summer Benefit Text Feature

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After the initial launch of the P-EBT web application, the Minnesota Department of Human Services (DHS) identified a need to quickly notify P-EBT eligible families of benefits and information about the program. The MNIT and DHS teams chose SMS or text messaging to solve this need.

Three MNIT groups – MNIT DHS, and teams at MNIT Enterprise working on system security and cloud technologies – collaborated with Amazon Web Services to spin up the technology, ensure the infrastructure was in place, and identify security mechanisms. The team used AWS Pinpoint service, an emerging cloud technology, to send SMS/text message notifications. They also worked with legal teams at DHS to review and approve the texting strategy to ensure that the program complied with all state and federal privacy and communication laws.

In less than 10 days, MNIT and AWS set up the texting environment to test campaigns. They sent text messages in seven different languages. Separate campaigns are created for each language. Amazon Pinpoint service distributes the text messages, and results are streamed to Amazon S3 storage to be read through SQL queries using the Amazon Athena service. MNIT also developed a python-based script to query Amazon Athena and send results upon request. The service launched to the public while [Summer P-EBT benefits](#) were delivered in 2020, and within less than two months after initial requirements gathering. After initial set up, DHS staff could send out text messages to families who need support from P-EBT without MNIT's help.



## Docket

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Minnesota now provides mobile access to immunization records for Minnesotans with [Docket](#), a free app available for download in Apple and Android app stores. The Docket app provides consumers with a secure, easy method for instantly accessing their and their dependents' immunization records. Minnesotans with a valid email or phone number on-file with the Minnesota Immunization Information Connection (MIIC) can access their personal immunization records using the Docket app and secure two-step verification.

The project was a collaboration between the Minnesota Department of Health (MDH), MNIT MDH Cloud Operations and DevOps Engineering, Application Development, Application Architecture, and Security teams, and Docket, a digital health company that partners with the government to put more Americans in control of their personal health data. MNIT teams played key roles in the data integrations and the security of that data.

Consumer-facing digital tools, like Docket, provide a number of benefits to Minnesotans by making it easy and convenient to access official immunization records. The Docket app allows people to view their immunization records and upcoming vaccinations based on the Advisory Committee on Immunization Practices (ACIP) recommendations, helping increase immunization awareness.

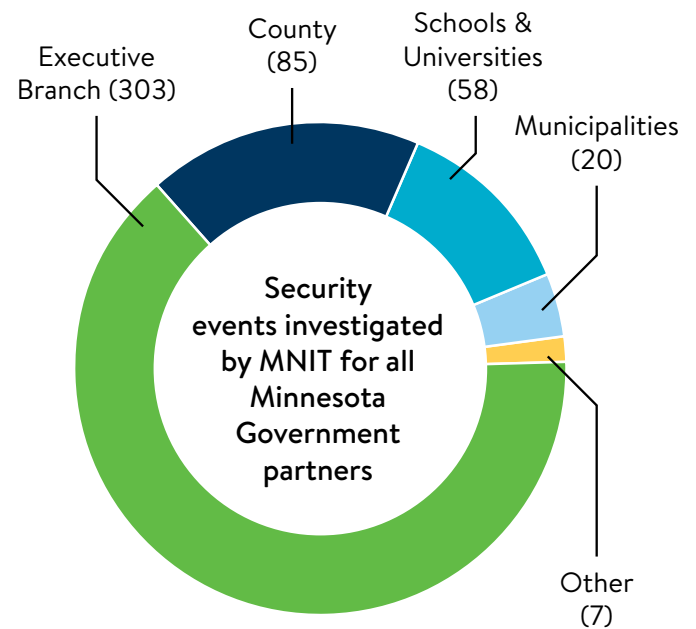
## Security

To keep state government running, and to 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 5.5 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 519 cyber incidents.

Type of Security Incident	Number Reported
Malware	200
Unauthorized Access Attempt	6
Network Attack/Scan	26
Forensic Investigation	75
Copyright Violation	4
Social Engineering	10
Denial of Service	6
Lost/Stolen Devices	1
Unauthorized Disclosure	2
Policy Violation	14
Inappropriate Use	1
Other	70

Security incidents detected by or reported to MNIT SOC

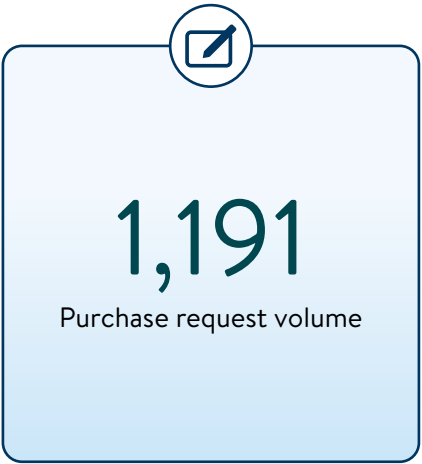


# 92,000

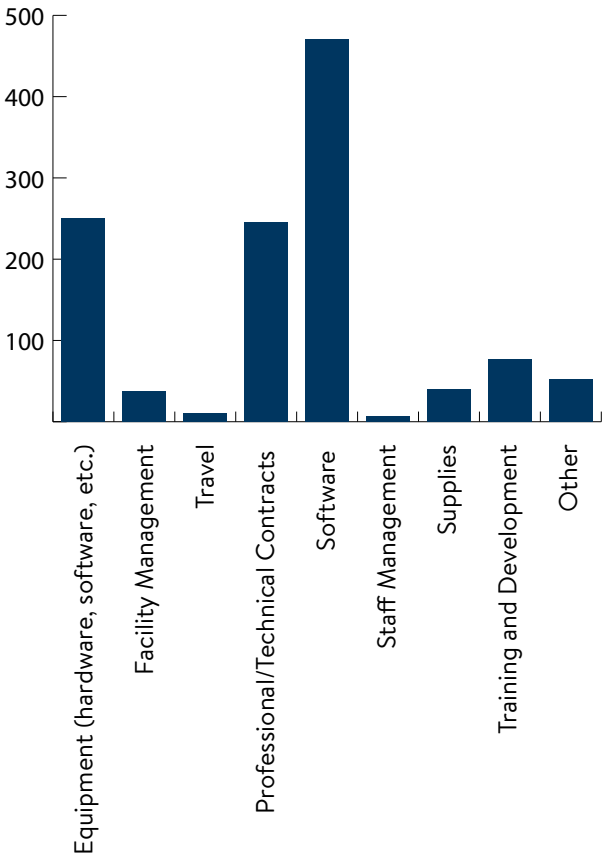
Total spam emails processed during the third quarter  
(July 1 - September 30) of 2021

# Procurement

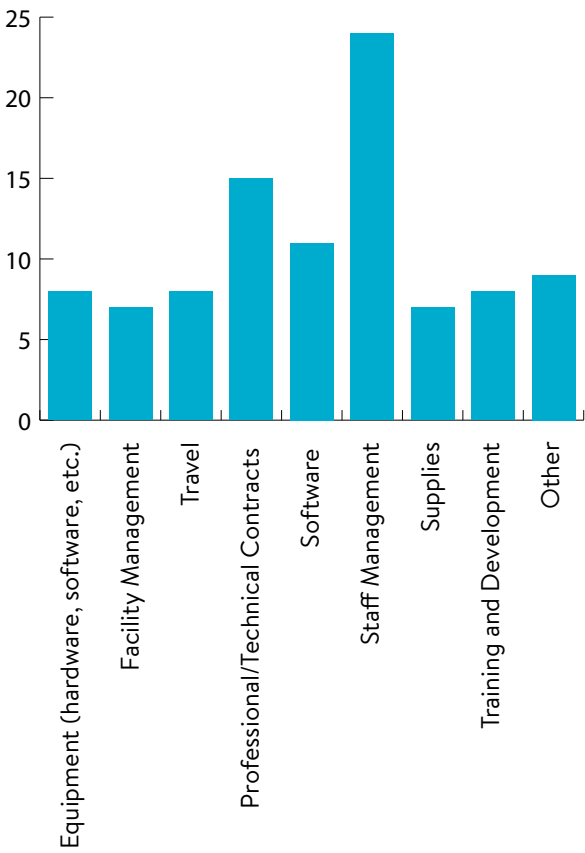
The Procurement Division is responsible for processing all requests to purchase everything from IT hardware, software, and mobile devices, to contractors brought in to assist on projects. Procurement follows a standardized purchasing process that can include administrative review, accessibility testing, vendor negotiation, open bidding, and competitive RFP processes, among others.



Number of purchase requests



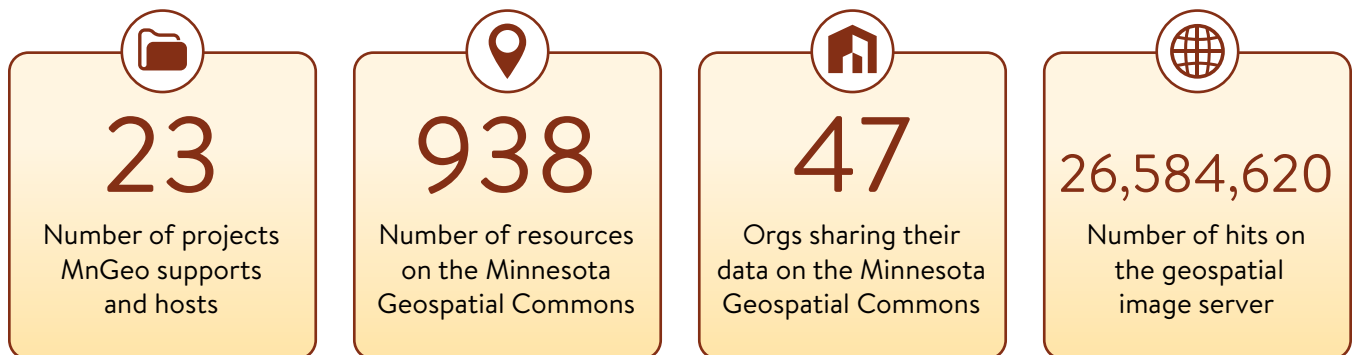
Average processing time (days)





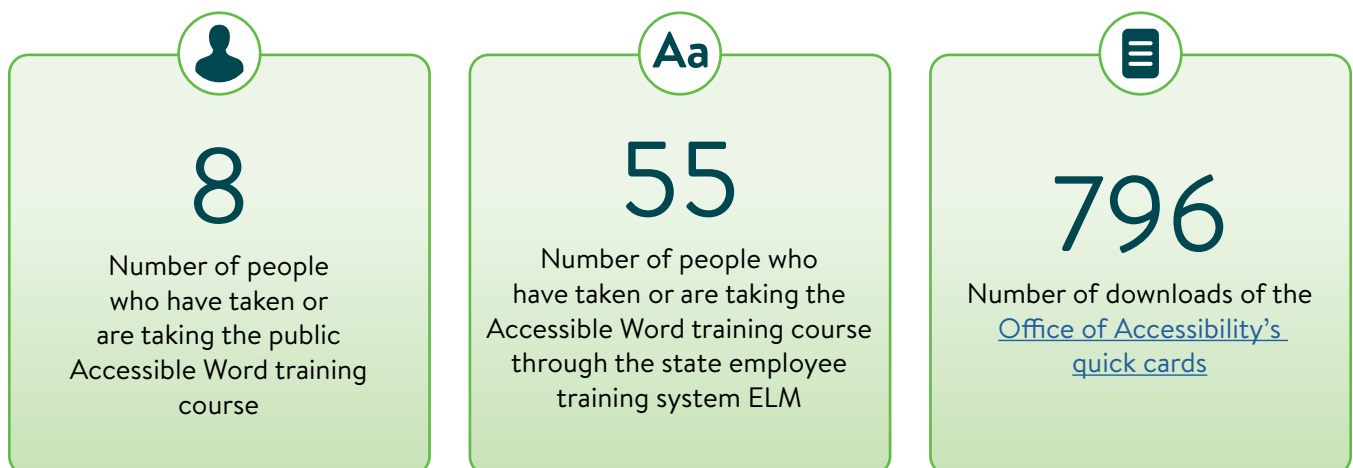
## Geospatial Information Office (MnGeo)

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 Geospatial 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. The Minnesota Geospatial Commons is supported by operational team that includes staff from MnDOT, the Metropolitan Council and MNIT staff partnering with DNR, MDE, MDA and MPCA.



## Office of Accessibility

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





635

Number of downloads of  
reference guides for digital  
content accessibility



1,973

Total downloads of  
accessibility-related  
materials



3,4,5

Overall rank on MNIT  
website for top 3  
downloaded documents

## 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.



95,884

Total volume of all service  
desk tickets across the  
executive branch



46,731

Number of those  
tickets resolved the  
same day



48.7%

Percentage of  
service desk tickets  
resolved in one day

# IT Optimization Updates

## CloudRAMP: MNIT Cloud Intentional Approach

CloudRAMP is our enterprise project to help the state realize our Intentional Cloud Approach. We are coordinating between MNIT teams and Microsoft to identify applications to begin moving into the Azure cloud. We are holding meetings with multiple stakeholders. The project is ongoing through mid-2022, and includes technical workstreams for planning and implementation: Azure Cloud Foundation, Workload Migration, Azure Assessment and Modernization Plan, and Applications Modernization.



### Our Strategic Cloud Vision:

- Define and start to implement an Intentional Cloud Approach embracing multi-cloud environments while providing some guardrails around certain services. Use Cloud technology to help the State of Minnesota advance infrastructure modernization and improve security and resiliency.
- Use a new standard for IT infrastructure and platform services: a primary provider for most of the state's cloud-based infrastructure and platform services, which includes IT networks, servers, and storage.
- Best meet the technology needs to enable agencies to serve all Minnesotans.
- This solution will help Minnesota strategically implement cloud services across the executive branch. While the standard will not arbitrarily limit which cloud provider may fit agencies' needs, we will be driving as much of our infrastructure as feasible and reasonable to our selected vendor.

### Our Goals:

- Building out Agile Cloud environment that allows MNIT to delivery secure, services fast and cheap.
- Develop deep expertise at MNIT for one cloud environment, that can be shared across agencies, to provide better user support.
- Reduce cloud infrastructure costs by negotiating price as an enterprise.
- Set strategy for cloud adoption that is easily implemented across the executive branch. This will reduce the barriers to cloud adoption.
- Provide better resiliency, recovery, and ability to respond to cyber threats or cyber attacks for line of business applications.
- Speak the same language across MNIT and agencies about how applications and services are performing.

# Meet MNIT

## Josh Cinnamo | Enterprise Data Center Team

During most days, Josh Cinnamo manages the inventory, data, and assets of data centers for the state of Minnesota's executive branch. He is also a world record holder in Paralympic athletics.

After a hiatus in international competition due to the COVID-19 pandemic, Cinnamo headed to Tokyo in 2021 with Team USA to compete in the throwing events during the 2020 Paralympics. Cinnamo won the bronze medal.

In 2019, Cinnamo not only set the shot put world record, he beat his own record to win the World Para Athletics Championships in Dubai, United Arab Emirates.



# 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 5.5 million Minnesotans.

## Learn More

For questions, comments, and feedback on MNIT's quarterly reports, please reach out to [MNIT\\_Comm@state.mn.us](mailto:MNIT_Comm@state.mn.us)

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

