

Technology Strategic Plan
Implementation Guide
2016-2021

Benchmark I: Commitment to a Clear Vision and Implementation Strategies

The Technology Implementation Guide is a document based on the Cohasset Technology Strategic Plan, which has been developed by a district team of twenty-six individuals representing all stakeholders. These stakeholders included teachers, parents, community leaders, and district contracted consultants. The Technology Team worked together over the 2015-2016 school year to develop the plan utilizing the Massachusetts Department of Secondary and Elementary Education Department's Technology Guidelines.

The Cohasset Public Schools is committed to a technology vision, which is seamlessly woven into four objectives to promote teaching and learning for:

- Planning instruction and assessing student knowledge;
- Engaging and providing access to knowledge for students with diverse learning styles;
- Partnering with families, communities and a global network of learners; and
- Collaborating with colleagues.

The Technology Strategic Plan and Implementation Guide provides administrators, teachers, and the community with a map for the integration of technology into the learning environment, transforming instruction and learning in ways that support diverse learners and assists them in achieving the 21st century skills of critical thinking, problem solving, communication, collaboration, and independence. These documents provide for the professional development and technology infrastructure and support to ensure that technology integration into instruction occurs for all students.

As this is a five-year plan, the district has also provided for ongoing needs assessments in teacher/ administrator digital proficiencies for the purpose of planning professional development that will effectively ensure the ongoing integration of technology into instruction. At the same time needs assessments in technology infrastructure, hardware/software are planned on an ongoing basis to ensure that the functionality of the system continues to provide teachers, students, administrators, and the community with seamless use.

Any technology plan must also be developed with the budget process as a critical aspect. Cohasset has line items within its operational budget for all aspects of technology. The district actively seeks funding for technology from federal, state, and

private resources, grants, as well as academic departments for funding assistive technology, instructional technology, and professional development.

Evaluation is also a critical aspect of the successful implementation of a 5-year plan. Written within the Cohasset Technology Strategic Plan is an evaluation process that enables the monitoring of its progress in achieving its goals and to provide for corrections in the course of the plan in response to new developments and opportunities as they arise.

Key to Implementation Plan

R = Research items contained within this action for feasibility of implementation.

B = Begin Implementation (not considered a full implementation) Staff tests out IT options, Apps, programs, strategies for instruction etc.

I = Implementation Expectation These actions will be implemented fully across the district.

S = Sustain the implementation The implementation of actions will continue throughout the district and new staff will be provided with professional development to ensure the actions are continuing to be implemented.

Benchmark II: Technology Integration and Literacy								
1. Integrate technology K-12. 2. Develop Digital Literacy for all students. 3. Provide staffing to support technology integration and digital literacy in the classroom								
	Action Step	Responsible Parties	Implementation Dates					Measure of Success
1.1	Develop and implement teaching strategies that foster technology integration into instruction with an understanding of the principles of Universal Design for Learning (UDL).	Assistant Superintendent, Building Administrators, Teacher Leaders, INST K-12 Specialists, and all staff	17 B	18 B	19 I	20 I	21 S	Teaching strategies that foster technology integration into instruction with an understanding of UDL are evident through classroom observation, curriculum maps, teacher sharing of best practices in faculty and/or grade level and department meetings, and on postings to school website / teacher websites.
1.2	Adhere to all legal aspects of online learning for students and staff.	Chief CIO and DCIO, Assistant Superintendent, Building Administrators, INST K-12 specialists, and Teacher Leaders	I	I	S	S	S	Students and staff access online apps and sites adhering to all legal aspects of online learning.
1.4	Pilot emerging technologies as a means to continue to keep up-to-date on valuable teaching and learning resources.	INST K-5 Specialists, Teacher Leaders, Department Chairs and Pilot Teachers	R	R	B	B	I	Pilots are conducted and feedback shared with district leadership regarding recommendations for implementation.
2.1	Utilize technology to develop student skills in critical thinking, communication, collaboration, creativity, problem solving, global awareness and independence.	Assistant Superintendent, Building Administrators, Teacher Leaders & INST K-12 Specialists and all staff	B	B	I	I	S	Exemplars of instruction that utilize technology to develop student skills in communication, collaboration, creativity, problem solving, global awareness, and independence are observed in classrooms and shared among staff through faculty and grade level and/or department meetings, and postings on teacher and/or district websites.
2.2	Utilize instructional strategies to develop digital literacy, which includes skills in locating, evaluating, utilizing,	Assistant Superintendent, Building Administrators, Teacher Leaders, INST Specialists, and all staff	B	B	I	I	S	Exemplars of student work demonstrate levels of digital literacy and Ed Tech Resources to encourage creativity, innovation, foster communication and collaboration; use of

August 11, 2016

* Indicates Funding Implications

	sharing, and creating content using information technologies and the Internet while adhering to appropriate social, ethical, and legal aspects of online learning.							research skills, information fluency are posted under Faculty Resources on the District Website.
*3.1	Plan and budget for adequate staffing to maintain appropriate access to software and hardware K-12	Superintendent, CIO, and Assistant Superintendent	I	S	S	S	S	Full-time Technology Support Specialist is hired.
*3.2	Plan and budget for adequate staffing necessary to provide teacher support K-12.	Superintendent, CIO, and Assistant Superintendent	I	S	S	S	S	Full-time Instructional Specialist for CMS/HS is hired.

Benchmark III: Technology Training and Professional Development								
<ol style="list-style-type: none"> 1. Assess teacher and administrator proficiencies and needs as they align with the district technology plan using the MA Technology Self-Assessment Tool (TSAT) 2. Survey staff biannual using the MA Technology Self-Assessment Tool (TSAT) and utilize data to plan professional development in the area of technology. 3. Provide high quality professional development for technology integration in the classroom. 4. Provide a variety of professional development models to meet the individual needs of teachers. 								
	Action Item	Responsible Parties	Implementation Date					Measure of Success
1.1	Teachers and administrators manage both their individual technological growth and needs.	Teachers Administrators	17	18	19	20	21	Teachers and administrators participate in offsite educational technology PD and demonstrate increased skill through the TSAT professional practice.
			I	I	S	S	S	
2.1	Annually assess district's and teachers' needs based on MA Technology Self-Assessment Tool (TSAT)	Assistant Superintendent Building Administrators, INST Specialists	I		I		I	TSAT is administered bi-annually guiding PD offerings for the upcoming school year in the area of technology literacy skills and abilities.
3.1	Plan and provide professional development opportunities to effectively integrate technology into instruction with an understanding of the principles of Universal Design for Learning (UDL).	Assistant Superintendent, Building Administrators, PD Committee	B	B	I	I	I	The district Professional Development Plan includes learning opportunities presented by professional and/or teacher instructors for the staff in the areas of innovative technology strategies, technology integration into instruction and the implementation of the principles of Universal Design for Learning.
3.2	Plan and provide professional development in emerging technologies and their uses.	Assistant Superintendent, Building Administrators, INST Specialists	R	R	B	I	I	Professional development offerings in emerging technologies are incorporated into the professional development plan as recommended by the sub-group of the technology committee.
3.3	Plan and provide professional development in instructional strategies that promote collaboration, communication, creativity, and problem solving.	Assistant Superintendent, Building Administrators, INST Specialists, PD Committee	B	B	I	I	S	Professional development opportunities are provided to staff to develop instructional strategies that promote collaboration, communication, creativity, problem solving and independence and are aligned with such models as SAMAR and TPACK.

August 11, 2016

* Indicates Funding Implications

3.4	Enroll a team of administrators and lead teachers in the Verizon Mobile Learning Academy.	Assistant Superintendent, Building Administrators	17 I	18	19	20	21	Cohort of administrators, instructional technology specialists, and teachers complete the academy and report on Capstone Project to Leadership Team.
4.1	Develop professional development models that include coaching, mentoring, study groups, teacher release time and online opportunities.	Assistant Superintendent, Building Administrators, Professional Development Committee	B	B	I	I	S	Professional development committee's plan provides a variety of PD offerings utilizing varying models. These offerings incorporate both in-house and out-of-district learning opportunities for staff to develop their skills and knowledge in the area of digital learning. Participation reports provide data on models utilized by staff.
4.2	Provide traditional and non-traditional professional development opportunities for proficiency development in digital learning.	Assistant Superintendent, Building Administrators, Professional Development Committee	B	B	I	I	S	Professional development offerings demonstrate a variety of avenues to increase proficiency such as Summer Technology Camp for Teachers, 1 and 3 credit courses (both face-to-face and online), independent projects detailed by individuals.
4.3	Provide PD for all staff in digital citizenship and Internet safety.	Assistant Superintendent, Building Administrators INST Specialists	I	I	S	S	S	Professional development in the area of digital citizenship and Internet safety is provided to all staff with review on an annual basis.
4.4	Establish a sequence of face-to-face and online informative sessions for the community about BYOD concept.	↓	I	S	S	S	S	A communication plan is established that provides all stakeholders with opportunities to participate in face-to-face and online informational BYOD sessions.
4.5	Establish professional online conversations between and among faculty around current best practices in teaching on the district website.		R	B	B	I	S	All faculties actively participate through local and outside district online professional discussions.

Benchmark IV: Accessibility of Technology								
1. Provide consistent hardware access throughout the Cohasset Public Schools 2. Provide consistent Internet access throughout the district. 3. Provide consistent network functionality. 4. Provide access to the Internet outside the school day to ensure equity for all students. 5. Provide staffing to ensure proper maintenance and functionality of network services.								
	Action Items	Responsible Parties	Implementation Date					Measure of Success
1.1	Provide all students with access to one high-capacity Internet connected computer	CIO, DCIO, Assistant Superintendent, and K-12 INST Specialist	17	18	19	20	21	All students will have access to high capacity Internet connected devices by end of the 2016-17 school year.
			B	B	I	I	S	
1.2	Provide access to emerging technologies as determined to be appropriate	Assistant Superintendent, Building Administrators, DLC Emerging sub-group, and INST Specialists	R	B	B	I	I	Pilot programs are conducted, evaluated and recommendations are planned to provide emerging technologies appropriate for effective teaching and learning.
1.3	Provide access to general education curriculum for diverse learners using the principles of UDL	Assistant Superintendent, Director of Student Services, DCIO, Building Administrators and INST K-12 Specialist	B	B	I	I	S	Assistive Technology devices are in place for all students who need to access information, express ideas, or interact with data beyond devices already in place.
1.4	Provide technology rich learning environments with such items as digital projectors, interactive whiteboards, etc.	CIO and DCIO Assistant Superintendent INST Specialists Building Administrators	B	B	I	I	S	Technology rich learning environments are equipped with digital devices that are appropriate for effective teaching and learning. These needs are assessed on an ongoing basis.
1.5	Develop a 5-year replacement protocol.	CIO and DCIO	I	S	S	S	S	Lease equipment is replaced every 3 years, evaluation of new technology & necessary upgrades are completed & replacement moves from 7 years to a 5-year plan.
1.6	Develop a disposal protocol for outdated equipment.	CIO and DCIO	I	S	S	S	S	Proper disposal of old hardware is in place.
2.1	Maintain connections and management for all devices including those within the BYOD program.	CIO and DCIO	B	B	I	I	S	Management protocol of connections to Internet is in place including BYOD protocol managed connectivity.

August 11, 2016

* Indicates Funding Implications

2.2	Maintain and upgrade all infrastructure equipment when necessary to ensure the consistent use of the Internet throughout the district.	CIO and DCIO	17 B	18 I	19 I	20 S	21 S	100 Mbps per 1,000 students/staff at MHS & Switching upgrades are in place. Bandwidth of 10/100/1Gb for each classroom at MHS is in place.
3.1	Provide the district with a wide-area network (WAN)	CIO and DCIO	B	I	I	S	S	All CMHS classrooms have wireless access points and are 21 st century ready.
3.2	Provide access to secure servers either internally or through contracted services for the purposes of file sharing, backups, scheduling, email, and web publishing.	Superintendent, Assistant Superintendent, CIO and DCIO	B	I	I	S	S	Secure file sharing, email and web access, educating end users and up to date policies are all in place.
4.1	Provide locations within the schools where students can access devices after school hours.	Assistant Superintendent, Building Administrators, CIO and DCIO	B	I	S	S	S	Survey delivered to staff and community with available areas identified.
4.2	Provide an up-to-date list of locations within the community where students can access the Internet during after school hours.	Assistant Superintendent, Building Administrators, DLC, CIO, and DCIO	B	I	I	S	S	List of after school access points is created and disseminated to parents and students.
5.1	Assess IT staffing requirements to maintain district network and services utilizing the DESE guidelines and plan through the budgeting process for an increase in staffing when necessary.	CIO, DCIO, and IT Department	R	I	S	S	S	At least one FTE person to support 400 computers/ devices is in place and re-evaluated on a yearly basis.
5.2	Provide a clear process for technological support throughout the district and communicate this to all within the district.	CIO, DCIO, and IT Department	I	S	S	S	S	Information about how to access technical support (remotely or in person) is communicated with all district employees.

August 11, 2016

* Indicates Funding Implications

5.3	Monitor support services for effective and timely response to issues.	CIO, DCIO, and IT Department	I	S	S	S	S	Technical problems are resolved within 24 hours
-----	---	------------------------------	---	---	---	---	---	---

Benchmark V: Virtual Learning and Communication								
<ol style="list-style-type: none"> 1. Encourage the use and development of innovative strategies for delivering high-quality courses through technology. 2. Deploy IP-based connections for access to web-based and/or interactive video learning on the local, state, regional, national, and international level. 3. Provide virtual learning opportunities including courses, collaborative projects, field trips, and discussions. 4. Maintain an up-to-date district website. 								
	Action Items	Responsible Parties	Implementation Date					Measure of Success
1.1	Incorporate the use of innovative technology strategies into courses and instruction.	Assistant Superintendent, Building Administrators, INST K-12 Specialist, and staff members	17	18	19	20	21	Technology integration is incorporated into courses as demonstrated through curriculum maps.
			B	B	I	I	S	
1.2	Promote computer science events (such as Hour of Code, and Summer Computer Ed Camp) at all schools.	Assistant Superintendent, Building Administrators, INST Specialist, classroom teachers, and Cohasset students.	B	B	I	I	S	STEAM events are offered throughout the district. (These include but are not limited to Hour of Code, Programming, and/or Robotics.)
1.3	Expand computer science and engineering (STEAM) literacy/access to incorporate computational skills among students K-12.	Assistant Superintendent, Building Administrators, and K-12 INST Specialist, Lead Teachers	B	I	I	S	S	Computer science and engineering literacy is evidenced through computational skills as seen in K-12 programs such as robotics, programing, and coding.
2.1	Provide teachers with secure password protected access to web-based and/or interactive video learning opportunities	Assistant Superintendent, Building Administrators, K-12 INST Specialist, and Lead Teachers	I	S	S	S	S	Teachers access local, state, national, and international web-based and/or interactive video learning opportunities from a password protected resource section of the CPS district website.
3.1	Provide virtual learning classroom experiences through a variety of options.	Assistant Superintendent, Building Administrators, and K-12 INST Specialist, Lead Teachers	B	B	I	I	S	Students have the opportunity to engage in online learning opportunities through the use of a variety of virtual learning options.
3.2	Create a graduation requirement for a virtual learning experience.	Assistant Superintendent, Building Administrators, and K-12 INST Specialist, Lead Teachers	B	B	B	I	I	All students experience taking a Virtual course before graduation.

August 11, 2016

* Indicates Funding Implications

3.3	Pilot use of Google Classroom as a virtual learning environment with intent to expand to full implementation.	Building Administrators, K-12 INST Specialist, and Lead Teachers	17 B	18 I	19 I	20 S	21 S	Google Classroom is being implemented in most classrooms.
3.4	Empower teachers to pilot and create Virtual Learning Environment (VLE's)	Assistant Superintendent, Building Administrators, K-12 INST Specialist, and Lead Teachers	B	B	I	I	S	Teacher-created virtual learning environments are in place using online instructional methods and strategies.
3.5	Investigate a Learning Management Systems (LMS) to enhance teaching and learning experiences.	Building Administrators, INST K-12 Specialist, and Lead Teachers, DLC	R	R				LMS's are explored for potential teaching and learning benefits with recommendations made to the DLC.
4.1	Maintain an up-to-date informative website for teachers, parents, students, and community members	CIO, DCIO, Assistant Superintendent, K-12 INST Specialist, and Lead Teachers	B	I	S	S	S	Within the district website teachers, students, parents and community members are informed of school related topics and information.
4.2	Dedicate a location on the district website for faculty to share digital resources.	CIO, DCIO, Assistant Superintendent, and K-12 INST Specialist	B	I	I	S	S	IT website is in place housing information regarding IT and policies.
4.3	Evaluate the present student management system as well as other systems for effectiveness in delivering communication for students, staff, and parents.	Assistant Superintendent, Administrators, K-12 INST Specialist and Teacher Leaders	R	B	I	S	S	Homework assignments and school-related activities are communicated in a standard way and are accessible online to students and parents.

Benchmark VI: Safety, Security, and Data Retention

1. Establish a CIPA-compliant Acceptable Use Policy (AUP) regarding Internet and network use.
2. Knowledge of appropriate online behavior is adhered to in the district.
3. District security and confidentiality of personal information is in accordance with legal and DESE guidelines.
4. District maintains proper archiving of electronic communications.

	Action Item	Responsible Parties	Implementation Date					Measure of Success
			17	18	19	20	21	
1.1	Review and revise the district's Acceptable Use Policy as needed and communicate this policy to teachers, students, and parents.	Assistant Superintendent, CIO, DCIO, INST K-12 Specialists, and Digital Learning Committee	I	S	S	S	S	District AUP in place accommodates for current technologies and is CIPA compliant which posted online.
2.1	Educate teachers and students about appropriate online behavior and strategies for dealing with these issues.	Assistant Superintendent, Building Administrators, CIO, DCIO, INST K-12 Specialists, and DLC	B	I	S	S	S	The district has an online K-12 digital citizen curriculum posted on the district website
2.2	Develop policies for BYOD program that includes face-to-face and online behavior codes.	↓	B	I	S	S	S	Policies for BYOD program are in place that includes f-f and online behavior codes
3.1	Revise district security and confidentiality of personal information when necessary.	Superintendent, Assistant Superintendent, Building Administrators, CIO, and DCIO	I	S	S	S	S	Procedures are in place to protect security and confidentiality of personal information of students and staff.
3.2	Monitor and maintain separate network traffic and data, current update of patching, and stay on top of threats if and when they arise.	CIO and DCIO	I	S	S	S	S	Cohasset network system is a safe and secure network.
4.1.	District reviews and revises when and if necessary its compliance with federal, state, and local policies for archiving of electronic communications.	CIO and DCIO	I	S	S	S	S	Email evaluation and archiving is completed.