Department Report: Information Technology

Objective: Report the state of technology systems functionality and on strategic key measurements of student and staff technology experience.

Data: Data on percentage of staff and students reporting adequate access to technology is provided through the 2023-24 staff and student surveys. Additional data sources for this report include the help desk system, asset management system, server and networking systems log files.

Staff and student reporting access to technology

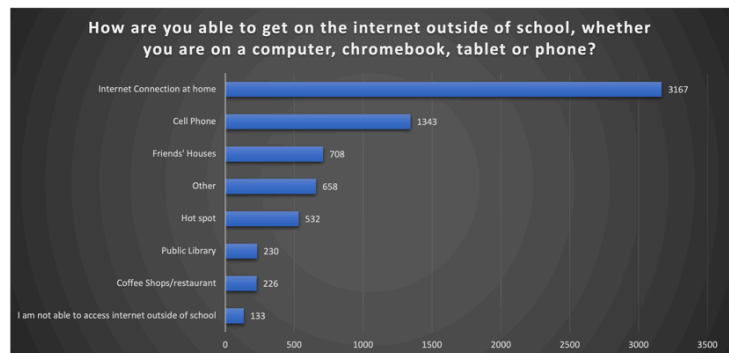| Measurement	2021-22	2022-23	2023-24
% teachers reporting adequate access to technology to support their work	88.0%	84.1%	85.5%
% secondary students reporting their learning experience is supported by digital tools the school offers	91.5%	90.3%	90.8%
% students reporting their school teaches them to be a good digital citizen	83.2%	85.1%	85.9%

2024 BSD Student Survey – Technology Support for Student Learning

Elementary Students

In the 2024 elementary student survey, students in grades 4 and 5 were asked how they access the internet outside of school. Students were able to select more than one response. Compared to 2023 elementary student survey results, the number of students responding to each internet access option declined in most categories. Categories with the sharpest decline were students reporting access at coffee shops and restaurants with a decline of 50%. Student reports of internet access using a hotspot declined by 34%. The only category with increased responses from last year was the category other, increasing by 126

How are you able to get on the internet outside of school, whether you are on a computer, chromebook, tablet or phone?

Internet Connection at home — 3167
Cell Phone — 1343
Friends' Houses — 708
Other — 658
Hot spot — 532
Public Library — 230
Coffee Shops/restaurant — 226
I am not able to access internet outside of school — 133

responses. At the elementary level, most students do not take devices home and there is no expectation that elementary students use devices outside of the school day.

Middle School Students
Students in middle school were asked if digital tools supported their learning, whether their student device was their main device used for completing schoolwork and if the student had adequate internet connectivity. Student responses were over 90% in reporting their learning experience is supported by digital tools and having adequate home internet connectivity. For the second year in a row, students reporting their district issued


Chromebook as their main device used to complete schoolwork outside of school rose, now at 82% of students.
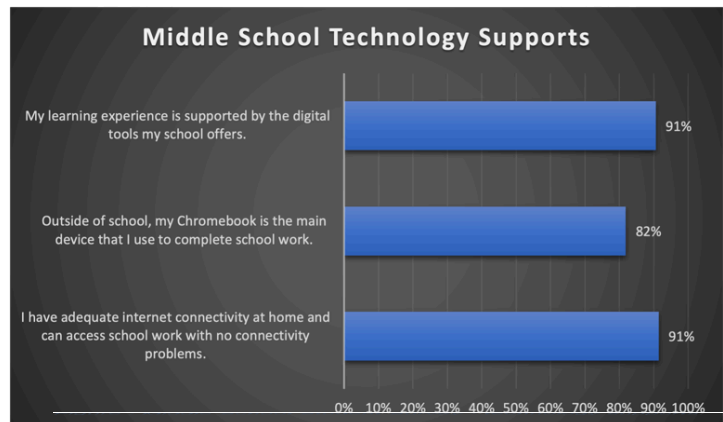
High School Students
High school students were asked the same questions as middle school students regarding technology supports. High school students reported their learning is supported by digital tools at 91%. High School students reporting having adequate internet connectivity to access schoolwork at home was 94%, rising by 2 percent over last year. Although slightly lower than the 82% of students

at the middle school level, over 3 out of 4 high school students reported their district issued Chromebook is the primary device used to complete schoolwork outside of the school day. Chromebooks used by students are funded through the 2022 bond. High levels of student use illustrate the need for devices so students can continue their learning outside of the school day.
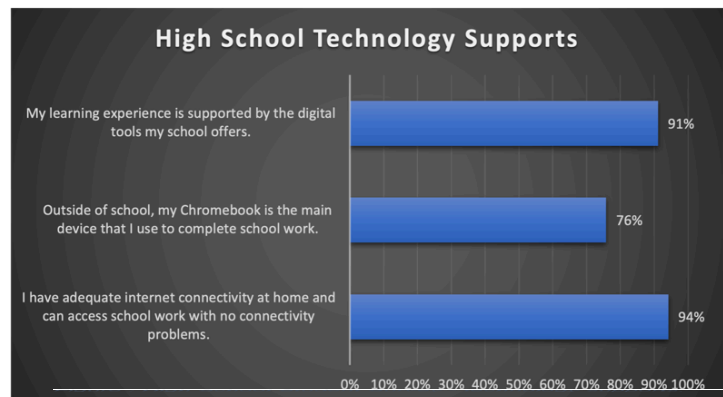
Successes:

- Student and staff survey responses indicate continued high satisfaction for technologies supporting student learning and staff work.
- Student device refresh is complete for elementary and middle school students.
- IT projects funded through the 2022 bond remain delivered on time and on budget.

Issues:

- Beaverton School District is continuing to experience an increase in the number of cyber security attacks. With the advent of Generative AI tools, the attacks are much more sophisticated and targeted than in previous years.

Action Plan:

- Work to increase technology supports for students and staff continues through bond and general fund investments and is summarized in this report. While not inclusive of all projects within IT, the projects below demonstrate work aligned to increasing staff and student satisfaction of how technology supports their learning and work.

Technology Systems

Our Strategic Plan, teaching and learning mission and our business functions demand robust and reliable technology systems and support structures. Access to network resources and the internet are critical to our learning mission and business operations. Applications for student learning and business functions are used both inside and outside of school or work hours and must be accessible from any location. The mission of the Information Technology department is to create and sustain an environment that is always available, highly secure and continuously improving to meet the needs of students, staff and our community.

Infrastructure Improvements

Cyber Security

Securing Beaverton School District networks, systems and data is a primary and critical focus area for the IT department. Due to extensive amounts of personal and financial data maintained by school systems, and coupled with resource challenges, school systems across the nation are a frequent target for ransomware and other cyber-attacks.

According to a recent report from Check Point Research, the education and research industry has consistently been a prime target for cyber criminals. The education and research sector was the number one most attacked industry globally, seeing a 53% increase compared to last year.[1] Attacks include ransomware, account compromise, malware, unauthorized access, and data breach attempts to download student, staff and organizational data. In addition to protecting data stored in our district data centers, the IT department must work with vendors to secure and protect data stored in cloud systems.

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[1] *Check Point Team. (2024, July 16). Check Point Research reports highest increase of global cyber attacks seen in last two years – a 30% increase in Q2 2024 global cyber attacks. Check Point Blog. https://blog.checkpoint.com/research/check-point-research-reports-highest-increase-of-global-cyber-attacks-seen-in-last-two-years-a-30-increase-in-q2-2024-global-cyber-attacks/*

To assess the effectiveness of our IT cyber security processes and systems, a third-party security assessment is conducted every other year. The assessment is aligned to standards defined by the National Institute of Standards and Technology (NIST) and assesses multiple facets of the district's cybersecurity preparedness.

IT department staff are planning for the upcoming assessment and once complete, the results will inform planning to improve our cyber security defenses.

A key defense in our cybersecurity portfolio is addressing user education and training. Staff regularly receive phishing simulations from our security awareness platform along with micro training sessions both when a phishing email is reported and when a staff member clicks a phishing email from the platform. IT tracks engagement with the platform, staff skill level at identifying phishing emails and speed of reporting. While there has been improvement in staff reporting of phishing emails through this training, a goal for the IT department this year is to increase staff awareness and use of this valuable training platform.

Data Center and Network Infrastructure
The Beaverton School District has redundancy at the data center level, with two locations serving district network, telecommunications and system access needs, with the ability of either location to assume full IT control of the district and continue operations in the event of an outage.

The Beaverton School District operates in a hybrid cloud environment. This means some applications are utilized directly from the internet and others are housed in our district data centers. Applications for learning and business functions are used around the clock and must always be available.

This year, the systems administration team is replacing the virtual infrastructure operating system due to licensing changes from the current vendor. When complete, the district will realize licensing savings costs while retaining the functionality needed for application access and system security.

Enterprise Applications

Enterprise Resource Planning (ERP)
For the past 27 years, the district has used the PowerSchool BusinessPlus HR/Finance application for business processes including human resource management, payroll, accounting and purchasing. The existing application has been substantially customized to district processes, creating delays in updating and patching the system due to the amount of time needed for staff testing of upgrades.

The request for proposal (RFP) was successfully completed in June 2024 with BusinessPlus from PowerSchool selected. Contract negotiations completed in

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September 2024 and the project kickoff was held in early November. The team is now in the initiation phase of the project and will soon move to the design phase.

PowerSchool is an ERP solely designed for K-12 school districts and demonstrated the closest alignment to standard school district business practices and needs. While PowerSchool is our current vendor, this will be a new implementation of the ERP. The Business Office, HR and IT will examine current business practices and move to standard processes. This will reduce manual processes, create efficiencies for department staff, and provide improved customer service for users of the system. This implementation will transition from an application hosted in district data centers to a vendor hosted solution which will streamline upgrades and security patching.

The implementation of a new ERP system is complex. In addition to running the business operations, all employees use the system to access employee financial and a variety of other information. A project plan is in development to allow for change in business practices, migrate data and systems, and train staff on new processes. We anticipate a phased approach, with the business functions going live in fall 2025 and the human resources functions transitioning for the start of the 2025-26 fiscal year.

Transition to Synergy Special Education (SE)
IT department staff work closely with Teaching and Learning colleagues to ensure the Synergy student information system continues to meet needs of teachers and support the teaching and learning mission of the Beaverton School District.

For many years, Beaverton School District staff have used the ORSPED application developed and maintained by the Northwest Regional ESD (NWRESD). The ORSPED application provides documentation and support to students receiving special education services. In summer of 2024, NWRESD announced the discontinuation of ORSPED. Staff from the Special Education and IT departments are collaborating on the transition to Synergy SE. Synergy SE is a part of the core Synergy platform so there are no additional licensing costs in making the transition.

Synergy SE will be live in fall 2025 for the 2025-26 school year. Staff training will happen prior to the start of school to ensure staff are knowledgeable in the new system.

An advantage of Synergy SE is that all special education documentation will be in Synergy. Maintaining all student information in one system will be much more efficient for special education and general education staff to work together in supporting students receiving special education services.

Student Data Privacy
The Beaverton School District, like all school systems across the country, holds a vast amount of student, staff and family data. This data is necessary for instruction, administration of the school district and for state and federal reporting requirements. With the addition of digital instructional resources, student data might also be held by

third party applications and vendors. The increased use of digital resources can make it more difficult for parents to know what information on their student is held by the district and if additional personally identifiable information is also contained in third party vendor systems.

Since 2018, the Beaverton School District has been a member of the national **Student Data Privacy Consortium** (SDPC). The SDPC is a national consortium of school districts that share information and best practices for providing parents with student data privacy information. The consortium allows districts to work together with vendors through a national student data privacy agreement to ensure vendors are adhering to best practices for safeguarding student data.

The IT Department maintains a **public web portal** on our district website listing Beaverton School District digital applications and the data fields they create

Logo	Software Name	Agreement Status	Agreement Type	Agreement Dates	Grade Level	Content Area	Data
Renaissance	EduClimber	Active	Vendor Specific (OR-NDPA-V1) with Exhibit Exhibit E	Approved: 03/12/2024 Expires: 03/12/2027	K, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	English Language Arts, Math	

and store. Staff, students, parents and community members can access the portal to view applications used in the district, vendor information and the data collected and stored by vendors. The page contains this information for 811 applications used by students and staff in the district and as additional applications are identified, they are added to the web portal.

To strengthen data privacy practices in Oregon, Beaverton School District IT staff are launching a workgroup open to all school districts in Oregon. This community will meet virtually to share information and collectively, will align our efforts to improve practices in the school district, across the state and our work with vendors.

2022 Bond Projects

In May of 2022, Beaverton voters approved the 2022 bond. The 2022 bond contains $44M of investments for student devices, networking upgrades and infrastructure support. Information Technology staff are working on the following projects as part of the third-year implementation of the 2022 bond.

Elementary and Middle School Student Device Replacement
The majority of monies allocated from bond funds are used to replace student devices. Devices for elementary and middle school students were replaced at the start of the 2024 school year. Middle school students and students in grades 3-5 received new Chromebooks with 15,760 devices purchased for their use. Students in kindergarten through second grade received iPads with 7,896 devices purchased. The previously used student devices are now being collected and securely erased. Some devices will

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be repurposed for lighter use while most of the devices will be sold to a recycling company. Any funds received for the devices are only used to purchase or support student devices.

Dark Fiber Improvements
Dark fiber is a strategy of leasing fiber optic network cables and maintaining the electronics on the points where those network connections enter buildings to connect school and ancillary sites. The advantage of a dark fiber network is that monthly connection costs remain constant during the long-term lease agreement and the district has the ability to scale up network speeds by upgrading the electronics on the connections without incurring additional monthly costs from the provider.

In 2017 as part of the 2014 bond, High and Options school sites were connected to the district via dark fiber connections. In 2022, construction began on phase two of our dark fiber project with the project adding all elementary and middle schools in the northern half of the district. Phase 2 completed in October 2024. The third and final phase of the project began in 2023. This phase will add schools and sites in the southern half of the district and will be complete by May 2025.

When phase 3 is complete, all district sites will be on a long-term, leased fiber optic network which is a lower cost solution for district connectivity over the next 10 years. In addition to the ability to scale to meet future network needs, ownership of the network will allow IT staff to best secure and optimize the network. This network design is also highly resilient, with multiple network routes available to maintain school connectivity in the case of a fiber cut in our network.

User Services and Support

Much of the work done in IT is work not immediately visible to our students, staff and community. When done well, efficiencies and time saved for staff can seem almost invisible to users. The impacts most visible to students, staff and our community are those that involve direct service and support.

Classroom Technology Standards
Information Technology and Facilities have completed the classroom standardization project. In the past, schools were funding classroom technology from school budgets and the result was a variation in classroom technology equipment and age of technology available to students and teachers. There are many benefits to standardizing classroom technology including:

- Ensuring all students have access to the same learning environment and opportunities, regardless of the school they attend.
- Providing a consistent experience for teachers and substitute teachers when they move to other classrooms.
- Simplifying staff training and support on standard classroom technology.
- Cost savings with bulk purchasing.

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The District classroom technology standard consists of a display mounted on a cart or on the classroom wall, an Apple TV so content can be projected to the display from either a laptop or iPad, and an Apple iPad with an Apple Pencil which can be used as a mobile classroom device for the teacher, a document camera, or can be given to a student to show their work projected to the classroom display.

In the 2023-24 school year, 2,100 classrooms were upgraded to the classroom standard. The installation was done by IT staff members which in addition to saving costs on installation, allowed IT staff members to visit and support schools.

Teachers have transitioned to the classroom technology standard and receive support from school technology support staff (TSS) and IT staff as needed. The IT department maintains a small inventory of additional classroom technology devices to be able to quickly replace broken or damaged equipment.

School Office Staff Computer Replacement
Beginning in 2012, a computer replacement program was launched for certified staff members. Every four years, certified staff receive a new laptop as their primary computing device. Other staff computer purchases were funded through school or department budgets and as a result, there was a wide variation in the age and adequacy of computing devices used by classified staff and school administrators. In 2023, IT began a computer replacement cycle for some classified positions to ensure computing devices are adequate for staff work. School office assistants, registrars, athletic trainers, college and career specialists and accounting assistants were provided a standard computing device with those devices on a four-year rotation cycle.

In 2024, this project is expanding to additional administrator and classified positions including campus supervisors, library media assistants, principals and assistant principals.

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The standard staff computer is either an Apple or Dell laptop, an external monitor with an integrated web camera, a keyboard, mouse, and an adapter to connect the laptop to a monitor or other peripherals.

The advantages of a staff computer replacement cycle include being able to project fixed costs for computer replacement into the future, efficiencies in support and staff training and improved user experience for staff as in many cases, staff members were using very old equipment.

New and Unified Help Desk System
For many years, there have been multiple help desk applications staff were required to use to submit help requests. The maintenance department maintained a work order system and another system was used for the IT helpdesk. The IT helpdesk application was extended to other departments to simplify the help request process.

In an effort to provide the easiest solution for staff seeking help, the maintenance and IT department collaborated in seeking a solution that would best support the ease of requesting help and the features needed by maintenance, IT and other departments to manage those requests through the support process and track district inventory and assets.

Incident IQ was selected as the solution. The maintenance department moved to the new system in fall 2024 and work is underway to transition all department users of the existing IT help desk solution to Incident IQ.

As with the ERP project, staff are undertaking a comprehensive review of our help desk processes to ensure the best user experience for staff and the most efficient workflows to route and respond to user help requests. This project will be completed in the 2024-25 school year and when complete, staff will have one resource to visit for any request for help.

Generative Artificial Intelligence (AI)
Since the launch of ChatGPT in November 2022, school systems across the United States have been exploring the impact of generative artificial intelligence (AI) on student learning and business operations.

The use of AI applications in the Beaverton School District has the potential to support student learning. AI tools, like other resources on the internet, offer students the opportunity to seek help in their learning, brainstorm ideas for demonstrating their understanding and provide ways for students to stay engaged in their learning.

For staff, AI tools can automate routine and repetitive tasks. The use of this technology can afford teachers more time to focus on instruction and relationships with students, as

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outlined in the **Artificial Intelligence and the Future of Teaching and Learning** report released by the U.S. Department of Education. Examples include automating the delivery of additional learning resources for an assignment or project and automating recordkeeping.

As AI tools become more integrated into applications used by students and staff, it's important to understand the limitations of these tools. While AI tools are growing in sophistication, the information that they provide isn't always accurate, so students and staff need to exercise critical thinking skills to evaluate work produced by AI. In addition to accuracy, concerns over data privacy, copyright, and bias must be addressed.

In collaboration with Teaching and Learning, IT is developing a generative AI task force. The Gen AI task force will explore and develop guidelines for the responsible use of Generative AI applications in the Beaverton School District. Our focus will be on ensuring that AI technologies are used to enhance teaching and learning outcomes for students and improving operational efficiencies for staff. The task force will provide recommendations for policy, training, and resource development to support safe and effective AI adoption.

The Task Force will work through winter 2024 and spring 2025 and will have guidelines created by the end of the 2024-25 school year.

Customer Service

A strength of the IT department is that in addition to high levels of technology skills and knowledge, IT department staff understand and embrace the importance of their work supporting the teaching and learning of our students. As a result, the IT department staff continues to maintain excellent levels of service aligned to the IT Department Customer Service Standard.

At the end of every IT help desk ticket submitted, there is a chance for staff to provide feedback on how quickly IT resolved issues, the level of approachability and professionalism displayed, and our communication throughout troubleshooting the issue. Survey results on each question from July 1, 2023 through June 30, 2024 are above 90% ranking staff as excellent in each area.