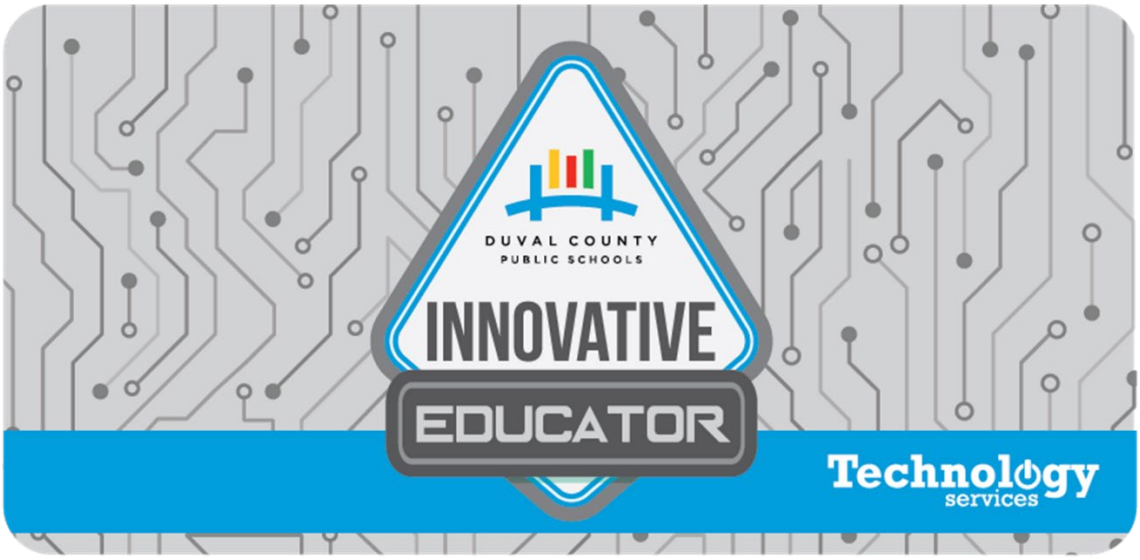
Duval County Public Schools
Technology Plan
2020-2021



DUVAL COUNTY PUBLIC SCHOOLS | Technology services

DUVAL COUNTY
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Dear Stakeholders,

As a School Board, we recognize the important role that technology plays in education. We are committed to providing students with an innovative environment, focusing on accessibility and an opportunity for personalized learning. Ensuring engagement and student voice in the learning process provides students with the future ready skills necessary to be successful in college or a career and life.

This past spring, we were met with the unprecedented challenge of responding to the Covid 19 pandemic. As a district, we were able to meet the needs of our students by implementing Duval HomeRoom—the district's remote learning initiative, deploying student laptops and hot spots to those who needed them, and providing technical support to students, parents, and staff.

It is the mission of Technology Services to deploy and maintain technology that provides students, teachers, and administrators with the tools they need to be successful. We are committed to providing our students with the environment and equipment that supports the continual transition into digital learning whether it is a face-to-face, hybrid, or virtual model.

In order to create an environment of innovation, accessibility, and opportunity for personalized learning for all students, a connection between the technology that is available and learning taking place must be established. Technology Services has implemented the DCPS Innovative Educator Program, currently in year three, to support teachers with integrating technology in learning. With the ISTE Technology Standards as the guide, emphasis is placed on ensuring that students thrive in a constantly evolving technological landscape to be successful in the postsecondary setting and workforce.

While the financial investment that has been made in technology is substantial, it is essential. It is our belief that these digital tools enhance the educational learning experience and play a vital role in preparing all students for college, a career, and life.

Sincerely,

Warren Jones
Board Chairman

I. Mission and Vision

Duval County Public Schools Technology Mission

Deploy and maintain technology to provide educational excellence in every school, in every classroom, for every student, every day.

Duval County Public Schools Technology Vision

Every student is inspired and prepared for success in college or a career, and life.

Technology integration is the ultimate goal and all stakeholders have a vested interest in preparing students for success in college or a career. To ensure that the district accomplishes this goal, Technology Services must work with Curriculum and Instruction to deploy adequate technologies to establish an environment of innovation, accessibility, and an opportunity for personalized learning for all students.

Partnerships

Externally, Technology Services has developed strong partnerships with business and community groups to integrate technology through the following:

- Sharing resources including human and financial
- Developing mentoring and/or job shadowing opportunities for students through summer internships
- Promoting "real-life" applications of skills learned in the classroom
- Demonstrating and reinforcing the importance of lifelong learning

Partnerships include:

- City of Jacksonville
- Florida State College at Jacksonville
- Microsoft
- Lenovo
- Hewlett-Packard
- NEC
- Deutsche Bank
- Emtec, Inc.
- JEA
- Cisco Systems
- Citi
- JTA
- Availity

Benefits from these partnerships include cost savings, shorter implementation timeframes, enhanced technology capabilities, improved purchasing strategy, and a more transparent integration of technology solutions.

Duval HomeRoom Community Partners

- Duval HomeRoom Community Partner was designed to provide student data to improve instruction, assess programs and advance student achievement throughout Duval County.
- Duval HomeRoom provides a platform for secure communication and vetted data exchange between the district and its partners.
- The portal facilitates the engagement of community partners to support the district's vision in uniting a variety of community-based organizations to enhance the academic, physical, mental, social, fiscal, and environmental well-being of DCPS students and their families.

The following Community Partners have approved MOUs and partner with DCPS through Duval HomeRoom:

- Cathedral Arts Project, Inc.
- Goodwill Industries of North Florida, Inc.
- Groundwork Jacksonville, Inc.
- Hope Haven Association, Incorporated
- I'm A Star Foundation, Inc.
- Jacksonville Science Festival, Inc.
- Kids Hope Alliance
- MaliVai Washington Kids Foundation, Inc.
- Police Athletic League of Jacksonville, Inc.
- Teen Leaders of America, Inc.
- The Sanctuary of Northeast Florida, Inc.
- Vision For Excellence, Inc.
- Young Men's Christian Association of Florida's First Coast, Inc.

II. Background Information

The DCPS Technology Services Division supports the needs of 163 schools (excluding Charters) in training, integration, and use of technology.

District Profile

Duval County is the 6th largest school district in Florida and the 21st largest district in the nation with a student population of over 129,000 students. The district covers a geographical area of 841 square miles and has 196 schools (including Charters).

Duval County District Facts for School Year 2019-2020

Schools

- 99 Elementary Schools
- (3) K-6 School
- (2) K-8 Schools
- 24 Middle Schools
- (2) 6-12 Schools
- 19 High Schools
- 32 Charter Schools
- 6 Exceptional Centers
- 7 Alternative Schools
- 1 Virtual School

Student Demographics

129,000 students

- 43% African American
- 34% Caucasian
- 13% Hispanic
- 5% Multi-racial
- 4% Asian
- <1% American Indian/Alaskan Native

Graduation Rate 86.5% (Federal Formula)

26,789 exceptional education students (mentally, physically, emotionally handicapped, learning disabled, or gifted)

Average expenditure per pupil-- $8,073

Staff Facts

13,113 employees--(includes full-time and part-time) making the district the second largest employer in the county

8,284 teachers

Planning Process

The technology planning process has been a collaborative effort involving community and business leaders, school leaders, teachers, district staff, consultants, and technology vendors. Stakeholders have contributed intellectual capital, conducted audits and assessments, and participated in action research. By piloting new hardware solutions and offering resources including human capital, these groups have led DCPS to be reflective and strategic regarding our technology future.

Planning Process Timeline

The planning process is detailed below to illustrate the depth of ongoing collaboration and planning:

08/19—Continued participation as an active member on Microsoft K-12 Advisory Council Meeting sharing ideas and best practices with industry leaders

10/19—Technology Services leadership team began the Technology Plan revision process

07/20—Submit the revised plan for review by District Leadership

08/20—Present updated Technology Plan to DCPS School Board

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III. Needs Assessment

Determination of Need:

The following Strengths, Weaknesses, Threats, and Opportunities (SWOT) Analysis was conducted to:

- Plan for the evolving role of Technology Services
- Support the drive of digital tools and resources to increase student achievement
- Prioritize which initiatives will ultimately support the district's goal of accomplishing our strategic plan targets

SWOT Analysis:	
Strengths	1. Communication • Duval HomeRoom enhancement releases • Implementation of Microsoft Teams district wide 2. Infrastructure Development • IP Cameras for all Schools • More reliable network for all schools that includes backup circuits 3. Enterprise Systems • Establishing a state-of-the-art district Data Center moving away from CSX and centralizing all IT assets • Integration of FOCUS with Microsoft Teams 4. Student Programs • Summer internship opportunities for DCPS students • CTE programs—Cybersecurity at Jackson High School 5. Technology Innovation • Continuation of the DCPS Innovative Educator Program • Technology Resource Site resources to support district initiatives including the district-wide implementation of Microsoft Teams during Duval HomeRoom • Implementation of the Curriculum Innovation Team to support the transition of all curriculum guides to OneNote Notebooks
Weaknesses	1. Funding source to expand devices and interactive monitors to non-Title I elementary schools needs to be identified
Opportunities	1. Work collaboratively with Curriculum and Instruction to ensure that the integration of technology is a meaningful component within all curriculum guides 2. Establish a DCPS Innovative Educator Cohort for New Teachers 3. Establish a Technology Innovation user group consisting of principals and district staff 4. Establish a Minecraft Lab at Kirby-Smith MS to seed coding into Elementary classrooms
Threats	1. Life cycle management plan is dependent upon funding 2. Develop a succession plan that allows for cross training opportunities for key personnel that will be retiring over the next three years 3. Continuing to attract highly skilled IT staff in a very competitive Jacksonville job market 4. High turnover rate of Teachers with IT skillsets

Project Management Oversight Process:

In addition to the internal SWOT analysis, district technology needs are assessed through the major projects that are largely initiated at the district level as a result of district data analysis. The Superintendent's Leadership Team monitors alignment and prioritization of technology initiatives with national and state standards as well as alignment with the District Strategic Plan.

Completed Projects 2019-20:

- Duval HomeRoom 2.0 & Related Releases
- Share Drive Migration
- Office 365 Groups and Microsoft Teams
- District-wide Document Management System
- High School Accelerated Programs Online Application
- Special Placement Online Application
- Magnet Online Application Release
- Remedy ITSM System Implementation
- Enterprise Document Management
- DCPS Centralize ID Badge System
- Administrative Internet bandwidth Upgrade
- Blackboard Mass Communications and Integrated Mobile App
- New Data Center built to 35G for Schools & Admin Sites
- PowerSchool Implementation TalentEd On-Boarding
- ESS - Phase II implementation and deployment - Leave Requests
- Web-based School Accounting System
- F5 to Alteon Load Balancer Change Out
- Enterprise DDoS (Distributed Denial of Service) Protection

Current Projects:

- Duval HomeRoom Together Mode
- Field Trip Request & Voucher Management Phase III
- BadgePass - Visitor & Employee Management System
- BadgePass - Volunteer Tracking management System
- BadgePass – Access Management System
- Positive Behavior Tracking
- Canvas Professional Development
- District Schools IP Phone Implementation
- Network Electronics Upgrade in all Schools
- Nearpod SSO and Teams integration
- NT 4.0 Release (Non-Employee Accounts)
- Office of Economic Opportunity Minority/Women Business Enterprise Application Phase II
- Adapt - SDLC New Application
- Audition Application (Multiple Schools)
- Equity and Inclusion Application
- Principal Interview Process Application
- Code Enforcement Application
- Special Student Services (SSS) Module in Focus

- Student Hot Spots-Sprint 1 Million
- Technology Lockers
- NAC - Network Access Control
- District Contract Tracking Portal
- Azure Information Protection
- District Schools IP Phone Implementation
- Promotion and Retention Application Release
- School Choice Online Applications Release (MAG/STO/HSAP/PREK)
- Transportation Student Bus Ridership implementation
- Collaborate with HR to utilize Microsoft Teams to support New Hire Onboarding

IV. Goals

Short Term Goals:

- Rebrand OneView to Duval HomeRoom to align with the implementation the district's remote learning initiative
- Provide adequate resources for teachers and staff to support the district wide implementation of Microsoft Teams and the district's Duval HomeRoom Initiative
- Implement a 1:1 initiative in all secondary schools: grades 6-12
- Increase the overall number of computers for Elementary schools to accommodate the possibility of moving classrooms quickly to Duval HomeRoom
- Purchase and distribute equipment to core secondary classrooms to provide power to support the 1:1 initiative and the use of student laptops throughout the school day
- Distribute an additional 3,000 hotspots to student that lack reliable internet access
- Continue to collaborate with Curriculum & Instruction to implement a Curriculum Innovation Team that will align technology best practices within the Curriculum Guide Microsoft OneNote Notebooks to support Duval HomeRoom
- Continue the implementation of the Duval County Public Schools Innovative Educator Program that provides professional development opportunities for administrators, teachers, and academic coaches
- Increase the number of teachers and students utilizing Minecraft as an instructional tool
- Provide ongoing and effective technical support for all deployed equipment
- Maintain compliance with an established multi-year life cycle management plan for systems and hardware deployed throughout the district to include operating systems, application software, hardware, peripherals, customized district images, etc.
- Implement an IP Telephone System for the district
- Implement modern SAP mobile apps for all district employees
- Build pipeline of future IT district employees through IT Career Academies and internships

- Implement a professional development plan that encourages and rewards employees for completing course work and obtaining certifications related to their job
- Implement a district wide ID Management/Visitor Tracking System
- Move Duval HomeRoom development and maintenance from Microsoft GD team to the on-premises SharePoint team
- Retire or create retirement plan for legacy applications (NEQT, CAST, Genesis, etc.)
- Implement new workflow for printing of transcripts for archive students
- Implement new ITSM solution replacing existing, non-scalable solution that combines technology services and maintenance operations into a single platform
- Improve device tracking through reporting and workflow changes
- Implement an online Equipment Transfer Form (ETF)
- Implement IM produced applications that reduce workload and increase productively, transparency, and communication of District departments
- Upgrade key applications, such as Promotion/Retention, to current technology easing required maintenance and protecting against data loss
- Increase customer exposure to SAS dashboards integrated with key applications using targeted data to give visibility into school and department success indicators

Long-term goals:

- Increase utilization of the Duval HomeRoom portal across the district by enhancing features and adding functionality so that it becomes the single-entry point for all district digital tools, resources, data, and services for all district stakeholders
- Expand interactive monitors to all elementary classrooms
- Expand laptop lockers for laptop storage in secondary schools
- District wide 1:1 for all schools and all grade levels
- Reliable home Internet access for all students
- Implement a centralized copy/print management solution
- Implement a cloud-based email filtering service that helps protect the District against unknown malware and viruses by providing robust zero-day protection, and includes features to safeguard your organization from harmful links in real time
- Implement a cloud-based public records solution that can analyze unstructured data within Office 365 and perform more efficient document review in all data storage locations associated with Office 365 (Exchange Online, SharePoint Online, OneDrive for Business, Skype for Business, Office 365 Groups, and Microsoft Teams)
- Implement the running of the Promotion/Retention process in Focus

- Implement IM produced software infrastructure solution that will give real time transparency into the operation of Technology Services applications, increasing awareness of status, and speeding resolution of issues
- Reduce cost and reliance on vendors, replace fee-based vendor applications with IM developed applications that work in concert with key enterprise applications such as Duval HomeRoom, ITSM, MIM, Focus, and SAP

V. Strategies

Strategies	Timeline		Outcomes
	Start Date	End Date	
The District will rebrand OneView as Duval HomeRoom; the Teacher, Student, Parent, and Partner portal to increase access to "on time" data through a simplified single portal system	07/20	Ongoing	• OneView will transition to Duval HomeRoom • The District will deploy continual enhancements to the functionality and information sources • Development and maintenance will transition from Microsoft GD Team to DCPS internal resources • Training tutorials and resources will be provided to all district stakeholders
Funding Plan	07/2020	06/2021	Planned funding for district-wide technology includes the following sources: • District Capital Funds • Technology Operating Funds • Maximize E-Rate Funds
Collaborate with Curriculum & Instruction to support a Curriculum Innovation Team	12/2018	Ongoing	The following activities will support Curriculum & Instruction: • Support content area Directors and specialists with updating Curriculum Guides in Microsoft OneNote • Conduct Microsoft Innovative Educator Trainer Academies to promote the effective use of educational technology to implement the Florida Standards and the ISTE Technology Standards
1:1 Laptop Initiative for Secondary Students	09/20	Ongoing	Implement a 1:1 initiative for secondary students grades 6-12

			• Provide a laptop for all secondary students • Deploy equipment to deploy power to all secondary core classrooms
2:1 to 1:75 Laptops for Elementary Students	09/20	Ongoing	Increase the number of Laptops in all Elementary schools allowing for a rapid switch to Duval HomeRoom
Hotspots for Students	01/20	Ongoing	Distribute Hotspots to student that lack reliable internet access at home
Increase Professional Development	06/2017	Ongoing	Plans to increase technology skills and integrate technology in the classroom: • Continue the implementation of the MIE Trainer Academy and the DCPS Innovative Educator Program to increase the number of Microsoft Innovative Educators in the district • Integrate technology as a meaningful component of all curriculum training • Ensure adequate facilities, instructors, materials, equipment, and funding are available for staff development • Put in place a system for follow-up and evaluation of all training offered to serve as a basis for determining effectiveness and future needs
Training for All District Personnel	06/2015	Ongoing	Continued operation of support systems is crucial to the success of the professional training programs. The Technology Services Division provides resources and tutorials to support all district personnel for the following systems: • SAP—District ERP • Microsoft Applications Continue to provide resources and tutorials to all employees through the Technology Resource Site Provide videos and resources that target new employees and new teachers to assist with the onboarding process
Implement customer support surveys to promote increased	09/2014	Ongoing	Collect regional feedback and analyze data to determine strengths and areas for

accountability and provide feedback regarding services provided and culture			further development. Surveys will focus on: • Quality of service • Timeliness of service • Communication regarding problems encountered and timeline for resolution (next steps) • Completion of "exit slip" prior to leaving with administrator to inform them of the status/progress made regarding an open repair issue

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VI. Funding Plan

Funding Sources

Planned funding for district-wide technology includes the following sources:

- District Capital Funds
- Technology Operating Funds
- E-Rate Funds

The district determines final funding allocations on a yearly basis in accordance with the district budget cycle; however, plans for long-range technology funding are presented prior to the budget cycle.

The Technology Services funding plan establishes tentative budget allocations. These allocations are used for long-range technology planning but are subject to adjustment each year. The allocations provided in FY 2019, FY 2020 and anticipated for FY 2021 include:

Funding Source	18/19	19/20	20/21
Capital Funds	$21.0 M	$26.5 M	$25.8 M
Operating Funds	$20.5 M	$21.0 M	$21.6 M
E-Rate Funds	$2.3 M	$14.5 M	$12.2 M

The funds allocated are sufficient to provide services and equipment purchases in support of the FY 2020 E-Rate submissions.

In addition, funding for recurring district-wide telecommunications services, such as Centrex Data (Frame Relay, High-Speed Ethernet, and Sonnet/Fiber), are budgeted annually in the district operations budget for telecommunications through the duration of the related contracts.

VII. E-Rate Technology Plan Addendum

The district E-Rate Plan is developed based on the approved Technology Plan. The E-Rate Plan Addendum is submitted separately identifying eligible services and/or equipment for which the district is requesting E-Rate discount funding.

Internet Access and Internal Connections

Network Electronics:

- Improved network switches to provide more bandwidth per port for students, which will allow more network connectivity to support academics
- Load balanced and protected
- Elementary schools will have a minimum of 500MB
- Middle and high schools will have a minimum of 1GB

Goals and Strategies

Overall goals are described in Section 4. Providing equitable technology access, support, and training district-wide supports the use of the internal connections that provide data services and Internet access.

Budget

Telecommunications Services for IP voice, data, and network electronics are fully budgeted at the district level. This covers all discounted and non-discounted E-Rate costs. This ensures that all existing telecommunications services will continue even if E-Rate funding is not approved.

VIII. Technology Acquisition Plan

Appropriate Technologies for Educational Goals and Materials

The acquisition of technology to support the district's strategic and operational goals is a priority. In an effort to best leverage equipment acquired for classrooms, personnel in Technology Innovation work collaboratively with Curriculum and Instruction on professional development activities to model the usage of equipment. This training centers around the usage of technology to deliver district curriculum.

Infrastructure for Teaching and Learning

Technology Services will provide a reliable, easy to use computing infrastructure allowing teachers and students to have access to the Internet, local digital educational content, and research-based diagnostic and instructional technology resources in the classrooms.

The technical environment will continue to be upgraded to support school-based technology equipment and infrastructure:

- All schools will have a minimum of 1 GB internal LAN
- Elementary schools will have a minimum of 150 MB external WAN; Middle schools will have a minimum of 500MB external WAN; High schools will have a minimum of 1GB external WAN
- The goal is for a ratio of students to CPUs that meets current conditions and instructional needs
- Students will have access to differentiated instructional learning systems
- Students and teachers will have a process to request new education technology aligned with district goals
- All district administrators, teachers, students, staff, parents, and community stakeholders will have access to applicable district resources through Duval HomeRoom, the district's Enterprise SharePoint Portal

Instructional Technology Software

Technology Services will support Curriculum and Instruction and schools in leveraging technology to:

- Provide a digital multimedia educational environment for students

- Promote the effective use of technology to implement the Florida Standards and the ISTE Technology Standards
- Enable differentiated instruction for students through the provision of aligned diagnostic and curriculum solution packages

Data Management for Teaching and Learning

Technology Services will coordinate with appropriate divisions, schools, support organizations, and parents to leverage technology toward improved collaboration and increased web-based learning. Operationally, Technology Services will improve web and phone capability between the schools, district, and parents; enable increased communication between the schools and learning communities; and improve district distance learning capability.

The following activities will support the learning initiatives:

- Provide parents access to view student information: grades, GPA, attendance, homework assignments, unofficial transcripts, and discipline via Duval HomeRoom
- Investigate content and knowledge management to better support information flow to learning communities
- Provide virtual education opportunities for students

Academic Performance

Plans for instructional software and technology-based education materials will be based on a new architecture. This learning architecture will focus on end users and the skills they will need to be successful in college and a career. To this end, the plan provides a digital multimedia environment for stakeholders including:

- Infrastructure and hardware to support teaching and learning needs and goals
- Instructional software that diagnoses, prescribes, and evaluates student performance with an emphasis on differentiated instruction
- Integrated data management system for teaching, learning, and leading

Hardware and Software Deployment Timetables

Deployment of hardware and software is managed by a Life Cycle Management Process. This plan is reviewed and adjusted as needed.

Acquisition Process

The technology acquisition process is driven by national and state standards aligned with district curriculum, instruction, and assessment initiatives. As the district acquires new technology solutions, Technology Services is committed to including end users in every step of the process.

Acquisition Workflow

The Technology Capital budget is reviewed and approved each year to ensure priorities are aligned with school curriculum and the objectives of the Florida Standards. Technology Services purchases equipment in accordance with the budget priorities. Once technology is purchased, it is assigned to individual schools for custody, management, and use. While Technology Services operationally supports the equipment, use of technology shifts to the purview of the local schools upon receipt of the equipment. The district maintains a school inventory of major technology available in each school.

Curriculum and Instruction maintains a number of digital instructional programs. All major curriculum programs have met basic technology requirements. Curriculum and Instruction periodically evaluates each program for effectiveness. The results of this review are cycled back into the next year's budget process. A technology program manager serves as an active resource to the division of Curriculum and Instruction to ensure alignment and prioritization of technology needs.

Acquisition Strategy Adjustments

New developments and opportunities are addressed as major mid-course corrections. These new developments or opportunities are usually found as a result of a user-identified need but could also be identified by senior leadership as a result of policy change, program review, or outside analysis. Regardless of the cause for the mid-course correction, the process remains the same. The request is passed to the Leadership Team for review. Since capital funds are fully budgeted prior to the start of each fiscal year, mid-course opportunities must identify either new funds or compensating offsets.

Technical Guidance to School and District Personnel

Technology Services assigns a Regional Information Officer (RIO) for each school. These service coordinators are responsible for the planning, implementation, and operational support of all technology systems at the school and region level, as well as district business offices. Technology Services provides additional support via the Service Desk and Regional support staff. This face-to-face customer service helps build trusting relationships, provides desk-side teaching and learning, and maximizes the use of technology tools.

IX. Access

Equitable and Effective Access

Similar to the majority of other large school districts in Florida, this district is faced with a highly diverse student population, school buildings that vary in age and ability to accommodate technology, and tight budgets. In order to ensure technology access at all schools, wired data ports and wireless access points enable all classrooms to have internet access. The Technology Services division continues to deploy laptops to teachers. The district has a long-term deployment plan to guide work which will continue to modernize the infrastructure systems in schools and maintain a student to computer ratio that supports all instructional initiatives.

Technology resources are centrally managed by Technology Services. This division works to leverage the purchasing power of the district to gain the best price for technology equipment. The equipment is assigned to schools on a managed lifecycle plan and funded based on district priorities. Individual schools also have some limited capability to use other sources of funds to purchase supplemental technology.

The district is rich in access to external instructional service and programming providers, such as public libraries, charter schools, remote teaching sites, home-school connections, online products, and other services. The district directly supports Florida Virtual School, direct digital connection to charter schools, after-hours school programs, and Internet access from district computers. An upgraded Bring Your Own Device (BYOD) network was implemented in the 2015-2016 school year district wide. This network allows students and staff with a district account to utilize their own device on the wireless network.

To address the issue of lack of internet service for students, the district has launched the Free Hotspots for High School Students Program in partnership with the 1Million Project which provides a hot spot to high school students so that they can keep with their homework assignments, communicate with teachers, study online for college prep exams, download educational apps, and be better positioned for academic success.

Technology Communication Tools & Resources

To assist in achieving the ISTE standards, there must be effective communication tools and resources readily available to end users districtwide. Our district has partnered with Microsoft to help bring cohesiveness and collaboration through a districtwide implementation of Office 365 including SharePoint. Embedded in Office 365 are various apps and services that enable employees to communicate with others, share and edit documents, work collaboratively on projects, and save documents and resources. Through the utilization of these apps and services, our district has the ability to bridge the informational gap between district personnel.

The concept of centralized access to all information in one location has been addressed by the development of Duval HomeRoom, transitioning to Duval HomeRoom, gives all stakeholders access to applicable role-based data. Because the portal is built in SharePoint, it easily integrates to all the features of Microsoft Office 365.

Duval HomeRoom

OneView will be rebranded as Duval HomeRoom and is a communication, collaboration, and content management tool designed to empower members of the community by providing personalized access to important data, resources, and services. By bringing together critical information from multiple sources and providing access through one centralized online tool, Duval HomeRoom ensures that each person in the district will see the information that is important to him or her, without having to navigate a maze of resources and websites. Everything needed as a student, teacher, parent, administrator, or community partner can be seen through this "single pane of glass," providing one point of access to district resources, including:

- Porting in many sources of information, data and services that are important to students, teachers, parents, administrators, and community partners
- Providing the DCPS community with a single point of access to resources based on their roles and individual needs
- Providing resources that support student success

In a major step to simplify and streamline the growing technology systems used to support the district, Duval HomeRoom displays data and resources that are connected to each person's role, and the academic and administrative responsibilities they have. This customized experience will help the district continue to improve its efficiencies by enabling easier integrated communication across classrooms, schools, and district administration. In addition, Duval HomeRoom will help students and their families more easily understand and engage in their academic and administrative requirements in an effort to focus on student achievement. Duval HomeRoom provides the following:

- Provides parents greater access to participate in the education process
- Encourages student use of technology in pursuit of educational success
- Gives teachers tools, data, and resources to plan and deliver instruction
- Integrates business, administrative, and instructional resources improving communication and efficiency

In addition, Duval HomeRoom provides access to a repository of technology best practices and resources. The repository is hosted on a SharePoint site where documentation, FAQs, tips and tricks, and videos are stored so they can be easily accessed by users.

Acceptable Use

Both students and employees are required to acknowledge an Acceptable Use Policy (AUP) prior to gaining access to District computer systems. The student AUP is contained within a student handbook which is available online and is provided to each student the first week of school each year. All users are required to read and agree to the AUP as part of the initial account creation process.

Both AUP policies address protection for the confidentiality of students, protection of intellectual property rights, licensing agreements, and legal/ethical standards for the sharing of resources with other educational entities. In addition, the policies maintain the integrity of systems, programs, and information resources. The AUP also provides guidance to students, prohibiting them from accessing inappropriate matter on the Internet and World Wide Web; including so-called "hacking," and other unlawful activities by minors online.

Building principals are tasked with ensuring that teachers are knowledgeable about this policy and district guidelines, procedures, and controls. In particular, teachers must monitor computer use for the safety and security of all students. The district authorizes the use of electronic mail and chat rooms with students through Office 365, the district's student communication and collaboration tool. Information Security monitors and reports on access to inappropriate material and attempts by users to bypass network security systems. Parents and guardians assume risk by consenting to allow their child to participate in the use of the Internet.

Technology Protection Measure

The district first installed Internet Filter Software in 1996. The software is regularly upgraded to industry standards. In 2019, the district moved to a new firewall and decommissioned the legacy firewall and legacy content filter. These upgrades enhance our ability to monitor and protect children from harmful Internet activity. Any user attempting to access a prohibited website will be rejected, and a block page will be sent back to the user. The filter also logs all website access attempts. This creates a comprehensive list of all internet sites requested/accessed by anyone within the network. The logs are periodically reviewed and then reported by category of Internet violation and sorted by username and IP address. The reports, containing a brief explanation of the user's Internet activities, are distributed only to the Executive Director of Information Technology, the Chief of Police, and either the Office of Professional Standards or the principal of the school where the violation took place. When possible, the individual student names are provided.

X. User Support Plan

Strategy

Exceptional customer service continues to be a primary goal of the IT division. To this end, personnel in this division aspire to provide personal, one-on-one support where possible. The successful integration of technology is highly dependent on the ability of the district to provide the human resources necessary to support the technology purchased for usage by students and staff. Currently, the district has 102 technology support specialists to install, troubleshoot, repair, and maintain over 100,000 computers, printers, and network devices.

Technology Support services include:

- Centralized hardware and software standards
- Leveraging of district buying power to lower acquisition costs
- Service Desk
- Regional Information Officers (RIOs)
- School-based technicians in all middle and high schools
- Software and hardware support
- Field server support

One of the primary advantages to the centralization of district oversight of technology is the ability to develop and adopt standards for the purchase of both hardware and software. This division directly purchases most technology hardware for new schools or retrofitted schools. Individual schools may also purchase equipment in accordance with district standards. Hardware and software standards include requirements for support and maintenance. This policy provides the district with consistent platforms, improves interoperability, and allows for consistent results during planned migrations to new software and hardware platforms.

Standards for both software and hardware are reviewed annually and updated to provide the latest technology capabilities for students and staff. Additionally, school and district staff are counseled by the Division of Technology staff in all technology related purchasing decisions. These staff members are provided on-going training opportunities allowing them to stay current regarding emerging

technologies. It is important to note that the total cost of computer ownership over the life of the equipment is much more important than the initial cost of acquisition.

Technology Support Services

Technology support services include the Service Desk, Regional Information Officers (RIO), Software Support, Hardware Repair, and Field Server Support.

Service Desk— (13) Technology Services Technician II, (2) Technology Services Technician III, (2) District Operators

The service desk acts as the gateway into Technology Services by providing remote support for all technology applications and equipment. In addition to remote support, this team provides on-site assistance via "Depot" services located at the front entrance of the Technology Services Building A Location. The Service Desk also provides all technical support for the Technology Center, Parent Resource Center, and the new Innovation Center.

A centralized service desk housed within the Technology Services Division provides telephone assistance and on-site support from 7:00 AM to 5:00 PM Monday through Friday and 7:30am to 4:30pm on both Saturday and Sunday. The service desk is able to provide support for hardware and software problems, remote assistance, and first contact resolution through the use of remote tools or written work orders for problems that need on-site repair. Work orders are tracked and evaluated to determine the timeliness and efficiency of staff. User support is also available for software application questions. The volume of contacts to the Service Desk averages approximately 50,000 incidents per year. The service desk currently provides a 95% customer satisfaction rating with a 60% first call resolution rate.

Regional Information Officers (RIO)— (6) coordinators

Technology Services assigns a RIO to each academic region and district administrative office. The RIO is responsible for the planning, implementation, and operational support of all instructional learning systems and technology systems at the school and district level.

Software and Hardware Support— (72) Technology Services Technician II

The support team provides field response and support for all technology systems including computers, printers, network electronics, infrastructure, and servers. The District supports approximately 110,000 pieces of technology hardware including 13 operating systems, three (3) major business systems, and 250 approved applications; making DCPS one of the largest Technology Enterprises in northeast Florida.

Field Server Support— (6) Technology Services Technician III

The Field Server Support team is the primary troubleshooter for server hardware, software, and configurations in the field. They are responsible for supporting all instructional learning systems deployed throughout the district.

Enterprise Management

Data Center Operations— (1) Computer Supervisor, (11) Technology Services Technician III and IV, (1) Technology Services Technician II

The Enterprise Operations group provide support in 3 functional areas:

1. Enterprise Data Center and Disaster Recovery
2. Device Management
3. Communications and Identity Management

The Enterprise Data Center and Disaster recovery team provide Data Center support for 2 active data centers which manage servers, virtualization, and storage for mission critical systems. This group also provides disaster recovery support for those systems located in district facilities. Over the course of the next year, the Data Center Team will be consolidating all centralized IT assets to the new DCPS Data Center. The device management group is responsible for the management of over 100,000 computers. This group is responsible for software delivery and patch management of all computers. The identity management group maintains an enterprise system based on Microsoft Identity Management for the provisioning and decommissioning of accounts for staff, students, and parents. This team also uses Active Directory and Cloud Services to makes sure that every user can log in and gain access to the resources needed given their role as staff, student, or parent. The group is also responsible for setup and coordination of single sign with hosted solutions. The communications team is responsible for the management of the Office 365 Cloud system providing email, messaging, Microsoft Teams, and all other Microsoft Cloud resources in use by district staff and students.

XI. Professional Development Plan

Professional Development is an ongoing challenge given the number of tools, applications, and users served. The priority is to increase technology integration into curriculum, instruction, and learning environments. The focus is on increased student engagement, increased student and teacher technology proficiency, and academic improvement.

Increasing Technology Integration in the Classroom

The district has made a substantial financial investment in school-based technology. That being said, the district has a vested interest in providing teachers with the necessary professional development, resources, and support to make connections between the technology available and its use in the classroom. Technology should not be taught in isolation but within the content area so that teachers can make the necessary connections. The adoption of the ISTE Technology Standards provides the framework that is needed to foster the transition from the teacher-centered classroom to the student-centered classroom. This transition is essential to creating a 21st Century Learning Environment for students in which they can develop the skills necessary to be successful in school and in life.

Plans to increase technology skills and integrate technology within instructional design and delivery include:

- Continued implementation of the ISTE Technology Standards
- Partnering with Curriculum & Instruction to create the Curriculum Innovation Team that ensures that the integration of technology is a meaningful component within all curriculum guides, professional learning opportunities, and monthly coach's meetings
- Researching innovative software and hardware solutions which demonstrate the potential for measurable academic growth
- Ensuring adequate facilities, instructors, materials, equipment, and funding are available for staff development
- Implementing a system for follow-up and evaluation of all training offered to serve as a basis for determining effectiveness and future needs

Training Resources

- District Technology Innovation Team
- Technology Resources SharePoint Site
- Microsoft Educator Center
- School-level Technology Innovation Support

The Technology Services Division is committed to working with Curriculum & Instruction to create a Curriculum Innovation Team that provides the support necessary for teachers to facilitate the integration of technology in education. Each academic core area's training needs are different, and coordinators work with district staff to customize the course offerings to meet those needs. Special care is been taken to ensure that the material being developed, presented, and shared during these course offerings is in alignment with the New Florida Standards and ISTE Technology Standards.

Information on additional sources of ongoing training and technical assistance from external entities such as state technology offices, intermediate educational support units, service providers, regional education training facilities, and institutions of higher learning are also made available to teachers and administrators in the district.

Technology Innovation Support Network

The Technology Innovation Support Network was designed to increase the number of instructional staff available to provide support and guidance to classroom teachers in the area of technology integration. The network is being built by establishing a professional learning plan concentrating on the following two areas: (1) transitioning the School Technology Contact (STC) to the role of Technology Innovation Support (TIS) and (2) establishing the DCPS Innovative Educator Program.

Part 1: Technology Innovation Support (Formerly School Technology Contact)

Objective: The role of the Technology Innovation Support (TIS) is to support teachers with integrating technology into instruction.

Background: The amount of technology available to teachers and students has increased exponentially but the adoption of all the available technologies and their utilization in the classroom has grown at a much slower pace. Transitioning the role from one of technical support to one of instructional support would benefit the district.

Implementation: Inform principals of the role of the TIS so that they can make an informed decision when choosing the person who will receive the supplement.

Part 2: DCPS Innovative Educator Program

Objective: To build capacity in the area of technology integration among instructional staff and provide a needed boost towards achieving the district's digital transformation goals.

Background: The district received an offer of free professional development through our partnership with Microsoft to scale capacity toward digital transformation efforts. The professional development opportunities offered will be a combination of face-to-face sessions, virtual session facilitated via Teams, and online courses through the Microsoft Educator Community.

Implementation: The following audiences have been targeted for participation: district curriculum staff, principals/school-based administrators, Technology Innovation Support, and classroom teachers. Principals have had the opportunity to select 10% of their faculty (up to 10 teachers) to participate in the program cohorts. Participants who successfully complete the blended professional learning program will earn 36 points. Teachers who successfully complete the program will also be eligible for a new laptop. Currently, there are over 1,400 teachers participating in the program. Over 50% of those teachers have completed the DCPS Innovative Educator Program requirements and have received a new DCPS laptop: https://www.flickr.com/photos/165420506@N06/.

Training for All DCPS Personnel

Continued operation of support systems is crucial to the success of the professional training programs. The Technology Services Division provides training to all personnel in the use of the following systems:

- Duval HomeRoom/Office 365
- SAP—District ERP
- Specialized Technology Training is provided to supplement the needs for grant implementation and to support district initiatives

Training is offered in multiple formats including face-to-face, online networking, and web-based instruction. Courses are offered at times and locations that are convenient and accessible. The particular type of technology chosen for professional development is based on:

- The curriculum
- Number of people to be served
- Location of attendees
- Time of day and school schedules

XII. Duval HomeRoom

Response to Covid 19 Pandemic

Duval HomeRoom, the district's remote learning initiative, was launched on March 23rd in response to the Covid 19 Pandemic. Microsoft Teams was the platform chosen for Duval HomeRoom.

Technology Services support for the Duval HomeRoom Initiative included:

- District wide implementation of Microsoft Teams
- Duval HomeRoom Support Site—SharePoint site created to provide professional development to teachers to get them quickly up and running with Microsoft Teams. The site contains a variety of resources and suggested best practices to support remote learning
- Duval HomeRoom Support Team that was created offering 24/7 support to teachers by answering questions, troubleshooting technical issues, sharing best practices, and providing up to date information
- Duval HomeRoom Postmaster message sent out daily that documented technical issues, suggested best practices, answered frequently asked questions, and provided tips and program updates
- Student laptops were distributed at designated locations throughout the district to students who didn't have devices
- Hot spots that were deployed to students who didn't have reliable internet access.
- Equipment repair sites established at designated sites around the district for swapping out broken equipment and turning in equipment for repair
- Service Desk to resolve technical issues and answer questions regarding technology related issues

Opening of the 2020-2021 School Year

To prepare for the opening of the new school year, Technology Services will:

- Collect laptops from graduating seniors and students who no longer need them
- Clean and reimage returned laptops before they are put back on the DCPS network to ensure that they are safe and secure for student use
- Plan that all schools will be at a 4:1 student to computer ratio to support baseline testing
- Continue utilizing the Duval HomeRoom Support Team to provide teachers with 24/7 access to support

- Update the resources and tutorials on the Duval HomeRoom Support Site to reflect updates to Microsoft Teams
- Request board approval to implement a 1:1 initiative in secondary schools

XIII. Monitoring and Evaluation

Evaluation Process Description

This process will focus on three variables; the Technology Services Division's ability to carry out the strategies and initiatives in the Technology Plan, the level and quality of support provided to the end users, and the impact of technology on student achievement. Measurable objectives will include:

- Customer support survey results
- Departmental Climate Survey Results
- Device to Student Ratio
- Survey results regarding professional development offerings
- Survey results related to the end user's access to adequate software resources
- Technology Services' personnel evaluations

Mid-course Corrections

Technology Services and the Curriculum and Instruction department will meet quarterly to review measurable outcomes and make any necessary mid-course corrections to the plan as new information and technologies emerge. In addition, monthly monitoring of district-wide needs will be conducted by the District Leadership Team to ensure alignment with the District Strategic Plan.