

ICT Action Plan 2022-2025 - Year 2 Update

Department/Portfolio: Information, Communication Technology
Senior Staff Lead(s): Renald Cousineau, Superintendent of Education - Program Services Peter Burnette, System Principal for Experiential Learning, K-12 Doug Fiebig, Manager of Information and Communication Technologies (ICT) Department
<p>Growth Target: The following growth targets (qualitative and/or quantitative) have been established for the system:</p> <ul style="list-style-type: none"> ● implement an electronic portal for parents/guardians in order to augment two-way communication between staff and parents/guardians whether in-person at school or on-line at home; ● ensure equity of access by eliminating barriers to the range of high-quality programs and services offered across the system, through technological integration, in order to meet the needs of all learners; and, ● leverage innovative technologies to accelerate and deepen learning, as described in the '<i>Inspired Learning</i>' resource, both in-person and on-line. <p><i>To lower the ratio of devices to students from approximately 2:1 to 1:1 for all students in Grades 7-12 (device access ratio) in preparation for the upcoming school year. (Students in Kindergarten and Grades 1-6 will continue to benefit from a minimum 3:1 device access ratio.)</i></p> <p>This indicator will facilitate the continued, seamless integration of technologies into teaching and learning environments, including assessment and instructional practices of the future.</p> <p><i>To ensure the District's information assets are properly secured through the procurement and implementation of various cyber security tools, solutions and platforms.</i></p> <p>This indicator will be integral to elevating the organization's security posture by assessing risks and providing appropriate security solutions, moving forward.</p>

Areas of Focus	Responsibility Centre(s)	Timelines	Resources Required	Notes
Cyber Security	<p>Allocate resources to cybersecurity through a reorganization of duties, additional resources and/or third party contracting</p> <p>Involve ICT in the procurement process, using ICT knowledge and expertise to evaluate third party security measures and system configuration during the selection process;</p>	2022	<p>ICT Security Analyst Position</p> <p>Hired Andrew Lebert effective August 15, 2022</p>	<p>Pricing based on recent job postings by Ottawa-Carleton District School Board and Waterloo Catholic District School Board</p> <p>Recommendation from Eastern Ontario Cyber Security Audit</p>
Cyber Security	Develop and implement cybersecurity policies and procedures, with assistance from the Educational Computing Network of Ontario (ECNO).	2022	<p>Educational Computing Network of Ontario (ECNO) Shared Technology Services</p> <p>RISA Project - \$6696.75</p> <p>Eastern Ontario has new Regional Information</p>	ECNO is currently working on the development of cybersecurity policies and procedures for all ENCO school board/district members

			<p>Security Analyst - Mark CioBanu</p> <p>ECNO Security Services (PISO) - \$1500</p> <p>ECNO has replaced Provincial Information Security Officer (PISO) position with Director of Security Services (DSS). Chris Dale has been appointed.</p>	<p>Recommendation from Eastern Ontario Cyber Security Audit</p>
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K-12 Cyber Protection Strategy (CPS)

- RCDSB was one of seven school districts invited to participate in K-12 Cyber Protection (CPS) initiative - Accepted
- One of the key goals of the K-12 Cyber Protection Strategy (CPS) is to collectively improve cyber resilience in Ontario school boards and maintain newly achieved levels of resilience, while adapting to the changing cyber landscape and evolutions in digital education.
- The following are three tenets driving the work:
 - Establish / foster a collaboration force across the sector through partnerships with EDU, school boards, Ontario Government's Cyber Security Division, ECNO (and anyone with a sword).
 - Establish a common vision for cyber protection, with a cyber threat aware community, self-defence and machine response (human-automated) - recognizing constraints (e.g., financial, resourcing and skill shortages).
 - Adopt a layered defence approach:
 - **Stage 1** - Achieve cyber protection foundations, defined by the **Cyber Security Wellness Architecture (CSWA)**.
 - **Stage 2** - Adopt an adaptive plan and approach to maintaining a solid cyber protection baseline as the threat landscape evolves, defined by **Cyber Rails (CRP)** – *prevent drifting back to an unsecured state*.
 - **Stage 3** - Move towards human-automated threat detection and response (24x7x365), with **Cyber Hub**, fostering collective cyber protection learning among all school boards.

Cyber Security Wellness Architecture (CSWA)	Acquire assistance (~10 months)	2023-2024	Funding to be provided via K-12 Cyber Protection Strategy (CPS)	
Cyber Security Wellness Architecture (CSWA)	Identify critical and essential asset list	2023-2024	Funding to be provided via K-12 Cyber Protection Strategy (CPS) if required	
Cyber Security Wellness Architecture (CSWA)	Implement Multi-Factor Authentication (MFA)	2022-2024	Additional funding to be provided via K-12 Cyber Protection Strategy (CPS) if required	<p>Multi-factor authentication is an electronic authentication method in which a user is granted access to a website or application only after successfully presenting two or more pieces of evidence to an authentication mechanism</p> <p>Completed:</p> <ul style="list-style-type: none"> ● Exec ● Board Office Non-Union <p>Next Steps:</p> <ul style="list-style-type: none"> ● Principals / Vice-Principals ● Unionized Admin Staff (School and Central)

				<ul style="list-style-type: none"> ● Educators ● All others
Cyber Security Wellness Architecture (CSWA)	Implement PAM for privileged users	2023-2024	Year One Funding to be provided via K-12 Cyber Protection Strategy (CPS)	Privileged access management (PAM) is the combination of tools and technology used to secure, control and monitor access to an organization's critical information and resources.
Cyber Security Wellness Architecture (CSWA)	Transition Broadband Modernization Program (BMP) RA 2.0 Software-Defined Wide Area Network (SD-WAN) to BMP 3.0 Secure Access Service Edge (SASE)	2023-2024	Year One Funding to be provided via K-12 Cyber Protection Strategy (CPS)	Secure access service edge, also known as SASE (pronounced sassy), is a cloud architecture model that bundles together network and cloud-native security technologies and delivers them as a single cloud service. SASE lets organizations unify their network and security tools

				in a single management console.
Cyber Security Wellness Architecture (CSWA)	Implement a Network Detection and Response (NDR) solution	2023-2024	Year One Funding to be provided via K-12 Cyber Protection Strategy (CPS)	An NDR solution continuously scans our network for signs of malicious actors and suspicious data. As soon as a potential problem is discovered, the NDR system deploys network forensics and initiates a response - a counterattack - and begins repairing the damage.
Cyber Security Wellness Architecture (CSWA)	Implement an Endpoint Detection and Response (EDR) solution	2023-2024	Year One Funding to be provided via K-12 Cyber Protection Strategy (CPS)	Endpoint detection and response refers to a solution used to detect and investigate threats on endpoints, and to eliminate threats quickly and minimize the impact of an attack.

<p>Cyber Security Wellness Architecture (CSWA)</p>	<p>Implement Vulnerability Scanning and Patching Automation solutions</p>	<p>2023-2024</p>	<p>Year One Funding to be provided via K-12 Cyber Protection Strategy (CPS)</p>	<p>Vulnerability scanning is the process of identifying security weaknesses and flaws in systems and software running on them.</p> <p>Automated patch management uses software to automate the entire patch management process. With automated patch management software, IT teams can scan and deploy necessary patches to devices without manual intervention.</p>
<p>Cyber Security Wellness Architecture (CSWA)</p>	<p>Perform platform and cloud security posture review</p>	<p>2023-2024</p>	<p>Funding to be provided via K-12 Cyber Protection Strategy (CPS)</p>	<p>Cloud security posture management tools help in the identification and remediation of risks across cloud infrastructures, including Infrastructure as a Service (IaaS), Software as a Service (SaaS), and</p>

				Platform as a Service (PaaS).
1:1 Mobile Device Deployment	Grades 7-12 1:1 school based mobile device ratio allowing students access to devices at point of learning when required	2023-2024	\$1,716,686.54 (\$940 000 taken from Accumulated Surplus - internally restricted ICT)	<p>JK-6 mobile device funding to remain based on FTE - 3:1 ratio</p> <p>\$169 per FTE</p> <p>All schools with Grade 7-12 students have now received their 1:1 Chromebooks.</p> <p>School Administrators have been provided instructions on properly deploying 1:1 Chromebooks to students whose parents/guardians have completed and submitted the Assumption of Responsibility form.</p> <p>Deployment of 1:1 Chromebooks to Grade</p>

				7-12 students is now underway.
Parent Portal	Evaluation and implementation of Parent Portal	2022-2025	To Be Determined	<p>TBD based on final product selection</p> <p>ICT review/discussion of possible Parent Portal solutions continues.</p> <p>Review and clean up of student contact records in Aspen continues. In order to implement a parent portal it is imperative to have only one record for each contact (no duplicates) to ensure secure and accurate access to the correct student. 50,000 incorrect records have now been removed or corrected.</p>
Electronic Records Management (ERM)	Implement an Electronic Records Management (ERM) system for the capture, storage,	2022-2025	To Be Determined	TBD based on final product selection

	modification and sharing of physical files within the RCDSB. Establish policies and standards for maintaining diverse types of records..			<p>Reviews of ERM systems has been completed by selection committee.</p> <p>Platform selected was Laserfiche. Successful vendor was ThinkDox.</p> <p>RCDSB is currently awaiting final quote from ThinkDox.</p>
Classroom Mobile Device Allocation	Remove all mobile devices (iPads and Chromebooks) that were either purchased by IT (no matter the purchase date) or purchased by the school and are four (4) years of age or older and deploy new mobile devices (iPads and Chromebooks).	2023-2025	<p>2023-2024 - \$530,299.50</p> <p>2024-2025 - \$496,751.39</p> <p>There will be no Classroom Mobile Allocation in 2022-2023 as we will be deploying devices for 1:1 Mobile Device Deployment</p>	Estimated cost based on 2021-2022 student body count numbers and technology pricing
Storage for Mobile Allocation Devices	Tech Tub 2.0's for housing Mobile Allocation Devices	2023-2025	<p>2023-2024 - \$47,000.00</p> <p>2024-2025 - \$45,700.00</p>	Estimated cost based on 2021-2022 student body count numbers and Tech Tub pricing

			There will be no Tech Tubs required for Classroom Mobile Allocation in 2022-2023 as the District will be deploying devices for 1:1 Mobile Device Deployment.	
Teacher/ECE Laptop Allocation	Deploy new Windows laptops to Teachers and ECE's. Deploy docking stations to connect Teacher/ECE laptops to classroom interactive whiteboards.	2022-2025	2022-2023 - \$195,727.70 Completed 2023-2024 - \$188,433.50 2024-2025 - \$232,198.70	Estimated cost based on 2021-2022 staffing numbers and technology pricing
EA Chromebook Allocation	Deploy new Chromebooks to EA's.	2022-2025	2022-2023 - \$15,539.34 Completed 2023-2024 - \$15,948.27 2024-2025 - \$20,037.57	Estimated cost based on 2021-2022 staffing numbers and technology pricing

Windows Desktop Lab (Secondary Schools Only)	Replace Windows Desktop Lab	2022-2025	2022-2023 - \$58,200.00 Completed 2023-2024 - \$29,100.00 2024-2025 - \$58,000.00	Estimated cost based on 2021-2022 technology pricing
Continuing Education Classroom Windows Devices	Replace Continuing Education Classroom Windows Laptops	2023-2024	\$67,975.15	Estimated cost based on 2021-2022 technology pricing
Storage for Continuing Education Classroom Windows Devices	Tech Tub 2.0's for housing Continuing Education Classroom Windows Devices	2023-2024	2023-2024 - \$2730.98	Estimated cost based on 2021-2022 student body count numbers and Tech Tub pricing
SMARTboard Projectors	Replace Existing SMARTboard Projectors	2023-2025	2022-2023 - \$35,000.00 Completed 2023-2024 - \$35,000.00 2024-2025 - \$35,000.00	Estimated cost based on 2021-2022 technology pricing
Principal/Vice Principal Laptops	Replace Principal/Vice Principal Laptops	2022-2023	\$76,500.00 Completed	Estimated cost based on 2021-2022 staffing

				numbers and technology pricing
Secretary Laptops	Replace Elementary, Secondary and Continuing Education Secretary Windows Laptops	2024-2025	\$80,000.00	Estimated cost based on 2021-2022 staffing numbers and technology pricing
Elementary Office Printers	Replace Elementary Office Printers	2024-2025	\$22,000.00	Estimated cost based on 2021-2022 technology pricing
Secondary Office Printers	Replace Secondary Office Printers	2022-2023	\$19,500.00 Completed	Estimated cost based on 2021-2022 technology pricing
Trustee Devices	Replace Trustee Laptops (Including Student Trustees)	2022-2023	\$20,000.00 Completed	Estimated cost based on 2021-2022 technology pricing
Director/Superintendent Devices	Replace Director and Superintendent Windows Laptops	2022-2023	\$15,000.00 Completed	Estimated cost based on 2021-2022 technology pricing
Superintendent Administrative Assistants	Replace Superintendent Administrative Windows Laptops	2022-2023	\$12,000.00 Completed	Estimated cost based on 2021-2022 technology pricing

School Support Counsellor Devices	Replace School Support Counsellor Devices	2023-2024	\$35,000.00	Estimated cost based on 2021-2022 staffing numbers and technology pricing
Disaster Recovery	Annual Disaster Recovery & Vulnerability Assessments / Penetration Testing	2022-2025	2022-2023 - \$50,000.00 Completed 2023-2024 - \$50,000.00 2024-2025 - \$50,000.00	IBM Canada K-12 Education
Disaster Recovery - Google	Disaster Recovery - Google (Backupify)	2022-2025	2022-2023 - \$15,000.00 Completed 2023-2024 - \$15,000.00 2024-2025 - \$15,000.00	
Video Conferencing	Replace/Update New Video Conferencing Equipment	2022-2025	2022-2023 - \$15,000.00 Completed 2023-2024 - \$15,000.00 2024-2025 - \$15,000.00	Estimated cost based on 2021-2022 technology pricing

eLibrary	Purchase of digital books for eLibrary	2022-2025	2022-2023 - \$12,000.00 Completed 2023-2024 - \$12,000.00 2024-2025 - \$12,000.00	RCDSB committed to minimum spend of \$6000.00 annually
Custodial Desktops	Replace all Custodial Desktops	NA	NA	Replaced in 2021-2022 school year.
Library Circulation Desktops	Replace all Library Circulation Desktops	NA	NA	Replaced in 2021-2022 school year.
Library Chromebooks	Replace mobile cart of 24 Chromebooks - 1 cart per secondary school	2023-2024	\$71,719.65	Estimated cost based on 2021-2022 technology pricing
Library Kajeet MiFi Devices	Purchase an additional 30 Kajeet MiFi Devices for a total of 10 per secondary school	2023-2024	\$16,500 (Year 1 only). \$29.500 annual renewal.	Estimated cost based on 2021-2022 technology pricing
Innovation	Funding for Innovation	2022-2025	2022-2023 - \$20,000.00 Completed 2023-2024 - \$20,000.00	

			2024-2025 - \$20,000.00	
Professional Development	Funding for Professional Development for Educators	2022-2025	2022-2023 - \$30,000.00 Completed 2023-2024 - \$30,000.00 2024-2025 - \$30,000.00	
eLearning/vLearning	Funding for eLearning/vLearning	2022-2025	2022-2023 - \$30,000.00 Completed 2023-2024 - \$30,000.00 2024-2025 - \$30,000.00	

Note: As part of the ongoing commitment to the District's measurement of progress over time, the metrics for Information and Communication Technologies (ICT) are denoted in bold font.