

Ridgedale Local School District



Technology Plan 2022-2025

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Executive Summary

The Ridgedale Local Schools (RLS) technology plan represents the District's vision and recommendations for the implementation of technology in the classroom. This is based on the current technological status, critical components needed to make this successful, and the desired outcomes for instructional technology. This plan is a fluid document and can be revised as needed based on changes within the district. It is a flexible plan, but is specific enough to serve as a guide in decision-making and budgeting. The Superintendent, Administration, and the Technology Coordinator, along with teacher feedback from the survey that was created have been used to help develop this plan. This plan has been developed to assist the District in allocating the proper budgets needed to follow the recommendations in this 3 year plan. The recommendations are based on the following components: infrastructure, equipment, and training/professional development. The following plan specifies how the district will support the integration of technology in teaching and learning.

Infrastructure

The implementation of this plan must begin with an appropriate wired and wireless infrastructure that can support the increasing need of devices on our network. RLS has already begun to create a robust technology infrastructure consisting of domain controllers, virtual servers that can be scaled as needed, file storage servers, cloud storage with GSuite, switches, high-density access points, etc, that will help meet the ever-growing demands of today. This infrastructure will ensure learners experience a robust, filtered Internet environment using a variety of technology to ensure success in the classroom.

Equipment

RLS has already begun to create an environment with high access to technology devices in the classroom. K-12 our students all have a school issued chromebook. We plan to continue replacing all chromebooks every 4 years to keep the students working efficiently. Teacher and staff devices are provided by the district and the device type and allocation is determined by job requirements and their needs. We plan to continue replacing all staff devices every 4 years to keep them working efficiently. All Elementary classrooms have a smartboard, we began a refresh cycle for the Elementary of a grade level a year in 2019 and K-3 all have been replaced, Grades 4-5 are in dire need of replacement. We would like to continue replacing a grade level a year to keep the smartboards both up to date and running efficiently. All Jr./Sr. High classrooms either have a smartboard or a TV for projection. Starting in 2019 we have purchased 3 smartboards a year to replace the older model smartboards in the Jr./Sr. high, the staff that chose to have TV's are only used for projection and much cheaper, those are replaced as needed since they have a longer lifespan.

Training/Professional Development

Ongoing sustained professional development must be a top priority for the success of our students and teachers. We must provide our staff with the appropriate tools so that they can be successful when integrating technology into their curriculum. We must provide staff with the capability to effectively use the variety of technology in their classroom. This would include planning to purchase a training package whenever a new item is added or replaced (such as a smartboard) so they can make the most out of the technology.

Process

1. Survey

Technology surveys were created and made available to all staff that have district issued technology or needs technology. The survey was created in Google Forms and was sent out to the staff via email. After the survey closed, the staff that had not filled out the survey were contacted via email individually to try to get a response from everyone. 68 staff members submitted a response to the survey.

2. Critical Components

The following components have been identified for this plan.

- *Infrastructure* - Wiring, connectivity, and foundational support.
- *Equipment* - Physical devices used during instruction.
- *Training/Professional Development* - Continuing Education Opportunities

3. Critical Component Vision Statements

- *Infrastructure*: To provide adequate wired and wireless connectivity and bandwidth throughout the district which will support instructional efforts and allow for the needs of the future.

- *Equipment*: Ensure equipment is capable of performing all necessary tasks and operations for grade levels and/or specific courses for all students and staff in order to promote successful technology integration.

- *Training/Professional Development*: Provide ongoing professional development that supports and encourages effective use of technology that enhances student learning.

4. Current State of Technology

RLS currently serves 637 students in grades K-12 and 29 students in Pre-School. RLS currently serves a total of 92 staff members, including 29 HS teachers, 23 Elementary teachers, 5 Administrators, and 35 classified staff.

Infrastructure

All buildings currently have high speed Internet wired and wireless access. The wireless infrastructure was upgraded in 2019 with Extreme High Density Access points, There are a total of 60 access points across the district. The network switches were replaced in 2019 with Extreme POE managed switches including 2 new fiber runs to every switch for redundancy. The switches and access points will need to be refreshed every 5 years which 70% will be covered through E-Rate funds.

The Servers are ready to be replaced and have been in service since 2015. We are considering switching over to a managed service for servers with Meta. This would include an enterprise backup solution managed by Meta.

Equipment

Elementary

- Smartboards
 - All classrooms have a smartboard with the exception of Special Ed
 - Special Ed requested a smartboard in the survey, currently have TV.
 - Starting in 2019 we have been replacing smartboards 1 grade level per year
 - K-3 is completed
 - Grades 4 and 5 are in dire need of replacement
- TV's used for projection of material
 - 2 have TV's (Special Ed)
 - 1 requested a smartboard on the survey
- Chromebooks
 - All students have their own chromebook
 - We will continue to replace 25% of chromebooks per year
 - There is 20 chromeboxes (Desktop Chromebooks) in the Computer Lab
 - These are not used any longer since we have went 1:1
 - They are end of life and will not be replaced
- Staff Devices

- Teachers
 - All have a Windows Laptop
 - We will continue to replace 25% of teacher laptops per year
 - Document Cameras
 - All teachers have a document camera except for 4.
 - Need to purchase the 4 that don't have one yet.
 - We should replace 25% of these per year
- Classified Staff
 - 4 have Desktop PCs (Custodian, Lunch, Library, Secretary)
 - Continue to replace on a regular 4 year interval.
 - 6 have chromebooks (Aides)
 - Continue to replace on a regular 4 year interval.
 - 2 have Windows Laptops (Nurse and Guidance)
 - Continue to replace on a regular 4 year interval.
- Admin Staff
 - Principal has a Windows laptop.
 - Continue to replace on a regular 4 year interval.

Jr./Sr. High

- Smartboards
 - 11 total smartboards (in the Jr./Sr. High many teachers don't want or have a need to be fully interactive and only want to project, so smartboards have been placed only by request/need. Those that only want to project have TV's)
 - Have been replacing and/or adding 3 new boards each year since 2019
 - 4 of the current 11 are older boards that need to be replaced
 - 2 teachers requested a board on the survey that don't have one yet.
- TV's used for projection of material
 - 18 teachers have Smart TV's to cast/project
 - 4 additional TV's (Cafeteria, Computer Lab, Conference Room, Mobile Library)
 - TV's are replaced as needed.
- Chromebooks
 - All students have their own chromebook
 - We will continue to replace 25% of chromebooks per year
 - There is 37 chromeboxes (Desktop Chromebooks) in the Computer Lab
 - These are not used any longer since we have went 1:1
 - They are end of life and will not be replaced
- Windows Devices for Classroom Usage
 - 20 Windows Desktops in High School Industrial Tech/Robotics
 - 16 Windows Laptops in Jr. High Robotics
- Virtual Reality Cart in Junior High

- Staff Devices
 - Teachers
 - All have a Windows Laptop
 - Continue to replace 25% of teacher laptops per year
 - Document Cameras
 - 4 teachers have document cameras
 - 3 teachers requested one in the survey, but I think most would use them if they had them.
 - We should replace 25% of these per year
 - Classified Staff
 - 4 have Desktop PCs (2 Secretaries, Lunch, Library)
 - Continue to replace on a regular 4 year interval
 - 2 have Windows Laptops (Food Service Manager, Maintenance)
 - Continue to replace on a regular 4 year interval
 - Admin Staff
 - 2 have Windows Laptops (Principal, Dean)
 - Continue to replace on a regular 4 year interval

Administration Building

- Staff Devices
 - All 6 have Windows Laptops (Superintendent, Treasurer, Secretary, Payroll, Accounts Payable, Tech Coordinator)
 - Continue to replace on a regular 4 year interval
- TV for projection in meetings
- Camera for broadcasting meetings

Bus Garage

- 2 have Windows Laptops (Mechanic, Bus Coordinator)
 - Continue to replace on a regular 4 year interval

5. Committee Budget Recommendations

The committee has developed the following budget recommendations that would move the district from its current state to the desired state and continue to refresh old equipment on regular intervals. These recommendations are meant to be specific enough to help build a budget plan but also expected to be flexible as technology needs change in the district.

-Infrastructure

RLS currently has 300Mbps leased lit fiber service with Meta Solutions. The Technology Coordinator files for E-Rate annually to help cover the cost. The cost breakdown of the service contract is below. The current contract is valid until June 30, 2025

Fiber/Internet Access	2022-2023	2023-2024	2024-2025	Total for this plan
Total Annual Cost	\$16,080	\$16,080	\$16,080	\$48,240
E-Rate Discount	(\$11,256)	(\$11,256)	(\$11,256)	(\$33,768)
District Responsibility	\$4,824	\$4,824	\$4,824	\$14,472

The servers at RLS have been in service since 2015 and are ready to be replaced. When we purchased the servers in 2015 they cost roughly \$28,000 with OS Licensing. Meta now offers Managed Services for Servers. Meta includes an enterprise backup solution Veeam and all the OS licensing required to be compliant. This would also be backed up to the cloud as well included in the pricing. This would also eliminate the need of air conditioning year round for our servers, since they would be housed in Meta's data centers clustered in Marion and Columbus. This would also eliminate the need for 5 year refresh of servers and make it an expected monthly cost.

Server Replacement (Monthly Managed Service from Meta)				
Items	2022-2023	2023-2024	2024-2025	Total for this plan
-2 Hosted Servers -Enterprise Backup -OS Licensing	\$10,680	\$10,680	\$10,680	\$32,040
3 Year Contract Discount (30%)	(\$3,204)	(\$3,204)	(\$3,204)	(\$9,612)
District Responsibility	\$7,476	\$7,476	\$7,476	\$22,428

RLS currently has our phone service through Valtech. Our contract has ended and we are currently month to month which will give us the freedom to look into other options as well if we wish. The numbers below just represent what we currently have with Valtech which also

includes a 10X10 fiber circuit dedicated to the phone system, which keeps them working if we lose internet connection for any reason.

Phone Service (VOIP and Analog lines for Faxes/Fire Alarms)				
Items	2022-2023	2023-2024	2024-2025	Total for this plan
Total Annual Price -\$1,315 per month	\$15,780	\$15,780	\$15,780	\$47,340

RLS currently has 47 T-Mobile Hot Spots and 75 Verizon Hot Spots in service for our students and staff in need of connectivity. They have been paid for by grants and Emergency Connectivity Fund money to this point. The USAC has extended another wave for 2022-2023 to cover these hot spots for another year assuming we get approved. The estimates below show what the cost is without the funds and also what they will be if approved. This program may continue past 2023 or it may stop, we will need to decide if we are keeping them in service at that point and be prepared to pay for them if we do.

Hot Spots for Students/Staff in Need of Connectivity				
Items	2022-2023	2023-2024	2024-2025	Total for this plan
-47 T-Mobile Hotspots with unlimited data -\$20 a month each	\$11,280	\$11,280	\$11,280	\$33,840
75 Verizon Hot Spots with unlimited data -\$15 a month each	\$13,500	\$13,500	\$13,500	\$40,500
Estimated ECF Discount if approved	(\$24,780) (if Approved)	Unknown	Unknown	(\$24,780)(If Approved) Unknown for years 2 and 3
District Responsibility	\$0 (if Approved)	\$24,780	\$24,780	\$49,560 (Assuming Approval on year 1 and unknown if the ECF program continues for years 2 and 3)

Network switches and Wireless Access Points need to be refreshed every 5 years to keep the network running optimally. The Fiber Cabling was replaced in 2019 and should not need replaced during this plan, but repairs are possible, Example: we have had an animal chew through a fiber line a couple of times in the past. The network switches, UPS devices, and wireless access points will need to be replaced in the summer of 2024, but these are E-Rate eligible and the Technology Coordinator will bid this project out through the E-Rate process. The estimated cost and discounts are shown below. The estimates are provided based on today's prices.

Network Device Refresh				
Items	2022-2023	2023-2024	2024-2025	Total for this plan
2 Core Switches -Layer 3 10G -SFP Modules -Licensing -Labor			\$15,000	\$15,000
15 POE switches with 10 Gig uplinks district wide			\$45,000	\$45,000
UPS Protection for switches			\$10,000	\$10,000
60 Wireless Access Points with licensing/install			\$15,000	\$15,000
Expected E-Rate Discount			(\$59,500)	(\$59,500)
District Responsibility			\$25,500	\$25,500

Our district web site contract ends on October 1, 2022. We will have the opportunity to shop around for other solutions. The pricing below is what our current solution would cost if we stay with the same company.

Web Site and App				
Items	2022-2023	2023-2024	2024-2025	Total for this plan
Total Annual Price	\$5,750	\$5,750	\$5,750	\$5,750

-Equipment

RLS currently serves 637 students in grades K-12 all of which have a chromebook. We need to continue to refresh student chromebooks at 25% per year. The following estimates are based on the current student enrollment and prices.

Student Chrome Device Refresh				
Items	2022-2023	2023-2024	2024-2025	Total for this plan
Student Device Refresh -160 devices per year -Google Licenses	\$40,000	\$40,000	\$40,000	\$120,000
Student Protective Case Refresh -160 Cases per year	\$3,200	\$3,200	\$3,200	\$9,600
Total	\$43,200	\$43,200	\$43,200	\$129,600

RLS currently has 20 windows desktops in Industrial Tech/Robotics. Also there is 10 windows laptops purchased for the Computer Applications program taught by MTC that needs to be

refreshed at 4 year intervals (these were purchased this year and won't be on this 3 year plan for refresh).

Student Windows Device Refresh				
Items	2022-2023	2023-2024	2024-2025	Total for this plan
20 desktops 10- 2022-2023 10- 2023-2024	\$10,000	\$10,000		\$20,000
Total	\$10,000	\$10,000		\$20,000

RLS currently serves a total of 92 staff members, including 29 HS teachers, 23 Elementary teachers, 5 Administrators, and 35 classified staff. All 52 teachers and 5 administrators have a windows laptop. There are 30 total devices for classified staff which is a mix of laptops, desktops, and chromebooks based on needs. These need to continue to be replaced on 4 year intervals. The estimates below are based on current staffing, prices, and needs.

Staff Device Refresh				
Items	2022-2023	2023-2024	2024-2025	Total for this plan
Laptops -67 Total Laptops -Replace 17 per year (25%)	\$27,000	\$27,000	\$27,000	\$81,000
Desktops -8 total desktops -4 are new this year 2021-2022 -4 need replaced 2022-2023	\$4,800			\$4,800
Chromebooks -6 total -in need of replacement 2022-2023	\$1,500			\$1,500
Total	\$33,300	\$27,000	\$27,000	\$87,300

Currently in the elementary we have 12 classrooms with new Smartboards bought in the last 3 years, we have 6 classrooms in dire need of replacement, then 3 old boards in Music, Library, and in the room Mrs. Galloway and Mrs. Tilley-Bails work in. We need to push ahead and do 2 grade levels in summer of 2022 which will take care of the 6 in dire need. Then we can replace the other 3 old boards in 2023-2024. Then restart the refresh of 1 grade level per year for elementary in 2024-2025 and continue that refresh cycle.

Currently in the Jr./Sr. High we have 11 total Smartboards. 7 are new boards bought in the last 2 years. 4 are in need of replacement and 2 staff members requested a board that doesn't have one yet. If we purchase 6 smartboards in summer of 2022 this will take care of the 4 old boards and the 2 staff members that would like to have one. With 13 boards we would need to plan to replace 2-3 per year, however re-assess staff needs for adding additional boards annually.

The rest of the teachers have TV's because they only need to project materials and do not need to be interactive. TV's lifespans are hard to predict but they are also low cost, usually around \$700-\$800. For the teachers with TV's we will need to be prepared to replace those as needed.

We have 23 teachers K-12 that have a document camera. These are relatively low cost. We need to purchase a document camera for the 29 remaining staff members in summer of 2022 and then begin a refresh cycle of 25% a year. These cost around \$90 a piece.

Classroom Technology Refresh				
Items	2022-2023	2023-2024	2024-2025	Total for this plan
Smartboards	\$42,000	\$21,000	\$21,000	\$84,000
TV's	\$3,200	\$3,200	\$3,200	\$9,600
Document Cameras	\$2,610	\$1,170	\$1,170	\$4,950
Total	\$47,810	\$25,370	\$25,370	\$98,550

Budget Totals for the entire plan are summarized on the next page.

6. Budget Totals

Below is a running total of the District Responsibility expected from this 3 year Technology Plan.

Budget Totals				
Items	2022-2023	2023-2024	2024-2025	Total for this plan
Internet Access	\$4,824	\$4,824	\$4,824	\$14,472
Server Replacement	\$7,476	\$7,476	\$7,476	\$22,428
Phone Service	\$15,780	\$15,780	\$15,780	\$47,340
Hot Spots (Unknown ECF Status)	\$0	\$24,780	\$24,780	\$49,560
Network Refresh			\$25,500	\$25,500
Website/App	\$5,750	\$5,750	\$5,750	\$17,250
Student Chromebooks	\$43,200	\$43,200	\$43,200	\$129,600
Student Windows Devices	\$10,000	\$10,000		\$20,000
Staff Devices	\$33,300	\$27,000	\$27,000	\$87,300
Classroom Technology	\$47,810	\$25,370	\$25,370	\$98,550
Total	\$168,140	\$164,180	\$179,680	\$512,000