

St. Mary Catholic Schools (SMCS)

Technology Four-Year Plan

Vision

Strategy

Goals

2015-16 Plan

Approved by the TCCES Board of Trustees

on

November 17, 2014



St. Mary
Catholic Schools
— *Grades P3-12* —

SMCS TECHNOLOGY VISION

(Revised 10-27-2014)

The St. Mary Catholic Schools system values the use of technology at all levels as a support to student academic growth and staff effectiveness.

To best prepare students for college and the work force, evaluation of new technologies will be considered and implemented based on intended purpose and within the financial parameters of the system.

All implementation will include regular review and annual upgrade/replacement strategies.

Educator effectiveness in the integration of instructional technology is critical and requires a formalized training plan (second half of August each year) for teacher and administrative staff instruction and periodic additional training throughout the year.

GOALS

1. Evaluate and revise stated Technology Vision, Goals, and Strategy each year to assure that they reflect 21st century educational requirements.
2. Train and mentor teachers to ensure full utilization of the installed technologies to ensure maximum return on the investment.
3. For the short-term (one or several years) provide SMCS teachers and students with a single platform of high quality, reliable technologies that will permit them to achieve the stated educational goals of SMCS. Upon annual review of the system's technology plan, consider the change in technology & software platforms based on curriculum needs.
4. Regularly review and evaluate new technologies available, while resisting the desire/pressure to purchase the latest fad.

SMCS TECHNOLOGY STRATEGY (issued 10-27-2014)

The re-engineering of the education process, and the demand for a more technology skilled labor force will be the consistent drivers for SMCS technology strategies.

With the above in mind, the administrative leadership must balance the need/want to innovate with protecting the quality of education provided. Changing strategies on the surface can be costly and affect quality of service to the educators and students. Therefore following a defined approach for developing strategies is important. This document defines that approach. Revisions will be made as curriculum & technology adjustments arise.

- **Plan Review & Fine-tuning** - takes place August-September each year, led by the SMCS Business Department with input from all school Principals, Technology Department, and a Board of Trustees (BOT) Technology Advisory Committee.
- **Approval by System President** – needed by October 15 for inclusion into next school-year budget and for the next school year recruiting of new students.
- **Process** – the strategy must include review of the current school year plan and at least the ensuing three (3) years:
 - Current year – make adjustments if necessary
 - Year-one – is fixed upon approval
 - Year-two – will be modified when it becomes year-one based upon expected student population, completion of pilot projects in year one, advancements or curriculum changes in education requirements, enhancements in available technology and the ability to meet funding needs.
 - Year-three - provide a view of the future for the school system for budgeting and marketing purposes.
- **Pilot projects** – will be authorized to validate the capabilities of hardware/software/applications without a long-term commitment.
Components of the pilots:
 - Definition – What?, Why?, Justification, Cost – one-time & on-going
 - Timeframe – target dates , begin & completion deadline
 - Measurement – defined measurements throughout the pilot
 - Responsibility – While pilot projects must be approved by the system president, they will be overseen by the system curriculum director and business manager.
- **Standards** - SMCS technology standards (Attachment A) were developed over a number of years since 1999. The intent is to:
 - Assure state-of-the-art, high quality, reliable technology services at the lowest practical cost

- Permit transition to new technologies with minimal disruption and training
- Keep technology staffing as lean as possible

- **Standards Adherence:** Changes/additions to standards are part of the world of technology. It is the responsibility of the SMCS Business Manager to assure that changes are evaluated and tested (piloted) to assure they fit within the above intent. Evaluations may involve the technology team, technology consultant, curriculum director and the technology advisory group. Changes or adjustments to the standards are to be reviewed & approved by the curriculum director and the SMCS business office manager.

- **Tablet/Smart Phone Strategy**
Mini tablets (Pre-K – 2nd grade), and all other future Tablets and Smart Phones added to the “SMCS Technology Standards” will be limited to accessing the Internet. This means they will not have capabilities of the SMCS Intranet (email, file access, printing, and document access).

This initial approach is intended to protect the security of SMCS information and continue the strategy of supporting only one technology platform – Microsoft.

Therefore, other personal device usage on SMCS premises lies with the parents of students and teachers/staff/visitors using their personal devices

The educational use of Tablets and Smart Phones will be the responsibility of the building principals and teachers. This includes limiting/restricting usage.

SMCS TECHNOLOGY PLAN SUMMARY

Revised 10-27-14

School Years 2015-16, 2016-17, 2017-18, 2018-19

The SMCS Technology Committee is comprised of Patrick Batey, Sandy Ehlers, Pat Hickey, Jeanine Leege, Dustin McClone, Kathleen Healy Osland, and Don Tully. This committee reviewed input from all five system principals and coordinated a two-hour seminar with three independent K-12 education technology professionals. After much sharing of professional experience, ideas, and input, the following plan of action was devised and recommended.

High School Plan

- One-to-one laptops for four years & Microsoft based software.
- Add smart boards/projectors to classrooms that warrant them (due to curriculum).
- Three of the current four technology classrooms already have smart boards & projectors in them.
- Curriculum- incorporate & add course work to address 21st Century (current marketplace) needs to include basic graphic arts, computer assisted design (CAD), and basic application (apps) programming.
- Two tablets will be provided following the “pilot project” process to the high school administration for various education purposes in 2015/16. In future years, additional tablets will be considered as warranted by the curriculum and allowable by the technology budget.

Middle School

- One-to-one laptops & Microsoft based software.
- Move quality smart boards & projectors from old school to new school and determine how many additional smart boards & projectors are needed.
- Two tablets will be provided following the “pilot project” process to the middle school administration for various education purposes in 2015/16. In future years, additional tablets will be considered as warranted by the curriculum and allowable by the technology budget.

Elementary Schools

- Computer lab for intro to computers equipped with thin client terminals (monitors, keyboards & mouse) for each school with thin client based strong & reliable server–, 20 St. Mary, 25 each St. Gabriel & St. Margaret Mary.
- Pre-K through Grade 2- Mini tablets- 15 at St. Mary, and 20 tablets at St. Gabriel, 25 St. Margaret Mary.
- Grades 3-5- Five small Lenovo laptops for each homeroom with the understanding that these can be utilized all at once for entire class projects or learning sessions.

Annual Training

High School: Principal, Ass't. Principal, administrative staff & teachers will receive professional training to be proficient on the use and integration of the following technology tools to enhance our students' education. This training will take place in August of each year in several half-day structured/scheduled all staff training seminars that will be taught by our in-house SMCS technology staff and/or outside professional trainers. IT staff will coordinate and lead this training under the direction of the SMCS President with full support of our system's five principals.

- Existing & new smart boards/projectors
- Recently installed STORIA system (library/e-books)
- Recently installed PowerSchool software system
- Technologies located in the four (2012) high tech classrooms
- Refamiliarization and brush-up on uses and capabilities of Microsoft Windows & Office 365 (email, video conferencing, etc.)
- Explanation of SMCS system policies such as security, "help desk", and requests for specialized hardware & software.

Middle School: Principal, administrative staff & teachers will receive professional training to be proficient on the use and integration of the following technology tools to enhance our students' education. This training will take place in August of each year in several half-day structured/scheduled all staff training seminars that will be taught by our in-house SMCS technology staff and/or outside professional trainers. IT staff will coordinate and lead this training under the direction of the SMCS President with full support of our system's five principals.

- Existing & new smart boards/projectors
- Recently installed STORIA system (library/e-books)
- Recently installed PowerSchool software system
- Technologies located in the four (2012) high tech classrooms
- Refamiliarization and brush-up on uses and capabilities of Microsoft Windows & Office 365 (email, video conferencing, etc.)
- Explanation of SMCS system policies such as security, "help desk", and requests for specialized hardware & software.
- Instruction on Smart Response system

Elementary School: Principal, administrative staff & teachers will receive professional training to be proficient on the use and integration of the following technology tools to enhance our students' education. This training will take place in August of each year in several half-day structured/scheduled all staff training seminars that will be taught by our in-house SMCS technology staff and/or outside professional trainers. IT staff will coordinate and lead this training under the direction of the SMCS President with full support of our system's five principals.

- Thin client lab with 20+ monitors & keyboards will be in place at each elementary school for existing teaching staff to teach students basic computer usage.
- Smart board/projection training
- 3rd, 4th & 5th grade teachers will be trained and/or refreshed on the thin client lab, small laptops, as well as the use of Microsoft software,- Excel, Word, and Power Point.
- Throughout the school year, an SMCS teacher will provide scheduled classes for 1st – 5th grade students on the use of Microsoft software.
- Students in grades 3-5 will also receive periodic instruction on introduction to the use of laptops.

- Mini-tablet best practices will be introduced and trained for elementary K-2 teachers in August of each year.
- Explanation of SMCS system policies such as security, “help desk”, and requests for specialized hardware & software.

Mini-tablets at each elementary school are felt to be the best technology tools for basic introduction to early technology/computer learning. Thus, several carts of mini-tablets will be provided at each elementary school for K-2 students.

Other Matters:

Replacement of obsolete (no longer functional or useful) computers & technology equipment will be reviewed and planned by the SMCS technology department. The head of technology and the SMCS business office manager will manage these equipment changes & disposals.

The 60 existing small laptops (considered near obsolete) that are currently at St. Margaret Mary Grade School will be evaluated and serviced during the summer of 2015 at the SMCS technology office. Those that are deemed functional will be serviced and maintained in inventory for two purposes: (1) spare units for replacement aids during the school year; and (2) distribution to all three elementary schools per class sizes and per other administrative recommendations.

It is the current intent (subject to funding affordability) to upgrade to Microsoft 8+ for the school year beginning 2016/17 throughout the system.

Each year the curriculum will drive the integration of technology and additional technology requirement & changes.

STORIA- Goals & plans for each year will drive the technology requirements (i.e. E-books)

The opportunity for technology to enhance the curriculum and education programs provided in the FAEC should be studied and integrated for future years.

Cost to Implement Plan in July 2015

<u>EQUIPMENT</u>	<u>UNIT COST</u>	<u>QUANTITY</u>	<u>TOTAL</u>
A. Laptops (Seton- 80, SMM- 20, SMC- 30, spare- 10)	\$ 800	140	\$112,000
B. Small laptops (Elementary- 60, Seton-6 th - 55)	\$ 600	115	\$ 69,000
C. Desktops	\$ 750	1	\$ 750
D. Thin client boxes	\$ 200	70	\$ 14,000
E. Smart boards & Projectors	\$1,850 & \$1,200	6 each	\$ 18,300
F. Old projector replacements	\$1,200	20	\$ 24,000
G. Mini tablets	\$ 200	64	<u>\$ 12,800</u>
			\$250,850

A. 140 new laptops are required for the five school system. These complement the existing recently purchased laptop inventory on hand. As Seton teachers and administrators all have new laptops, these do not need to be replaced. Seton also has 25 new student laptops purchased this year. Our plan provides the large Lenovo laptops for all 7th & 8th grade students and 55 small laptops for 6th grade students. Based on a projected middle school enrollment of 160 students, our plan purchases 80 new large laptops and 55 new small Lenovo laptops. The 55 small laptops for 6th grade students will be regarded as school technology inventory and will not be allowed to leave the schools. We project four years of use by the next four years of 6th graders for these small laptops. The 7th & 8th graders will be assigned a specific large Lenovo laptop on a one-to-one student basis and will be allowed to have custody of these computers throughout the school year (home & at school). These computers remain the property of the school. Upon graduation from 8th grade the large Lenovo computers will be reassigned to incoming 7th graders. Thus, the large & small Lenovo laptop computers are scheduled for a four year life.

Separate from the middle school, St. Margaret Mary Grade School will receive 20 new large laptops for their teaching & administrative staff (replacing current over-aged units). The high school will receive 30 new large laptops for their teaching & administrative staff (replacing current over-aged units). In addition, the system technology department will receive 10 new large Lenovo laptops as spares to support the replacement & maintenance needs of all system schools.

B. 115 new small Lenovo laptops will be purchased and installed as follows: 55 for the 6th grade students in our middle school curriculum, and 60 in the elementary schools as follows- 15 for St. Mary, 20 for St. Gabriel, and 25 for St. Margaret Mary. It is expected that the principals of each of these schools will allocate these laptops amongst their 3rd, 4th, and 5th grade homerooms. Past experience has shown that grade school teachers will periodically borrow laptops from other classrooms within their school when they are having a class that depends on the use of laptops.

C. Upon inventory review with the SMCS technology department it was determined that only one desk top will need to be replaced for the beginning of the 2015/16 school year. This is in the Guidance department at the high school.

D. Upon expected successful completion of the current pilot study, thin client interface boxes will replace current but severely outdated desktop boxes used in our elementary school computer labs. We will install 20 at St. Mary, 25 at St. Gabriel, and 25 at St. Margaret Mary.

E. In addition to the quality Smart board & projector equipment that we currently have on hand at our middle school & high school, we need four additional installations at these schools that currently do not have this equipment. We are ordering two additional sets as teacher requests for this equipment in classrooms that currently don't have it will be considered.

F. Throughout our five schools, we have various classrooms that are equipped with antiquated & outdated projectors. There's a mixed bag of many different models & brands and parts & light bulbs are constant problems and repair costs. Thus, these need to be put to rest and replaced. In actuality, there are more than 20 that need to be replaced and we will address additional replacements in future years.

G. Our technology plan acknowledges the benefits of mini tablets at the K-2 elementary levels as the best introductory tools to technology for young children. Thus, we are allocating the purchase of 15 mini tablets for St. Mary Grade School, 20 for St. Gabriel Grade School, and 25 for St. Margaret Mary Grade School. The type & brand will be determined by the elementary

school principals with approval from the system curriculum director. The cost per tablet is estimated at \$175-\$200. Management of the tablet inventory at each elementary school will be the responsibility of the principal.

Technology Plan Funding

The current SMCS annual operating budget allocates \$200,000 for technology system management & expense. These expenditures cover three IT employees of which one is a trainer & problem solver for our administrators & teachers. The remaining two are technicians that resolve daily equipment & software issues. These three individuals also manage pilot projects, security for our entire network, and a variety of other technical tasks. In addition, the above budget covers software licensing, state & federal reporting of technology related requirements, supplies and maintenance related to keeping our system reliable, and equipment procurement specifications. There are no excess funds in our existing technology operating budget for the purchase of new or replacement equipment. Thus, outside funding is required.

At our high school, our one-to-one laptop program that covers a four year purchase period by the parents of an incoming Freshman student has worked beautifully. We recommend that this program be continued and realize the additional monthly fee of approximately \$35 is a necessary but justifiable charge.

For our middle school, a one-to-one laptop program would be a tremendous benefit from a student education standpoint, as well as from a system marketing standpoint. Also, it is the current interim president's opinion that we cannot add additional fees to our proposed middle school tuition charge next year. Thus, we need to successfully orchestrate a technology fundraising effort next spring to raise the \$250,850 necessary to put our system back on track and not deeper in the hole financially. However, we do need to adopt a financial plan going forward to set aside reserve funds to maintain & replace our technology program. In current dollars, this is projected to require approximately \$60,000 per year. The proposal is for each of our five SMCS schools to allocate and contribute \$12,000 per school year from their PTO and fundraising efforts each year to the SMCS technology reserve fund. While each of our five principals cherish these monies for non-budgeted school program necessities, history shows that a good share of these monies have been designated for technology needs by the principals and/or their parent-teacher supporting organizations. Certainly, the SMCS development department will need to assist our five schools in planning and maximizing these annual fundraising efforts by each of our schools.

As this \$60,000 of proposed reserve funds may be adequate for ongoing maintenance repair and reasonable equipment replacement needs, it will be inadequate to replace the four year maturing laptops at our middle school for the 2019/20 school year. At that time, a new capital campaign or possibly a fee based program similar to the one currently used at our high school will need to be implemented if costs & technologies are still similar to today's.

The three principals and two board members that are on the technology committee believe that it is very important to charge a small monthly technology rental fee of \$10 (or \$100 per year) to the parents of the 7th & 8th grade middle school students. This fee provides a responsibility awareness and discipline to take care of the laptop to these students that are allowed to have day & night use of their assigned Lenovo computer throughout the school year. The parents of 7th & 8th grade students will be required to sign a rental agreement that explains the responsibilities on care & maintenance of their child's assigned laptop. The \$10,000 - \$11,000 annual rental fees collected from this rental fee will be reserved for and applied toward the middle school's \$12,000 technology obligation contribution to this technology plan's earlier stated annual requirement.

Attachment A

SMCS Technology Standards (6/2014)

Network

- Microsoft based (MS)
- Wide area; BadgerNet (AT&T is provider)
- Wireless: Hewlett Packard (HP)Xirrus
- CAT-6 wiring

Hardware

- Servers: Lenovo
- Virtualization: MS Hype-V & MS Remote Desktop Services
- Routers & Switches: Hewlett Packard (HP)
- Desktops: Lenovo
- Laptops: Lenovo
- Printers: Ricoh (larger), HP (small)
- Projectors: CASIO LED
- Document Cameras: IN-Focus
- Interactive White Boards: SMARTBOARD

Software:

- Windows Server 2012-R2
- MS Windows 7
- MS Office 2013 (Word, Excel, PowerPoint, Outlook, Access, One Note)
- System Center Configuration Manager
- Applications & Support Software list (attached)
- Office 365- (Cloud) email, web conferencing, office 2013, One-Drive (storage)

Security:

- Virus: MS – End-point Protection
- Firewall: SonicWALL
- Web & Spam Filter: LightSpeed
- Spam Filter – MS Office 365

Backup/Recovery:

- Open-Source software (free): performed daily & stored in Robotics Bldg