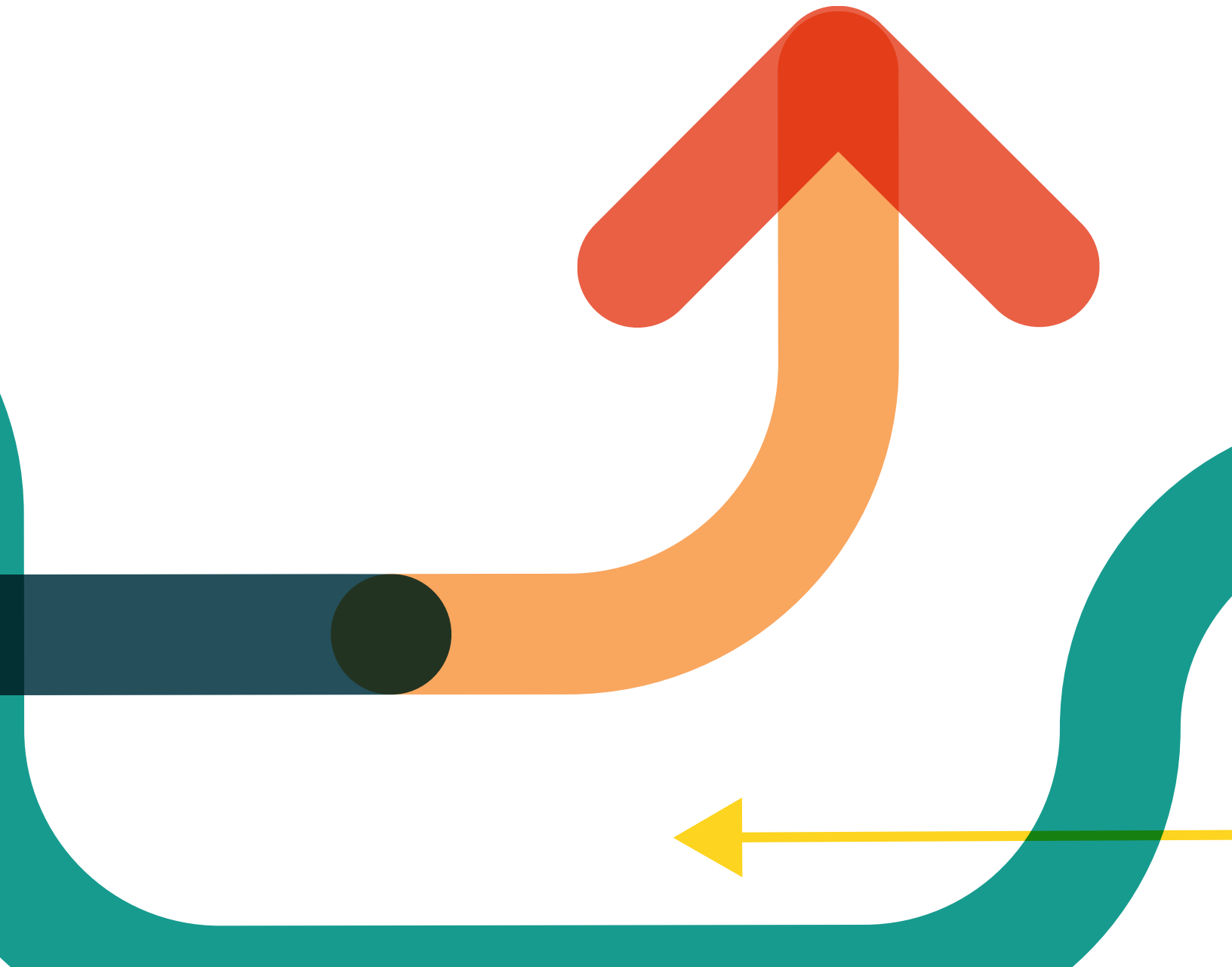


“MERLIN has been an integral partner for Park West School Division. Without their continuing support and services, we would not be in the position we are today. The provincial-wide services they offer education are second-to-none, and they have an amazing team working for them. Keep up the great work!”

—Grant Roszell, ICT Supervisor,
Park West School Division



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Staff as at March 31, 2022

Kiley Bender – A/Chief Operating Officer

Alicia Baldwin – Office Manager

JR de Guzman – Office Administrator

Travis Friesen – Consultant, IT Security

Bonnie Gibson – Office Manager (Term)

Warren Grieder - Consultant, Internet Technologies

Michael Hart - Consultant, Microsoft Technologies

Ryan Hébert – A/Manager, Information Technology Services

John Hiebert - Consultant, Networking Technologies

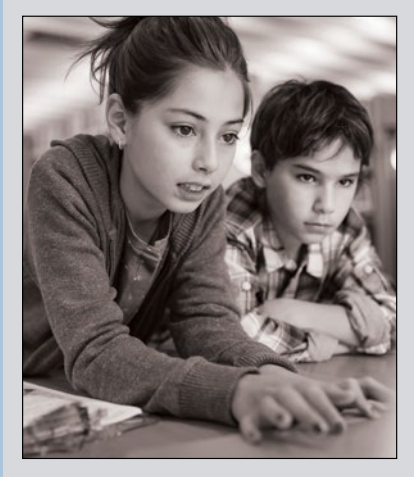
Diane Karalash – Provincial Licensing and Software Specialist

Brent McCrea – A/Manager, Information & Communication Technologies

Adam Thompson – Consultant, Infrastructure Services

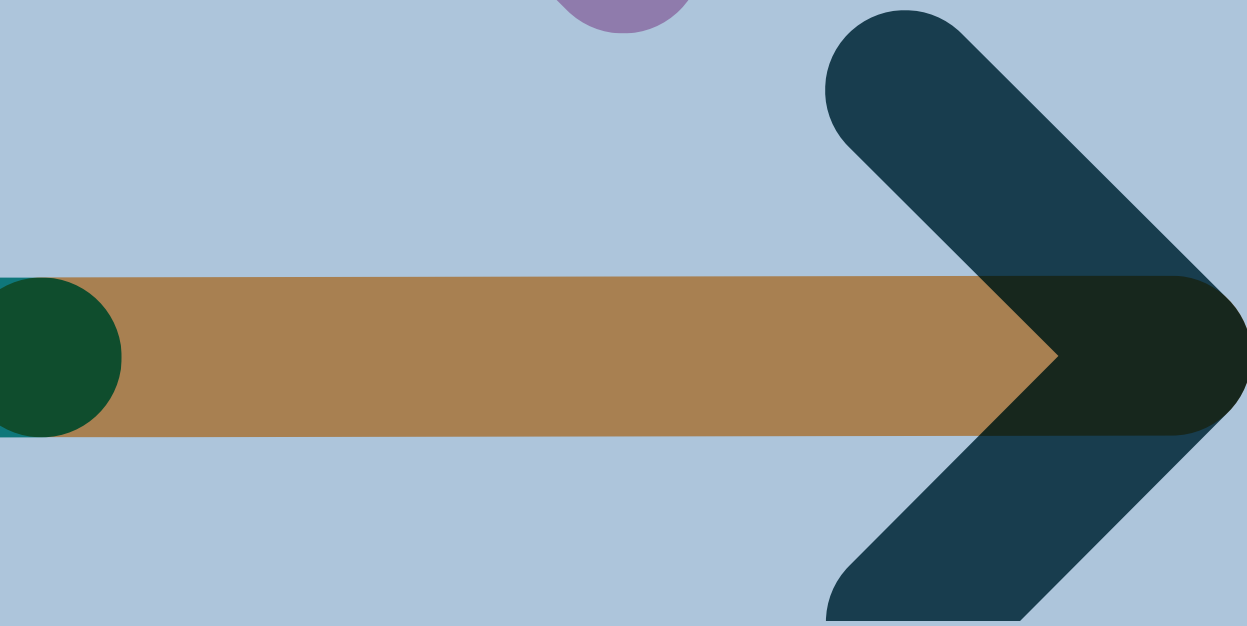
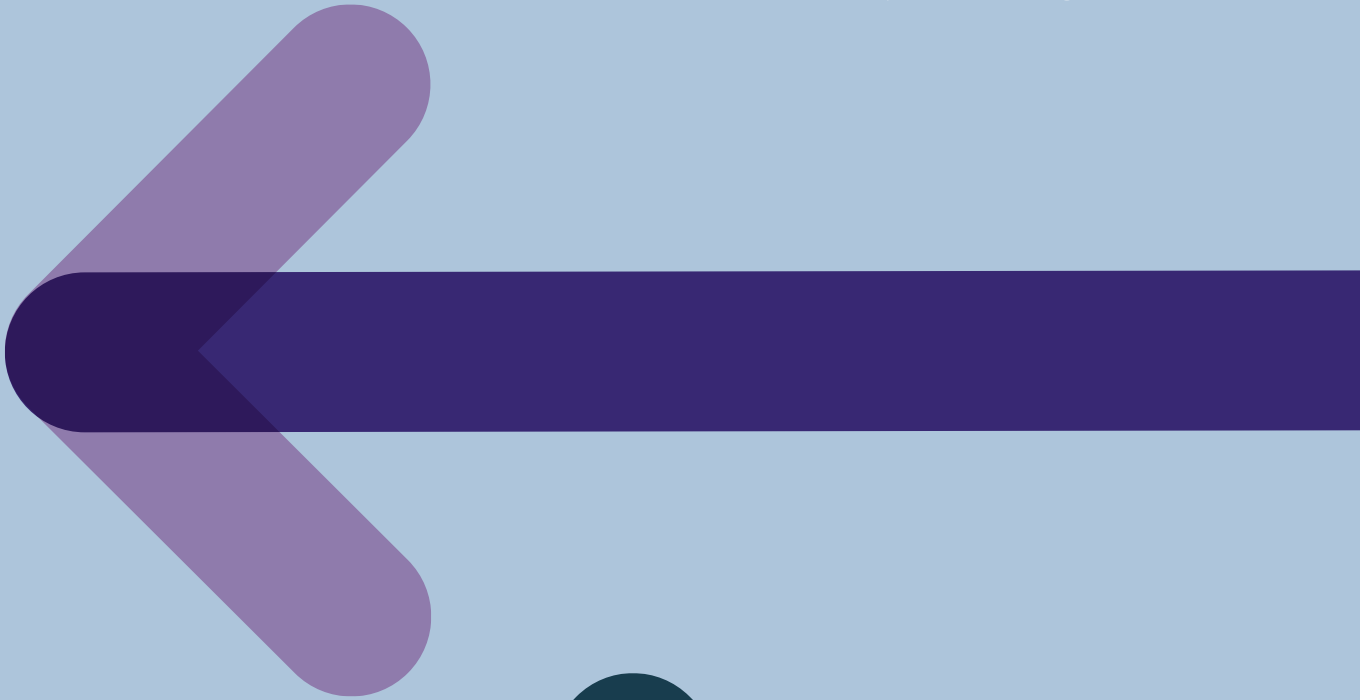
Rhonda Williams – Controller

MERLIN would like to thank the following employees who retired in this fiscal period for their dedicated service: Colette Lafond and Barb Finnimore



"MERLIN consistently gives my university returns that exceed expectations. U of W's partnership with MERLIN has saved us thousands of dollars through joint buying power. This relationship has also enabled us to implement technology solutions for our institution that we would not have been able to achieve if it were not for their expertise and low cost."

—Kim Benoit, Chief Information Officer,
The University of Winnipeg



LETTER FROM THE MINISTER

Her Honour the Honourable Janice C. Filmon, C.M., O.M.
Lieutenant Governor of Manitoba
Room 235, Legislative Building
Winnipeg, MB R3C 0V8

May it Please Your Honour:

It is my privilege to present the Annual Report of the Manitoba Education, Research and Learning Information Networks (MERLIN) for the operational year ended March 31, 2022.

Respectfully submitted,

Original Signed by:

Honourable Reg Helwer
Minister of Labour, Consumer Protection and Government Services
Minister responsible for the Manitoba public service
Minister responsible for the Public Utilities Board

LETTER FROM THE DEPUTY MINISTER

The Honourable Reg Helwer
Minister of Labour, Consumer Protection and Government Services
Room 343, Legislative Building
Winnipeg, Manitoba R3C 0V8

Dear Minister Helwer:

For over 26 years, MERLIN's knowledge and application of technology has benefited schools, colleges and universities in Manitoba. The Agency's broad range of technology services include software licensing and purchasing, consulting, Internet access, technical training, hosting and security services. The Agency's Information Technology (IT) service delivery has evolved over time to meet the advanced and imminent changes of technology that benefit students in learning. MERLIN plays a key role in growing, simplifying technology choices and getting the best value for money for educational organizations with limited budgets.

MERLIN continues to negotiate a single Master Agreement for all K-12 and post-secondary institutions in Manitoba to achieve the highest level of discount available from Microsoft. This enables Manitoba's education community to have the lowest possible pricing ever for Microsoft products—a major accomplishment each year.

MERLIN's Partner Programs, bundled IT service package, bring major savings, benefits and value for Manitoba Education. A new three-year agreement was renegotiated effective April 1st for post-secondary institutions. The K-12 Partner Program is now in its second year of its three-year agreement. Benefits include licensing compliance, best practices, consistency of application and long term technical and financial planning.

I would like to thank all staff for their dedication and effort that keeps contributing to MERLIN's success.

Respectfully submitted,

Original Signed by:

Scott Sinclair
Deputy Minister of Labour, Consumer Protection
and Government Services

MESSAGE FROM THE CHIEF OPERATING OFFICER

On behalf of staff, I am pleased to report the achievements of Manitoba Education, Research and Learning Information Networks (MERLIN) for the year ended March 31, 2022.

Worldwide events have changed the way education is delivered. The technology to accomplish the continuation of education during a worldwide pandemic either didn't exist or was priced out of reach of the average student 10 years ago! I am proud of the role that MERLIN has played in the last 26 years to prepare the infrastructure to support teachers and students during events like this. Providing infrastructure and software licensing that assisted in the huge shift to remote learning was a small part of the work that universities, colleges and schools had to do during this challenging time.

There are always more challenges ahead. The Staff at MERLIN have been preparing to meet the next challenge as students return to classrooms both in K-12 and post secondary institutions. We are working on better security programs to help secure information, more network capacity to keep ahead of the demand, new software partnerships to enhance learning opportunities for students.

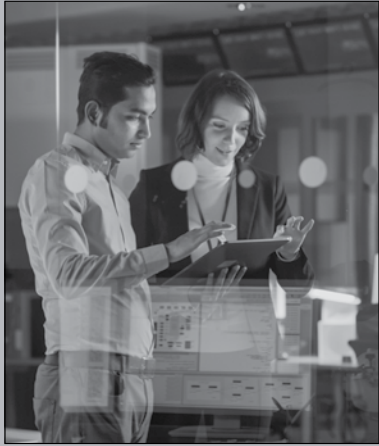
Working collaboratively with other organizations in the Education space in Manitoba, Canada and worldwide, continues to provide significant value for Manitoba schools, school divisions, universities and colleges. MERLIN is consistently recognized as a key player to help facilitate those partnerships and working with others allows all to achieve things that would not be attainable by individual organizations.

Shared services in Education are extremely beneficial to the organizations involved and difficult to manage and maintain. I would like to thank all the educational organizations in Manitoba that have chosen MERLIN as a vehicle for those shared services, even though they have many other choices. 26 years of working together is truly a monumental achievement.

Finally, I would like to thank the staff of MERLIN, past and present, without your hard work and dedication to MERLIN, Manitoba and the education system, none of the great achievements that MERLIN has accomplished would be possible.

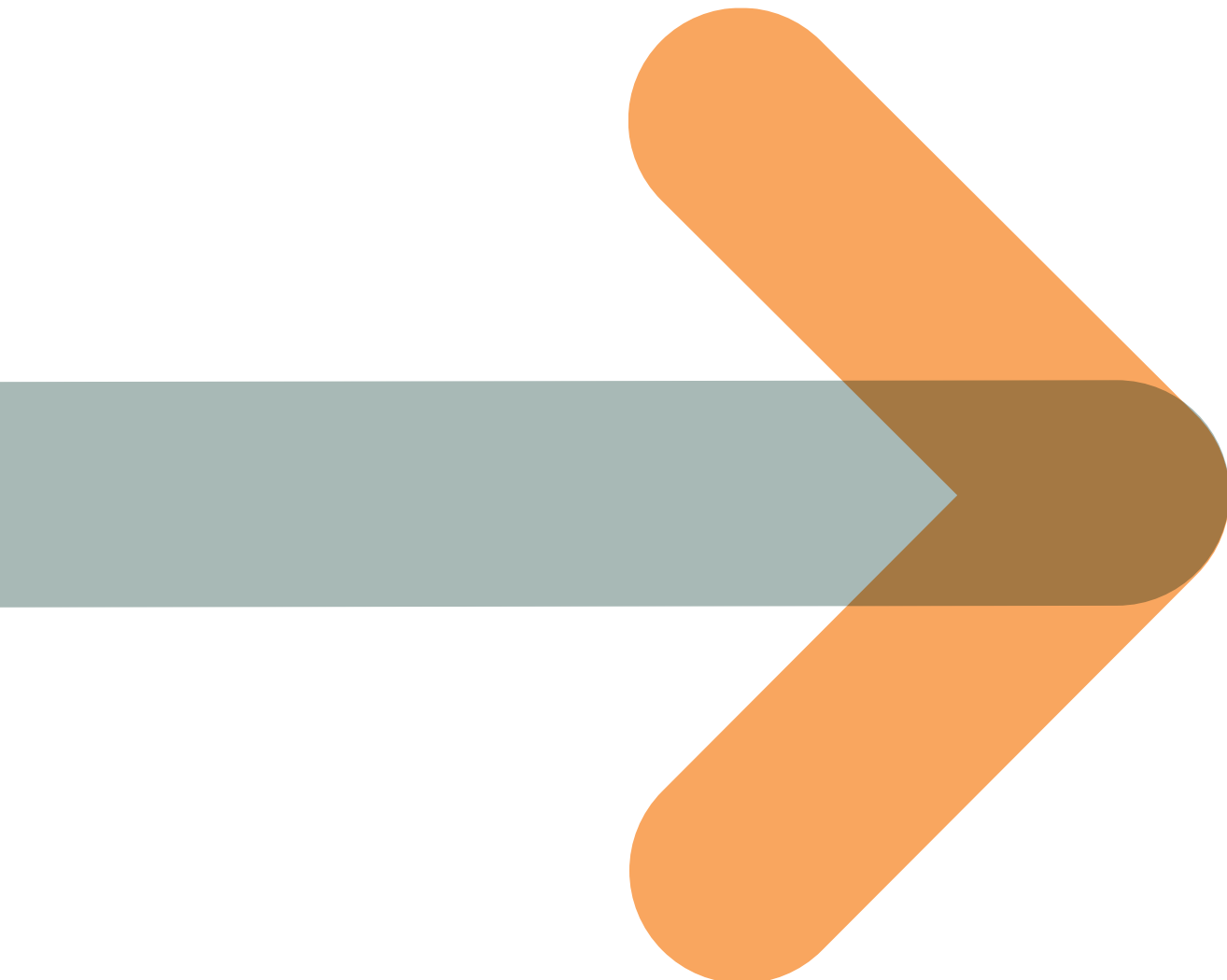
Original Signed by:

Kiley Bender
A/Chief Operating Officer



“MERLIN is a great asset for Manitoba School Divisions, not only helping divisions save money with bulk licensing but also providing great support and excellent service. MERLIN plays an integral part in bringing the school division’s IT teams together to discuss and learn on what’s working and what’s coming. We value and appreciate the partnership we have with them.”

—Jean St. Godard, Director of Learning
and Information Technologies,
Pembina Trails School Division



agency profile

BACKGROUND

Manitoba Education, Research and Learning Information Networks (MERLIN) was established in 1995 as a special operating agency with the Department of Education and Training. It was formed as a facilitating body to coordinate the delivery of technology services to the education community across Manitoba.

MISSION

To support the use of technology in improving educational services to learners.

MANDATE

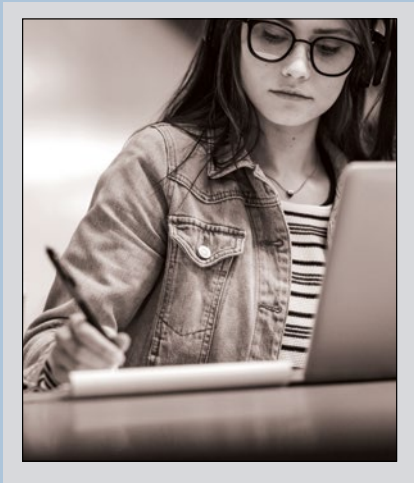
- Provide services that support educational institutions in the application of technology tools to enhance and expand program delivery; and
- Provide direction and management in the educational use of networks, acting as a broker of services to meet client needs.

SERVICES

The services provided are allocated into the following sections:

Services	Schools	Dept. of Education	Post-Secondary Institutions	Other Depts./Agencies
Partner Programs	X		X	
Consulting	X	X	X	
Provincial Licensing and Purchasing	X	X (MSD)*	X	
Shared Services	X	X X (MSD)*	X	X
Technical Training Services	X		X	
General Support for the education community	X	X (MSD)	X	X

* Manitoba School for the Deaf



"MERLIN is an invaluable partner for educational IT in Manitoba. Whether it's software licensing support and negotiations or on-the-ground hardware support or remote software support, MERLIN is there for us."

—Al Stechishin, Divisional IT Manager,
St. James-Assiniboia School Division



PARTNER PROGRAMS

The Partner Programs are educational specific packages of software and IT services that assists schools and post-secondary institutions in providing a robust, secure and flexible environment to help improve the educational outcomes of learners. These Programs simplify the administration of many licensing and technology services for partners, allowing more resources to be directed at the classroom. The K-12 Partner Program was designed to allow schools to explore online resources and services without adding additional costs or limits on things like Internet bandwidth.

CONSULTING

This service includes per diem consulting, project consulting and support contracts.

- Design and implementation of on-premise infrastructures
- Design and implementation of Cloud-based technologies such as Microsoft Azure/Office 365
- Advice on the selection of technical equipment and services
- Advice on technologies that support distance education delivery
- Network systems management
- IT security services
- Assistance with development and review of educational technology plans

PROVINCIAL LICENSING AND PURCHASING

MERLIN negotiates province-wide licensing agreements to assist schools and post-secondary institutions with procuring best of breed solutions at pricing that's affordable and equitable across the province regardless of the size of the educational organization. MERLIN also provides licensing consulting and advice that is specifically tailored to schools and other educational institutions in Manitoba.

INTERNET ACCESS

MERLIN is the Internet gateway for K-12 schools in Manitoba as well as most of the post-secondary institutions. MERLIN manages and maintains, with our partner suppliers, one of the most extensive networks in Manitoba and is consistently one of top three of educational and research networks in terms of data usage in Canada. More than 200,000 students and educators use MERLIN as their Internet gateway.

HOSTING

MERLIN collaborates with the education community to offer a wide array of IT hosting services tailored to the individual needs of these organizations. These hosting services save school divisions and post-secondary institutions administrative costs associated with managing and maintaining their own technology infrastructures. MERLIN hosts many different applications from websites to student records systems and firewalls to Infrastructure as a Service.

SECURITY

MERLIN operates one of the largest security infrastructures in western Canada in order to protect students and staff from a wide range of Internet related threats. All MERLIN's security services are designed and deployed to ensure that students and schools have access to security tools and services that are rated amongst the top solutions in the world.

TECHNICAL TRAINING SERVICES

Customized training for school divisions helps sustain operations and enhance technology infrastructures. Training services are intended to provide education-specific training in areas where it might not normally be available.

GENERAL SUPPORT TO THE EDUCATION COMMUNITY

MERLIN continues its 26-year history of being the trusted advisor to schools, universities and colleges in Manitoba for all topics related to educational technologies. MERLIN actively participates with educational organizations in Manitoba including Manitoba Association of Educational Technology Leaders (MAETL), Manitoba's Regional Advanced Research and Education Network (MRnet).

MARKETS

PRIMARY

Schools and school divisions (K-12) comprised of 37 school divisions, over 700 public schools, 94 independent schools and over 50 band-operated schools within about 62 First Nations and 8 post-secondary institutions and adult learning centers.

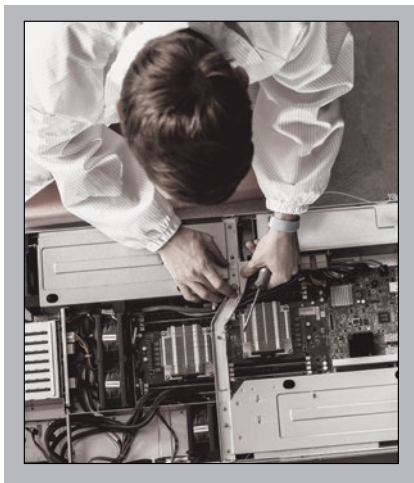
SECONDARY

Adult learning centres, educational organizations, Department of Education

TERTIARY

Other government departments and the broader public sector

While MERLIN does not have a monopoly for its services within the province, it does have a unique position in the education community, allowing for the provision of an education-specific component to decision-making, provincial coordination, and advisory services. The Agency attempts to foster cooperative relationships with private industry to benefit the education community.



“Over and above the services that MERLIN provides for Manitoba’s education community, the team at MERLIN has been a strong supporter of professional learning in many ways. While MERLIN regularly provides a wide variety of on-site and field training, their participation in the development and coordination of some of Manitoba’s longest standing annual educational technology conferences has been a huge benefit to all stakeholders!”

—Andy McKiel, Membership Officer, MAETL



performance review

PERFORMANCE TARGETS AND ACCOMPLISHMENTS

MERLIN MADE A SIGNIFICANT IMPACT IN MANY AREAS DURING THE FISCAL YEAR 2021/22. SOME EXAMPLES ARE HIGHLIGHTED BELOW.

MERLIN PARTNER PROGRAMS

The Partner Programs includes a collection of commonly used technology services, bringing major cost savings and benefits to all schools and post-secondary institutions in Manitoba.

MERLIN's K-12 Partner Program is in its final year of the three-year Agreement beginning July 1st, 2019. All of Manitoba's school divisions and 70% of funded independent schools participate in the Partner Program. The Agency also negotiated the Partner Program three-year Agreement for post-secondary institutions effective April 1st, 2020.

PROVINCIAL LICENSING and PURCHASING

MICROSOFT

- MERLIN negotiates and administers the Master Agreement for all Microsoft software and services for every educational organization in Manitoba. This provides equity to all organizations regardless of their size and access to the Microsoft suite of software and services for every student, teacher, professor and staff member in Manitoba's educational institutions. This includes Microsoft Cloud-based services like Office 365 and Teams as well as Desktop Operating Systems, database software and other products.
- MERLIN has negotiated a single Master Agreement for all K-12 and post-secondary institutions in Manitoba to achieve the highest level of discount available from Microsoft, enabling Manitoba schools to have the lowest possible pricing for Microsoft products.
- MERLIN has worked with Microsoft to renew the Shape the Future Program for Manitoba schools. This Program provides schools with a discount on OEM desktop licenses.

ADOBE

- MERLIN continues to work with Adobe on educational pricing on Adobe products for K-12 schools and post-secondary institutions. These products include Adobe's Creative Cloud, Acrobat Pro, Photoshop Elements and Premiere Elements.

EDUCATIONAL CLASSROOM LICENSES:

- MERLIN negotiates and administers the Manitoba School Consortium Purchasing Programs for Mathletics, ReadWriter and Learning A-Z products. These educational classroom resources are essential for successful student learning. These K-12 student and teacher resources cover subject areas in math, literacy and science.

MULTI FACTOR AUTHENTICATION (MFA)

- MERLIN works with Cisco Duo, Bell MTS and Yubico to provide options for School Divisions to facilitate MFA for their users, as per their insurance company's requirements.

STORMWIND TECHNICAL TRAINING:

- MERLIN works with StormWind to provide access to Unlimited IT and Project Management courses, live instructor-led classes, as well as self-paced recorded courses and hands on labs and practice tests.

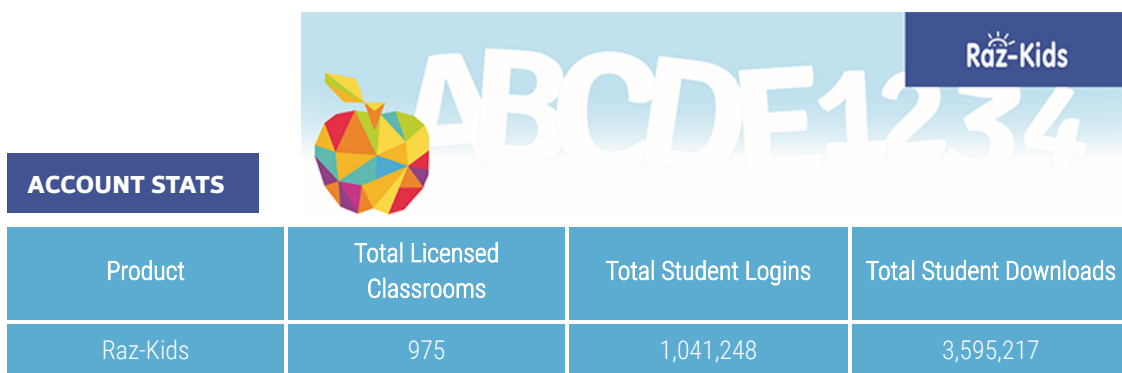
TRIMBLE SKETCHUP PRO:

- MERLIN continues to be a facilitator of the Trimble SketchUp Pro K-12 Provincial-Wide License Grant Program providing all publicly funded K-12 schools with access to the latest versions at no cost. SketchUp Pro is a full-featured desktop 3D modeling tool.

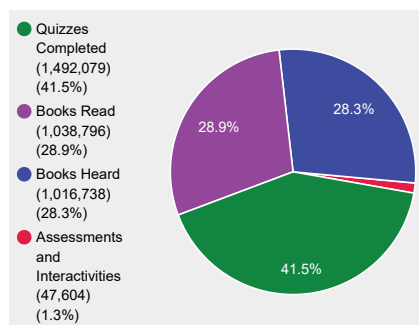
MATHLETICS USAGE REVIEW 2022:

Activity Mastery		Number of Logins	
Total #Activities Completed	Average Improvement Rate	Total Student Logins	Total Teacher Logins
318,941	65%	240,019	30,605
Enrollment		Professional Development	
Total # Mathletics students	# Divisions using Mathletics	202 Mathletics PD trainings purchased in the past two years.	
24,678	33/37		

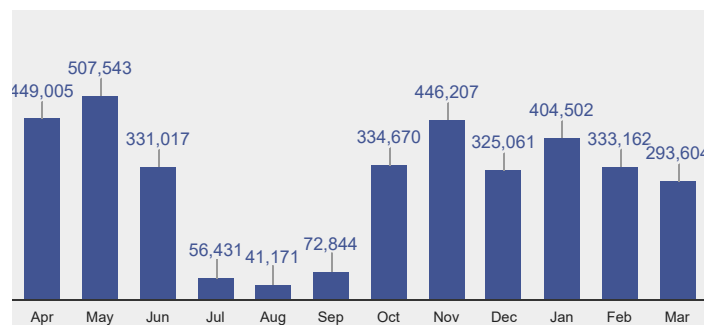
USAGE REVIEW MERLIN APRIL 1,'22–MARCH 31,'22:



Student Digital Usage



Student Activities Completed By Month



CONSULTING

MERLIN provides consulting support for two provincial departments	Department of Labour, Consumer Protection and Government Services – MERLIN facilitates Manitoba Network services for education	
	Department of Education and Early Childhood Learning – MERLIN has a Memorandum of Understanding with the Department of Education which provides a number of consulting and IT-related services	
The Agency has also worked with all public and private schools as well as post-secondary institutions	Design and implementation of: <ul style="list-style-type: none"> • Network security and monitoring solutions • Authentication services including integration with Office 365, G-Suite and other Cloud services • Collaboration services like Email, Instant Messaging, SharePoint and others 	<ul style="list-style-type: none"> • Network solutions which include security and virtual private networks (VPN), network management, disaster recovery/backup solutions, desktop deployments, application deployments, virtual infrastructure deployments, network connectivity failover strategies and strategic planning
MERLIN provides fee-for-service consulting for the education community	Some examples: <ul style="list-style-type: none"> • Installed and managed security services • Design and implementation of Office 365 tenant services • Migration of mail from on premises Exchange to Office 365 • Federated authentication with Google's G-Suite and Office 365 • Reviewed network segmentation and design and implementation of directory services for single user directory • Software security lifecycle review • Network security review 	<ul style="list-style-type: none"> • Wide Area Network performance testing and problem resolution • Design and setup of a network monitoring solution • Design and implementation of virtual server infrastructure • MERLIN is frequently called upon to assist school divisions with problem-solving and provides an objective evaluation as well as recommendations. The Agency's goal is to assist school divisions to become self-sufficient in managing their own infrastructures

INTERNET ACCESS

MERLIN partners with many private sector network providers to provide the best value for money solutions to get schools across the province connected to Internet services. Some of these organizations are:

- BellMTS
- MRnet
- Shaw
- Manitoba Hydro
- Manitoba Network
- Westman Communication
- Pembina Trails School Division
- Valley Internet Service Provider (VISP)

MERLIN works in very close partnership with MRnet (Manitoba's Regional Advanced Research and Education Network), who is Manitoba's connection to the global high-speed education and research networks through the CANARIE National Research and Education Network.

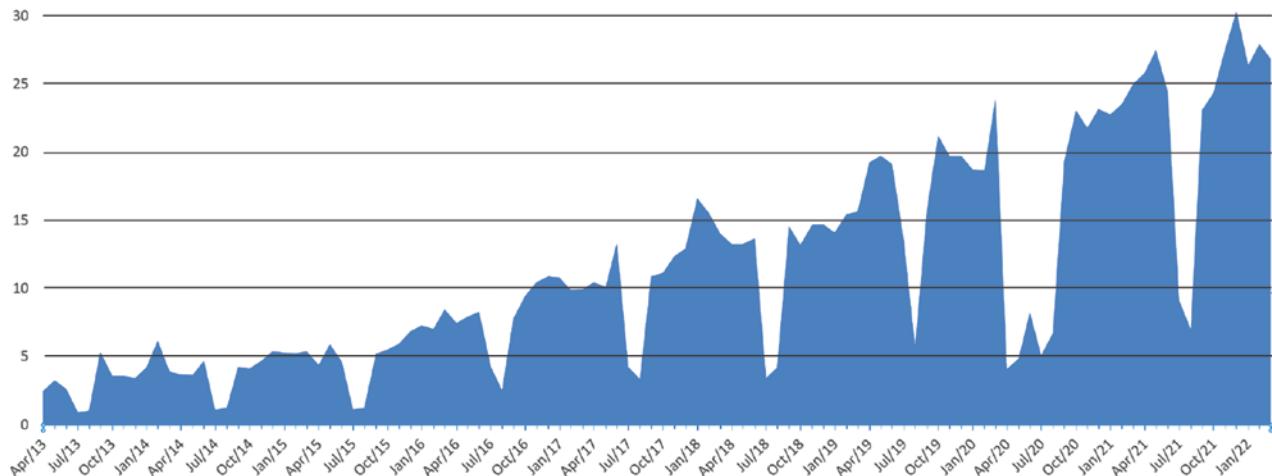
CANARIE provides high-speed access to popular Internet based resources and content providers such as Microsoft, Google, Amazon and others via the CANARIE's Content Delivery Service (CDS). MERLIN is consistently one of the top three largest users of CANARIE's CDS in Canada.

MERLIN's 20Gbps connection to CANARIE provides access for K-12

schools and many post secondary institutions. Approximately 40% of the traffic from education in Manitoba uses CANARIE's network. This partnership provides significant cost savings as well as shorter, faster paths to services like G-Suite, Office 365, YouTube, Apple and others.

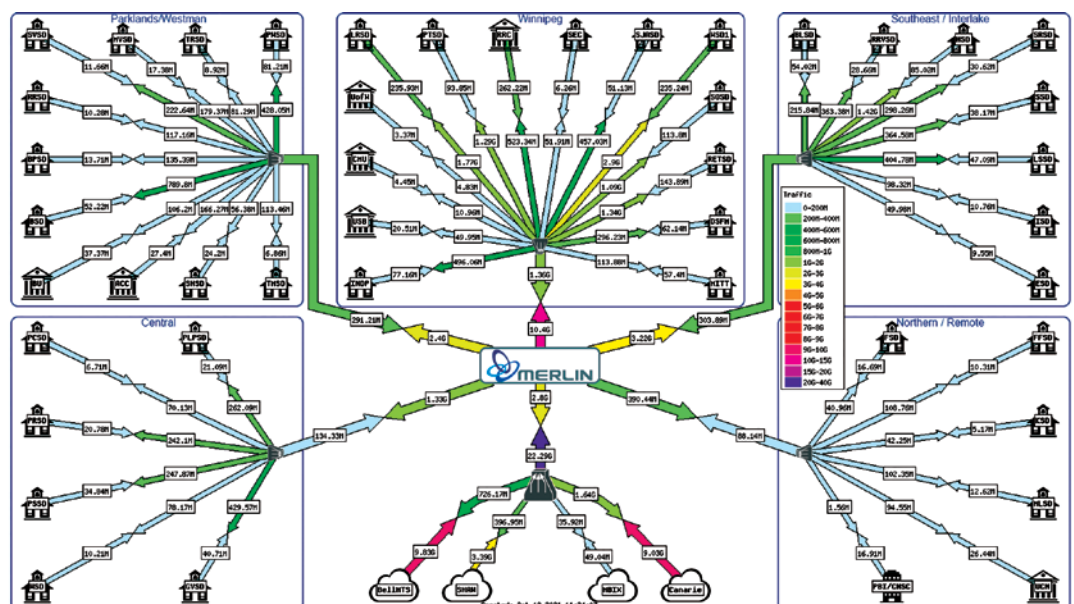
MERLIN's commercial Internet is currently supplied by BellMTS and Shaw with connections to multiple locations, allowing educational institutions to share 30Gbps of capacity. MERLIN also offers both IPv4 and IPv6 connectivity services as part of its Internet gateway services. MERLIN is one of the largest volume customers of BellMTS in Manitoba.

Inbound Traffic Max Gb/s



INTERNET WEATHER MAP

MERLIN staff maintain a service called the Internet Weather Map. This tool provides a point in time view of school division, post-secondary, and independent school Internet usage across the Province of Manitoba. Usage statistics are updated every five minutes. This can be viewed at <https://observium.merlin.mb.ca/weathermap>.



HOSTING

MERLIN works in partnership with educational institutions in Manitoba to host many different applications and infrastructure components.

APPLICATION AND INFRASTRUCTURE HOSTING

- **Hosted Microsoft Exchange**—MERLIN manages a large shared Microsoft Exchange infrastructure to provide school staff with the full features of Exchange, including email, shared calendar, and contacts. The Microsoft Outlook client (Win/Mac), a browser-based web mail interface, as well as Active Sync compatible mobile devices are supported.
- **Hosted Microsoft SharePoint**—MERLIN manages several dedicated Microsoft SharePoint deployments hosted in our virtual infrastructure. This services can be used by school staff for collaboration, document management, forms, announcements, calendars and many other features.
- **Off-Site Backup Storage service**—This service provides flexible access to an off-site storage target in MERLIN's datacenter to be used for client backup data storage. Storage methods are available as required by the client's preferred data transfer modality/software.
- **Microsoft 365 / Google Workspaces Tenant Data Backup Service**—This service allows clients to backup and archive various types of data stored in M365 / Google cloud services to MERLIN's datacenter. This data can include mailbox data and remote file storage data, as well as other related cloud service data.
- **Hosted Infrastructure as a Service (IaaS)**—As part of MERLIN's IaaS service we provide clients with a hosted virtual environment including virtual server provisioning, server management, performance tiered storage, and backup services. Benefits to clients include server infrastructure and licensing cost-savings, as well as efficiencies with redundancy and fault tolerance. MERLIN is currently hosting 576 virtual machines (up from 571 last fiscal year) for 27 educational organizations (up from 22 last fiscal year) in our infrastructure.
- **Web and Public Domain Name System (DNS) Hosting Service**—MERLIN houses, serves, and maintains websites including server space, web services, and file maintenance for websites controlled by clients that do not have their own servers. Currently, MERLIN hosts 93 websites, as well as DNS hosting for 151 primary and 23 secondary domain names.
- **Email list server**—This electronic mail discussion list gives each mailing list a unique web page and allows users to subscribe, unsubscribe and change their account options over the web. Currently, MERLIN maintains 59 lists.
- **Other Hosting Services**—Through hosting services for the Department of Education, school divisions also benefit from the following initiatives:

- **Websites**—MERLIN has been hosting the Department of Education's website since 1996. This currently includes 7,335 web pages (down from 7,374) web pages and 16,890 PDFs (up from 16,545).
- **Hosted ORME/DREF for the Manitoba Education Library systems and associated databases.**—Teachers across the province can access these online resources. MERLIN provides ongoing support for the library servers. There are 3 ORME and 7 DREF servers in MERLIN's infrastructure available to staff and Manitoba teachers. These are accessible from the Internet as well as from the Managed Environment.

SECURITY

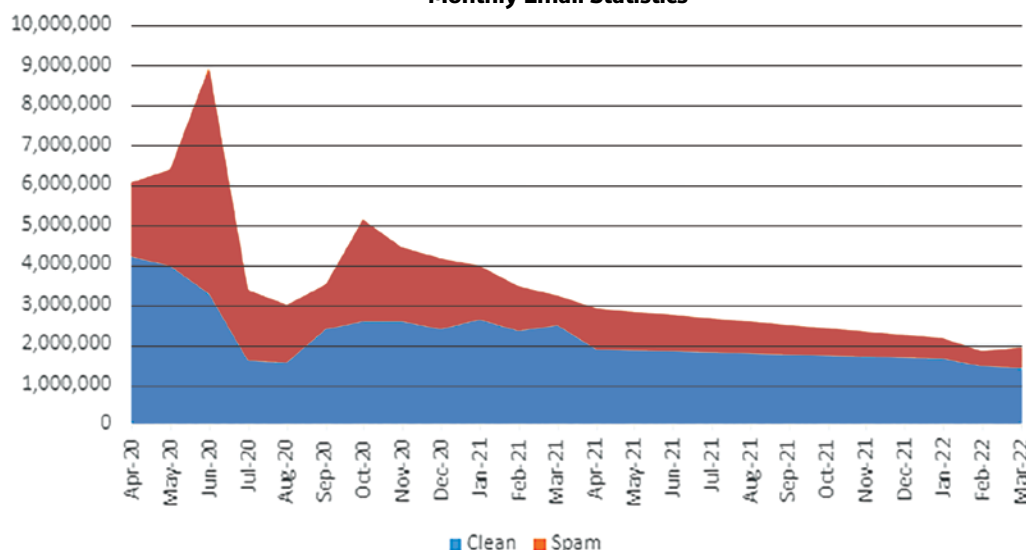
- **Anti-spam/Anti-virus Email Filtering Service**—All email accounts hosted by MERLIN are scanned for spam and viruses. This service is also available for an annual fee to any school division that runs and maintains its own email server.

Spam continues to be alive and well, albeit in lower volumes than the Agency has seen in past years. Highly targeted phishing campaigns are the top concern as spammers are utilizing improved techniques for evading IP reputation-based and traditional anti-virus tools. MERLIN continues to use new and novel methods to keep users from receiving unwanted or malicious email.

- **Distributed Denial of Service (DDoS) Mitigation Service**—All Internet traffic through MERLIN is protected from DDoS attacks. MERLIN currently sees about 100 Distributed Denial of Service (DDoS) attacks per month. MERLIN leverages a DDoS Mitigation Service from our Internet Service Provider which continues to be very effective. We also have expanded protection to routers within our network for reporting and blocking of DDoS attacks.
- **Web Content Filtering**—MERLIN provides blocking or filtering of undesirable Internet web content. Currently 48 educational organizations are using this service.
- **Vulnerability, Anti-virus, and Spyware Protection**—MERLIN provides protection from known vulnerabilities, spyware and viruses by utilizing a Palo Alto Networks firewall. Non-hosted firewall client traffic passes through this firewall and is:
 - Scanned for client and server-based vulnerabilities - Vulnerabilities classified as critical, high, and medium severity are automatically blocked.
 - Scanned for viruses—Web, FTP, IMAP, POP3, SMTP, and SMB traffic is analyzed. Traffic containing viruses is blocked and the connections are reset.
 - Examined for spyware—Spyware categorized and classified as critical, high, and medium severity are automatically blocked and connections are reset.

MERLIN also makes use of Palo Alto's Wildfire service for all client traffic. This service uploads unknown executables and portable apps to its Cloud sandbox. Files are executed and all

Monthly Email Statistics



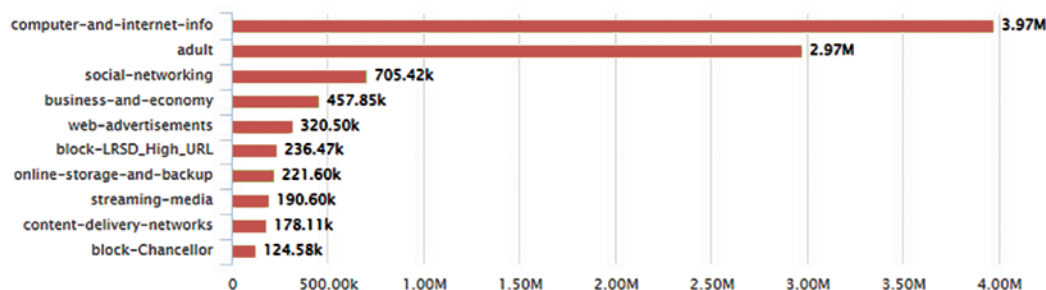
This graph illustrates the volume of email and spam that the Agency has processed.

activity is monitored to determine if the file contains malware or behaves in a malicious way. Future downloads of any files identified as malicious are blocked.

- **MERLIN's Hosted Firewall Service** is based on a Palo Alto Networks firewall and currently serves 31 (up from 29) MERLIN clients. It includes all the protection of MERLIN's vulnerability protection service and provides the following additional benefits:

- Layer 7 next-generation firewall technology which provides application visibility. Clients can identify and classify application traffic from applications such as Facebook, YouTube, Dropbox, iTunes, Twitter, FaceTime, Pinterest, Instagram, BitTorrent, and Netflix.
- User identification through the firewall's User ID functionality. This connects to a division's user directory and provides the ability to apply application control rules to the appropriate users and groups.
- Application control by user or group which provides flexibility on how, when, and to what destinations they are allowed. Applications can be blocked, allowed, or limited based on the application's category and the educational need.

- Visibility of internal device addresses which increases the client's ability to track down and identify the source of malicious traffic and unwanted applications.
- Content filtering by user or group allowing for multiple unique content filtering profiles within a single school or site.
- Secure VPN with MFA access to internal systems for staff.
- Advanced vulnerability, anti-virus, and spyware protection
- **CIRA** has leveraged their expertise in DNS to offer a suite of cybersecurity services to protect Manitoba educational organizations from cyberattacks. These include Anycast DNS infrastructure, DNS Firewall (enterprise level protection) and Cybersecurity Awareness training platform.



This graph illustrates the URL filtering blocks by category in the last 24 hours as of June 29, 2022 12:00 PM.

TECHNICAL TRAINING

Customized training for school divisions helps them sustain operations and enhance their own technology infrastructures.

Due to the pandemic, MERLIN was not able to offer in house technical training to clients. MERLIN did successfully reach a 25+ discount pricing for the education community on a subscription basis through StormWind Studios that offers a wide array of technical online courses. This includes different formats and benefits:

- Live Virtual Training—classes featuring a live instructor
- On-Demand Video Training—Courses feature a recording of the class that can be consumed on-demand
- Course format: courses are divided up to smaller manageable sections
- Labs: unlimited attempts
- Course Materials: many courses include books, study guides, and supplemental materials
- Practice Exams: unlimited attempts
- Mentorship: students have 1on1 access to their instructor for questions

GENERAL SUPPORT TO THE EDUCATION COMMUNITY

As part of its service portfolio, MERLIN provides general support to the education community, facilitating communication and collaboration and ensuring that the Agency is on track in its service provision. Some of the areas in which MERLIN provides support include:

PARTNERSHIPS / AFFILIATIONS

Educational Organizations

- Manitoba Association of School Superintendents (MASS)
- Manitoba Association of School Business Officials (MASBO)
- Manitoba Association of Education Technology Leaders (MAETL)
- Manitoba First Nations Education Resource Center (MFNERC)
- Manitoba Association of Computing Educators (ManACE)

Information Technology Organizations

- CANARIE
- Manitoba's Regional Advanced Research and Education Network (MRnet)
- The Research and Education Networks Information and Analysis (REN-ISAC)
- Manitoba Internet Exchange (MBIX)
- Canadian Cyber Defense Challenge (CCDC)
- Defence Research and Development Canada
- Canadian Centre for Cyber Security
- Internet Society Manitoba Chapter

EDUCATION TECHNOLOGY SUPPORT

The Agency provides technical support on educational concerns ranging from Internet access to network and computer hardware issues responding to a large volume of inquiries.

MERLIN has created a mailing list that schools and post-secondary institutions can subscribe to, to view any planned and unplanned network outages and events along with a Twitter account to communicate these updates.

PRESENTATIONS, MEETINGS AND COMMITTEE SUPPORT

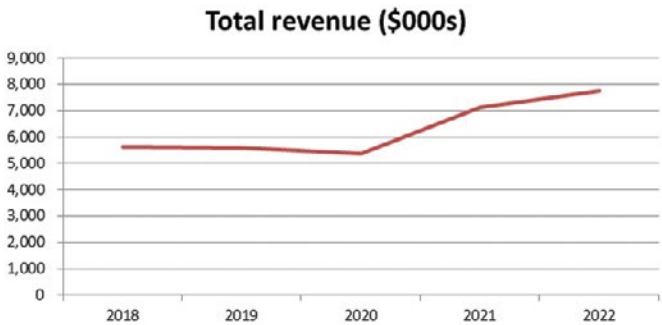
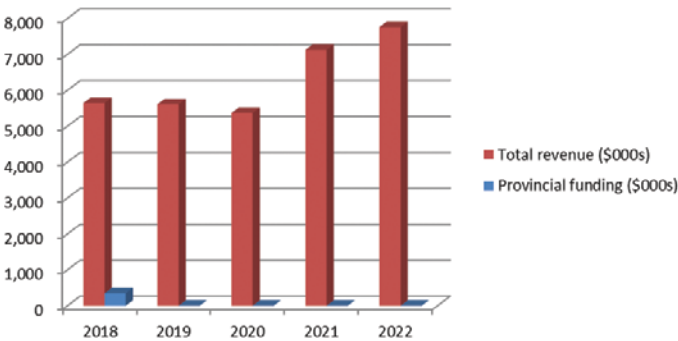
Educational Activities

In addition to MERLIN's important role in supporting and providing technology services, MERLIN is also asked to participate on Advisory committees and support educational technology activities (assist in planning conferences, deliver IT presentations and workshops). Some of the events that MERLIN participated in include:

- **MAETL**—Manitoba Association of Educational Technology Leaders—This IT group is committed to supporting and promoting the objectives of its members in the use of ICT in teaching and learning as an integral part of curriculum delivery in the Province of Manitoba. Membership is open to all school divisions and partners with educational organizations (Department of Education, ManACE, MERLIN, etc.) MERLIN staff regularly attend monthly meetings.
- **MRnet**—Manitoba's Regional Advanced Research and Education Network—It is Manitoba's connection for all post-secondary institutions, research centers and K-12 schools to the global high-speed education and research network through the CANARIE Network. MERLIN staff participate on the Executive Committee.
- **RTW** (Riding the Wave of Change Annual Technology Conference)—MERLIN staff participate on the Planning Committee.
- **CCDC** (Canadian Cyber Defense Challenge)—This is a non-profit organization designed to promote and educate awareness of Cyber security.

FINANCIAL ANALYSIS

Clients value MERLIN’s services and have increased the use of MERLIN’s service offerings over the last five years. This has had a favorable financial impact as the Agency is now self-sufficient and no longer requires provincial funding.



FUTURE OUTLOOK

Overall, MERLIN’s proposal is to continue to forecast increased demand for the FY 2022/23 in the following, but not limited to, technology services that the Agency delivers to the education community:

- Expansion of the managed firewall service - The service makes available a modern, managed firewall platform to participating customers allowing them to more effectively manage IT security within their organizations at a reduced cost. MERLIN provides central management of the platform to ensure that it evolves to meet ongoing requirements.
- Expansion of the Infrastructure as a Service (IaaS)– MERLIN runs virtual servers within the Agency’s infrastructure for school divisions and post-secondary institutions.
- Expansion of MERLIN’s network and Internet service to accommodate the 50% annual growth in demand from our clients.
- Expansion of shared services with post-secondary clients.
- Expansion of the Manitoba School Consortium Purchasing Programs for educational licenses (assumed after the closure of the Manitoba Learning Resource Centre). These educational classroom resources are essential for successful student learning. These K-12 student and teacher resources cover subject areas in math, literacy, and science.
- Expansion of digital security products to our educational customers. MFA (Multi Factor Authentication) options are being provided by MERLIN to customers to meet their insurance company requirements.

Management's Responsibility for Financial Reporting

The accompanying financial statements are the responsibility of the management of the Manitoba Education, Research and Learning Information Networks (the "Agency") and have been prepared in accordance with Canadian public sector accounting standards. In management's opinion, the financial statements have been properly prepared within reasonable limits of materiality, incorporating management's best judgment regarding all necessary estimates and all other data available to the date of the audit report.

Management maintains internal controls to properly safeguard the assets and to provide reasonable assurance that the books and records from which the financial statements are derived accurately reflect all transactions and that established policies and procedures are followed.

The responsibility of the external audit is to express an independent opinion on whether the financial statements of the Agency are fairly represented in accordance with Canadian public sector accounting standards. The Independent Auditor's Report outlines the scope of the audit examination and provides the audit opinion.

On behalf of Management of the Agency:

Original Signed by:

Kiley Bender, Acting Chief Operating Officer

Original Signed by:

Rhonda Williams, Controller



Tel.: 204 956 7200
Fax.: 204 926 7201
Toll Free: 800 268 3337
www.bdo.ca

BDO Canada LLP
201 Portage Avenue - 26th Floor
Winnipeg MB R3B 3K6 Canada

Independent Auditor's Report

TO THE SPECIAL OPERATING AGENCIES FINANCING AUTHORITY

OPINION

We have audited the financial statements of **Manitoba Education, Research and Learning Information Networks, An Agency of the Government of Manitoba** (the "Agency"), which comprise the statement of financial position as at March 31, 2022, and the statements of operations, change in its net financial asset, and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Agency as at March 31, 2022, and its results of operations, its change in net financial asset and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

BASIS FOR OPINION

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Agency in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

RESPONSIBILITIES OF MANAGEMENT AND THOSE CHARGED WITH GOVERNANCE FOR THE FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Agency's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Agency or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Agency's financial reporting process.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect



a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for expressing an opinion on the effectiveness of the Agency's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Agency's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Agency to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Original Signed by: BDO Canada LLP

Chartered Professional Accountants

Winnipeg, Manitoba

June 23, 2022

Financial Statements

Statement of Financial Position

	(In Thousands)	
	March 31	March 31
	2022	2021
Financial Assets		
Cash and cash equivalents	\$ 1,527	\$ 1,724
Accounts receivable	440	271
Portfolio investments	47	47
	<u>2,014</u>	<u>2,042</u>
Liabilities		
Accounts payable and accruals	290	305
Unearned revenue	1,533	1,395
Employee future benefits (Note 6)	134	162
	<u>1,957</u>	<u>1,862</u>
Net financial asset	<u>57</u>	<u>180</u>
Non-financial Assets		
Prepaid expenses	799	415
Tangible capital assets (Note 7)	735	726
	<u>1,534</u>	<u>1,141</u>
Accumulated surplus	<u>\$ 1,591</u>	<u>\$ 1,321</u>

Commitment (Note 9)

The accompanying notes are an integral part of these financial statements.

Statement of Operations

(In Thousands)

For the year ended March 31

	2022	2022	2021
	Budget	Actual	Actual
Revenue			
Fee for goods and services	\$ 5,708	\$ 7,742	\$ 7,101
Other	3	14	21
	5,711	7,755	7,122
Expense			
Advertising and promotion	18	7	6
Amortization of tangible capital assets	350	338	338
Bad debt	-	-	7
Audit and legal fees	14	11	9
Communication and bandwidth	249	306	302
Cost of purchases for resale	2,393	3,846	3,526
Course delivery	50	4	29
Equipment repair and maintenance	365	413	376
Manitoba Network connections	794	782	827
Occupancy	118	113	107
Office and miscellaneous	66	83	83
Professional development	20	10	-
Purchased services	-	281	29
Salaries and benefits	1,254	1,286	1,194
Travel	20	5	4
	5,711	7,485	6,837
Annual surplus	-	270	285
Accumulated surplus , beginning of year	1,036	1,321	1,036
Accumulated surplus , end of year	\$ 1,036	\$ 1,591	\$ 1,321

The accompanying notes are an integral part of these financial statements.

Statement of Change in Net Financial Asset

(In Thousands)

For the year ended March 31	2022 Budget	2022 Actual	2021 Actual
Annual surplus	\$ -	\$ 270	\$ 285
Tangible Capital Assets			
Acquisition of tangible capital assets	(400)	(347)	(380)
Amortization of tangible capital assets	350	338	338
Net acquisition of tangible capital assets	(50)	(9)	(42)
Other Non-financial Assets			
(Increase) decrease in prepaid expenses	-	(384)	179
Decrease in net financial asset (net debt)	(50)	(123)	422
Net financial asset (net debt), beginning of year	(292)	180	(242)
Net financial asset (net debt), end of year	\$ (342)	\$ 57	\$ 180

Statement of Cash Flows

(In Thousands)

For the year ended March 31	2022	2021
Cash provided by (applied to):		
Operating Activities		
Annual surplus	\$ 270	\$ 285
Amortization of tangible capital assets	338	338
	608	623
Changes in:		
Accounts receivable	(169)	297
Accounts payable and accruals	(15)	(43)
Unearned revenue	138	23
Employee future benefits	(28)	17
Prepaid expenses	(384)	179
Cash provided by operating activities	150	1,096
Capital Activities		
Acquisition of tangible capital assets	(347)	(380)
Increase (decrease) in cash and cash equivalents	(197)	716
Cash and cash equivalents, beginning of year	1,724	1,008
Cash and cash equivalents, end of year	\$ 1,527	\$ 1,724

The accompanying notes are an integral part of these financial statements.

Notes to Financial Statements

(In Thousands)

For the year ended March 31, 2022

1. Nature of Organization

Effective April 1, 1995, Manitoba Education, Research and Learning Information Networks (the "Agency") was designated as a Special Operating Agency pursuant to The Special Operating Agencies Financing Authority Act, Cap S185, C.C.S.M. and operates under a charter approved by the Lieutenant Governor in Council. The Agency operates as part of Labour, Consumer Protection and Government Services under the general direction of the Assistant Deputy Minister.

The Agency is financed through the Special Operating Agencies Financing Authority (SOAFA). SOAFA has the mandate to hold and acquire assets required for and resulting from the Agency's operations. It finances the Agency through repayable loans and working capital advances. This financial framework enables the Agency to operate in a business like manner according to public policy expectations.

A Management Agreement between SOAFA and the Minister of Labour, Consumer Protection and Government Services assigns responsibility to the Agency to manage and account for Agency related assets and operations on behalf of SOAFA.

The Agency remains bound by relevant legislation and regulations. It is also bound by administrative policy except where specific exemptions have been provided in its charter in order to meet business objectives.

2. Basis of Accounting

The financial statements are prepared in accordance with Canadian generally accepted accounting principles for the public sector as recommended by the Public Sector Accounting Board.

3. Significant Accounting Policies

A. REVENUE

(i) Government Transfers

Government transfers without eligibility criteria or stipulations are recognized as revenue when the transfer is authorized.

Government transfers with eligibility criteria but without stipulations are recognized as revenue when the transfer is authorized and all eligibility criteria have been met.

Government transfers with or without eligibility criteria but with stipulations are recognized as

revenue in the period the transfer is authorized and all eligibility criteria have been met, except when and to the extent that the transfer gives rise to a liability.

(ii) Exchange Transactions

Product revenue is recognized when the goods are shipped or delivered and title and risk of loss pass to the customer. Service revenue is recognized when the rendering of services is completed or substantially completed.

(iii) Other Revenue

All other revenues are recorded on an accrual basis.

B. EXPENSES

(i) Accrual Accounting

All expenses incurred for goods and services are recorded on an accrual basis.

(ii) Government Transfers

Government transfers are recognized as expenses in the period in which the transfers are authorized and all eligibility criteria have been met.

C. FINANCIAL ASSETS

(i) Portfolio Investments

Portfolio investments are short term deposits with original maturities of more than three months. These investments are recognized at cost.

D. LIABILITIES

Liabilities are present obligations as a result of transactions and events occurring prior to the end of the fiscal year. The settlement of the liabilities will result in the future transfer or use of assets or other form of settlement. Liabilities are recorded at the estimated amount ultimately payable.

E. NON FINANCIAL ASSETS

Non financial assets do not normally provide resources to discharge liabilities of the Agency. These assets are normally employed to provide future services.

(i) Prepaid Expenses

Prepaid expenses are payments of goods or services which will provide economic benefit in future periods. The prepaid amount is recognized as an expense in the year the goods or services are consumed.

(i) Tangible Capital Assets

Tangible capital assets are recognized at cost. Cost includes the purchase price as well as other acquisition costs. The cost of tangible capital assets, less any residual are amortized over their estimated useful lives as follows:

Computer hardware	25%, straight line
Computer software	25%, straight line
Equipment and furniture	20%, straight line
Leaseholds	20%, straight line

F. MEASUREMENT UNCERTAINTY

The preparation of financial statements in accordance with Canadian public sector accounting standards requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingencies at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from management's best estimates as additional information becomes available in the future.

4. Financial Instruments and Financial Risk Management

MEASUREMENT

Financial instruments are classified into one of the two measurement categories: (a) fair value; or (b) cost or amortized cost.

The Agency records its financial assets at cost, which include cash and cash equivalents, accounts receivable and portfolio investments. The Agency also records its financial liabilities at cost, which include accounts payable.

The Agency did not incur any remeasurement gains and losses during the years ended March 31, 2022 and 2021.

FINANCIAL RISK MANAGEMENT — OVERVIEW

The Agency has exposure to the following risks from its use of financial instruments: credit risk; liquidity risk; market risk; interest risk; and foreign currency risk.

CREDIT RISK

Credit risk is the risk that one party to a financial instrument fails to discharge an obligation and causes financial loss to another party. Financial instruments which potentially subject the Agency to credit risk consist principally of cash and cash equivalents, accounts receivable, and portfolio investments.

The maximum exposure of the Agency to credit risk at March 31 is:

	2022	2021
Cash and cash equivalents	\$ 1,527	\$ 1,724
Accounts receivable	440	271
Portfolio investments	47	47
Maximum exposure to credit risk	\$ 2,014	\$ 2,042

Cash and cash equivalents, and portfolio investments: The Agency is not exposed to significant credit risk as these amounts are held by the Minister of Finance.

Accounts receivable: The Agency is not exposed to significant credit risk as the balance is due from a large client base, and payment in full is typically collected when it is due. The Agency manages this credit risk through close monitoring of overdue accounts.

The Agency establishes an allowance for doubtful accounts that represents its estimate of potential credit losses. The allowance for doubtful accounts is based on management's estimates and assumptions regarding current market conditions, customer analysis and historical payment trends. These factors are considered when determining whether past due accounts are allowed for or written off.

The allowance for doubtful accounts balance at 2022 was \$NIL (\$7 in 2021).

LIQUIDITY RISK

Liquidity risk is the risk that the Agency will not be able to meet its financial obligations as they come due.

The Agency manages liquidity risk by maintaining adequate cash balances and by review from the Province of Manitoba to ensure adequate funding will be received to meet the obligations.

MARKET RISK

Market risk is the risk that changes in market prices, such as interest rates and foreign exchange rates, will affect the Agency's income or the fair values of its financial instruments.

INTEREST RATE RISK

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The interest rate exposure relates to funds on deposit, and portfolio investments.

The interest rate risk on funds on deposit is considered to be low because of their short term nature. The interest rate risk on portfolio investments is considered low as the original deposits are reinvested at rates for investments with similar terms and conditions.

FOREIGN CURRENCY RISK

Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Agency is not exposed to significant foreign currency risk as it does not have any financial instruments denominated in foreign currency.

5. Cash and Cash Equivalents

The Agency invests all surplus cash in short term deposits with the Province of Manitoba, which are made up of term deposits with maturities of up to three months.

6. Employee Future Benefits

	2022	2021
Severance benefits	\$ 118	\$ 143
Sick pay benefits	16	19
	\$ 134	\$ 162

PENSION BENEFITS

Employees of the Agency are eligible for pension benefits in accordance with the provisions of the Civil Service Superannuation Act (CSSA), administered by the Civil Service Superannuation Board (CSSB). The CSSA established a defined benefit plan to provide benefits to employees of the Manitoba Civil Service and to participating agencies of the Government, including the Manitoba Education, Research & Learning Information Network, through the Civil Service Superannuation Fund (CSSF).

Pursuant to an agreement with the Province of Manitoba, the Agency is required to pay to the Province an amount equal to the current pension contributions of their employees. The amount paid for 2022 was \$78 (\$74 in 2021). Under this agreement, the pension liability is the responsibility of the Province, and the Agency has no further pension liability.

SEVERANCE BENEFITS

Effective April 1, 1998, the Agency began recording accumulated severance pay benefits for its employees. The amount of severance pay obligations is based on actuarial calculations. The periodic actuarial valuations of these liabilities may determine that adjustments are needed to the actuarial calculations when actual experience is different from that expected and/or because of changes in actuarial assumptions used. The resulting actuarial gains or losses are amortized over the expected average remaining service life of the related employee group.

An actuarial report was completed for the severance pay liability as of March 31, 2020. The report provides a formula to update the liability on an annual basis. The Agency's actuarially determined net liability for accounting purposes as at March 31, 2022 was \$118 (\$143 in 2021), with an actuarial adjustment being amortized over the 15 year expected average remaining service life (EARS�) of the employee group.

Significant long-term actuarial assumptions used in the March 31, 2020 valuation, and in the determination of the

March 31, 2022 present value of the accrued severance benefit obligation were:

Annual rate of return:	
Discount rate	3.20%
Annual salary increase rates:	
Annual productivity increase	1.00%
Annual general salary increase	2.50%
	3.50%

The severance benefit liability at March 31 includes to following components:

	2022	2021
Accrued benefit liability		
Balance, beginning of year	\$ 212	\$ 159
Actuarial loss	-	40
Benefits accrued	7	7
Interest on accrued benefits	7	6
Severance paid	(46)	-
Balance, end of year	180	212
Less unamortized actuarial (losses) gains	(62)	(69)
Severance benefit liability	\$ 118	\$ 143

The total expenses related to severance benefits at March 31 includes the following components:

	2022	2021
Interest on obligation	\$ 7	\$ 6
Current period benefit cost	7	7
Amortization of actuarial losses over EARS�	7	4
Total expense related to severance benefit	\$ 21	\$ 17

SICK PAY BENEFITS

The Agency provides sick leave benefits for employees that accumulate but do not vest. The accrued benefit obligation related to sick leave entitlement earned by employees is determined using a valuation model developed by an actuary. The valuation is based on employee demographics, sick leave usage and actuarial assumptions. These assumptions include a 3.20% discount rate and a 3.75% annual salary increase.

7. Tangible Capital Assets

	2022			
	Opening Balance	Additions	Disposals	Closing Balance
Cost				
Computer hardware	\$ 2,676	\$ 347	\$ (575)	\$ 2,448
Computer software	62	-	-	62
Equipment and furniture	48	-	-	48
Leaseholds	20	-	-	20
	2,806	347	(575)	2,578
Accumulated Amortization				
Computer hardware	1,956	334	(575)	1,715
Computer software	58	4	-	62
Equipment and furniture	46	-	-	46
Leaseholds	20	-	-	20
	2,080	338	(575)	1,843
Net book value	\$ 726	\$ 9	\$ -	\$ 735
				2021
	Opening Balance	Additions	Disposals	Closing Balance
Cost				
Computer hardware	\$ 2,296	\$ 380	\$ -	\$ 2,676
Computer software	62	-	-	62
Equipment and furniture	48	-	-	48
Leaseholds	20	-	-	20
	2,426	380	-	2,806
Accumulated Amortization				
Computer hardware	1,624	332	-	1,956
Computer software	52	6	-	58
Equipment and furniture	46	-	-	46
Leaseholds	20	-	-	20
	1,742	338	-	2,080
Net book value	\$ 684	\$ 42	\$ -	\$ 726

8. Designated Assets

The Agency has allocated \$47 (\$47 in 2021) of its portfolio investments as designated assets for cash received from the Province of Manitoba for the vacation entitlements earned by employees of the Agency prior to its designation as an SOA and the severance pay benefits accumulated to March 31, 1998 for certain of their employees. This amount is held in an interest bearing account until the cash is required to discharge the related liabilities. Any unused balance is reinvested annually.

2023	\$ 455
2024	455
2025	455
2026	455
2027	455

9. Commitments

The Agency has entered into a lease agreement for the rental of the building with The University of Manitoba until March 31, 2027. The estimated minimum lease payments for each of the next five years are as follows:

10 Uncertainty Related to COVID-19 Pandemic

The impact of COVID-19 in Canada and on the global economy continues. There could be a further impact on the Agency and its major customers, suppliers, and related government agencies that could impact the timing and amounts realized on the Agency's assets and future profitability. Management is actively monitoring the effect on its financial condition, liquidity, operations, and workforce. The Agency is not able to fully estimate the effects of the COVID-19 outbreak on its results of operations, financial condition, or liquidity at this time.



Manitoba Education Research and Learning Information Networks (MERLIN), a Special Operating Agency of the Province of Manitoba

100-135 Innovation Drive | Smartpark University of Manitoba | Winnipeg, Manitoba R3T 6A8

Phone: 204-977-6800 | Toll-free: 1-800-430-6404

merlin.mb.ca

