

Accountability Topic: Equitable Access to Technology

Date of Board Meeting:

October 12, 2023

Strategic Priority:

- High Quality Teaching and Learning
- Engagement of All Students, Families, and Communities
- Effective Policy and Procedures
- Healthy, Sustainable Physical & Social Environments

Quality Indicator(s) (if applicable):

QI 4.3. Establishing and following adequate internal financial controls.

QI 4.7. Reviewing expenditures to ensure continuous improvement in value for money.

QI 7.2. Keeping the Board informed about Division operations, challenges, and celebrations.

Key Measures:

- Annual Deployments
- Technology Infrastructure upgrade
- Operational Projects
- The Good Spirit School Division 2023-24 Strategic Plan
- Future Technology Plans

Targets:

- Providing GSSD with a safe a reliable network.
- Technology Infrastructure upgrades.
- Operational Projects.

Data:

- Annual Deployment:
 - Devices:
 - Deployed 128 iPads.
 - Deployed 36 refurbished desktop computers to CCS, NOR and INV to upgrade labs.
 - Network Device Deployment
 - Completed replacement of Cisco Access points / Layer 2 switches to Ubiquiti at all schools.
 - Desktop Computer Upgrades
 - Developed a 4 year plan in conjunction the with digital learning consultants to replace / upgrade school computer labs.
- Technology Infrastructure upgrade
 - Internet Bandwidth Upgrade - Head end switch replacement at YRHS data center.
- Operational Projects
 - Cyber Security Training
 - Continuation of monthly Cyber Security training to all Teachers, PSPs, Administrators, GSEC Staff, Consultants, and coaches.

- VoIP (Voice Over Internet Protocol) Phone System
 - KCI received a new VoIP head end (Sept 2023).
- CIRA DNS Firewall
 - DNS Firewall implemented resulting in on average 1200 Web Filter Blocks, 500 Malware / Phishing Blocks and 3000 Botnet Blocks per month.
- MCS Surveillance System
 - Installation of new indoor and outdoor Ubiquiti camera system at MCS.
- Student Registration Form
 - A new custom student registration online form was created by Tech Services to streamline the registration process.
- SLP Websites
 - New online School Level Planning websites were rolled out for all schools to replace the text only word documents.
- Microsoft Licenses
 - A5 Licenses were rolled out to all GSEC staff and board members increasing the account security for these users.

Key Strategies Employed:

- Annual Deployment:
 - Student Devices - iPads:
 - 128 iPads were deployed to the following schools this September, this now puts us at a 3:1 ratio which is our goal for grades K-3:

School Name	iPads
Bear Stream School	1
Canora Composite School	0
Canora Junior Elementary	0
Churchbridge Public School	0
Columbia School	8
Davison School	7
Dr. Brass School	10
Esterhazy High School	0
Grayson School	0
Hofer Colony School	0
Invermay School	0
Kamsack Comprehensive	0
Langenburg Central School	14
M.C. Knoll School	40
Macdonald School	1
Melville Comprehensive	0
Miller School	2
Norquay School	16
P.J. Gillen School	0
Preeceville School	0
Saltcoats School	0
Silver Stream School	0

Springside School	0
Sturgis Composite School	6
Victoria School	17
Yorkdale Central School	6
Yorkton Regional High	0
Totals:	128

- Student Devices - Chromebooks
 - Once the 900 Chromebooks are deployed this school year we will approx. 200 devices short of our goal of 1:1 in grade 4-12 which we will achieve during the 24-25 school year.
- Student Devices - Desktops
 - The IT Manager worked together with the digital learning consultants to determine the needs of each school for their computer labs. A 4 year plan was developed to upgrade the computer labs at the schools. The following plan was developed:
 - 23/24 School Year:
 - KCI – Purchase 25 new PC’s and install the Media Lab, Move 25 of the M73’s currently in that lab to the business lab which upgrades the M58e computers in the lab.
 - INV – Remove lab of M58e computers and replace with 15 refurbished desktops.
 - 24/25 School Year:
 - NOR – Upgrade lab with 15 more computers.
 - PRE – Reduce lab of 28 M58e computers and 12 M73 computers to a lab of 20 new PC’s.
 - EHS – Replace Lab of 25 M73 computers with a cart of 25 laptops. Possibly drop down to 1 lab.
 - SCS – Remove labs, students will now utilize 1:1 Chromebooks.
 - MCS – Remove 1 lab of M73 computers, students will utilize Chromebooks.
 - 25/26 School Year:
 - CCS – Replace Lab of M73 computers with new PC’s and move P330 computers to the other lab.
 - YRH – Remove A20 lab which contains M73 computers. Upgrade PAA lab and move computers to the Business Centre.
 - Any remaining M73 computers will be upgraded
 - 26/27 School Year:
 - Remaining P330 computers upgraded.
- Network Device Deployment
 - All GSSD locations have now received their new Ubiquiti Layer 2 switches and access points which will save GSSD approx. \$30,000 annually in Cisco licensing costs.
- Technology Infrastructure Upgrade
 - Head end switch replacement at YRHS data center.

- The head end Meraki switch that all GSSD internet traffic flows through was upgraded to a new Ubiquiti switch to double the available internet speeds from 1GB/s to 2GB/s.
 - This will cut down on internet slowness during peak times when the school division has heavy internet utilization by allowing more simultaneous traffic to flow in and out of our network.
- Operational Projects
 - VoIP (Voice Over Internet Protocol) Phone System
 - KCI has received a new VoIP head end system to replace the existing system which was functioning with limited capacity.
 - The new system allows them more reliable access to their phone, voicemail and paging system.
 - Cyber Security Training
 - Since October 2022, IT department has been assigning 15-20 minutes Cyber Security training modules to all Teachers, PSPs, Administrators, GSEC Staff, Consultants, and coaches.
 - These cybersecurity awareness training helps educate GSSD employees about malicious methods used by cybercriminals, how they can be easy targets, how to spot potential threats and what they can do to avoid falling victim to these insidious threats.
 - After they finish training, IT department is also sending phishing simulations emails to check their knowledge.
 - This training will continue this school year with more content creation coming from within GSSD and the courses being more relevant to GSSD staff.
 - As this is an ongoing threat, IT department will continue this project in future.
 - CIRA DNS Firewall
 - The CIRA DNS firewall is another layer of security organizations can use to block unwanted threats. It is purchased by the ministry with all school divisions in Saskatchewan having access to it. The firewall was implemented by the IT Manager in May of 2023 at no direct cost to GSSD.
 - The firewall reports daily on the threats blocked to the IT Manager so that any security threats can be analyzed and dealt with if a trend is occurring.
 - The firewall filters on 3 different categories; Web Filter, Malware / Phishing and Botnets. It also reports on total web traffic for the division.
 - This tool is very helpful in identifying what types of threats we are being targeted with as well as it blocks threats before they enter our environment.
 - MCS Surveillance System
 - IT and facilities worked together to plan out and install a new Ubiquiti camera system at MCS to replace the ageing and failing system that was in the school.
 - System integrates with existing network equipment which results in cost savings and easy access for exporting and reviewing footage.
 - Network line and camera installation was all performed by GSSD staff without the use of an external vendor.
 - Student Registration Form
 - A new online student registration form was created based on the requirements set out by the education team.
 - This new form helps to streamline the student registration process making it easier for students to register with GSSD and makes it easier for our staff to process those registrations.
 - SLP Websites

- IT created a new website for schools to enter their school level plans into which allows them more flexibility in showcasing their school level plans.
- The new web versions can be posted to school websites or other locations for viewing.
- The new websites allow the schools to add pictures to the “Tell your story” portion of their plans further highlighting the work they are doing in the schools.
- Microsoft A5 Licenses for GSEC and board members
 - Previously all GSEC staff and board members were on an A3 license which gave them access to Microsoft 365 and basic security features.
 - Moving these staff members to the A5 license level added more intensive security management, additional analytics tools and more advanced threat protection.

Future Strategies:

- 2023-2024 Projects
 - The IT Team will develop a reliable and secure network by replacing the remaining Layer 3 Cisco Meraki network devices with updated hardware in all schools also saving money on licensing costs.
 - Replacement of School Servers.
 - 900 More Chromebooks will be rolled out during the Christmas break.
 - Configuring Intune device management for Staff laptops.
 - Upgrading Computer Labs based on 4 year plan.
 - Ongoing review of 5 years Technology renewal plan.
 - Active Directory and Exchange email systems will be moved entirely to the cloud.
 - Develop more personalized Cyber Security training materials.

Risk Assessment:

Impact Categories	Insignificant	Minor	Moderate	Major	Catastrophic
Financial	Financial impact of the event is less than \$50,000	Financial impact of the event exceeds \$50,000, but less than \$150,000	Financial impact of the event exceeds \$150,000, but is less than \$250,000	Financial impact of event exceeds \$250,000, but is less than \$500,000	Financial impact of the event exceeds \$500,000
Comments & Mitigation Strategy	The GSSD technology department is updating security policies regularly. Apart from that division also enabled multi factor authentication for all staff to protect their accounts. We are currently working on providing cyber security training for all current and future staff.				
Reputational	One negative article in a publication	Negative articles in more than one publication	Short term negative media focus and concerns raised by stakeholders	Long term negative media focus and sustained concerns raised by stakeholders	Stakeholders lose faith in management or Trustees
Comments & Mitigation Strategy	IT is regularly updating technology infrastructure to stay up to date with the latest technology.				
Managerial Effort/Capacity	Impact can be absorbed through normal activity	Some management effort is required to manage the impact	Can be managed under normal circumstances with moderate effort	With significant management effort, can be endured	Potential to lead to the collapse of the organization

Comments & Mitigation Strategy	The IT Manager continues to motivate and train other team members so in case of any technology failure it can be resolved with minimal disruption.				
Government Relations	Routine ministerial inquires	In-depth ministerial inquires	Concerns raised by Ministry of Education	School division's ability mandate is questioned	Ministry of Education loses faith in the organization
Comments & Mitigation Strategy	Keep up to date with ministry's communication to ensure compliance with ministry's policy and regulations.				
Legal	Legal action threatened	Civil action commenced/small fine assessed	Criminal action threatened/moderate fine assessed	Criminal lawsuit commenced/significant fine assessed	Jail term of any length for a Trustee/Director; multiple significant fines assessed
Comments & Mitigation Strategy	Implementing controls to track unusual activities and have a plan to mitigate risks associated with security breaches.				
Student Outcomes	Immaterial impact on student achievement	Student achievement metrics begin to show a decline	Parental complaints submitted related to student achievement	Overall student competency levels are below standards	Inability to satisfactorily deliver curriculum or key programs
Comments & Mitigation Strategy	By increasing student devices, the division will be able to provide students with latest devices capable of accessing multiple platforms for learning.				

Likelihood				
The likelihood of identified risks is to be assessed by estimate the probability of the risk occurring during the planning horizon.				
Rare	Unlikely	Moderate	Likely	Almost Certain
Extremely rare in the sector. Once in more than 10 years at the school division.	Has occurred occasionally in the sector. Once in 5 to 10 years at the school division.	Periodic occurrence in the sector; possible occurrence. Once in 3 years at the school division.	Has occurred previously and could reasonably occur again. Once in 1 to 2 years at the school division.	Extremely likely to occur. Multiple times per year at the school division.

Summary Comments:

Recommended Decision/Motion:

"That the Board approve the accountability report on Accountability Topic and acknowledge the report met the requirements of QIs _____, based on the evidence within the report."

Respectfully submitted,

Quintin M. Robertson, Director/CEO
Good Spirit School Division