

Accountability Topic: Technology Services

Date of Board Meeting:

March 2, 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
- Future Technology Plans

Targets:

- Annual Deployments
 - Student Devices and Renewal Cycle
 - Network Device (Wi-Fi Access points and Switches) Deployment
- Technology Infrastructure Upgrade
 - Internet Bandwidth Upgrade
- Operational Projects
 - Helpdesk System
 - GSSD Separate Network
 - Portal/Website Migration
 - VoIP (Voice Over Internet Protocol) Phone System
 - Cyber Security Training

Data:

- Annual Deployment:
 - Devices:
 - Deployed 1050 Chromebooks.
 - Network Device Deployment
 - Replacing current Network Devices (Meraki) with new devices (Ubiquiti/Unifi).
 - Replacement done at 11 Schools and GSEC.
- Technology Infrastructure upgrade
 - Internet Bandwidth Upgrade

- Increased Internet bandwidth in 2 Colony and 16 Elementary/High schools which will support future demands and technology requirements.
- Operational Projects
 - Helpdesk System
 - Implemented new Helpdesk system which is hosted in cloud.
 - GSSD Separate Network
 - Separating GSSD Network for Students and Staff devices to improve overall technology security posture of GSSD.
 - Portal/Website Migration
 - Published a new website for GSSD on rallyonline.ca platform.
 - Implemented a new Portal on SharePoint site and was launched in November 2022.
 - VoIP (Voice Over Internet Protocol) Phone System
 - Grayson School, Springside School, and Canora Junior Elementary School received VOIP Phone System in December 2022.
 - Cyber Security Training
 - Providing monthly Cyber Security training to all Teachers, PSPs, Administrators, GSEC Staff, Consultants, and coaches.

Key Strategies Employed:

- Annual Deployment:
 - Student Devices:
 - IT Manager worked with CFO and developed a fixed renewal cycle for Student devices (Chromebooks and iPads). All student devices will be purchased from Central Budget.
 - Grade K to 3 will receive iPads and Student: Device ratio will be 3:1. Grade 4 to 12 will receive Chromebooks and Student: Device ratio will be 1:1. Based on current statistics and inventory, both of these ratios will be achieved by end of School year 2023-24.
 - Network Device Deployment
 - New Network devices were deployed to 11 Schools and GSEC. These new devices replaced existing Cisco Meraki Devices. This change will contribute approx. \$150,000 capital savings annually.
 - New devices are performing the same as previous ones but will provide more benefits in future technology deployments. All schools will receive new devices before December 2023.
 - These new devices are providing the latest Wi-Fi Technology (Wi-Fi v6) which provides more coverage and speed.
 - Moreover, these new devices support video surveillance systems. The first implementation will be done in March 2023 at Melville Comprehensive School by IT Team. In future the IT team will be able to handle any surveillance projects without any external vendor.
- Technology Infrastructure upgrade
 - Internet Bandwidth Upgrade
 - IT Manager worked with Ministry of Education to provide reliable Internet Service at Bear Stream and Hofer Colony schools. Ministry of Education offered Xplorenet Service to both of those schools and also increased the Internet Bandwidth. Colony schools were responsible for Internet service in the school and were paying from their budget. With this new internet service, Ministry of Education will be responsible for support and budget in future.
 - Internet Bandwidth was also upgraded in following schools:

Canora Composite	P.J. Gillen School
Davidson School	Preeceville School
Dr. Brass School	Saltcoats School
Esterhazy Central High School	Springside School
Grayson School	Sturgis Composite School
Kamsack Comprehensive Institute	Victoria School

Langenburg High School	Yorkdale Central School
MacDonald School	Yorkton Regional High School

- Remaining School doesn't require upgrade at this time.
 - This upgrade was necessary for future projects like 1:1 student device ratio, VOIP, Video Surveillance System, etc.
- Operational Projects
 - Helpdesk System
 - GSSD was using SysAid System for IT helpdesk for many years, and it was hosted at YRHS Datacenter locally. In December 2021 a huge security vulnerability was identified and SysAid was affected due to that. IT department had implemented temporary solution at that time but to prevent such risks in future, IT Manager decided to go with serverless technology.
 - IT Manager looked at different options in previous school year and decided to go with cloud service. In July 2022, IT Manager started working on initial configuration of new helpdesk system and tried to replicate all features and functionality of old system into new system.
 - In September 2022, IT department deployed new System and retired old one. Since then, the new helpdesk system has been working without any issue and has exceeded our expectations.
 - GSSD Separate network (Student and Staff)
 - Main motive behind this Project was to create a Network Segregation between student devices and staff devices. This segregation will enhance GSSD's overall IT security posture.
 - Currently our two main datacenters (One at YRHS and second at GSEC) are using SecureSSID network. These datacenters are core for the whole IT infrastructure of GSSD. IT department noticed that lots of Staff Members, Students and some external Service providers are using same network for their personal devices i.e., Cell Phone or Personal Laptop. These personal devices on GSSD Network are not managed by GSSD IT Team. Because of this our Datacenters are exposed to lots of unknown risks. This risk is also identified under Tech Risk Registry 2022-23.
 - To mitigate this risk, IT Manager looked for solutions and decided to put Student Devices, Staff Devices and Personal devices on separate network. In January 2023, this project's information was shared with all schools and since then this solution has been implemented in two schools.
 - GSSD's staff and students didn't notice any change in their daily work. This change will secure GSSD Network from internal security threats as well.
 - Portal/Website Migration
 - Our old website and portal were hosted at YRHS Datacenter and were consuming a lot of resources. Therefore, to move everything on cloud, Technology Manager and Digital Learning Consultants contacted different vendors and decided to go with rallyonline.ca.
 - Migration work was done during Summer 2022 and the website went live in September 2022.
 - We moved division's portal on Teams/SharePoint Online. Digital Learning Consultants worked with various departments to clean their current data on old portal and migrated everything to new platform. We launched our new portal in November 2022. This new Portal is hosted on GSSD's online platform.
 - VoIP (Voice Over Internet Protocol) Phone System
 - Following three school were done in December 2022:
 - Grayson School
 - Springside School
 - Canora Junior Elementary School
 - This project was started in previous school year but due to Supply Chain issue we didn't receive equipment in summer break. However, we utilized time during Christmas break in 2022 and finished above three schools.
 - Next priority will be for following Schools:
 - Saltcoats School
 - Kamsack Comprehensive Institute

- P.J. Gillen
- Columbia School
- 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.
 - As this is an ongoing threat, IT department will continue this project in future.

Future Strategies:

- 2023-2024 Projects
 - Revise Technology related Administrative Procedures and standardized policy and procedures.
 - Replace Cisco Meraki network devices with Unifi/Ubiquiti network devices in all schools.
 - Additional VoIP Systems in Schools. (KCI, SAL, PJG, COL)
 - Explore solutions to replace School Servers (Centralize or Cloud).
 - Intune device management for Staff laptops.
 - Explore solutions to replace Computer Labs (Virtual Desktop can be an option).
 - Ongoing review of 5 years Technology renewal plan.

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	Technology department is updating security policies regularly. Apart from that division also enabled multi factor authentication for all staff to protect their accounts. Division is currently working on providing cyber security training for all current and future staff. Also, division is working on separating networks for students, staff and personal devices to secure GSSD Network.				
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	Division is regularly updating technology infrastructure to cope with 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	IT Manager tries to empower 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	Having better control over technology provides an option to track unusual activities.				
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: device ratio, 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:

- Before adopting any technology, team investigates and evaluates its impact on our current process, expenses, future dependencies, security, and ease of use.

Recommended Decision/Motion:

“That the Board approve the accountability report on Technology and acknowledge the report met the requirements of QIs 4.3, 3.7, and 7.2, based on the evidence within the report.”

Respectfully submitted,

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