

NORTH
Dakota

Be Legendary.™

Information Technology

Team North Dakota

EMPOWER PEOPLE
IMPROVE LIVES
INSPIRE SUCCESS

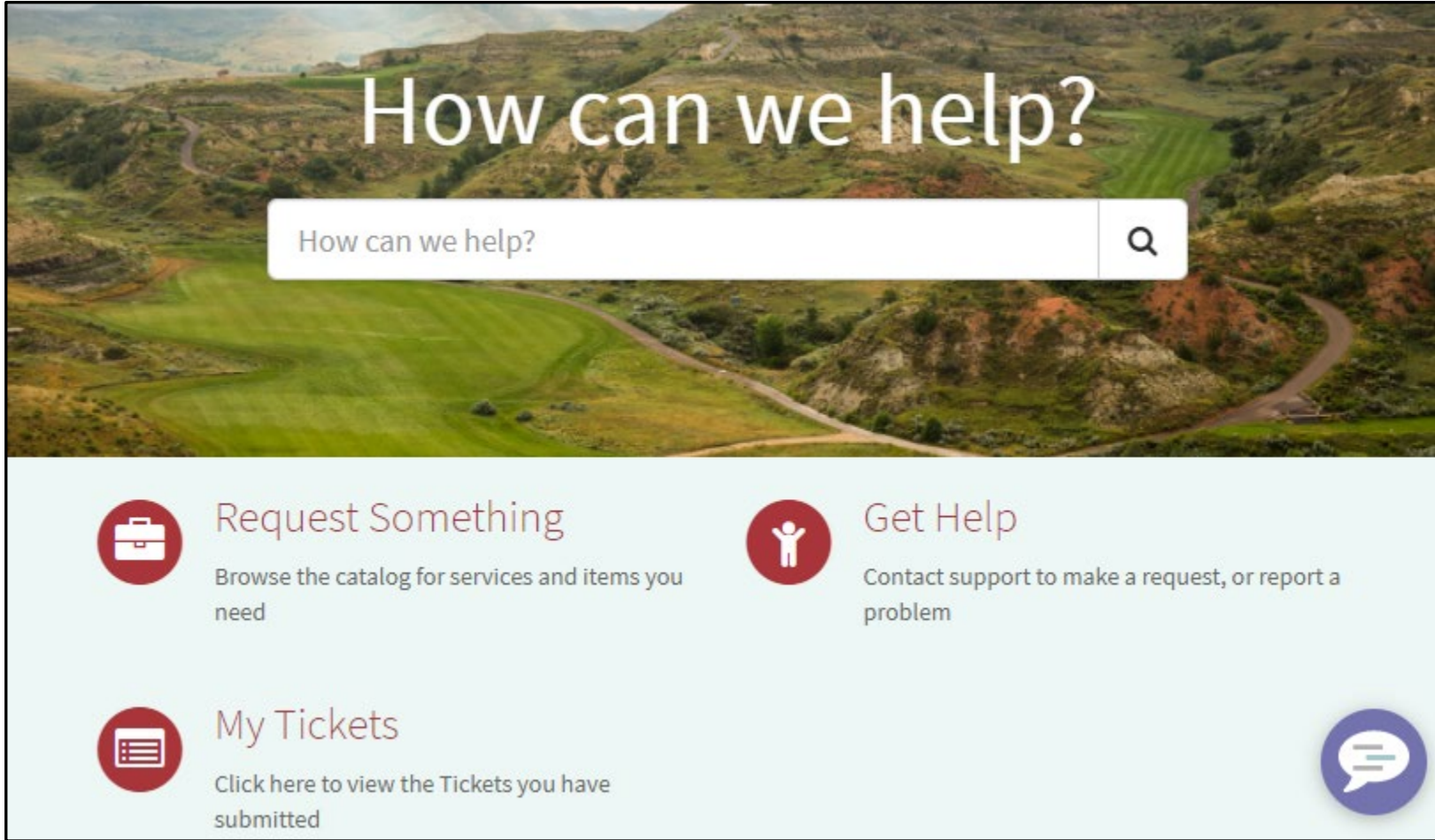
Senate Government and Veterans Affairs

HB 1094

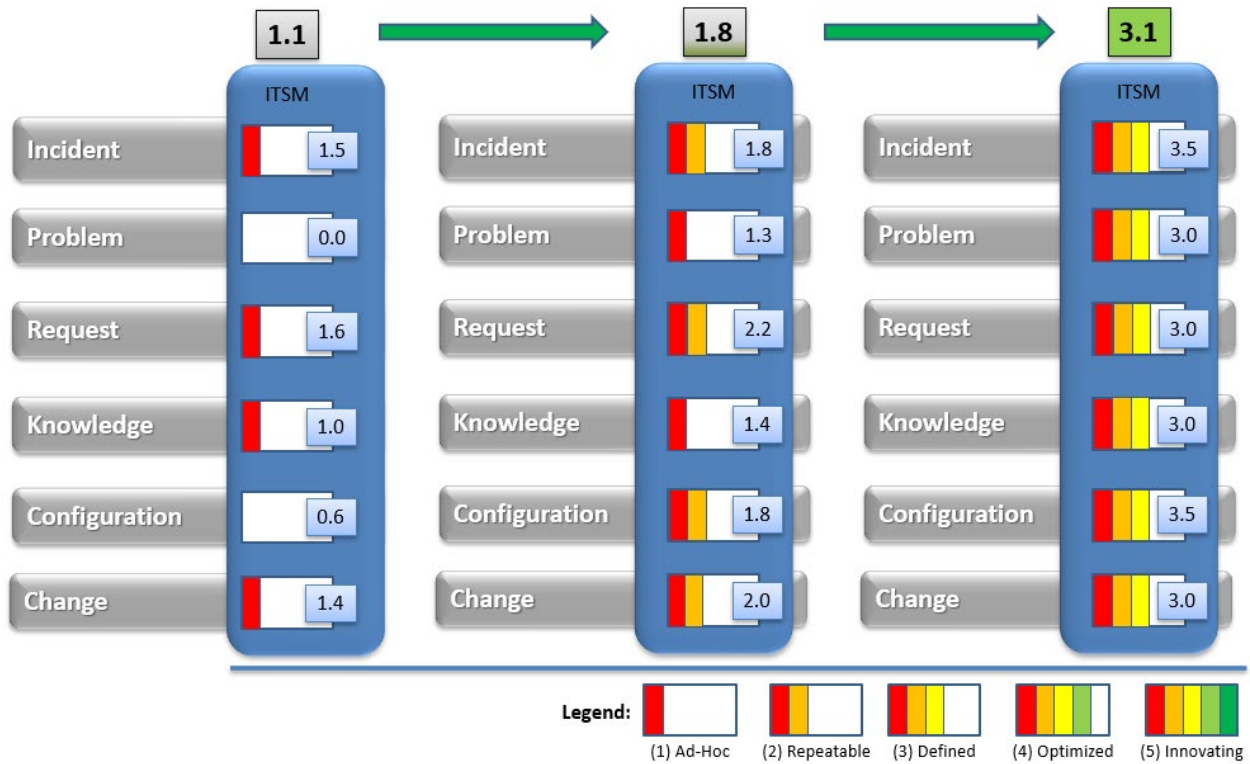
March 11, 2021 | RM 216

Empower People | Improve Lives | Inspire Success





Service Management



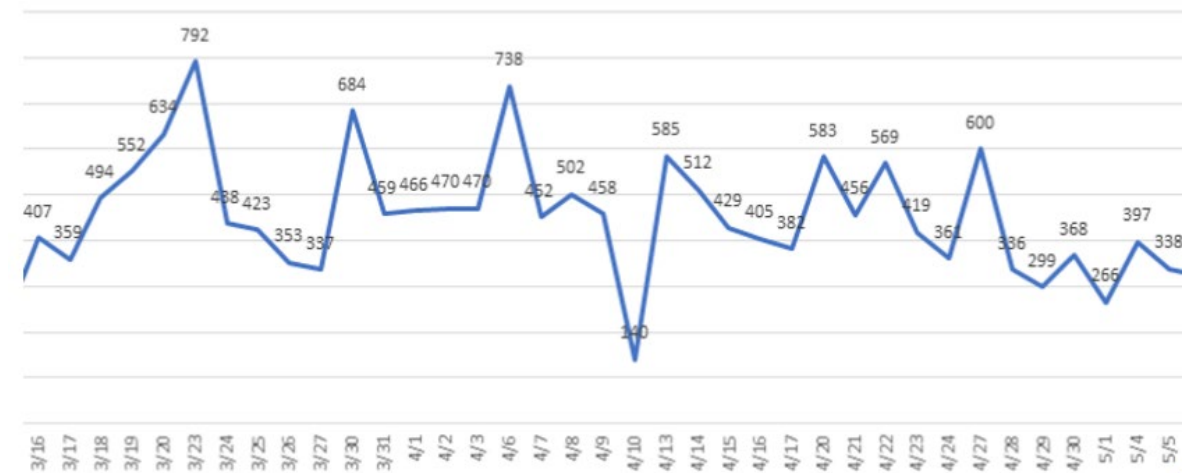
2.3
Target EOY 21

3.1
Target EOY 22

NDIT Call Center Volume

150% weekly average - 300% volume at peak

Sum Of Total Calls Per Day



- **Ad-Hoc** – Unpredictable and reactive
- **Repeatable** – Processes are managed but not standardized
- **Defined** – Processes are standardized across the organization
- **Optimized** – Visibility, predictability across organization
- **Innovating** – Strong governance for all process and functions

Service Management Data State Auditor

Incidents – 7 Day Sum

Desktop Service

Number of new incidents > Agency = State Auditor > Assignment Group = NDIT-End User Compute & Collaboration

June 18, 2020 - Yesterday 7d running SUM

Yesterday

1 0(0.0%)

220
No. of scores

527
Sum

1
Change

0%
Change %

2
Average

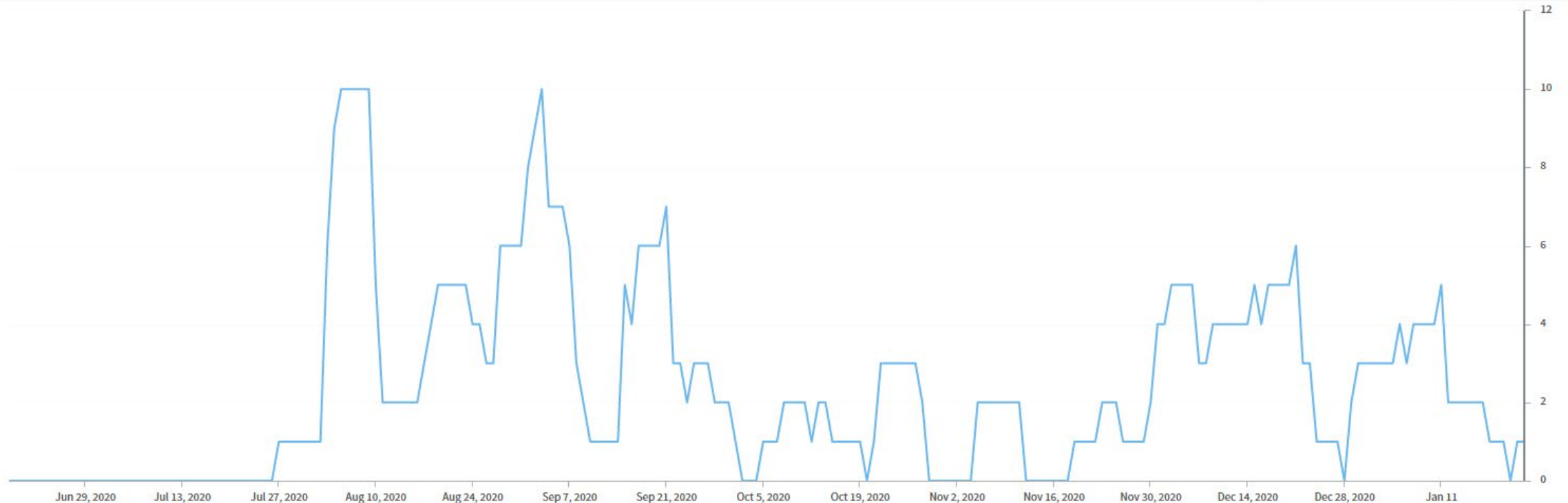
0
Minimum

10
Maximum

2
Median

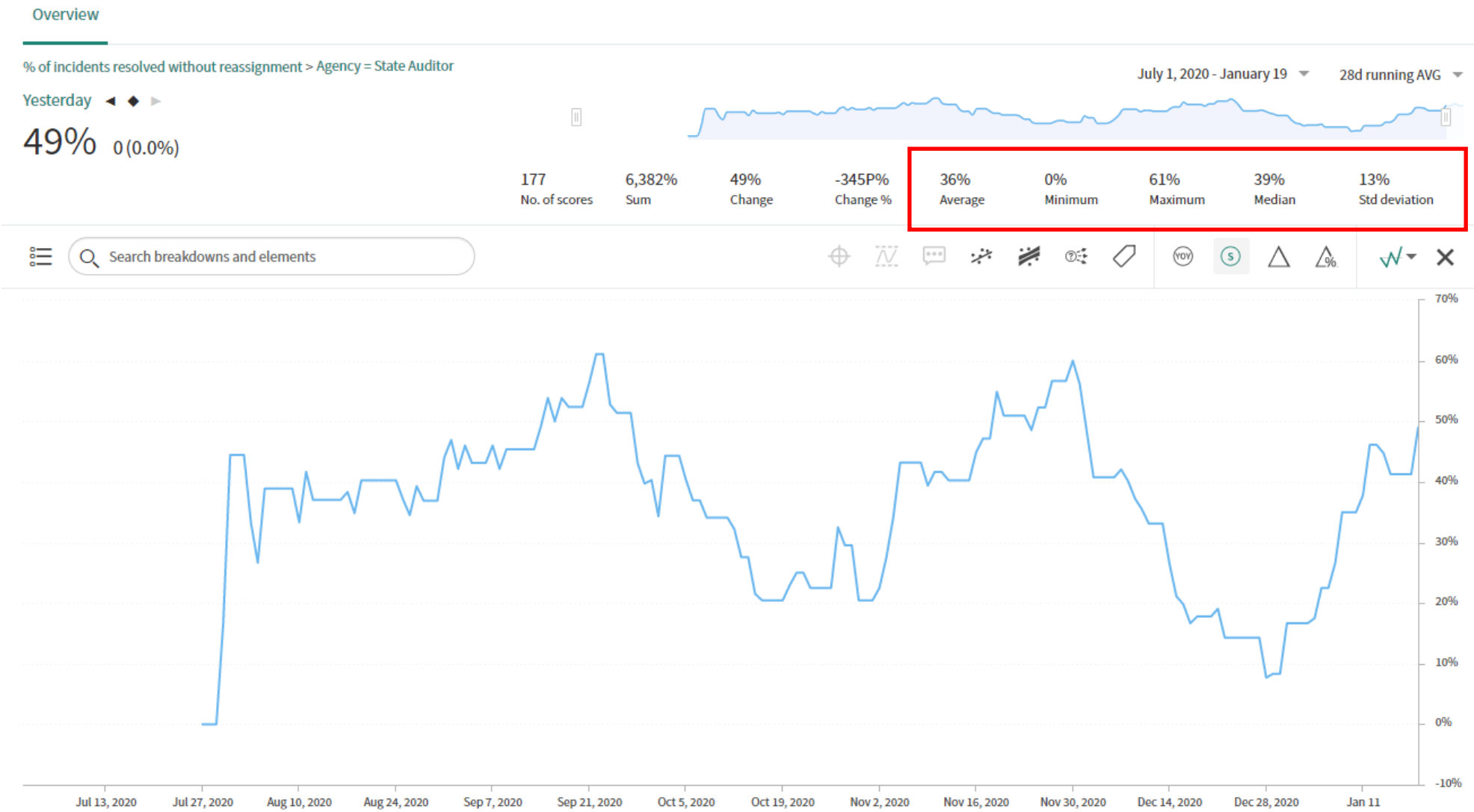
2
Std deviation

Search breakdowns and elements



Incidents – First Call Resolution

First Call Resolution: The percentage of calls resolved without the need of escalation beyond first contact



Incidents – First Call Resolution Time

First Call Resolution: The percentage of calls resolved without the need of escalation beyond first contact

Average resolution time of resolved incidents > Agency = State Auditor > Assignment Group = NDIT-Service Desk

June 28, 2020 - December 28, 2020

28d running AVG

Yesterday

145
No. of scores

3.36 days
Sum

0.01 days
Change

566.47%
Change %

0.02 days
Average

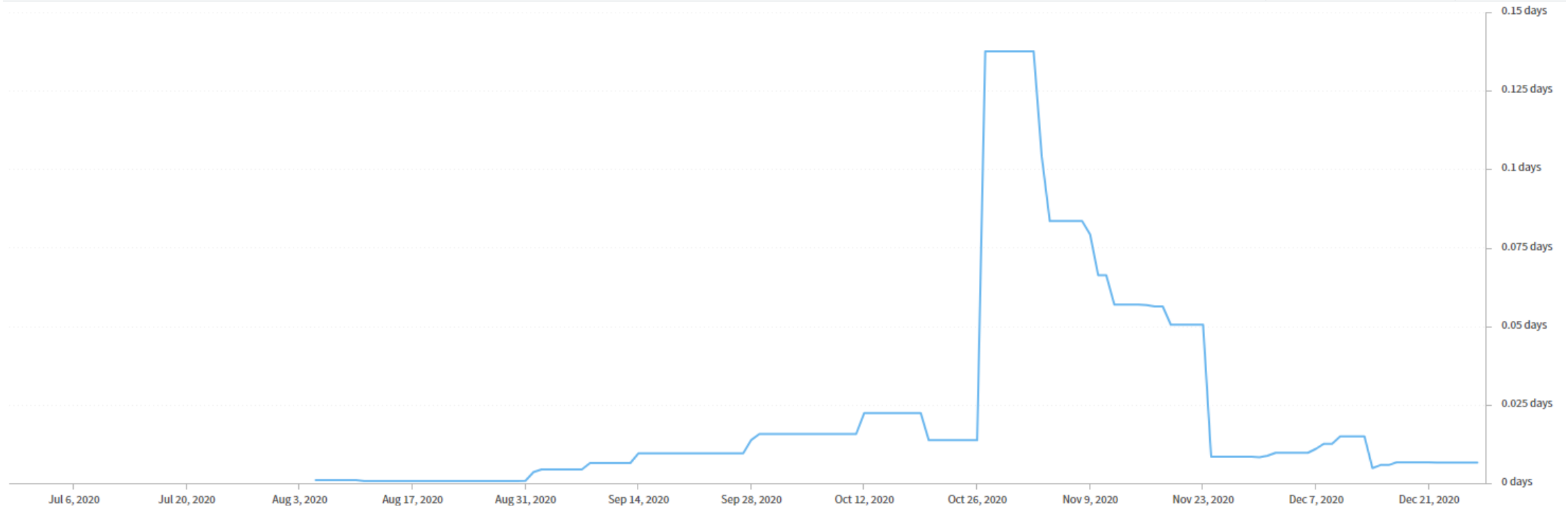
0.00 days
Minimum

0.14 days
Maximum

0.01 days
Median

0.03 days
Std deviation

Search breakdowns and elements



Incidents – Resolution Time Desktop Support

Overview

Average resolution time of resolved incidents > Agency = State Auditor > Assignment Group = NDIT-End User Compute & Collaboration

June 18, 2020 - December 28, 2020 28d running AVG



155
No. of scores

272.71 days
Sum

0.53 days
Change

17.97%
Change %

1.76 days
Average

0.25 days
Minimum

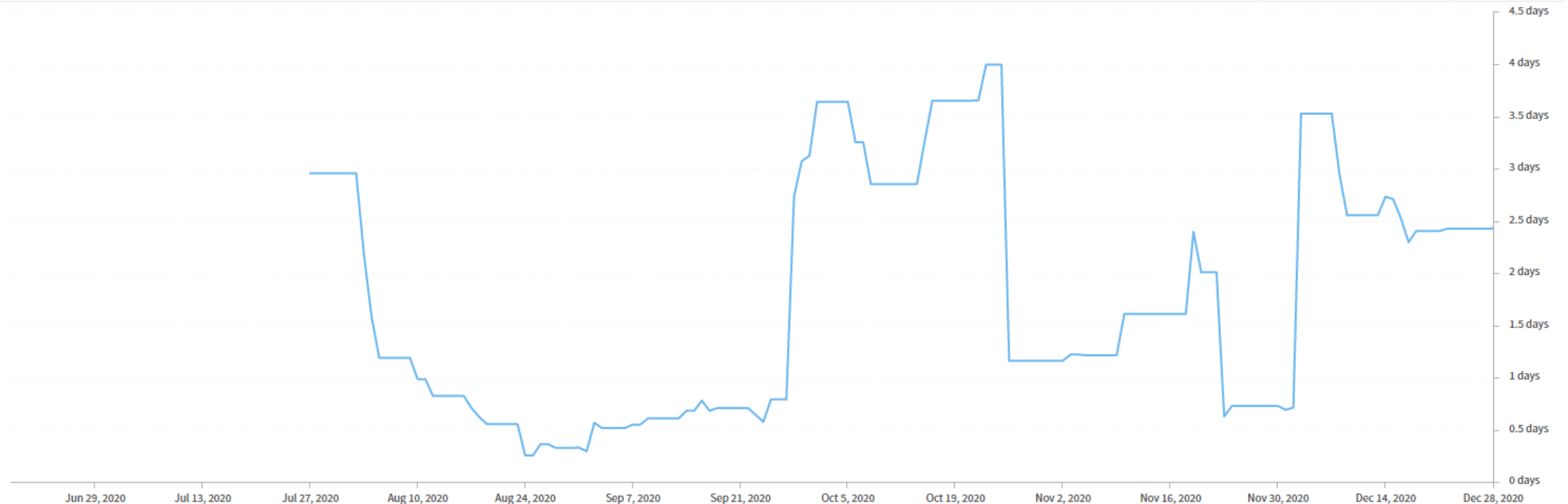
4.00 days
Maximum

1.22 days
Median

1.14 days
Std deviation



Search breakdowns and elements



Desktop Support Cost Data

Desktop Support Rate Studies

- Desktop Support and the associated rates and services have been studied several times in the last 8 years
 - In 2013 as required in SB 2021, Eide Bailly conducted a “study of all state agencies' information technology desktop support to determine the feasibility and desirability of centralization of desktop support services through the information technology department for all state agencies.” (50 agencies included in survey)
 - In 2017 as required in SB 2001, Legislative Management conducted a study and survey of ITD services and costs. 54 agencies responded with completed surveys. In particular, 24 agencies responded to the level of satisfaction with desktop support. 23 of 24 were very, mostly, or somewhat satisfied with the service
 - In 2019 the State Auditor’s Office conducted a comprehensive study of state agency fees
 - What were the findings.....

Findings – Auditor’s Study



Office of the
State Auditor

REPORT HIGHLIGHTS

State of North Dakota Fees

Audit Report for the Biennium Ended June 30, 2019 | Audit Code P3041-19

WHAT WE LOOKED AT

In early 2019, the Senate passed a bill (SB 2130) that requires a comprehensive study of North Dakota state agency fees. We looked at the revenues, expenditures, and other elements related to these fees and evaluated whether they were authorized to be collected.

WHAT WE FOUND

This audit did not identify any areas of concern.

Findings – Legislative Management Study

INFORMATION TECHNOLOGY DEPARTMENT SERVICES SATISFACTION

The survey provided to state agencies included questions related to the services provided by ITD and asked each agency to rank their experiences with ITD in each category according to the following criteria:

- Very satisfied - 5
- Mostly satisfied - 4
- Somewhat satisfied - 3
- Somewhat dissatisfied - 2
- Mostly dissatisfied - 1
- Very dissatisfied - 0
- Not applicable - N/A

19.9164.01000

Information Technology Committee

The average rating by agency for all categories is as follows:

Overall Rating	Number of Agencies
5	6
4	33
3	10
2	1
1	0
0	0
Total	50

Distributed security roles and responsibilities adds unnecessary risk to the environment.

Summary of Recommendations



Hybrid Support Model

- 32 Agencies / 1,787 Users – Migrate to Desktop Support provided by ITD
- 16 Agencies / 6,088 Users - Continue with the current agency-based Desktop Support model



Tools Standardization

- Expand efforts to consolidate Desktop Support related tools and services
- 5 Key Tools recommended as “mandatory” for use by all agencies



Improved Efficiency

- Shared staff for smaller agencies results in fewer overall staff than are currently required for Desktop Support
- Focus agency staff on their primary function

Cost Comparisons

		NDIT Service	SAO	DOA	
Standard Equipment	46.6%	45.86	45.86	45.86	HP Machine w/warranty
Base Level Staff	39.7%	39.09	143.68	106.84	1 FTE Minimum
Infrastructure/Tools	8.9%	8.73	5.17	5.17	SCCM, imaging, patching
Overhead	4.9%	4.82	??	??	Supervision, HR
		98.50	194.71	157.87	

- Will a per call fee need to be developed for when incidents exceed the knowledge of part time support staff?
- Will this create even larger, more complex issues?

What increases costs?

Specific areas where a decentralized support structure is driving up support costs include the following:

- Ticketing Systems
- Remote Desktop Control Tools
- Imaging Solutions
- Procurement
- License Management
- Lifecycle Management
- Hardware Consistency
- Software Consistency

NDIT Services

- ServiceNow
- SCCM, requires a server
- 1.5 FTE continual effort
- Automated with HP
- M365 Tenant managed at NDIT
- ServiceNow Asset Inventory
- Handful of standard machines
- 1 FTE of effort

Appendix

NORTH
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GRATITUDE

COURAGE

CURIOSITY

HUMILITY



Citizen Focused

Growth Mindset

Leadership Everywhere

Work As One

Make A Difference

Service Management Data Overall

Incidents – 7 Day Sum

Overview Compare

Show Records

Number of new incidents

July 8, 2020 - January 8 7d running SUM

January 8 ◀ ◆ ▶

3,074 ▲ 385 (14.3%)



185	498k	1,181	62%	2,694	1,879	4,008	⋮
No. of scores	Sum	Change	Change %	Average	Minimum	Maximum	



Search breakdowns and elements



Incidents – First Call Resolution

First Call Resolution: The percentage of calls resolved without the need of escalation beyond first contact

Overview

% of incidents resolved without reassignment

July 8, 2020 - January 8 28d running AVG

January 8 ◀ ◆ ▶

71% ▲ 0 (0.2%)



185	13k%	5%	6%	71%	64%	77%	⋮
No. of scores	Sum	Change	Change %	Average	Minimum	Maximum	



Search breakdowns and elements



Incidents – Mean Time to Resolve

When is an incident resolved?

- When the customer acknowledges resolution
- When confidence is high the incident is resolved but the customer is non-responsive

Overall

Overview

Average resolution time of resolved incidents

January 8 ◀ ◆ ▶

1.44 days
Average

0.01 days
Minimum

2.31 days
Maximum

First Call Resolution – Mean Time to Resolve

Overview

Average resolution time of resolved incidents > Assignment Group:

January 8 ◀ ◆ ▶

0.12 days
Average

0.00 days
Minimum

0.23 days
Maximum

Incidents created by calling the service desk

Overview

Average resolution time of resolved incidents > Contact Type = Phone

January 8 ◀ ◆ ▶

0.26 days
Average

0.00 days
Minimum

0.76 days
Maximum

Incidents created by emailing the service desk

Overview

Average resolution time of resolved incidents > Contact Type = Email

January 8 ◀ ◆ ▶

1.73 days
Average

0.03 days
Minimum

3.33 days
Maximum

** Resolution times increase when waiting on electronic confirmation from customers*

Industry Benchmarks

How do we compare to other government organizations?

IT Service Management

Summary: November 2020 | Your Industry: Government

ALL

INCIDENT

PROBLEM

CHANGE

SERVICE CATALOG

27.85
Percentile

0.7%

% of high priority incidents

1.1%

Benchmark



View trend

55.9
Percentile

73.2%

% of incidents resolved on first assignment

67.4%

Benchmark



View trend

44.95
Percentile

1.4%

% of reopened incidents

2.6%

Benchmark



View trend

66.46
Percentile

3 hours

Average time to resolve a high priority incident

21d 20h

Benchmark



View trend

Issue Response

1. When we open tickets on software issues, ITD responds to the request with a notification to install specific software. When the users go to install the software, it prompts for admin credentials, which only our in-house IT staff have. This delays the user from being able to complete their work, and they also must get in contact with one of our own IT staff to assist with the installation.

Response: Limiting admin credentials is a security best practice and our support team is well trained and regularly work around this control

2. We ordered laptops for our Mineral Royalty team in September 2020 as they were due for an upgrade. As of January 11th, 2021, we still do not have new laptops. One of our team members was having issues with her computer and the ITD help desk technician that was assisting her said that her laptop was over three years old and she should have a new one. She explained they have been on order since last year.

Response: Supply chain issues have plagued us since the beginning of the pandemic causing us to be behind schedule.

3. 3. We have had multiple team members in our office that are getting the “blue screen sad face errors” and it shuts down their computer. Many of these issues are related to driver-specific errors. If ITD were updating computer drivers on a six to 12-month cycle, these drivers would be up to date. Instead, our team must manually go out and search for any driver updates. This can range anywhere from one to 20 driver updates depending on the age of their system and the last update of the laptop. This process can take anywhere from minutes to multiple hours depending on the number of updates.

Response: 2020 was an abnormal year with a great deal of unplanned work. As such, some of our pro-active efforts are behind schedule however the support team is trained and skilled at dealing with these type of issues and we are working to get back on track with normal maintenance.

Appendix Issues

1. Office 365 - Any issues with Microsoft Office 365 where the software does not load or is constantly crashing, we must go in and run the Office Repair to try and resolved the issue. Other times we must complete an uninstall or reinstall. Our team uses the software program Excel daily and if the program is not working, our auditors cannot be productive. Waiting several days days for a resolution is not acceptable.

4. Windows Profile Issues – Computer specific error messages that happen on our teams computer require solutions that are rebuilding user profiles from scratch. All files need to be backed up and saved, the profile must be deleted, and we start from scratch to create the new profile and configure settings.

Response: Unfortunately, these are issues that do arise however our support team is well trained and able to resolve these type of issues.

Appendix Issues

2. Computer Issues - We have had multiple issues with docking stations, monitors, and laptops that are not working or they do not recognize the docking station or monitors. We must go in manually to make sure that all the drivers are up to date on the computer and docking stations. Additionally, our own IT team replaces cables on monitors and adapters.

3. Printer Issues – If users are not able to print to our printer, our IT team must verify users are connected to the correct printer and if the correct drivers are installed for that specific printer.

Response: 2020 was an abnormal year with a tremendous amount of unplanned work. As such some of our normal pro-active maintenance did slip however, we are working to get back on track.

Appendix Issues

5. RedSky Download – These cloud-based E911 software programs and updates are not always pushed to every computer. Our IT team must manually configure downloads for many of our computer systems.
6. Global Protect Download/Upgrade – These software programs and updates are not always pushed to every user's computer. Our IT team must go and manually configure the downloads.
7. Avaya Software/One X Communicator – These software programs and updates are not always pushed to every user's computer. We must manually configure the download in many instances.
9. MFA Setup – Support for the multifactor authentication is severely lacking from ITD. Our IT team has had to help our team members with this critical set-up as we can't wait for several days for ITD to get back to us to simply access our computer.
15. Password Unlocks – With users being at home and passwords expiring, we had to work with user to get their password changed without being connected to the VPN.

Response: Moving over 7000 users to a remote situation in less than 48 hours resulted in deploying software and solutions in an abnormal manner. Automated systems require devices to be on the network to be effective. With so many people in transition, software was not deployed to 100% of devices. Our support team was well prepared to resolve these issues from a skillset perspective however we will admit that we did have capacity constraints with the rapid transition.

Appendix Issues

10. Mobile Phone Support – Support for any type of mobile phone service is practically nonexistent. This leaves our IT staff to support mobile phone inquiries.
11. Intune Company Portal - We have not had adequate support for this system. It has always been up to our IT staff to assist with getting users set up and understand what these programs do and how they work.
12. Outlook Mobile App – The assistance for this is severely lacking. Our IT team has had to support staff with understanding of the program functions.

Response: NDIT would like to better understand these issues as NDIT does support 1000's of these device and is well trained on these issues. NDIT also provides free training available to every state user how to utilize these technologies

Appendix Issues

8. Phone Issues – If users need to manually configure their Avaya phone password, ITD is not able to reset team members passwords. This is a challenge because presently our IT staff does not have the ability to retrieve those passwords and no one is able to help our staff to retrieve their phone messages.

Response: This is a design feature of the phone system and intended to maintain a secure environment. The instructions on how to change a phone password is well documented on our website and knowledge base

13. Adobe Pro – While the license is through the state contract, users still require assistance with installation on their computer.

Response: NDIR has a automated way to deploy this software and it is unclear why this capability is not being utilized

14. Conference Room Video Equipment – User can experience issues with not be able to share their computer screen on the TV, or they cannot hear each other in conferences. Depending on the software used for the meeting, the user can run into issues with being able to log-in to meeting or not having the correct software to connect.

Response: The move to virtual and video environments have created a great deal of change for all users. We have seen a dramatic decrease in these issue as users have become more accustomed to this environment and we have extensive experience in supporting these environments.