

## **Local Technology Plan Guidelines** (School Year 2007-2008 through 2010-2011)

These guidelines are designed to help districts develop purposeful long-range technology plans. While not mandated, the guidelines represent recommended conditions for effectively integrating technology into teaching and learning.

There are several reasons that a school district should develop and maintain a technology plan. First, comprehensive planning helps the district take advantage of technology's power to improve teaching and learning. Technology has the power to engage and challenge students. Applications such as formative assessment tools can help teachers ensure that students are meeting the standards. By allowing teachers to access information about student learning, information systems make it possible for teachers to support individual students better. Online learning programs can increase the range of learning opportunities available to students, enabling them to study with experts and other students around the globe. Technology can also play a role in ensuring students' safety, by facilitating communication among school personnel and parents.

Funding is another reason technology planning is important. Every school district must have a long-range strategic technology plan approved by the Department of Education in order to be eligible for E-Rate discounts and federal and state technology grants. Each school district is required to develop a 3- to 5-year plan, which should be kept on file locally. Each year, as part of the technology plan approval process, the Department asks districts to report on the progress they have made in implementing their plans through the Department's secure web portal. The Department reviews this data, along with the district's long-range plan, to approve the district's plan. To facilitate this process, the Department asks the district to post its long-range plan on its web site or to email a copy of the plan to the Department.

These guidelines are based on the School Technology and Readiness (STaR) Chart<sup>1</sup> developed by the state's Educational Technology Advisory Council (ETAC). Using the STaR Chart, along with advice from stakeholders across the Commonwealth, the Department has developed this new set of guidelines for schools to use in technology planning. These guidelines are not mandated but rather recommended benchmarks for districts to meet by the end of the school year 2010- 2011. The Department will use these guidelines to gauge the progress of districts' implementation in order to approve their technology plans annually.

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<sup>1</sup> Full text of the StaR Chart is available on the Department's web site (<http://www.doe.mass.edu/boe/sac/edtech/star.html>).

# **Benchmark 1**

## **Commitment to a Clear Vision and Implementation Strategies**

- 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 2010-2011.
- 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 support of the district leadership team.
- C. Needs Assessment
  - 1. The district assesses the technology products and services that will be needed to improve teaching and learning.
  - 2. The technology plan includes an assessment of the services and products that are currently being used and that the district plans to acquire.
- D. 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.
- E. Budget
  - 1. The district has a budget for its local technology plan with line items for technology in its operational budget.
  - 2. The budget includes staffing, infrastructure, hardware, software, professional development, support, and contracted services (including telephone services).
  - 3. The district leverages the use of federal, state, and private resources.
  - 4. 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.
- F. Evaluation
  - 1. The district evaluates the effectiveness of technology resources toward attainment of educational goals on a regular basis.
  - 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.

## **Benchmark 2**

### **Technology Integration and Literacy**

#### A. Technology Integration<sup>2</sup>

1. Outside Teaching Time - At least 85% of teachers use technology every day, including some of the following areas: lesson planning, administrative tasks, communications, and collaboration. Teachers share information about technology uses with their colleagues.
2. For Teaching and Learning - At least 85% 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 interpretation, communications, and collaboration (See the Massachusetts Recommended K-12 Instructional Technology Standards<sup>3</sup>).

#### B. Technology Literacy

1. At least 85% of eighth grade students show proficiency in all the Massachusetts Recommended PreK-12 Instructional Technology Standards for grade 8.
2. 100% of teachers are working to meet the proficiency level in technology, and by the school year 2010-2011, 60% of teachers will have reached the proficiency level as defined by the Massachusetts Technology Self-Assessment Tool (TSAT)<sup>4</sup>.

#### C. Staffing

1. The district has a district-level technology director/coordinator.

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<sup>2</sup> The Massachusetts Department of Education defines technology integration as the daily use of technology in classrooms, libraries, and labs to improve student learning.

<sup>3</sup> The Massachusetts Recommended K-12 Instructional Technology Standards are available on the Department's web site (<http://www.doe.mass.edu/edtech/standards.html>).

<sup>4</sup> The Technology Self-Assessment Tool is available as an interactive tool on MassONE, as well as a printable PDF checklist ([http://www.doe.mass.edu/edtech/standards/sa\\_tool.html](http://www.doe.mass.edu/edtech/standards/sa_tool.html)).

2. The district provides one FTE instructional technology teacher per 60-120 instructional staff.
3. The district has staff dedicated to data management and assessment.

### **Benchmark 3**

## **Technology Professional Development**

- A. At the end of three years, at least 85% of district staff will have participated in 45 hours of high-quality professional development<sup>5</sup> that includes technology skills and the integration of technology into instruction.
- B. Technology professional development is sustained and ongoing and includes coaching, modeling best practices, district-based mentoring, study groups, and online professional development. The professional development includes concepts of universal design and scientifically based, researched models.
- 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.<sup>6</sup>
- D. Administrators and teachers consider their own needs for technology professional development, using the technology self-assessment tools provided by the Massachusetts Department of Education or similar tools.<sup>7</sup>

### **Benchmark 4**

## **Accessibility of Technology**

#### A. Hardware Access

1. The district has an average ratio of fewer than five students per high-capacity<sup>8</sup>, Internet-connected computer. The Department will work with

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<sup>5</sup> High quality professional development is described in the Massachusetts 2001 State Plan for Professional Development (<http://www.doe.mass.edu/pd/stateplan/>).

<sup>6</sup> Details are available on the Department's web site ([http://www.doe.mass.edu/edtech/standards/sa\\_tool.html](http://www.doe.mass.edu/edtech/standards/sa_tool.html)).

<sup>7</sup> A sample administrator technology self assessment tool is available on the Department's web site ([http://www.doe.mass.edu/edtech/standards/tsat\\_sampadmin.html](http://www.doe.mass.edu/edtech/standards/tsat_sampadmin.html)). The Technology Self-Assessment Tool (TSAT) for teachers is also available as a printable document and as an interactive tool on MassONE ([http://www.doe.mass.edu/edtech/standards/sa\\_tool.html](http://www.doe.mass.edu/edtech/standards/sa_tool.html)).

<sup>8</sup> The Department defines a high-capacity computer as a computer that has at least 256 RAM and either a Pentium 4 processor or a Macintosh G4 processor (or equivalent). The Department also refers to these as Type A computers.

stakeholders to review the capacity of the computer on an annual basis. (The goal is to have a one-to-one, high-capacity, Internet-connected computer ratio.)

2. The district provides students with access to portable and/or handheld electronic devices appropriate to their grade level.
3. The district maximizes access to the general education curriculum for all students, including students with disabilities, using technology in classrooms with universal design principles and assistive technology devices.
4. The district has procurement policies for information and instructional technologies that ensure usability, equivalent access, and interoperability.
5. The district provides classroom access to devices such as digital projectors and electronic whiteboards.
6. The district has established a computer replacement cycle of five years or less.

#### B. Internet Access

1. The district provides connectivity to the Internet in all classrooms in all schools including wireless connectivity, if possible.
2. 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.

#### C. Networking (LAN/WAN)

1. The district provides a minimum 100 Mb Cat 5 switched network and/or 802.11b/g/n wireless network.
2. The district provides access to servers for secure file sharing, backups, scheduling, email, and web publishing, either internally or through contracted services.

#### D. Access to the Internet Outside the School Day

1. The district works with community groups to ensure that students and staff have access to the Internet outside of the school day.

2. The district web site includes an up-to-date list of places where students and staff can access the Internet after school hours.

#### E. Staffing

1. The district provides a network administrator.
2. The district provides timely in-classroom technical support with clear information about how to access the support, so that technical problems will not cause major disruptions to curriculum delivery.
3. The district provides at least one FTE person to support 200 computers. Technical support can be provided by dedicated staff or contracted services.

## **Benchmark 5**

### **E-Learning and Communications**

- A. The district encourages the development and use of innovative strategies for delivering specialized courses through the use of technology.
- 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.
- C. Classroom applications of e-learning include courses, cultural projects, virtual field trips, etc.
- D. The district maintains an up-to-date web site that includes information for parents and community members.
- E. The district complies with federal and state law<sup>9</sup>, 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.

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<sup>9</sup> Information about state regulations is available from the state's Record Management Unit (<http://www.sec.state.ma.us/arc/arcrmu/rmuidx.htm>).