Lowell Public Schools
Long Range Technology Plan 2012-2017

in alignment with the
LPS Information Technology Blueprint

Submitted by:

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May 2, 2012
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Introduction

Lowell Public Schools (LPS) is in the process of creating an integrated and comprehensive information technology infrastructure with the capacity to support all aspects of teaching, learning, and management within the school district. Having almost completed an extensive enhancement of the local and wide area networks (LANs and WANs) across the district and wireless capacity at each school facility using E-Rate funding sources, the second phase included the development of a comprehensive Technology Blueprint to identify LPS’s current status and highest priorities. The information collected during the development of the Technology Blueprint would assist LPS in developing a plan that supports the educational mission of the school district through technology. This study included a performance review, gap analysis, and recommendations for improvement and will provide the basis for updating the school district’s technology plan. The Information Technology Blueprint is particularly relevant at this time since lifelong learning will be a critical survival skill for 21st Century learners who must be able to access, analyze, and communicate information in a fast-paced and constantly changing world.

The recently-completed Information Technology Blueprint thoroughly addresses all of the benchmarks in the Massachusetts Department of Elementary and Secondary Education’s (DESE) Technology Plan benchmarks and expands upon them. This document demonstrates the alignment of the Information Technology Blueprint to the DESE Technology Plan benchmarks, listing which recommendations comprise the technology goals of LPS during the 2012-2015. In addition, this document includes the School Technology and Readiness (STaR) Assessment in Appendix A and Budget summary in Appendix B.
Benchmark 1 -- Commitment to a Clear Vision and Implementation Strategies

The Commitment to a Clear Vision and Implementation Strategies benchmark refers to the critical success factors that must be in place to facilitate a successful technology implementation. These include strong, supportive leadership, adequate technical support, professional development, and a continuous process of monitoring and evaluation.

The Lowell Public Schools Information Technology Blueprint addresses all of these areas in Chapter 1 (Vision and Introduction), Chapter 14 (Monitoring and Evaluation), Section 2 of Chapters 2 through 14 (Current Status), and Chapter 6 (Staff Development and Human Resources Management). The following table indicates the chapter in which these issues are discussed.

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Chapter</th>
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<tbody>
<tr>
<td>A. The district's technology plan contains a clearly stated and reasonable set of goals and implementation strategies that align with the district-wide school improvement plan. The district is committed to achieving its vision by the end of the school year 2014-2015.</td>
<td>Chapter 1</td>
</tr>
<tr>
<td>B. The district has a technology team with representatives from a variety of stakeholder groups, including school committee members, administrators, and teachers. The technology team has the full support of the school superintendent to implement the plan.</td>
<td>Chapter 1</td>
</tr>
<tr>
<td>C. Needs Assessment</td>
<td>See all chapters – section 2. Also, See STaR Chart in Appendix A.</td>
</tr>
<tr>
<td>1. The district assesses the technology products and services that will be needed to improve teaching and learning.</td>
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<tr>
<td>2. The technology plan includes an assessment of the services and products that are currently being used and that the district plans to acquire.</td>
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<tr>
<td>D. Budget</td>
<td>See all chapters – Budget included in individual Action Plans. Chapter 15 as well as the Budget line in each action plan. See also Appendix B in this document, Budget summary.</td>
</tr>
<tr>
<td>1. The district recognizes that technology plays a critical role in achieving its goals. The district has a budget that will ensure the implementation of its long-range technology plan.</td>
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<tr>
<td>2. The budget includes staffing, infrastructure, hardware, software applications, professional development, support, and contracted services.</td>
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<tr>
<td>3. The district seeks funding for technology programs from federal, state, and private resources, as well as from academic departments that are supported by technology. The district explores ways that technology can reduce costs and create efficiencies in other areas of the district budget.</td>
<td></td>
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<tr>
<td>E. For districts that plan to apply for E-rate reimbursement, the technology plan specifies how the district will pay for the non-discounted portion of their costs for the services procured through E-rate.</td>
<td></td>
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</tbody>
</table>
F. Evaluation
   1. The district routinely consults with technology staff before purchasing technologies items, to ensure that the items are appropriate, cost-effective, and sustainable.
   2. The district's technology plan includes an evaluation process that enables it to monitor its progress in achieving its goals and to make mid-course corrections in response to new developments and opportunities as they arise.

The Information Technology Blueprint includes the following recommendations to support this benchmark. Action plans are included at the end of the corresponding chapter.

CA-1.1 Adopt/Endorse Student Technology Standards/Competencies
   Formally adopt or endorse NETS for Students, 21st Century skills, and/or the Massachusetts Technology Literacy Standards and Expectations

LESF-1.1 Minimum Technology Learning Environments Guidelines
   Define, endorse, and advance minimum technology learning environment guidelines to ensure that all teachers and students in all schools have equal access to district technology resources in order to promote advanced and interactive learning in all classrooms by providing technological tools to engage students.

LESF-2.1 Application Standardization
   Standardize administrative productivity software, ensuring that each computer has the latest updates and versions to ensure document compatibility across the district.

SPMA-1.1 Establish a Standards Committee
   Establish a standards committee with a process that looks at both the ROI and the TCO of said product.

SPMA-1.2 Convene a Quarterly District and City Standards Review
   Convene a quarterly standards review meeting between the district and City constituents to discuss what technology to deploy.

SPMA-3.2 Fully Deploy Ticketing System
   The district should enhance the use of the Track-It® system so that an estimated date for corrective action is generated as well as priorities set by the ticket creator and modified and reported to IT.

PPS-2.1 Project Implementation Methodology
   Adopt a formal project management process so that tangential systems can be identified and projects can be monitored.

DSPP-1.1 District Morale and Pride
   Implement a program of personal caring, making a difference for all employees.

DSPP-3.2 Technology Steering Committee
   Establish a committee of instructional staff to approve IS projects, help prioritize the work and institute needed policy changes.
**DSPP-5.1 Project Management Office**

Implement a Project Management Office (PMO) and process. This would include documenting a project charter showing purpose, three-year total cost of ownership, schedule, sponsor and resources needed.

**CAP-3.2 Repository for District Policies**

Provide a common storage location for all district policies.

**MEPI-1.1 Technology Steering Committee**

Establish a technology steering committee and executive leadership team to monitor status of all technology initiatives, including the Technology Blueprint, on a regular basis.

**MEPI–2.1 Project Evaluations**

Define a process for monitoring and evaluating the effectiveness of all major initiatives. Make evaluations part of every project.
Benchmark 2 – Technology Integration and Literacy

To prepare students for both higher education and the workforce in the 21st century, they must master information technology as well as information literacy skills. While this has long been an expectation, it has not always been achieved. The Lowell Public Schools have adopted the National Educational Technology Standards for Students (NETS•S) and Teachers (NETS•T), including the Information Literacy Skills needed for digital citizenship. As the school district refreshes classrooms with interactive and multimedia technologies and refreshes the teachers’ computing devices, it will embark on a professional development program to prepare teachers to integrate these skills not their curriculum. No longer will technology be reserved for a weekly visit to the computer lab; it will be seamlessly integrated into daily teaching and learning.

The Lowell Public Schools Information Technology Blueprint addresses all of these areas in Chapter 2 (Curriculum and Assessment), Chapter 5 (Organizational Development and Staffing), and Chapter 6 (Staff Development and Human Resources Management). The following table indicates the chapter in which these issues are discussed.

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Page</th>
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<tbody>
<tr>
<td>A. Technology Integration</td>
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<tr>
<td>1. Outside Teaching Time - At least 90% of teachers use technology every day, including some of the following areas: research, lesson planning, organization, administrative tasks, communications, and collaboration. Teachers explore evolving technologies and share information about technology uses with their colleagues.</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>2. For Teaching and Learning - At least 90% of teachers use technology appropriately with students every day to improve student learning of the curriculum. Activities include some of the following: research, multimedia, simulations, data analysis, communications, and collaboration. Teachers integrate evolving technologies that enhance student interest, inquiry, analysis, collaboration, and creativity.</td>
<td></td>
</tr>
<tr>
<td>B. Technology Literacy</td>
<td></td>
</tr>
<tr>
<td>1. The Information Technology Blueprint includes the following recommendations to support this benchmark. Action plans are included at the end of the corresponding chapter.</td>
<td>Chapters 2, 6</td>
</tr>
<tr>
<td>2. 100% of teachers are working to meet the proficiency level in technology, and by the school year 2014-2015, 90% of teachers will have mastered 90% of the skills in the Massachusetts Technology Self-Assessment Tool (TSAT).</td>
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<tr>
<td>C. Staffing</td>
<td></td>
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<tr>
<td>1. The district has a district-level technology director/Coordinator.</td>
<td>Chapter 5</td>
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<tr>
<td>2. The district provides one FTE instructional technology specialist per 60-120 instructional staff to coach and model.</td>
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<tr>
<td>3. The district has staff specifically dedicated to data management and assessment.</td>
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</table>
The Information Technology Blue print includes the following recommendations to support this benchmark. Action plans are included at the end of the corresponding chapter.

**CA-2.1 Integration of Technology and ICT Skills**

Develop a process and timeline for systemically integrating both student technology skills and information literacy skills in grades K-12.

**CA-3.1 Expand/Monitor Lexia and Galileo Implementation**

Continue the implementation of both Lexia and Galileo systems. Develop a monitoring and evaluation strategy to ensure that LPS can determine the effectiveness of these initiatives/investments over time.

**TLT-4.2 Online Subscription Services**

Investigate and subscribe to a few core online reference databases for upper elementary, middle, and high school research projects and multi-grade level, cross-discipline, Web-based content services appropriate for K-8 students and teachers.

**LESF-1.2 Instructional Technology Refresh Program**

Research, develop, and maintain a short- and long-term instructional technology refresh program that increases inventories of modern computing devices to levels required for integration of technology into daily practice.

**ODS-1.1 Information, Communication, and Technology Services (ICTS) Director**

Develop the visionary and leadership role of Information, Communication, and Technology Services (ICTS) Director, reporting to the Deputy Superintendent of Finance and Operations and participating on the executive leadership team to ensure the role of technology in support of school district priorities.

**ODS-1.2 Reorganized Department of Information, Communication, and Technology Services (ICTS)**

Reorganize Management Information Services (MIS) into the Information, Communication, and Technology Services (ICTS) Department, which will be responsible for infrastructure, data and integration, and instructional technology.

**ODS-3.3 Target Ratio for Technical Support Staff**

Develop a target staffing ratio for technical support and work towards achieving that goal.

**ODS-3.4 Help Desk**

Define and staff a Help Desk to coordinate the calls and tickets submitted for technical support.

**ODS-4.1 Target Ratio for Instructional Technology Facilitators**

Define the position of Instructional Technology Facilitator (coach position) as a non-affiliated position to support the appropriate use of technology in the curriculum. The recommended staffing level is .5 FTE per 30-60 teachers.
Benchmark 3 – Technology Professional Development

Studies upon studies have demonstrated that a technology initiative can only be successful if it is accompanied by a sustained professional development effort. Technology Professional Development provides not only training on how to use technology tools, but development on how to effectively integrate them into classroom teaching and learning. In addition to this, school and district leadership must adopt and support a vision for educational technology and disseminate this to teachers.

The Lowell Public Schools Information Technology Blueprint addresses all of these areas in Chapter 5 (Organizational Development and Staffing) and Chapter 6 (Staff Development and Human Resources Management). The following table indicates the chapter in which these issues are discussed.

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<tr>
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<tbody>
<tr>
<td>A. At the end of five years, at least 90% of district staff will have participated in high-quality, ongoing professional development that includes emerging technology issues, technology skills, universal design, and research-based models of technology integration.</td>
<td>Chapter 5</td>
</tr>
<tr>
<td>B. Technology professional development is sustained and ongoing and includes coaching, modeling best practices, district-based mentoring, study groups, and online professional development.</td>
<td>Chapter 6</td>
</tr>
<tr>
<td>C. Professional development planning includes an assessment of district and teachers' needs. The assessment is based on the competencies listed in the Massachusetts Technology Self-Assessment Tool.</td>
<td>Chapter 6</td>
</tr>
<tr>
<td>D. Administrators and teachers consider their own needs for technology professional development.</td>
<td>Chapter 6</td>
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</table>

The Information Technology Blueprint includes the following recommendations to support this benchmark. Action plans are included at the end of the corresponding chapter.

CA-1.1 Adopt/Endorse Student Technology Standards/Competencies

Formally adopt or endorse NETS for Students, 21st Century skills, and/or the Massachusetts Technology Literacy Standards and Expectations

ODS-2.1 Job Portfolios for ICTS Staff

Revise job descriptions to reflect all job responsibilities, technical proficiencies, qualifications, certifications, and experience required for these positions.

ODS-3.1 Increased Training Opportunities for Technical Staff

Include MIS staff in training activities on new technologies and new systems.

ODS-3.2 Reduced Dependency on Technical Support Staff

Develop and implement a set of strategies for reducing the dependency on MIS staff for technical support.
SDHR-1.1 Technology Proficiencies for All Staff
   Define and adopt technology proficiencies for all staff as determined by productivity and/or instructional needs. Revise job descriptions to reflect these and include in evaluation process.

SDHR-1.2 Rigorous Technology Professional Development
   Based on the success of the Lowell Teacher Academy and the Murkland School’s improvement model, focus on programs that provide rigorous technology professional development for all teachers.

SDHR-2.1 Technology and Learning Summit
   Plan and host a technology summit to highlight successful practices at the school level and the new direction towards which the district is heading.

SDHR-2.2 Systemic Technology Prof. Development
   Integrate the use of technology in all training when appropriate.

SDHR-3.1 District-Wide Technology Professional Development Plan
   Develop a technology professional development plan to ensure that staff at all levels of proficiency has the opportunity to become proficient in using and integrating technology.

SDHR-6.1 Online PD Catalog and Calendar
   Define the needs and functional requirements for an online professional development catalog, calendar, and registration system.

DSPP-2.2 Teachers’ Technology Goals
   Include technology goals in all teachers’ performance goals.
Benchmark 4 -- Accessibility of Technology

Accessibility of Technology is critical in order to ensure that all students have the opportunity to use the tools that they will be expected to use in higher education and today’s work force. This not only includes sufficient student and teacher devices during the school day, but also access to technology outside the school day, adequate bandwidth to access instructional materials and resources, and adequate staff and professional development services to support these resources.

The Lowell Public Schools Information Technology Blueprint addresses all of these areas in Chapter 4 (Learning Environments and School Facilities); Chapter 5 (Organizational Development and Staffing), Chapter 12 (Communication and Network Infrastructure); and Chapter 13 (Parent and Community Access and Participation). The following table indicates the chapter in which these issues are discussed.

<table>
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<tr>
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<tbody>
<tr>
<td><strong>A. Hardware Access</strong></td>
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<tr>
<td>1. By 2014-2015, the district has an average ratio of one high-capacity, Internet-connected computer for each student. (The Department will work with stakeholders on a regular basis to review and define high-capacity computers.)</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>2. The district provides students with emerging technologies appropriate to their grade level.</td>
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<tr>
<td>3. The district maximizes access to the general education curriculum for all students, including students with disabilities, using universal design principles and assistive technology devices.</td>
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<tr>
<td>4. The district has procurement policies for information and instructional technologies that ensure usability, equivalent access, interoperability and SIF compliance.</td>
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<td>5. The district provides technology-rich classrooms, with access to devices such as digital projectors, electronic whiteboards, and student response systems.</td>
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<td>6. The district has established a computer replacement cycle of five years or less.</td>
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<tr>
<td><strong>B. Internet Access</strong></td>
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<tr>
<td>1. The district provides connectivity to the Internet for all computers in all classrooms in all schools, including wireless connectivity.</td>
<td>Chapters 3, 12</td>
</tr>
<tr>
<td>2. The district provides an external Internet connection to the Internet Service Provider (ISP) of 100 Mbps per 1,000 students/staff.</td>
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<tr>
<td>3. The district provides bandwidth of at least 10/100/1 Gb to each classroom. At peak, the bandwidth at each computer is at least 100 kbps. The network card for each computer is at least 10/100/1 Gb.</td>
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<td>Benchmark</td>
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<tr>
<td><strong>C. Networking (LAN/WAN)</strong></td>
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<tr>
<td>1. The district provides internal wide area network (WAN) connections from the district to each school between schools of at least 1 Gbps per 1,000 students/staff.</td>
<td>Chapter 13</td>
</tr>
<tr>
<td>2. The district provides access to servers for secure file sharing, backups, scheduling, email, and web publishing, either internally or through contracted services.</td>
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<tr>
<td><strong>D. Access to the Internet Outside the School Day</strong></td>
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<tr>
<td>1. The district provides access to its computer labs before and after school to ensure that students and staff have adequate access to the Internet outside of the school day.</td>
<td>Chapter 13</td>
</tr>
<tr>
<td>2. The district disseminates a list of up-to-date list of places where students and staff can access the Internet after school hours.</td>
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<tr>
<td><strong>E. Staffing</strong></td>
<td></td>
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<tr>
<td>1. The district provides staff or contracted services to ensure that its network is functioning at all times.</td>
<td>Chapter 5</td>
</tr>
<tr>
<td>2. The district provides resolves technical problems within 24 hours, so that they do not cause major disruptions to curriculum delivery. The district provides clear information about how to access technical support, which can be provided in person or remotely.</td>
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<tr>
<td>3. The district provides at least one FTE person to support 400 computers. Technical support can be provided by dedicated staff or contracted services.</td>
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The Information Technology Blueprint includes the following recommendations to support this benchmark. Action plans are included at the end of the corresponding chapter.

**CA-4.1 Web-based Solution for Sharing Resources**
Develop and implement a web-based environment for administrators, teachers, parents, and students to share resources at district and school levels.

**TLT-1.1 Web-Based Digital Resources Clearinghouse**
Expand the awareness of and access to instructional resources by implementing a searchable Web-based digital resources clearinghouse.

**TLT-1.2 Computer Compatibility Updates**
To reduce the frustration of users with various versions of Microsoft Office and applications such as Adobe Flash and Adobe Reader, install compatibility modules on and/or upgrade the utility applications on all computers.

**TLT-1.3 Research Cloud-Based Software Services**
Research the pros and cons of free, cloud-based productivity and information management systems such as Google Tools for Schools or Microsoft's Live@EDU.
TLT-2.1 21st Century Classroom Configurations
   Determine the appropriate levels, collections, selections of blended learning technologies and peripheral devices that are needed to support 21st Century classrooms across the school district.

TLT-3.1 Technology Resources for Special Populations
   Continue to identify resources and strategies at all grade levels to ensure that students included in special populations are provided with the resources and preparation required to achieve AYP.

SPMA-3.1 SLA Adaption and Adoption
   The district needs to set a standard that all contracts and future purchases will include Service Level Agreements (SLAs.)

PPS-2.2 Technology Disposal Plan
   The Facilities Department and IT need to develop a Service Level Agreement with commitments of time for pick-up and transfer of equipment from specific school locations to a central storage area.

PPS-3.1 Develop BYOT Security Policy
   Implement role-based access for the wireless network that has recently been deployed.

CNI-1.1 Document Wireless Implementation
   Supply the district with as-built drawings of WAP placement layered with penetration forecasts that can assess the number of users capable of connecting from any one location within the school. This should then be reviewed by the district to determine if the level of deployment may be sufficient to accommodate future growth and use of the wireless network.

CNI-1.2 Develop District-wide VoIP Initiative
   Create an overall plan for telephone services culminating in an RFP and an application for E-Rate subsidies.

CNI-2.1 BYOT Pilot Program
   Configure the wireless network to enable student/teachers and the community to access district resources through the use of their own technology. A pilot program should immediately be developed and deployed within at least one school over the next 6-12 months.

CNI-2.2 VBrick Implementation
   Define the goals and process for implementing VBrick as a media distribution solution to ensure contract compliance with the cable provider.

CNI-6.1 Vulnerability Assessment and Training
   Conduct a vulnerability assessment to identify areas in which data and information security could be breached.

CAP-1.2 Kiosks for Public Internet Access
   Expand Internet access to other areas around the city, such as community centers, ensuring access through public libraries

MEPI–1.2 Technology Equity
   Develop a common way to assess ‘technology equity’ at each school.
Benchmark 5 – Virtual Learning and Communications

Virtual Learning and Communications provides an alternative to traditional classroom learning and ranges from blogging and conferencing resources to a variety of online learning options. With the availability of Web 2.0 tools, school districts have greater options for servicing students who are homebound or otherwise unable to attend mainstream classes. While some alternative schools have adopted virtual programs as a complete solution, many districts prefer a hybrid model that combines an online component with the traditional classroom format.

The Lowell Public Schools Information Technology Blueprint addresses all of these areas in Chapter 3 (Teaching and Learning Technologies), Chapter 12 (Communication and Network Infrastructure), and Chapter 13 (Parent and Community Access and Participation). The following table indicates the chapter in which these issues are discussed.

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<tr>
<th>Benchmark</th>
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<tbody>
<tr>
<td>A. The district encourages the development and use of innovative strategies for delivering high-quality courses through the use of technology.</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>B. The district deploys IP-based connections for access to web-based and/or interactive video learning on the local, state, regional, national, and international level.</td>
<td>Chapter 3</td>
</tr>
<tr>
<td>C. Classroom applications of virtual learning include courses, collaborative projects, field trips, and discussions.</td>
<td>Chapter 13</td>
</tr>
<tr>
<td>D. The district maintains an up-to-date website that includes information for parents and community members.</td>
<td>Chapter 13</td>
</tr>
</tbody>
</table>

The Information Technology Blueprint includes the following recommendations to support this benchmark. Action plans are included at the end of the corresponding chapter.

**CA-1.1 Adopt/Endorse Student Technology Standards/Competencies**

Formally adopt or endorse NETS for Students, 21st Century skills, and/or the Massachusetts Technology Literacy Standards and Expectations

**TLT-2.2 School and Teacher Websites**

Determine a long-term strategy and solution(s) for developing and sustaining dynamic school and teacher websites.

**CAP-1.1 Dynamic School and District Websites**

Develop a more dynamic school-based website that can be easily modified and updated at the school level.

**CAP-1.3 Increasing Parent Participation**

Explore options so that all parents can participate in school events if they choose.

**CAP-3.1 Electronic School Committee Agenda Tool**

Select, purchase, and deploy e-agenda and document management software to reduce the time and expense of printing, copying, and distributing lengthy print materials.
CAP-4.1 Updated School District Website

Develop a vision for the district websites. Initiate a program to review and revise the district website and assign one staff member within each department and within each school to maintain current information on a regular basis.
Benchmark 6 – Safety, Security, and Data Retention

Safety, Security, and Data Retention is critical to the success of a systemic technology initiative. Safety and security apply to both the physical safety of people and infrastructure and the protection of data related to all aspects. Data, applications, and the network itself must all be safeguarded.

The Lowell Public Schools Information Technology Blueprint addresses all of these areas in Chapter 8 (Policies, Procedures, Security and Safety), Chapter 10 (Administrative and Productivity Systems), and Chapter 11 (Decision Support and Accountability). The following table indicates the chapter in which these issues are discussed.

<table>
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<tr>
<th>Benchmark</th>
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<tbody>
<tr>
<td>A. The district has a CIPA-compliant Acceptable Use Policy (AUP) regarding Internet and network use. The policy is updated as needed to help ensure safe and ethical use of resources by teachers and students.</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>B. The district educates teachers and students about appropriate online behavior. Topics include cyber-bullying, potential risks related to social networking sites and chat rooms, and strategies for dealing with these issues.</td>
<td>Chapters 8, 12</td>
</tr>
<tr>
<td>C. The district has a plan to protect the security and confidentiality of personal information of its students and staff.</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>D. The district complies with federal and state law, and local policies for archiving electronic communications produced by its staff and students. The district informs staff and students that any information distributed over the district or school network may be a public record.</td>
<td>Chapters 8, 12</td>
</tr>
</tbody>
</table>

The Information Technology Blueprint includes the following recommendations to support this benchmark. Action plans are included at the end of the corresponding chapter.

CA-4.2 Expand X2 Pilot
Continue to pilot and implement additional X2 modules, such as the Parent Portal. Develop a monitoring and evaluation strategy to ensure that LPS can refine the deployment of these over time throughout the district.

PS-1.1 Establish an Internet Policy Committee
Establish an Internet policy governing committee to assess current policy and modify the policy immediately to enhance access to appropriate content.

PPS-1.2 Online Collaboration Policy
Develop an immediate policy that may enable some teachers to collaborate more effectively with their students and parents.

APS-1.1 Race to the Top
Investigate approaches to integration of data and information across these application islands.
APS-2.1 Munis’ Capabilities
   Investigate the adoption of Munis modules that are not being used in the district.

APS-3.1 X2 Capability
   Clearly define the roles of the full-time staff assigned to support this important system.

APS-3.2 District-Wide Assessment System
   Set a district-wide standard for an assessment system. Investigate whether to stay with Galileo or not.

DSAS-1.1 Data Governance
   Establish a formal data governance process to ensure accurate data.

DSAS-2.1 Data Integration
   Investigate the approaches to integration of data and information across these application islands.