



The Fort La Bosse Information & Communication Technology Plan

2017 - 2020

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The Fort la Bosse Information and Communication Technology Plan.

For the 2017-18, 2018-19, 2019-20 School Years

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Thank you everyone for your help, participation and contributions.

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A. Introduction

A-1 Background

Fort La Bosse has a history of strong support for Information and Communication Technology over the last two decades. Significant in the planning process has been the direction of Manitoba Education and its various documents and initiatives over the years. Literacy with ICT, a Manitoba Education initiative in 2006 was embraced by the Division and a team of dedicated K-8 educators implemented the initiative into the K-8 grade levels. Extensive training to the division's K-8 teachers by this group aimed at infusing technology across the curriculum. In 2009, the Board moved to continue LwICT into Senior Years and today Manitoba Education is refreshing the LwICT continuum to K-12

A-2 The Planning Process

The current ICT plan is a continuous revamping of previous plans dating back to 1995. The Technology Leadership Team vigorously went through each line of the document in February 2017 and made revisions to the plan. With a robust fiber network in place, FLBSD has moved many services into the cloud. By utilizing Office 365, Clevr, Maplewood, Google Suite for Education, Bellamy, and other cloud based services the need for a solid network is extremely important. From 2013 to 2017 the divisional wireless networks have had major upgrades to support the Bring Your Own Device initiative that was completed in 2017. When considering these past developments and the future of technology over the next few years, the 2017-2020 plan was created. The ICT plan is reviewed annually by the Education-Technology Advisory Group and then presented to the board for approval.

A-3 Definition, Ministry Mandate, and Reporting Policy

To prepare students for their roles in society, Manitoba Education has identified technology, along with literacy and communication, problem solving, and human relations, as a foundation skill area to be developed in every subject area and grade (A Foundation for Excellence, 1995). Development of technology as a foundation skill area will not only enable students to use technology to learn, but will also enhance their understanding of the connections between technology, society, and the environment.”*

* (Technology As a Foundation Skill Area: A Journey Toward Information Technology Literacy, Manitoba Education & Training; 1998)

Information and Communication Technology (ICT) means the processes and tools used to send, retrieve, store, manipulate and manage information using any technology including traditional, new and emerging technologies. These include computers, printers, scanners, cameras, smart phones, wifi devices, e-readers and many other existing digital technologies and emerging ones.

In this regard, Manitoba Education published a resource for developing Literacy with Information and Communication Technology for Manitoba in 2006. The document, “A Continuum Model for Literacy with ICT (LwICT) Across the Curriculum” with an accompanying Continuum poster for the classroom is currently the provincial standard for expected K-8 student LwICT competencies. Along with this benchmark document, Manitoba Education mandated LwICT to be implemented province wide in all K-8 classrooms over a three year period (2006-7, 2007-8, and 2008-9). As part of this mandate, K-8 teachers were expected to report to parents on three competencies:

- demonstrates critical thinking with ICT to plan and gather information
- demonstrates creative thinking with ICT to produce and communicate information
- demonstrates responsibility and ethics with ICT

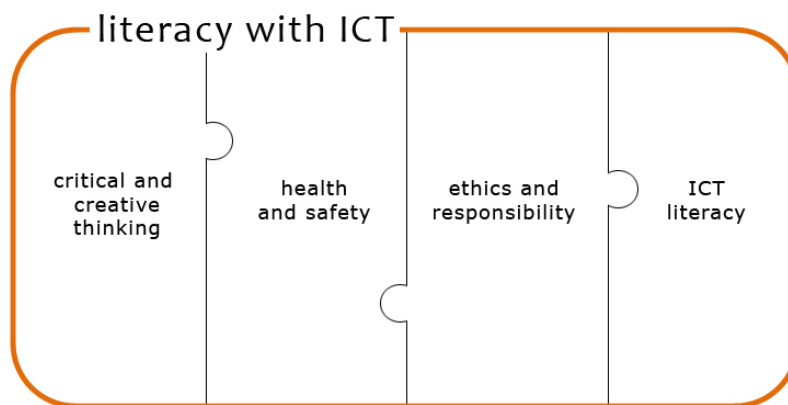
This was to be done during parent/teacher/student conferences using evidence such as

- portfolios of student work samples
- individual student profiles on the developmental continuum for Literacy with ICT*

*(Policy for Implementing Literacy with ICT Across the Curriculum, Manitoba Education, Citizenship and Youth, June 2006)

As mentioned previously, in 2009 the Board moved to ensure that LwICT would continue as a Senior Years Initiative in 2010 throughout Fort La Bosse high schools. While the reporting to parents is not a part of the board mandate, all schools are expected to follow Manitoba Education’s mandate of infusing ICTs across all curricular areas as outlined in the Department’s 2006 document, “A Continuum Model for Literacy with ICT (LwICT) Across the Curriculum”. Manitoba Education is currently refreshing and expanding the K-8 LwICT continuum to include K-12.

In 2017 the LwICT web site and supporting documents were updated to provide a refresh to the continuum. This update contains a new section that focuses on health and safety and provides a full K-12 inclusion for this continuum.



B. Vision and Purpose

B-1 Fort La Bosse School Division’s Information & Communication Technology Plan Vision Statement

Our challenge is to seek ways to enhance and improve student learning and achievement in the age of 21st Century Learning.

Our Vision is to maximize opportunities for students to use ICTs critically, creatively and responsibly in everyday activities, to enhance learning.

We see a future where our students are empowered to become interdependent, 21st Century life-long learners.

B-2 Division ICT Plan Purpose

The purpose of the Information and Communications Technology Plan is to:

- provide a vision, plan and directions for information, communication, and networking technology implementation within the Division for 2017-18; 2018-19, 2019-20
- ensure that the Division investment in information and communication technologies is focused on enhancing and improving student learning;
- provide overall guidance and direction for decision making regarding information, communication, and network technology use, infusion in curriculum, support, acquisition and administration within the Division;

- assist the Division and schools in determining budget requirements for the acquisition and implementation of information and communication technologies;
- ensure that the Division and schools maximize their technology investments;
- provide an overall framework for the development of school Information & Communication Technologies Plans; and
- comply with the information, communication, and network technology planning recommendations of Manitoba Education.

B-3 ICT Plan Goals

To achieve our Technology Vision and Purpose, seven goals are identified:

Goal One: Student Learning

All students will have equitable access to ICTs so they may acquire the skills and achieve the outcomes outlined in Manitoba Education's Literacy with ICT (LwICT) continuum.

Goal Two: Staff Development and Curriculum Infusion

All teachers and other staff will have access to and use ICTs to enhance and improve instruction and to assist them with job related tasks.

Goal Three: Administrative Support

All schools and division departments will use ICTs to support efficient, effective and secure management of information.

Goal Four: Technology Infrastructure Support

Division and on-site technical support will be provided to assist schools and division departments with ICT support, maintenance, implementation and research.

Goal Five: Operations Support

The Maintenance and Transportation departments will use ICTs to efficiently and effectively manage operations.

Goal Six: Management, Planning and Partnerships

The Division will manage the ICT Plan to maximize the educational impact of information technology investments in an effective, efficient, and systematic manner using appropriate management, planning, partnership and collaborative actions.

Goal Seven: Research and Development

The Division recognizes the need to stay current on research related to the impact of technology on learning and teaching. All staff need to stay abreast of new developments that have the greatest impact on students.

C. Plan Goals and Actions

For the implementation of the ICT Plan to happen a number of steps need to be identified and supported by all parties. The plan clearly outlines the individual goals, related actions, and timelines for implementation. In addition the personnel responsible for each action are identified in the pages that follow.

Goal One: Student Learning

All students will have equitable access to ICTs so they may acquire the skills and achieve the outcomes outlined in Manitoba Education's Literacy with ICT (LwICT) continuum, to develop, enhance and improve K-12 LwICT student learning.

Student Learning is the primary focus of our ICT Plan. All other goals support this primary goal. To participate and make informed decisions in today’s world, a global citizen requires ICT literacy skills that include the ability to gather process and manipulate data. These skills are now as essential as traditional numeracy and literacy in modern life. As a result, ICTs will be integrated into all subject areas and used as tools to enhance and improve the education of each student and not taught as a separate subject across curriculum. The supporting ICT skills students require are outlined on the back of Manitoba Education’s Literacy with ICT poster and found online at: <http://www.edu.gov.mb.ca/k12/tech/lict/index.html>

To make ICTs viable tools for learning, all students, including students with disabilities, will have easy and convenient access to a computer, software applications and other ICTs. While computer labs can make effective use of equipment and be very valuable in the teaching of specific skills, computer labs should not be the only access to information technologies for students. A variety of spaces and groupings; such as the library, classrooms and other learning areas; will be structured so that information technology becomes a natural and integrated component of the learning process for all students.

	ACTION	WHO	WHAT	WHEN
1.1	Maintain Manitoba Education’s Literacy with ICT initiative at K-12	Schools ICT Coordinator	K-12 LwICT	On-going
1.2	Students will be provided with differentiated Instruction to provide equitable and appropriate ICTs.	Student Services Coordinator, ICT Coordinator, & Schools	Provide equitable and appropriate technology	On-going
1.3	Support ongoing development and implementation of Learning Management Systems in our schools.	CIA Coordinator, ICT Coordinator Schools	Support development of learning management systems	On-going
1.4	The Division will support BYOD in grades 4-12	Sr. Admin, Schools, ICT Coordinator Sr. Techs	BYOD	On-going
1.5	The Division will support it’s collegiates with a Video Conferencing capacity to enhance equity for its rural students.	Sr. Admin ICT Coordinator Techs	Video Conferencing	On-going

Goal Two: Staff Development and Curriculum Infusion

All teachers and other staff will have access to and use ICTs to enhance and improve instruction and to assist them with job related tasks.

Research and experience have shown that it takes time for teachers and staff to adopt new ICT’s. The following Adoption Model diagram is a representation of this adoption growth.



In planning for staff in servicing, the implications of the Adoption Model must be considered. There are three

transitions where staff may need support through in-service and training opportunities. The activities at each transition must be designed to nurture staff growth toward the next phase of adoption.

Time is required for staff to become skilled and knowledgeable users of ICT's. In the case of teachers, research shows that it can take between 3 - 7 years to progress from the 'entry' level to the 'Mature Adoption' level.

	ACTIONS	WHO	WHAT	WHEN
2.1	Provide PD opportunities for teachers and support staff to exchange ideas related to using and integrating ICTs in the classroom.	ICT Coordinator CIA Coordinator Schools staff	Sharing ICT curricular ideas	On-going
2.2	Training for professional and support staff who use software and hardware specific for all students.	Student Services Coordinator ICT Coordinator	Specific training for Special Needs Programming	On-going
2.3	Provide a staff purchase option so that staff can purchase at division prices	Sec. Treas ICT Coordinator	Staff Purchase Plan	On-going
2.4	The acquisition of ICT skills shall become part of all staff's base skill set.	Sr. Admin Principals CIA Coordinator	Tech Skills required to meet job requirements	On-going

Goal Three: Administrative Support

All Schools and Division departments will use ICTs to support efficient, effective and secure management of information mindful of the privacy laws.

ICTs used as administrative and management tools can enable teachers, administrators, and Division personnel to be more efficient and effective managers of information.

The Division will continue to explore, expand and implement, where appropriate, ICT administrative support that will support efficiency and/or effectiveness for all teachers and students.

	ACTIONS	WHO	WHAT	WHEN
3.1	Continue to maintain, expand, and implement web services <ul style="list-style-type: none"> • Financial and business functions; • Human Resources Functions; • Maplewood • Attendance; • Student Timetabling; • Transportation and Maintenance Database • Record / Document Management • Division Event calendar • Clevr - IEP development software • Data collection and distribution • WAN access to Division info, VPN services 	Senior Admin ICT Coordinator Schools Techs	Web Admin Services	On-going
3.2	Provide support, maintenance, training and direction for web services (Maplewood, Bellamy, EIS/Outlook)	Sec. Treasurer Techs	Web Admin Training	On-going

Goal Four: Technology Infrastructure and Support

Division and on-site technical support will be provided to assist Schools and Division Departments with ICT research, implementation, support, and maintenance.

The Division will provide on-going technical support to Schools and Division Departments. Expanding and implementing ICT's requires on-going technical support for teachers infusing ICT in classrooms, the library, computer labs and other locations for learning. In addition, as more and more computers are placed in schools and connected to a local area network and the Division's wide area network (WAN), on-site technical maintenance and support is essential. Technical support services will continually work toward improvements in service to meet the response time requirements of Students, Teachers and Administrators within the IT Department's available resources. In addition, technical support needs to continue to be proactive extending efforts in: planning, scheduling, monitoring, evaluating, and budgeting.

	ACTIONS	WHO	WHAT	WHEN
4.1	Improve the WAN by building central Data center	Sr. Admin ICT Coordinator Sr. Techs	Central Data Center	on-going
4.2	The Division will maintain aging school Servers until central data center is built	Sr. Tech ICT Coordinator	School servers	Completed
4.3	Replace the current e-mail server To meet demands for higher levels of usage.	ICT Coordinator Sr. Techs	New Email system	Completed
4.4	Incorporate new flbsd.ca email address and support the old flbsd.mb.ca addresses	ICT Coordinator Sr. Techs	New email system	Completed
4.5	Hardware and software standards for computer operating systems, network software, security software, and telecommunications software, will be developed on a regular basis, where appropriate.	ICT Coordinator Sr. Techs Ed. Tech Advisory	Division hardware software standards	On-going
4.6	The Division will negotiate bulk licensing and software agreements with vendors where appropriate for school based administrative, instructional and educational software products as appropriate.	ICT Coordinator	Negotiate Division Software agreements	On-going
4.7	The Division will develop guidelines to use for recording & monitoring software licensing.	Sr. Techs ICT Coordinator	Monitoring Division software licensing	On-going
4.8	Schools & other sites in FLB will maintain accurate records of software licenses & installations (following the Division developed guidelines)	Principals Site administrators ICT Coordinator	Monitoring School software licensing	On-going

4.9	The Division will: -create regular data backups -create a data disaster prevention and security plan. -secure it's servers - secure data transmitted on the WAN	Sr. Techs Principals Site administrators ICT Coordinator	Information Security	On-going
4.10	The Division will provide technical support and servicing of computers that have exceeded their 5 yr replacement cycle life at the discretion of the school in consultation with the technical department.	Sr. Tech ICT Coordinator School Administrators	Support for legacy hardware	On-going
4.11	The Division will be responsible for redistributing and discarding old or obsolete computer technology.	Sr. Admin Technicians ICT Coordinator	Recycling technology	On-going
4.12	The Division will maintain all phone services with VOIP telephony.	Sr. Admin ICT Coordinator Technicians	VOIP telephony	on-going
4:13	The Division will develop guidelines to govern the use of ICTs; maximize the effective use of technical resources and improve communication between technical and instructional staff.(see appendix)	Sr. Admin ICT Coordinator School Admin	ICT guidelines	On-going
4:14	Install, Maintain and support video security systems	ICT Coordinator Technicians Operations Supervisor	Video Security	On-going
4:15	Provide ongoing management, maintenance and development of the Division Web Site.	ICT Coordinator Senior Adm Techs	Site management	On-going
4.16	Refresh and update the VC equipment in the VC conferencing rooms at the collegiates	ICT Coordinator Technicians	VC Conferencing	2017-2020
4:17	Explore the VC capabilities offered to provide professional development and meetings for Techs staff in FLBSD	ICT Coordinator	VC Conferencing	Investigate

Goal Five: Operations

The Maintenance and Transportation departments will use ICTs to efficiently and effectively manage operations.

ACTIONS	WHO	WHAT	WHEN
5.1 Energy Management system upgrade At VCI, Mary Mont & VJH	Operations Supervisor Technicians	Energy Management System	2017-2020
5.2 Video Surveillance access for RCMP	Operations Supervisor ICT Coordinator	Update existing Monitor system	Investigate

Technicians

Goal Six: Management/Planning/Partnerships

The Division will manage the ICT Plan to maximize the educational impact and use of the investment in information and communication technologies, in an effective, efficient and systematic manner using appropriate management, planning, partnerships and other collaborative actions.

ACTIONS	WHO	WHAT	WHEN
6.1 The Ed Tech Advisory Group will regularly meet to review the ICT Plan; and report back to the Board biannually	Ed. Tech Advisory maintenance	Tech Plan	Review annually
6.2 Each School (collaboratively with divisional personnel) will have an up to date ICT Plan	Principal and staff ICT Dept Maintenance Dept	School Plan	On-going

Goal Seven: Research and Development

The Division recognizes the need to stay current on research related to the impact of technology on learning and teaching. All staff needs to stay abreast of new developments that have the greatest impact on students.

ACTIONS	WHO	WHAT	WHEN
7.1 Fort La Bosse will continue to support research and development in the area of technology by support for IT Staff training and continuing to have representation on various professional committees	ICT Coordinator Technicians Sr. Admin	Research new and emerging technologies	On-going
7.2 Fort La Bosse will continue to support professional development that explores technology for all students.	ICT Coordinator Student Services Coordinator	Augmentative Technology Training	On-going

D. Implementation & Supporting The Plan:

D-1 Implementation of the Plan

There are a number of steps that will facilitate implementation of the ICT Plan and should be acted upon as soon as possible. These are:

- review by stakeholders groups;
- approval by the Division Board of Trustees;
- understand the total financial picture for information technology funding by development of a Consolidated Information & Communication Technologies Budget that includes all financial resources, direct and indirect, that are available and have been available for Information Technology;
- review all timelines annually;
- set realistic priorities;
- review the estimated cost for implementing the Division Plan and set budgetary goals for the next three years.
- proceed to fully implement the plan;
- collaborate, collaborate, collaborate; and

- communicate, communicate, and communicate.

D-2 Communications

The vision, goals, and related actions will be clearly communicated to all school division stakeholders through the divisional web site.

D-3 Monitoring, Evaluation and Renewal

The ICT Plan will be a 'living' document that will be reviewed annually. The progress in implementing the Plan goals will be monitored so it can be modified to best meet the needs of our students. Monitoring and evaluating are important management tools that can be used to ensure success of the ICT Plan. These tools can generate data and information that can be important in decision making and modifying the plan based on the success or failure of specific Plan actions.

Monitoring and Evaluation

To ensure that the Plan is successful and implementation is proceeding as specified, a monitoring and evaluation program is required. Monitoring provides an early identification of which parts of the Plan are being implemented successfully and which are not. Changes and adjustments to problems can be made before they become major issues. Monitoring can be tailored to particular needs and can be as frequent as daily, weekly or monthly.

Review and Renewal of the Plan

While the Plan is to be reviewed annually, the changing nature of technology change may necessitate the renewal of the Plan's main elements before its expected 3 year life span has been reached. Rather than invoking the total planning process, it may be expedient to continue the current plan, modifying and adding to it, to meet new educational goals and needs. At the end of this Plan's lifespan, it may be necessary to invoke a comprehensive planning process.

E. Appendix A: Glossary of Terms

The following are definitions of some terms used in this document. These definitions will be useful to the reader where some terms are unfamiliar or some definitions are emerging.

BYOD

Bring Your Own Device (BYOD) refers to a technology model where students bring a personally owned device to school for the purpose of learning. A personally owned device is any technology device brought into the school and owned by a student (or the student's family), staff or guests.

Hardware

The physical equipment related to a technology. A term used to refer to the components of a computer system.

ICTs

Information and Communication Technologies. An acronym commonly used to describe the blending of computer information technologies with communications technologies.

Information technology

A term that has a number of different definitions and dimensions. Generally, the term means the broad subject concerned with the processes and tools used to send, retrieve, store, manipulate and manage information using any technology including traditional, new and emerging technologies.

Infrastructure

The basic underlying framework or features of a system or organization. The fundamental facilities and systems serving a country, city or area, as transportation, communication systems, power plants and schools.

Internet

A worldwide 'public' computer network connecting individuals, organizations and other computer networks to information services and electronic mail. The global network of networks which has become pervasive in most areas of human life.

LAN or Local Area Network

A local area network. A network of computers usually confined within a single school or office building.

Multimedia

Use of text, graphics, video, animation and sound in an integrated way. The combination of video, audio and text in a single platform or presentation.

Network

Any system consisting of two or more computers connected via network cables or a linked set of computers and computer equipment.

Software

The messages transmitted or processed through a communication medium. This term also refers to a computer's list of instructions (program) written for programmable computers.

21s Century Skills

Students need to develop attitudes, skills and knowledge that can be generalized and applied to new tools and situations in the future. The standard has been achieved if students are equipped to learn how to effectively use new technologies that are yet to be invented.

Technology

Technology is a term that has a number of different definitions and dimensions. The term can refer to using computer technology and telecommunications. The term can refer to the processes, tools and techniques that alter human activity. The application of scientific knowledge for practical purposes; the employment of tools, machines, materials and processes to do work, produce goods, performs services or carry out other useful activities.

Technology Infusion

Technology infusion refers to the use of technology across the curriculum for research and production of products of learning.

Telecommunications

Telecommunications is any process or group of processes that allows for the relay of printed or written matter, moving or fixed pictures, or other or audible signals.

Traditional Information Technologies

Information technologies such as: print, film, photography, radio, audio tape recorder/playback, audio CD-ROM, television, cable. telephone, video cameras, interactive television, videotape recorder/playback, and graphing calculators.

Virtual

Not real. The term is popular among computer scientists and is used in a wide variety of situations. In general, it distinguishes something that is merely conceptual from something that has physical reality, an artificial environment created with computer hardware and software. For example, a virtual classroom could bring students together from all over the world but would not exist in a physical setting.

WAN or Wide Area Network

A network of computers covering a wide geographical area. For example, a School Division network of computers which connects all schools together. See also LAN, Internet and Network.