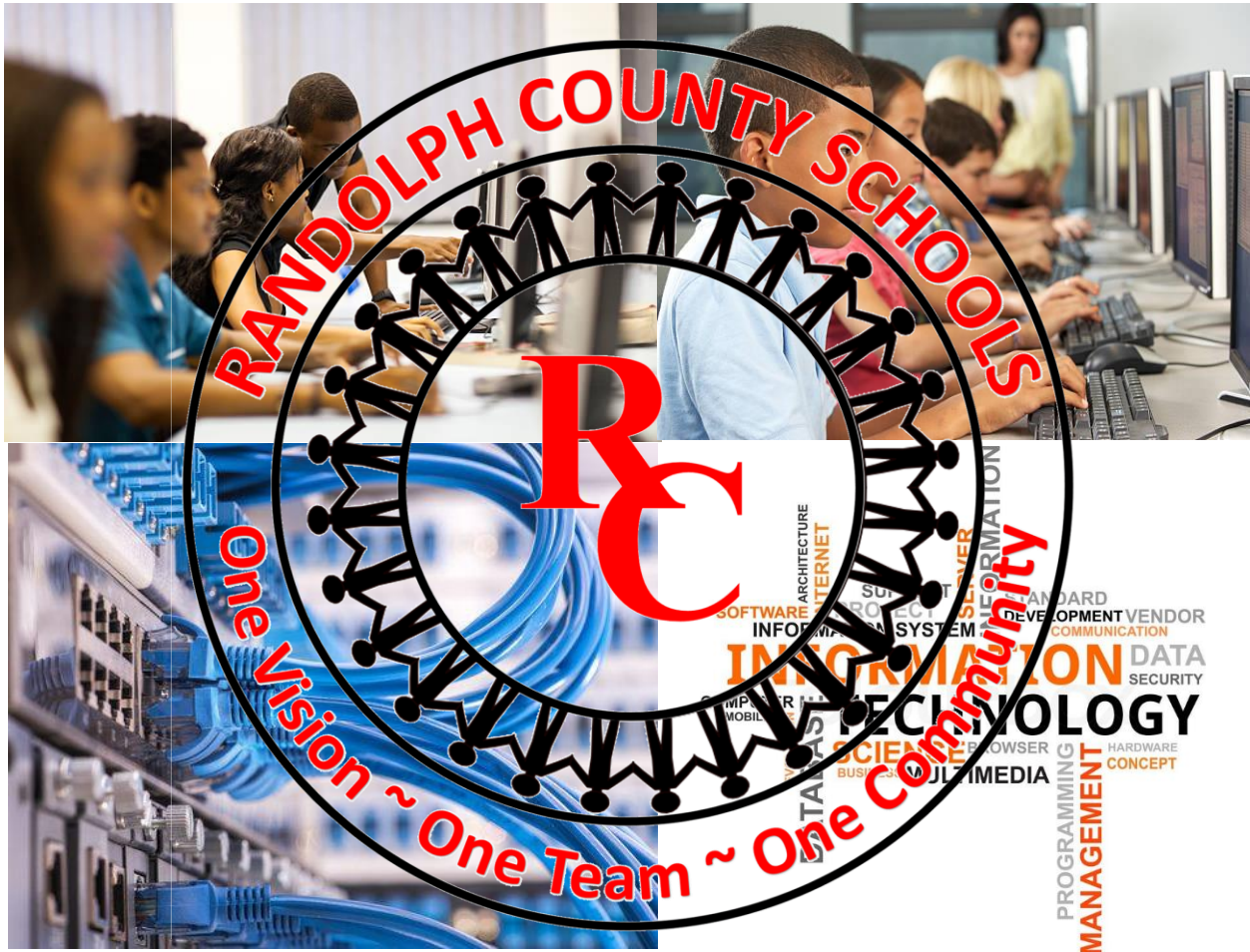


# Randolph County School System Office of Technology Services



## 2020-2023 Technology Plan

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# Executive Summary

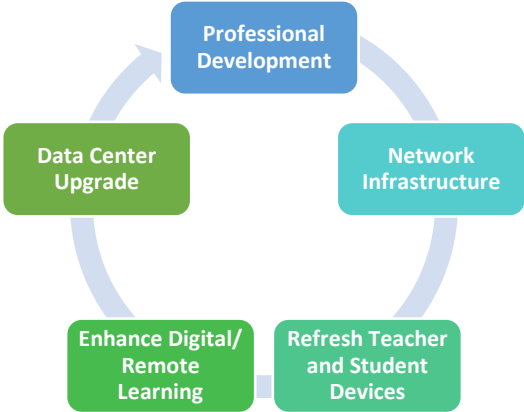
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## Introduction

The Randolph County School System Technology Department is dedicated to enhancing the learning experience by infusing technology into the instructional process and to provide the technological support needed for all stakeholders to achieve maximum success. Infusing technology into the instructional process throughout the curriculum will enable relevant and individualized learning as well as teach adaptable skills to students so they may succeed in future endeavors.

From March 2020 to August 2020, the Technology Advisory Committee participate in multiple remote collaborative work sessions, administered questionnaires, as well as hosted round table discussions and focus groups with various stakeholders to discuss the next steps for supporting the technology needs and infrastructure of the district during these unprecedented times. The Technology Advisory Committee used this feedback along with educational technology research, standards, and best practices to expand the current shared vision for technology use in the district and to map a course of action during the district construction phases that are approaching in the coming months. An analysis and evaluation of the district’s current technology infrastructure and data center against the district’s shared vision identified gaps that will certainly impede progress.

These gaps or concerns were organized into five areas: Professional Development, Network Infrastructure, Refresh Teacher and Student Devices, Enhance Digital/Remote Learning, and Data Center Upgrade. In this technology plan, the committee has developed clear, concise, and aggressive goals to address each area of concern.



## Stakeholder Identification

A comprehensive group of stakeholders provided insight and guidance used to develop this technology plan.



- **The Randolph County Business Community** – These organizations or individuals serve in advisory capacities to align school to work standards. Members of our business community
- **Chamber of Commerce** – This organization serves in advisory capacities to align school to work standards.
- **Bainbridge College** – This institution provides technology demonstrations and assistance, curriculum articulation, and “Move On When Ready”.
- **Andrew College** – This college provides technology demonstrations and assistance as well as free access to Internet in certain locations in the college area.
- **Randolph County Local Library** – This library provides resources for students after school hours.
- **School Governance Teams** - Parents, teachers, and business representatives monitor the progress of the schools and will make recommendations.
- **Teachers and Administrators** – Insight from teachers and administrators is collected representing the various grade levels and different academic areas and administrative regions.
- **Students** – Input from students was received via student surveys and focus group interviews.
- **Parents** – Parents provide the needed prospective from the community.

## Vision

The integration of collaboration, computer-assisted instruction, and good teaching can become tools in the service of rich curricula, enhanced pedagogies, more effective organizational structures in schools, stronger links between schools and society and the empowerment of disenfranchised learners. Technology-enhanced instruction, more technology resources, trained teachers, and classroom access to instructional software and Internet resources will allow teachers to more effectively integrate instructional



methods that promote inquiry and comprehension as well as oral and written communication skills. Teachers can present information in ways that are most effective in facilitating a deeper understanding of content. The elements of a 21st century educational program will help produce students who are literate in technology as well as all forms of communication skills and who are able to selectively retrieve, analyze, and use material to apply higher order work.

In Randolph County, we know that vision without action is merely a dream. Action without vision just passes time. But vision with action can change the world. Randolph County's school improvement process is helping to prepare students to be life-long learners in a 21st century classroom.

## Current Reality

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### Overview of our Technology Infrastructure

#### Fiber-Optic Network

The district leases two fiber-optic segments. One segment connects the Randolph Clay Middle/High School to the Randolph County Board Office and the second segment connects the Randolph County Board Office to the Randolph County Elementary School. These two segments are 10 Gigabit lines.

#### Point of Demarcation

The Internet for the system is supplied to the Randolph County Middle/High School

#### Main Distribution Facility (MDF)

Each campus has an MDF that is located in a strategic location. Each MDF contains the servers and switch structure to provide each school with an adequate central data communication center.

## Intermediate Distribution Facility (IDF)

Each campus has multiple IDF's that supply a network connection to the various data drops located throughout each campus. The computer labs will have more than a normal office because more computers are required in the lab.

## Network Connectivity

The Randolph County School System has both wire ethernet and wireless network connectivity. Each school has a 10 Gig connection between the MDF and the IDF's. There is a 1 Gig wire ethernet connection between each IDF and the network device. Each school has a wireless-N network with total coverage in each building.

## Internet

The Internet is supplied by ENA though the Georgia Board of Regents PeachNet initiative. The Randolph County School System has been allocated 300 Mb of data bandwidth.



## Web Filtering and Internet Protection

The Randolph County School System uses a web filtering solution to block inappropriate and potentially harmful content. The system uses a firewall to control incoming and outgoing network traffic based on applied rules set for securing data and other sensitive information from malware attacks and hackers. These web filtering and firewall solutions ensures compliance with the Children's Internet Protection Act (CIPA).

## Communications Infrastructure



The district's telecommunications infrastructure provides telephone access to personnel in each school, board office and transportation center. This encompasses over 81 telephones and voice mailboxes, 10 smart phones. The landline telephones use a copper cable backbone.

The communications infrastructure also includes managing the district's website and using a content management system to standardize and manage school websites. The district also leverages digital

communications tools such as social media applications and a mass notification system based on email, phone, and text protocols.

## Workstations, Devices, and Peripherals

To ensure equitable access, the district is continually increasing the computer/device to student ratio. Currently, there is a one-to-one ratio of devices to students (1:1). This ratio considers Chromebooks and iPads as instructional devices and reflects student enrollment and state approved inventory as of August 1, 2020. All identified instructional classrooms have also been equipped with an interactive whiteboard or interactive flat panel technology.

## Technology Support

The Randolph County School System has implemented a help ticketing system that is available to all staff and students through the schools and district webpages. Upon analysis, the ticket or request is routed to proper technology support personnel.



## Virtual Learning Environment

The district's virtual learning environment is grounded in Google. With Google Classroom being categorized as a Learning Management system, the Randolph County School System has incorporated Google Apps for Education and Google Classroom as its course and content management system, communication and collaboration tools, as well as an assessment and assignment tool. In addition, the Randolph County School System used Office 365 and Google Apps for Education as its cloud-based productivity tools. The district's Student Information is also integral parts of the virtual learning environment.

## Digital Learning Initiative

In response to the present and uncertain future of educating our students the Randolph County School System is continuously revamping our Digital Learning Initiatives. Each school will be responsible for creating a revised Digital Instructional Technology Plan that will guide the school into the future.

# Gap Analysis

As the Randolph County Technology Committee analyzed stakeholder feedback, reviewed existing technology inventories, and present conditions five areas of concern emerged.

## Professional Development

- There needs to be a focus on relevant and timely integration of technology tools into instruction.
- Mentoring and coaching staff needs to be provided to increase individualized assistance for staff.
- Self-assessment and monitoring need to be implemented to address growth at all performance levels.
- Exemplars on effective technology integration need to be made available to all teachers.
- Digital leadership must be addressed to prepare school administrators to lead in this technology-rich environment.

## Network Infrastructure

- Network security needs to be reviewed.
- District must update switch and access points to provide a stable wireless networking environment.
- Analyze physical LAN environment and update according to construction phases.

## Refresh student and teacher devices

- Analyze student mobile device condition.
- Analyze teacher mobile device condition.
- Analyze teacher instructional device(s) conditions.
- Analyze administration device condition.

## Enhance Remote/Digital Learning and Community Awareness

- Equitable access to technology for all students.
- Anytime and anywhere access to the virtual learning environment.
- Students need relevant exposure and training for using technology for organization, research, collaboration, and digital citizenship and literacy.
- Students need flexible opportunities to take virtual courses that support their personalized learning goals.
- The community needs to be made aware of the educational changes that are taking precedence now.
- Parents needs to understand how to use technology tools to assist child(ren) and monitor progress.



- The district needs to work with community to identify partnerships to extend safe learning environments for students.

## Data Center

- There is a need to replace outdated servers.
- The backup system is inadequate to service the data center devices.
- The antivirus and malware solutions need to update to correspond to modern threats.

# Goals and Strategies

<b>Goal 1: Continue to engage in relevant professional development.</b>				
<b>Strategies</b>	<b>Benchmarks</b>	<b>Evaluation Plan</b>	<b>Budget</b>	<b>Responsibility List</b>
Provide timely professional development of technology tools into instruction.	Professional development should be complete by the end of the 2 <sup>nd</sup> Nine Weeks.  Ongoing as needed for changes	Surveys providing information on the use of Google tools, NearPod, communications , and all curriculum supplemental resources. Observations		Curriculum Coaches, Assistant Principals, Principals, Instructional Technologist, Director of Technology
Mentoring and coaching staff needs to be provided to increase individualized assistance for staff.	Complete by the end of the 2 <sup>nd</sup> Nine Weeks.  Ongoing as needed for changes	Focus groups and interviews. Teacher surveys and observations.		Curriculum Coaches, Assistant Principals, Principals, Instructional Technologist, Director of Technology
Self-assessment and monitoring need to be implemented to address growth at all	Complete by the end of the 2 <sup>nd</sup> Nine Weeks.  Ongoing as needed for changes	Teachers will complete a reflection instrument each nine weeks.		Curriculum Coaches, Assistant Principals, Principals, Instructional Technologist, Director of Technology

performance levels				
Exemplars on effective technology integration need to be made available to all teachers.	Complete by the end of the 2 <sup>nd</sup> Nine Weeks.  Ongoing as needed for changes	Instructional Technologist Director of Technology		Instructional Technologist Director of Technology
Digital leadership must be addressed to prepare school administrators to lead in this technology-rich environment	Prior to the start of School 2020	Survey, Interview and Focus Group		Director of Technology and Instructional Technologist

**Goal 2: Update Network Infrastructure**

<b>Strategies</b>	<b>Benchmarks</b>	<b>Evaluation Plan</b>	<b>Budget</b>	<b>Responsibility List</b>
Network security needs to be reviewed	Review every Semester.	FortiGate summary reports and logs, Impero summary reports and log.		Director of Technology
District must update switch and access points to provide a stable wireless networking environment	Prior to 2021 school year.	Implementation and testing  Ongoing	Approximately \$96, 000 (E-rate)	Director of Technology
Analyze physical LAN environment and update according to	Prior to 2021 school year. Prior to 2022 school year.	Existing LAN topology and FortiGate network traffic reports.		Director of Technology

construction phases.	Prior to 2022 school year.			
<b>Goal 3: Refresh student and teacher devices.</b>				
Analyze student mobile device condition and replace as needed	End of 2020 school year End of 2021 school year End of 2022 school year	Physical Inventory of devices	Chromebooks \$400/device iPad \$400/device Title 1, Cares, Esplost, or Local	Director of Technology Instructional Technologist
Analyze teacher mobile device condition and replace as needed.	End of 2020 school year End of 2021 school year End of 2022 school year	Physical Inventory of devices	Laptop \$1200/device Cares, Esplost, or Local	Director of Technology Instructional Technologist
Analyze teacher instructional device(s) conditions. (Interactive Display)	End of 2021 school year End of 2022 school year	Physical Inventory of devices	ClearTouch \$4800 Cares, Esplost, or Local	Director of Technology Instructional Technologist
Analyze administration device condition.	End of 2020 school year End of 2021 school year End of 2022 school year	Physical Inventory of devices	Cares, Esplost, or Local \$1200/device	Director of Technology
<b>Goal 4: Enhance remote and digital learning to reflect the needs of the student, teacher, and community during the current educational constraints.</b>				
<b>Strategies</b>	<b>Benchmarks</b>	<b>Evaluation Plan</b>	<b>Budget</b>	<b>Responsibility List</b>
Equitable access to technology for all students.	All students will have a Chromebook or an iPad for remote access to learning content from home by Aug 2020	Device checkout reports from inventory software.	\$3000 /years from Title I, SpED, or Cares	Dir or Technology, School level inventory personnel.
Anytime and anywhere	Students that do not	Students physical home	\$50 /device and \$20/month	Director of Technology

access to the virtual learning environment.	have Internet at home will be issued a Verizon hotspot by Aug 2020	address, evaluation of ability to pay or secure Internet		and School Level inventory personnel.
Students need relevant exposure and training for using technology for organization, research, collaboration , and digital citizenship and literacy.	Students will continue to receive ongoing training in using technology for organization, research, collaboration , and digital citizenship and literacy.	Student participation levels, understanding , and grades,		Teachers Instructional Technologist
Students need flexible opportunities to take virtual courses that support their personalized learning goals.	All students will successfully attended, navigate, and communicate, and complete work assigned.	Student participation levels, understanding , and grades,		Teachers Curriculum Coaches Guidance SpED personnel
The community needs to be made aware of the educational changes that are taking precedence now.	Parents and Guardians will have access to School Messenger, school websites, school Facebook pages, Remind	The community will provide feedback through surveys and question and answer sessions.		Principals, Superintendent, Assistant Superintendent, Teachers, etc.
Parents needs to understand	Training presented on school	Surveys, Individual responses		Principals, Superintendent, Assistant

how to use technology tools to assist child(ren) and monitor progress.	websites, Internet resources, and student Google Classroom posting.			Superintendent, Teachers, etc.
The district needs to work with community to identify partnerships to extend safe learning environments for students.	Enlist local entities to help provide internet access (Andrew College and Local Library)	Monitor connections by physically connecting to Internet from each location.		Director of Technology

**Goal 5: Update data center and communications**

<b>Strategies</b>	<b>Benchmarks</b>	<b>Evaluation Plan</b>	<b>Budget</b>	<b>Responsibility List</b>
Replace aging servers with new virtual environment	Phase 1: Migrate all file servers to Google (prior to 2021-2022 school year) Phase 2: Virtualize all application servers except for financial and student records by the end of the 2021-2022 school year	System installed and tested for functionality	\$97000	Director of Technology
Migrate PowerSchool Server to online hosted environment	Prior to the beginning of the 2022 school year.	System installed and tested for functionality	\$6000 first year and then \$4000 per year after.	SIS Director Director of Technology

Move all file and applications servers to the main campus	Prior to the beginning of the 2022 school year.	Storage files are accessible	Price is included in the replacement of servers listed above.	Director of Technology
Install new backup solution on all servers	Prior to the 2021 school year	System installed and tested for functionality	\$12,000	Director of Technology
Install antivirus on all Windows devices. (ESET)	Prior to the 2021 school year	System installed and tested for functionality	\$4000/year.	Director of Technology
Install VoIP phone system district wide.	Prior to the 2021 school year	Phones tested and working	Approximately \$2400/month	Director of Technology

# Technology Committee

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## Members

James Cobb, Director of Technology  
Laura Perkins, Media Specialist/Instructional Technology  
Dr. Kim Ingram, High School Principal  
Elizabeth Knighton, Middle School Principal  
Traci Price, Elementary School Principal  
Shawna Stanfield, Elementary School Teacher  
Allyson Stapleton, Elementary School Teacher  
Amber Raines, Elementary School Teacher  
Courtney Baldwin, Middle School Teacher  
Nates Davis, Middle School Teacher  
Rao Venkat, High School Teacher  
Temecia Moore, CTAE Supervisor  
Christopher Johnson, CTAE Instructor

## Administration

Dr. Tangela Madge, Superintendent  
Dr. Donna Drakeford, Assistant Superintendent  
Dr. Tosha Middlebrooks, Director of Special Education

## Community/Business Partners

Microtechnology Consultants  
Crown Networking  
EdTech12