City Schools of Decatur

State of Information Services Department
2021—2022

Submitted by:
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Chief Information Officer

Board of Education
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Executive Summary

The Information Services Department is performing strongly. Our school-based and district staff continue to perform at a high level. We have focused this year on supporting the return to in-person learning, deploying new services and equipment to support students and staff, and investing in our relationship with school and district instructional teams.

Department Overview

Our Work

The Information Services Department's mission is to provide technology leadership, equipment, and services. We are stewards of enterprise systems that support staff and student safety, equitable access, efficiency, and innovation.

Our work is broad, and it is conducted in service to CSD's mission "to work with and inspire students to grow and develop their ability to learn, think, and inquire through meaningful, motivating, and rewarding learning experiences supported by highly qualified, caring adults in a safe, supportive, and inviting environment" and in support of the District Improvement Plan.

Information Service's work is often visible, and at other times hidden. That work includes

- Providing and maintaining technology equipment. Some of our 18,400 assets are user-facing (e.g. computers, projectors, copiers, interactive flat panels, phones, printers) while others are out-of-sight (network switches, servers, access points, etc.). We manage this equipment's full lifecycle, spanning specification-gathering, research, acquisition, deployment, maintenance, and disposal.
- Providing and maintaining reliable and secure network connectivity. We ensure authorized devices can safely connect to appropriate internal and outside resources.
- Providing and supporting third-party services. The Information Services team supports access to several dozen learning and business systems. These services also have a lifecycle, and Information Services directly or, in partnership with product-owning departments, supports specification-gathering, product research, acquisition, deployment, maintenance, and retirement.
- Supporting individual schools. As much as we appreciate systematized district-wide IT operations, we also make space to support the technology aspects of individual schools' instructional goals. This might look like helping a principal purchase e-ink readers at one campus, a podcast workstation at another school, and 3D printers at a third.
- Policies, procedures, project management, and project support. We steward the Acceptable Use Policy governing student and staff use of technology equipment and

services;[1] several administrative regulations (e.g. Internet Safety, Records Retention); and internal guidelines and procedures around privacy, technology evaluation, and project management. IS staff serve as project managers in many instances (e.g. student device deployment), and we serve as teammates for non-IS colleagues' projects that involve technology (e.g. solar panel installation).

The Team

Name	**Title - Work site**	**Joined CSD IS in…**
Derrick Burgess	Technology Support Specialist - TS & Maint.	2019
Ramous Fields	Technology Support Specialist - ECLC & DHS	2019
Lisa Jones	User Support Analyst - WC	2000
Kiet Le	Enterprise Applications Coordinator - WC	2000
Chris Leonard	Technology Support Specialist - RMS	2018
Eston Melton	Chief Information Officer - WC	2017
Max Mendoza	Work-Based Learning Intern - RMS	2021
Stephen Moore	Technology Support Specialist - OA & DVA	2018
Vu Nguyen	Technology Support Specialist - DHS	2014
Sam Payman	Work-Based Learning Intern - DHS	2021
Harold Rall	Administrative Assistant (0.8 IS FTE[2]) - WC	2001
Marcus Ray	Technology Support Specialist - FA	2009
Mike Reynolds	Technology Support Specialist - GL & WP	2017
Demetrius Towns	Technology Support Specialist - CL & WE	2018
Jason Wade	Network Services Coordinator - WC	1997

[1] Families acknowledge the AUP (embedded within the Student Handbook) during the Annual Data Update in the Infinite Campus Parent Portal, while staff acknowledge the AUP in their annual Employee Handbook sign-off in the Frontline Central HR Portal.
[2] The balance of Harold's job is with the Operations Department, with a focus on warehouse processes.

School-based staff work is largely driven by support ticket requests, plus projects and assignments they identify or that come from their building leadership or the Wilson Center IS team. They work in close collaboration with media specialists (PreK-12), instructional technology coaches (6-12), and administrators to support safe and effective learning.

In addition to their district-wide infrastructure roles, Wilson Center staff respond to support tickets within the Wilson Center and Kentucky Street office. Everyone on the WC team is an escalation contact for various supported products, and in some instances support requests are directly routed to Wilson Center staff. This and every year, we undertake or collaborate on projects large and small with every other CSD department.

Our staff brings tremendous expertise from their work prior to joining CSD, ranging from industry (Amtrak, Apple), other corners of government (GBI, the Georgia Board of Pardons & Paroles), and other school districts (Fulton, KIPP Atlanta). Our teammates have major industry certifications that include A+, Network+, Certified Educational Technology Leadership, and Google Workspace administration. Our longest-serving employee graduated from DHS, our two newest teammates are with us via a temporary work-based learning partnership with DHS, and several teammates are current or former CSD parents. The team, while highly experienced and educated, is also eager to continue professional development.

The IS team also participates in the broader K-12 IT and general IT communities. Members of our team represent CSD in venues that include:

- Serving among 30 districts on the Georgia Department of Education 21st Century Standards Task Force for IT infrastructure and service standards
- Serving among 30 American and Canadian districts on the Google for Education North American Customer Advisory Board (alongside representation from the Teaching & Learning Department)
- Serving on the IMS Global K-12 Institutional Leadership Board and several operating committees
- Serving in the Common Sense Media District Privacy Consortium
- Being the only K-12 institution on the 1Password Product Advisory Council

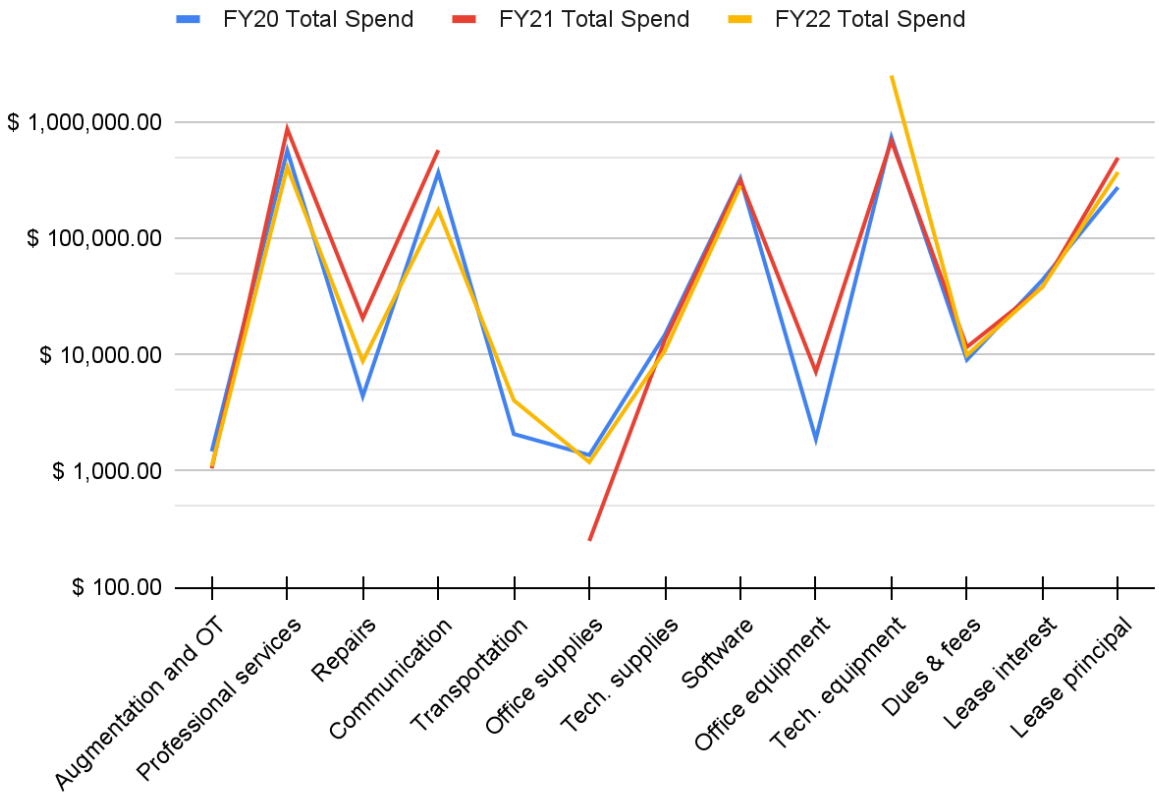
Budget

Between the pandemic and the transition from SPLOST V to SPLOST VI, Information Services has lived in interesting budgeting times. Since FY20, our general fund operating budget (excluding salaries and benefits) has been approximately $1,400,000; in FY21, the budget rose to approximately $1,650,000 after the Board approved pandemic-related adjustments. Our SPLOST V allocations have been $850,000 (FY20), $2,900,000 (FY21), and $3,200,000 (FY22).

The last two years, we underspent our allocated general operating funds; we anticipate doing so again in FY22. Pandemic-related supply chain issues contributed to this (and to some SPLOST

under-spending/deferred projects). Broader concerns about the general fund balance and the prospect of a reduced allocation each subsequent year has also led to underspending, particularly for vended software/online services: increasingly, the IT space is dominated by subscription-based services rather than one-time licensing costs, and we have been reluctant to implement new products without confidence that we could sustain them.[3] While the state's clarification that some cloud-based subscriptions are SPLOST-eligible has alleviated some of this anxiety, a reliance on SPLOST for essential operations carries its own challenges. That said, these constraints have also helped identify business and instructional service redundancies, and we are realizing operating expense reductions in other areas (mostly professional services and communications infrastructure[4]).

This graph represents all IS general fund and SPLOST spending by category (i.e. accounting object). The logarithmic scale makes it easier to gauge patterns and distribution of spending across different orders of magnitude.



[3] Consider: we will have a 5% operating budget reduction in FY23, and we anticipate at least a 5% increase in most license software/service subscription costs. Enrollment increases exacerbate this challenge.
[4] Please don't misconstrue this as "reducing communication." Communication is vital. This reduction specifically refers to finalizing a multiyear transition from one landline telecom provider to a better provider with more favorable rates.

- **Professional services**: In FY20 and FY21, this was largely CSD's contributions to the city-schools fiber optic network. With construction ending in FY21, our FY22 professional services expenditure is slightly less than half of what it was last year.
- **Repairs**: This is not a major expenditure, but it illustrates pandemic-era supply chain woes: we more than quadrupled repair expenditures in FY21 in part because of increased wear-and-tear on CSD equipment during virtual learning. This was compounded in some instances when we might have preferred to buy a replacement device, but we instead paid for (hard-to-get and/or aberrantly expensive) repair parts or service because a new device simply wasn't even available.
- **Communications**: The largest component of our communications expenditure is for landline phone service. Telecom costs have been a major driver behind our multiyear consolidation of disparate non-emergency landline services and contracts to a single provider. An uptick in hotspot service from FY20 (when we had 40 hotspots as pre-pandemic pilot) to FY21 (when we brought in about 10 times as many) also increased communication expenses. IS also began managing the district cell phone billing in Q3; it is net-zero for the district, but it manifests as additional spending on our books. Meanwhile, we saved money in this area this year by transitioning to the city-schools fiber optic network.
- **Transportation**: No conferences to "transport" to in FY21, so the red line vanished. We were happy to participate in in-person professional learning this year, and some members of the team will present at our major state conference in July,
- **Software**: Expect a spike in next year's report: after several years of planning, we are consolidating a significant portion of district software expenditures, including many online curriculum resources, to IS in FY23. A large portion of this will be under SPLOST, contributing to the district's overall general fund health.
- **Technology equipment**: This year's spike stems from two major projects that, due to supply chain issues, were delayed in previous years and fulfilled this year: refreshing interactive flat panels at most schools and refreshing DHS and RMS student devices. Both were paid for by SPLOST.
- **Lease interest & principal**: Three major student device equipment leases ended this year: two four-year leases, one each for RMS and Talley student devices; and one three-year lease for student devices at DHS. In all instances, we exercised the option to accept ownership of the equipment.

Goals and Key Performance Indicators

Goals

In summer 2021, we outlined four themes for major initiatives over the next three to five years: student connectivity, data interoperability, data warehousing, and infrastructure versatility. Each of those areas has one or more annual goals or initiatives, although the only goals specific to FY22 are in the student connectivity theme:

- **Implement a take-home 1:1 program for secondary students (including connectivity resources), and for K-12 students supported by the McKinney-Vento program**. We partially achieved this goal: the secondary program was implemented, but the McKinney-Vento supplement has been delayed by supply chain issues. We anticipate receiving the equipment in FY23.
- **Pilot a program for elementary students to check out take-home equipment (including connectivity resources) as needed to support learning.** We are deferring this to FY23: COVID-19 surges threatened to muddle a pilot program with the school's existing processes to loan equipment to students doing remote-learning under quarantine. Additionally, supply issues halted our ability to secure additional devices to support a pilot program without taking away from equipment needed within a school. We anticipate piloting this program in FY23.

Other major strategic goals over the next few years include ensuring 100% of online learning tools are LTI 1.3+ and OneRoster 1.1+ compliant, supporting the reenvisioning of data warehousing and analytics solutions, and scaling to provide 1.0 Gb/s of internet bandwidth for every 1,000 students. These goals are not exhaustive of our work (see below for a broader sense of our work), but these are compelling lifts whose pursuit will engender smaller critical initiatives to achieve and maintain fulfillment.

Key Performance Indicators (KPIs)

Support Tickets

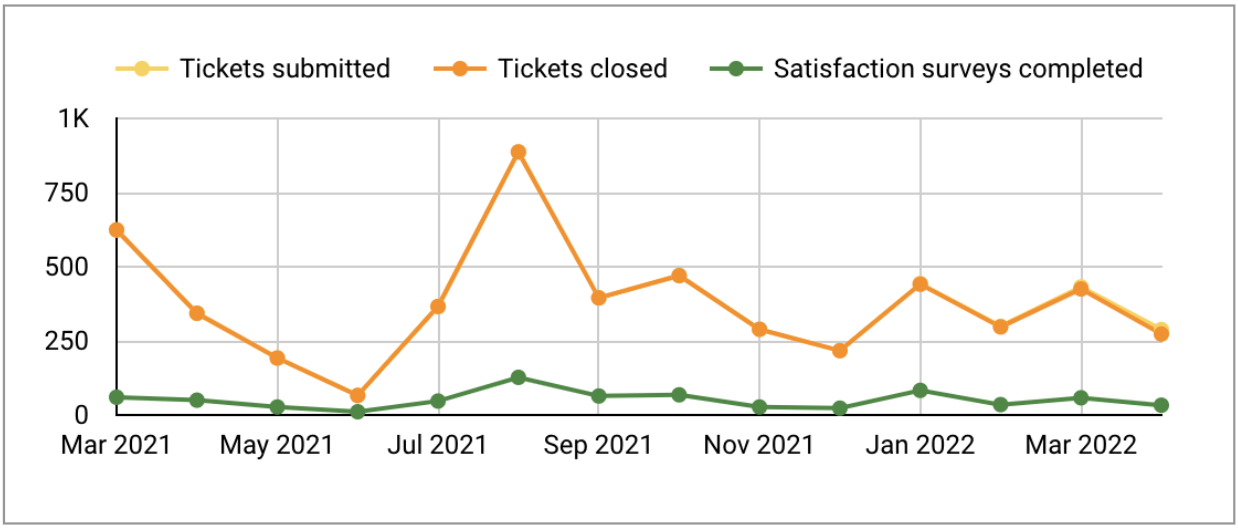
Our team's bread-and-butter is "working tickets," i.e. responding to users' reports of damaged or malfunctioning equipment or services. Any CSD employee can submit a ticket, and we have a ticket portal open for DVA families to directly submit support requests.

There is no clearinghouse for us to compare our volume and follow-up data with other districts, and districts vary widely in terms of what types of requests "live" within their ticketing platform. Our best comparison for our ticket performance tends to be our past selves.

Volume

The graph below reflects ticket volume from March 2021 to April 2022.[5] The "Tickets submitted" and "Tickets closed" lines logically overlap, save for a narrow gap the last couple of months for lingering issues.[6]

Unsurprisingly, some smaller campuses have proportionately lower ticket volumes relative to staff: on these campuses, quick fixes and the easy accessibility of a support tech sometimes cause our work not to get logged. We recently reminded site technicians and leadership at all campuses to reinforce the importance of submitting support requests through the ticketing system, especially as things get exciting with winding down the school year.



Note, too, the green line representing the number of customer satisfaction surveys received for closed tickets. We will dive into the submission and score rates further below.

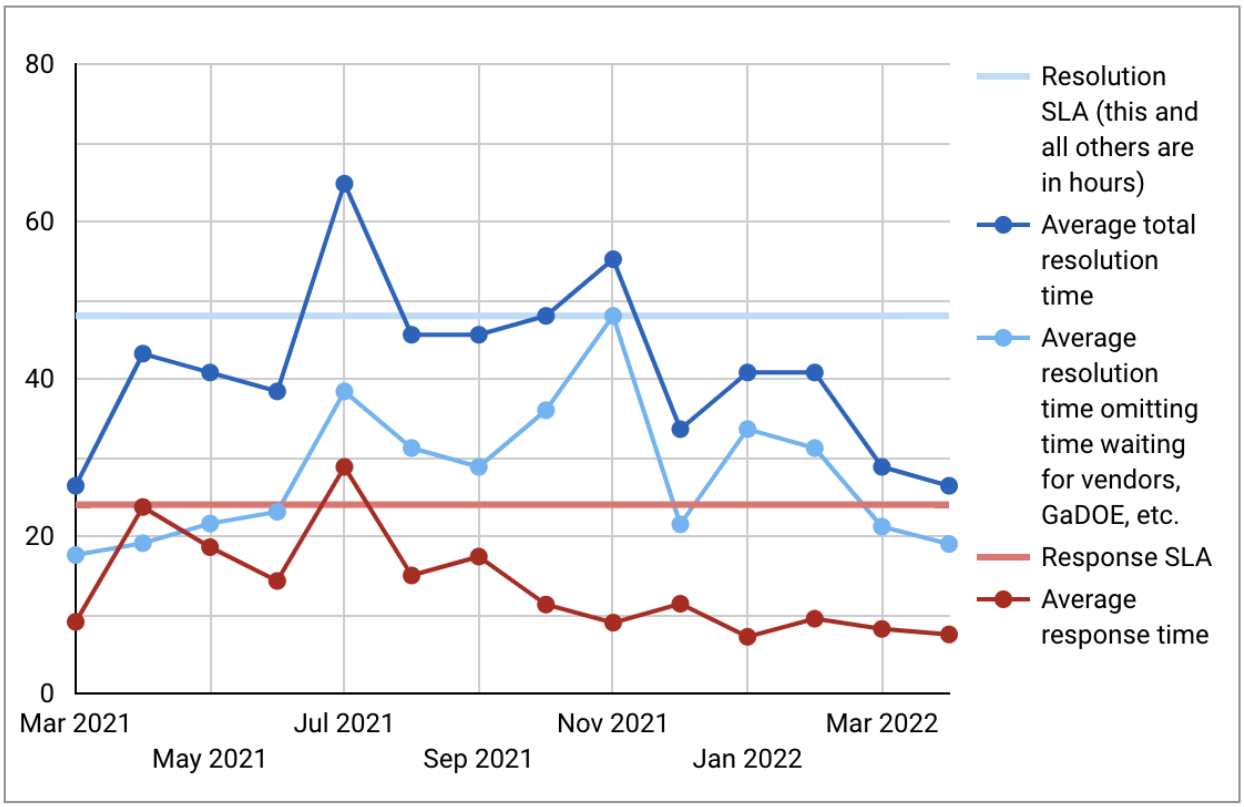
Response and Resolution

Two Service Level Agreements (SLAs) almost always[7] get applied to each ticket: an expectation to respond (i.e. provide acknowledgement to the customer, or "pick up" the ticket) within 24 hours, and for the issue to be resolved within 48 hours.[8] Anecdotally, these are common SLAs

[5] When ticket volumes decrease, techs work on projects outside the scope of ticketing. This includes inventory verifications, preventative maintenance, standardized test support, project implementations, and other "big picture" endeavors.
[6] Each ticket is anchored to the month it was created, i.e. if a ticket is created in June but resolved in July, its stats are included in June's data.
[7] The largest exception is for tickets related to damaged RMS and DHS 1:1 devices. Those are repaired by an outside vendor, and a separate SLA is applied to them. Thanks to effective break-fix forecasting and a commensurate spare device pool, we are satisfied with the vendor's stewardship over this break-fix partnership and the return on investment.
[8] i.e. within one workday and two workdays, respectively. Our ticketing platform is robust enough to "pause the clock" when appropriate for e.g. weekend- or holiday-submitted tickets.

among Metro Atlanta districts and with other districts that use the same ticketing tool. We value our customers, and when time is tight we prioritize *responding* to and communicating about tickets: customers like to know their request has been acknowledged and to be appraised of its status, even when that status might be "we need more time to work on it." That said, we consistently respond to and resolve tickets at or better than our advertised performance rates.

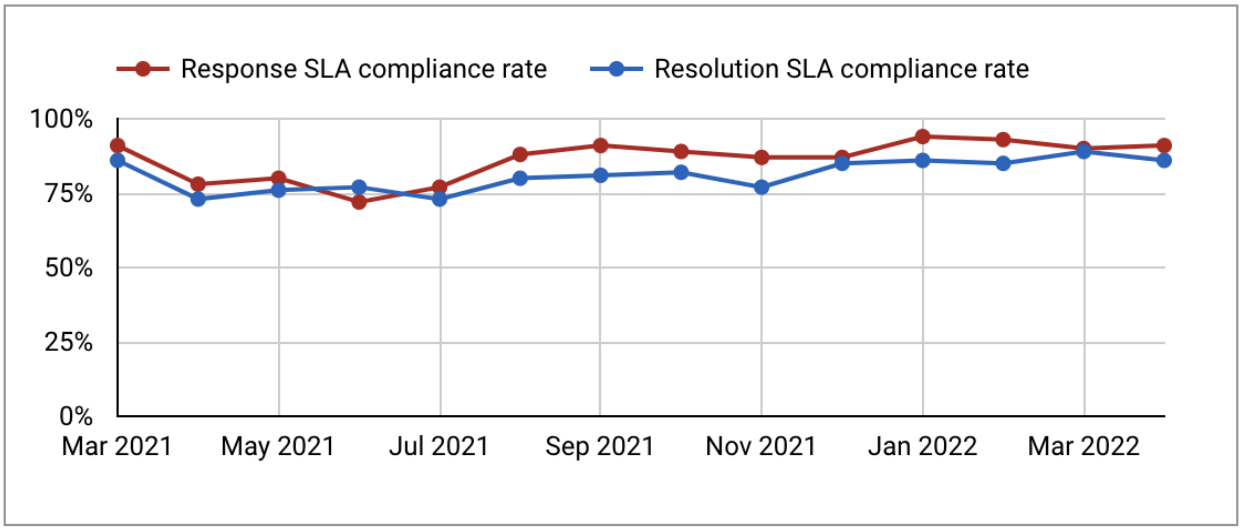
The next graph shows our monthly average response and resolution times from March 2021 to April 2022. Since March 2021, our average response time is 11.6 hours and our average resolution time is 43.2 hours (1.8 days). The graph also shows the "non-waiting" resolution time – i.e. the average time to resolve a ticket, but excluding the time a ticket's progress is paused while waiting for e.g. a vendor to respond, clarification from the customer, etc. This is not governed by an SLA (after all, the customer doesn't care whether *IS* is waiting on someone: *they* are waiting for *whomever it takes* to address the issue), but it is useful to see the extent to which our work has dependencies. Our average "non-waiting" resolution time is 31.2 hours (1.3 days).



Outliers skew these averages, particularly with our resolution data: spare parts limitations, a vendor closed for a holiday, or just a real head-scratcher of an issue can drag these out. We recognize that customers are still waiting for resolution regardless of the reason, but it is a complicator for aggregate retrospective and planning purposes. We have requested our ticketing platform's developer offer reports on the mode rather than average, and that request is

under consideration. We have API access to our underlying data, but leveraging that access into actionable insights is non-trivial.[9]

We look at response and resolution in another way, too: rather than average times, we monitor the rate of how many tickets each month meet the response and resolution SLAs. Whereas we want average response and resolution times (in the previous graph) to go down, we want compliance rates (in the next graph) to go up.

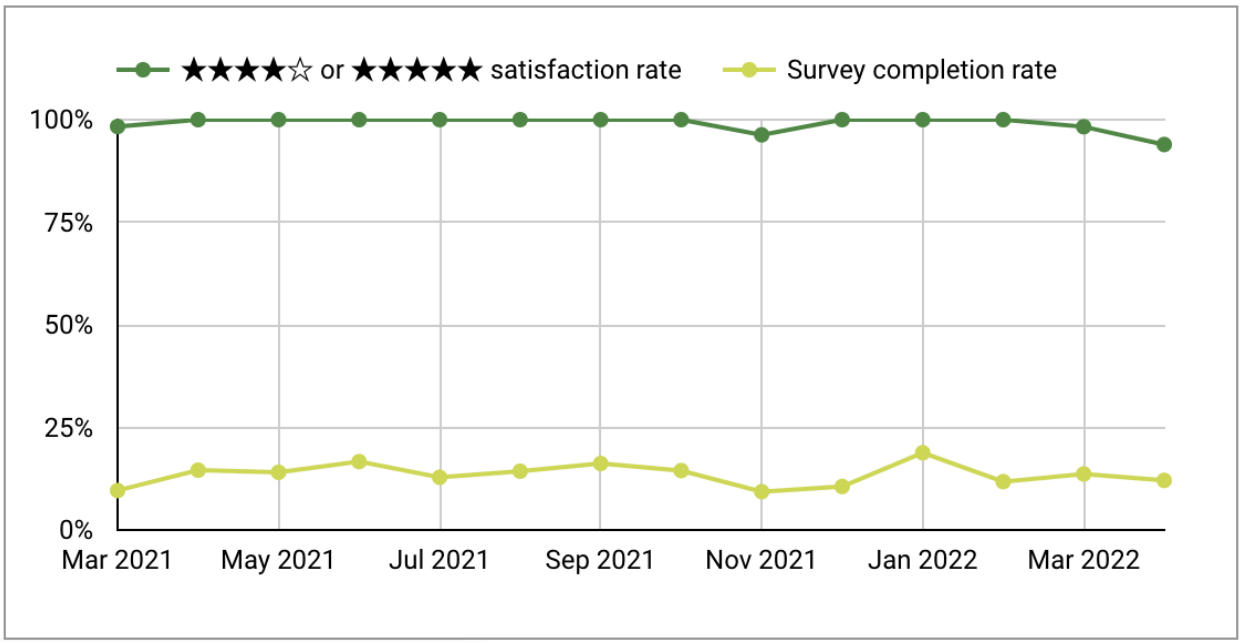


In April 2022, our response SLA compliance rate was 91% (the same as our overall average since March 2021, and down from a January high of 94%), and our resolution SLA compliance rate was 86% (down from our 89% high in March 2022, and above our overall average since March 2021 of 82%). In FY23, we plan to publish district-wide target compliance rates – SLAs for the SLAs, so to speak. Additionally, we look at individual school and technician SLA performance with principals as part of the evaluation process for support technicians.

[9] We might offer this as a student development project. Any interested students who'd like to express interest in working on this should email footnotefanatic@csdecatur.net.

Customer Feedback

Every time a ticket is marked as "resolved," the customer who submitted it (or on whose behalf it was submitted) receives a satisfaction survey via email. They are asked to rate the quality of their service on a one- to five-star scale, and they are invited to add additional comments.



At right is a word cloud from the optional narrative feedback from the April 2022 tickets that provided such feedback, with text size proportional to word recurrence.

We are cautiously happy about our user feedback data. On one hand, our service is rarely rated anything other than four or five stars: it's happened five times since March 2021, and one of those times was an accident. On the other hand, only 10-15% of surveys are completed. We will work with all campuses next year to further advertise and encourage not only ticket submission but also survey completion.

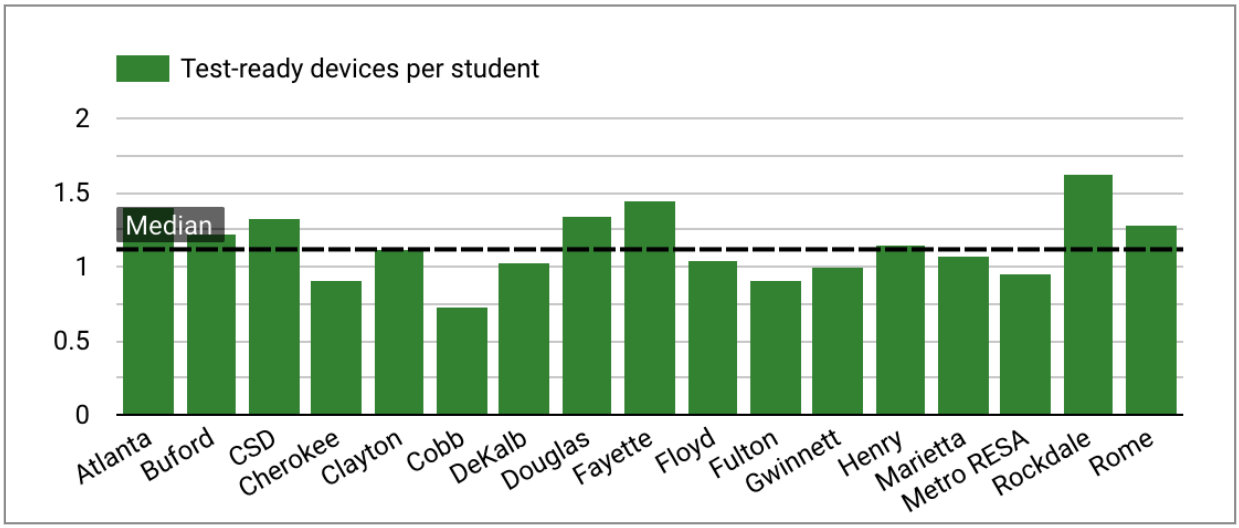
Wilson Center staff and the assigned tech review every one-, two-, or three-star customer rating, and in all instances there is follow-up with the customer.

We have other mechanisms to gather feedback. A critical qualitative avenue not anchored to a KPI is feedback from principals during quarterly IS-school technology check-ins. Principals also share feedback during their technician's midyear and final evaluations.

Another feedback source is our annual customer satisfaction survey, sent to a large representative sample of employees. Unfortunately, this survey went on hiatus last year and has not yet launched this year. We plan to include this data in our FY23 report.

Devices

We have 18,400 active devices in inventory, though 2,179 of them will reach end-of-life (EOL) in June and be auctioned or recycled.[10] One way we monitor our device fleet health is to compare CSD's ratio of test-ready devices[11] to students with the ratios other Metro Atlanta and peer districts report to the Georgia Department of Education. The graph below is pulled from Georgia Insights, whose dashboards are built on each district's annual GaDOE inventory submissions.[12] Based on May 2021 inventory data, we are slightly above the 1.12:1 median ratio, with 1.33 test-ready devices per student. Because we will not have deaccessioned pending-EOL equipment when we submit our 2022 inventory to GaDOE, and because that equipment still technically qualifies as test-ready for a few more months, we anticipate a small increase in next year's Georgia Insights report, followed by a small drop (but still slightly above the current median) the following year when the fleet stabilizes between refresh years. On average, our student devices have been with us for 2.39 years; similarly, we are in year two of a four-year lifecycle for most staff devices.



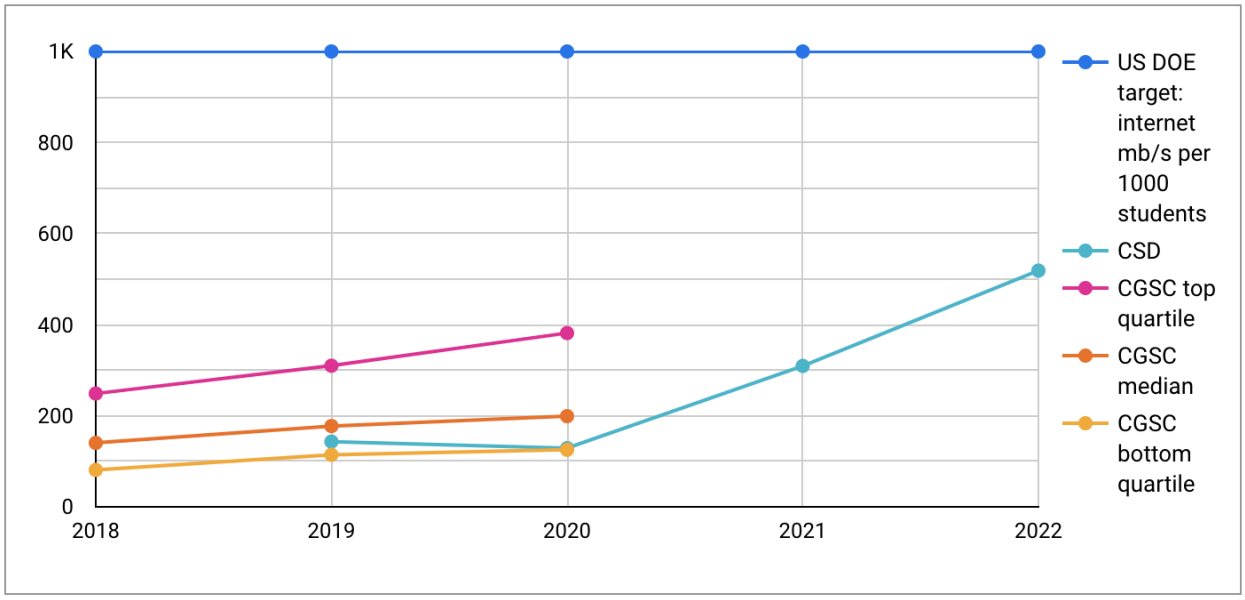
[10] Fifth Avenue's current 1:1 fleet and most of our other first-generation Chromebooks.
[11] Student devices less than five years old that run a modern, secure operating system.
[12] One note: annual inventory is reported only for K-12 schools; College Heights ECLC and similar schools are omitted from each district's report.

Network

The new fiber wide area network (WAN), which connects almost all of our properties[13] back to the Wilson Center, has had a districtwide 100% uptime. This places us in the top quartile (≥99.9996%) of the most-recent KPIs published by the Council of the Great City Schools. Each fall, CGCS publishes its member districts' operational and academic KPIs, with one major catch: their KPIs lag by a year. Still, they offer an interesting benchmark.

Additionally, each school has had 100% WAN connectivity time, with the exception of power outages that exceeded the network rack's backup power supply's capacity. This reliability is due in part to the network's inherent resilience: it is entirely underground, and thus not prone to kinetic damage from gravitationally-induced arboreal limb failure.[14] Additionally, the ring configuration means every site has a pair of (i.e. redundant) inbound/outbound connections. Because power outages are our major (though infrequent) network outage culprit, we began this year and will continue next year to upgrade our backup power supplies.

The GaDOE, via the University System of Georgia, allocates CSD 1.8 gigabits-per-second (gb/s) of internet bandwidth. We purchase an additional 1.2 gb/s. Our toal 3 gb/s[15] equates to 518.76 megabits per second (mb/s) per 1,000 students. This exceeds the ≥381.6 mb/s per 1,000 students of the CGCS most-recent top quartile, but it is below the U.S. Department of Education's 2018 target of 1 gb/s per 1,000 students.



[13] Kentucky Street was outside the scope of the new fiber ring. They have a dedicated ISP and VPN connection back to the Wilson Center.
[14] i.e. falling tree branches.
[15] It is 3 gb/s upload and 3 gb/s download. Bandwidth used to receive data does not reduce the bandwidth available to send data, or vice versa. Our outgoing traffic is far lower than our incoming traffic, and when we discuss "bandwidth utilization," we generally mean "*incoming* bandwidth utilization."

That said, bandwidth is only useful if it's used. We have had 0 days when bandwidth use exceeded 75% capacity, placing us in CGSC's top quartile (≤0 days) for excessive bandwidth use. Our daily use is healthy, generally hovering around 40% and rarely briefly spiking above 70%.[16] We eagerly anticipate GaDOE expanding Georgia Insights in FY23 to include near-live bandwidth utilization reports so we can better compare to other Georgia districts.[17] Although we are satisfied with current bandwidth availability and use, the aforementioned *infrastructure versatility* goal over the next few years includes achieving and maintaining the US DOE target.

Transparency and Collaboration

Every IS technician can pull up their building's (or buildings') and their own ticket volume, request types, response rates, resolution rates, device fleet data, and other insights. We encourage them to work with their building leadership to celebrate positive trends in technology stewardship and to collaborate on addressing challenges.

Additionally, we invite users logged in with their CSD Google Workspace account to visit our IS Reporting Dashboard to see many of these graphs updated on a regular basis. As we become more confident in the readability and clarity of the reports, we will evaluate making the Dashboard publically available.

Notable Accomplishments

Notable accomplishments so far this school year include:

- **New fiber implementation**. The fiber network physically connects our buildings' networks (except Kentucky Street) back to the Wilson Center, which in turns provides internet connectivity. This new network brings a level of resilience and control not previously available under a lit-fiber lease. This project was funded by SPLOST.
    - Next steps: Over the anticipated 20-year life of this network, we project the district will realize operating savings that exceed the capital construction and operational maintenance costs of the fiber ring. This multiyear enterprise is also a testament to how successfully the school district, city, and community can collaborate, and we look forward to future partnerships.
- **LaunchPad**. LaunchPad presents students and staff with one-click access to approved learning tools, and in most instances allows them to access those resources without having to enter separate usernames and passwords. LaunchPad also allows K-2 students to log into a CSD device with a QR code. LaunchPad has become a critical tool for students and staff to access learning resources. Strategically, LaunchPad has

[16] We recently had an "ah-ha" moment upon noticing that NCAA March Madness had come and gone without us having to remind staff that excessive streaming could degrade network performance.
[17] Literally being at the table to develop these standards, and hearing from other districts, reinforces our confidence that current bandwidth offerings are appropriate for our current and near-term needs.

provided a consistent reporting platform to identify (or confirm vendor-reported) third-party application use data to help gauge return on investment.
    - Next steps: LaunchPad was targeted mainly at classroom teachers this year, and next year we will work to reinforce its value not only in the classroom but also as a resource to discover and access important employee-focused resources.
- **Instructional resource rostering**. We opened this year leveraging a tool to automatically roster core third-party learning tools, saving school staff the time-consuming and error-prone process of managing spreadsheets and other manual data entry to get students into these tools. The process also helped further cement the mutual support relationship between the Information Services and Teaching & Learning teams.
    - Next steps: Our first round of bulk rostering across multiple vended products this summer presented some challenges, leading to some rostering delays. We have begun planning this summer's re-iteration. We also continue to engage in retrospectives and process improvements as we review new rostering requests.
- **Interactive surface refresh**. The large interactive real-estate in classrooms serves a variety of roles, from basic projection screen to interactive multi-touch manipulative surface. This fall, we installed over 200 new interactive flat panels at the lower elementaries, Fifth Avenue, and RMS.[18] The prior-generation interactive surfaces were a frequent source of failure and frustration at the classroom, undercutting teachers' interest in using (and confidence they could rely on) this classroom technology. The panels are mounted on mobile carts, giving staff flexibility in their rooms and no longer have the "front" of class defined by equipment. This project was funded by SPLOST.
- **Secondary 1:1 device refresh and reenvisioning**. In a time of pandemic-induced equipment shortfalls,[19] we not only secured a few thousand new devices, but we also supported school leaders' vision to allow this equipment to travel between school and home. This project was funded by SPLOST.
    - Next steps: Fifth Avenue's current 1:1 fleet reaches end-of-life this summer. That equipment will be auctioned, and the previous RMS fleet – which was purchased concurrently with Talley's – will shift to Fifth Avenue this summer. Once this relocation is done, our secondary sites will be in sync for their equipment refresh cycle, with the upper elementary schools offset by two years for theirs.
- **Telephone system consolidation and expansion**. We completed the multiyear consolidation and upgrade of what had been several disparate, antiquated landline systems to a single, modern provider that specializes in K-12. Among other features, this system notifies school and district leaders every time 911 is called. We also expanded individual handsets into every classroom to support connectivity and safety.
    - Next steps: Our previous telecom provider still provides service for emergency fire, burglar, and elevator lines. We are working with Operations to transition those lines to other solutions.

[18] DHS received interactive panels during their last renovation, and Talley opened with them.
[19] Consider reading this item aloud in a dramatic movie trailer voice.

- **Exterior Wi-Fi**. Through a 100%-funded GaDOE grant for equipment and installation services, we installed exterior Wi-Fi infrastructure at all K-12 schools. This work supports regular outdoor instruction and CSD partner activities.
- **Onlined two new buildings and one new school**. We supported bringing two new offices located on Westchester Drive online, along with providing equipment and support for the opening of Decatur Virtual Academy.
    - Next steps: We will reevaluate how we staff technology support for these satellite offices and DVA now that their user populations are stabilizing.
- **Copier refresh**. We renewed our relationship with the incumbent provider for copier equipment. We took advantage of the renewal process to negotiate the termination and removal of several out-of-sync copier contracts from another provider. The district's copier fleet is now systematized under a single provider.
    - Next steps: With equipment systematized, we are working with the vendor and two pilot schools on a service that provides better privacy, flexibility, and data insights for copier use.
- **Network monitoring and control**: We implemented a new monitoring, control, and alert mechanism for our network switching gear. Conveniently, this also integrates with an existing management console for our wireless network. Prior to this implementation, IS might not know about critical infrastructure going offline until a user reported a Wi-Fi outage. Additionally, this tool will greatly simplify our ability to deploy security and other firmware updates to networking gear, reducing our cybersecurity exposure.
- **Multifactor authentication**: We implemented multifactor authentication for an initial tier of employees with broad access to sensitive information and/or network infrastructure. This helps to reduce the threat of compromised account credentials.
    - Next steps: Like other K-12s, we are exploring how best to require and support multifactor authentication for all employees. The next tranche of users will be required to enroll in MFA in Q1 FY23.
- **Cybersecurity efforts**: We engaged with a leading K-12 partner to conduct an internal and external threat assessment, focusing on network infrastructure, servers, and endpoints. The review surfaced several actionable steps and strategic recommendations, and overall the vendor had positive feedback for CSD's security posture. Additionally, we joined the Multi State Information Sharing and Analysis Center (MS-ISAC), which operates under the auspices of the Cybersecurity & Infrastructure Security Agency within the Department of Homeland Security,[20] and we have begun to use some of their services to provide additional layers to our defense-in-depth posture.
    - Next steps: We are exploring how to increase the cadence at which we pursue and receive expert third-party feedback on our security exposure and practices. We will also further explore leveraging best-in-class resources through entities like MS-ISAC. We eagerly anticipate and will eagerly adopt pending resources coming from the Georgia Department of Education.

[20] aka "the other DHS"

- **E-Rate FY22**: E-Rate is a federal program that provides school and public libraries with discounts on eligible connectivity services and equipment. Most of our K-12 uninterruptible power supplies (UPSes) are due for refresh in the coming year. UPSes keep network equipment and connectivity – including phones and security cameras – online during a power outage. The federal government approved our proposal, allowing us this summer to order a large fleet of UPSes at a 40% discount. These new units offer centralized monitoring and alert critical staff when they kick-in, allowing us to proactively communicate about and respond to issues.
- **Non-E-Rate UPS updates**: We purchased and are mid-process in deploying UPSes for College Heights and our three administrative sites, which are not eligible for federal E-Rate funding.
- **Supporting intercom work**: We are excited by the Operations Department's ambitious plans to systemize school intercom systems, and were happy to support the work completed at Talley Street and Renfroe this year.
    - We will continue to work with Operations to ensure sufficient network infrastructure is in place to support intercom improvements (and at the same time commiserate together on our mutual struggles with vendors' ability to secure equipment).
- **School engagement**: We made a focus this year for the entire Wilson Center Information Services team to meet quarterly with each school's principal (or designee), media specialist, and technology support specialist. This proactive measure helped build communication, rapport, and trust between school and district staff. Additionally, principals were systematically engaged in the formal evaluation process for school-based technology staff.
    - Next steps: We will reiterate on the cadence, duration, and timing of quarterly engagements next year. Our school-based colleagues' time is precious, and we want to maximize the value and actionability of our time together.
- **Working with students**: We were so excited to have two students ask to work with our team for their work-based learning placements! Sam Payman and Max Mendoza have done tremendous work at DHS and RMS, respectively, and they have set a high bar for their successors.
- **Honorable mentions**: The following items are a bit arcane, but they nevertheless reflect significant lifts by one or more members of the IS team: transitioning equipment from a deprecated device management system to the new district-wide solution, retiring the end-of-life SoftDocs product, a new connectivity solution for Kentucky Street office, and supporting the implementation of new bus software.

Growth Areas

- **Greater focus on licensing costs vs. use**. This year was the first time in recent memory we partnered with Teaching & Learning and school-level leaders to closely examine licensing costs relative to use data. As IS subsumes a larger swath of district

instructional software license costs, we look forward to further correlating those costs to our internal (and vendor-provided) launch counts, user-base size, and session duration data as part of overall service lifecycle maintenance.

- **Establishing and monitoring SLA compliance rates, and evaluating whether to lower response/resolution SLA times**. We want to set an appropriate bar for how quickly we tend to our customers' needs. Having gathered baseline data on how well we comply with our SLAs, next year we will establish overall compliance expectations and consider whether to raise the bar in terms of response and resolution times.
- **Telling our story**. This is an persistent challenge and not unique to our department. We have had a few false starts with proactive updates to the CSD community about IS's work, particularly critical infrastructure projects.
- **Compensating for supply chain issues**. The IT supply chain has not yet recovered, and we have not yet adequately identified how to factor this into near-term and strategic purchasing plans and project management. For example: we ordered several new wireless access points in October 2021, projected at the time to arrive in March 2022. Alas, the latest delivery estimate is October 2022. We need to revisit our project timelines to better factor in ongoing struggles in this area.

Looking Ahead

- Since February, we have been part of a team working with the Georgia Department of Education to create IT infrastructure and system standards. The process has been rather affirming: we meet many of the standards we anticipate being published this summer. Still, there are some growth areas, and overall we look forward to continuing to work with the GaDOE and our peer districts on strategies to implement these standards.
- We look forward to reviewing and revising our three- to five-year goals, and to continuing to progress on those critical goals and initiatives.
- With members of the Research & Analytics team taking on additional duties to support DVA and other critical programs, we have tried to step in to assist with projects related to Infinite Campus and data analytics. We look forward to continuing to work with all corners of CSD to support the superintendent's shared vision of a data culture.
- We look forward to the various *Next steps* mentioned above. We also have an ambitious project calendar of both public-facing and behind-the-scenes projects to maintain and enhance student and staff experiences in CSD. Even with ongoing supply issues, we have ample opportunities to take advantage of to continue to move the district forward.

Conclusion

Thank you for your time and attention. Even at 19 pages, this is not an exhaustive report – but, we hope you have found it at least a compelling insight into our past, present, and future. The team cherishes our students and colleagues, and we look forward to continued service.