Technology Pinpoint Committee Members

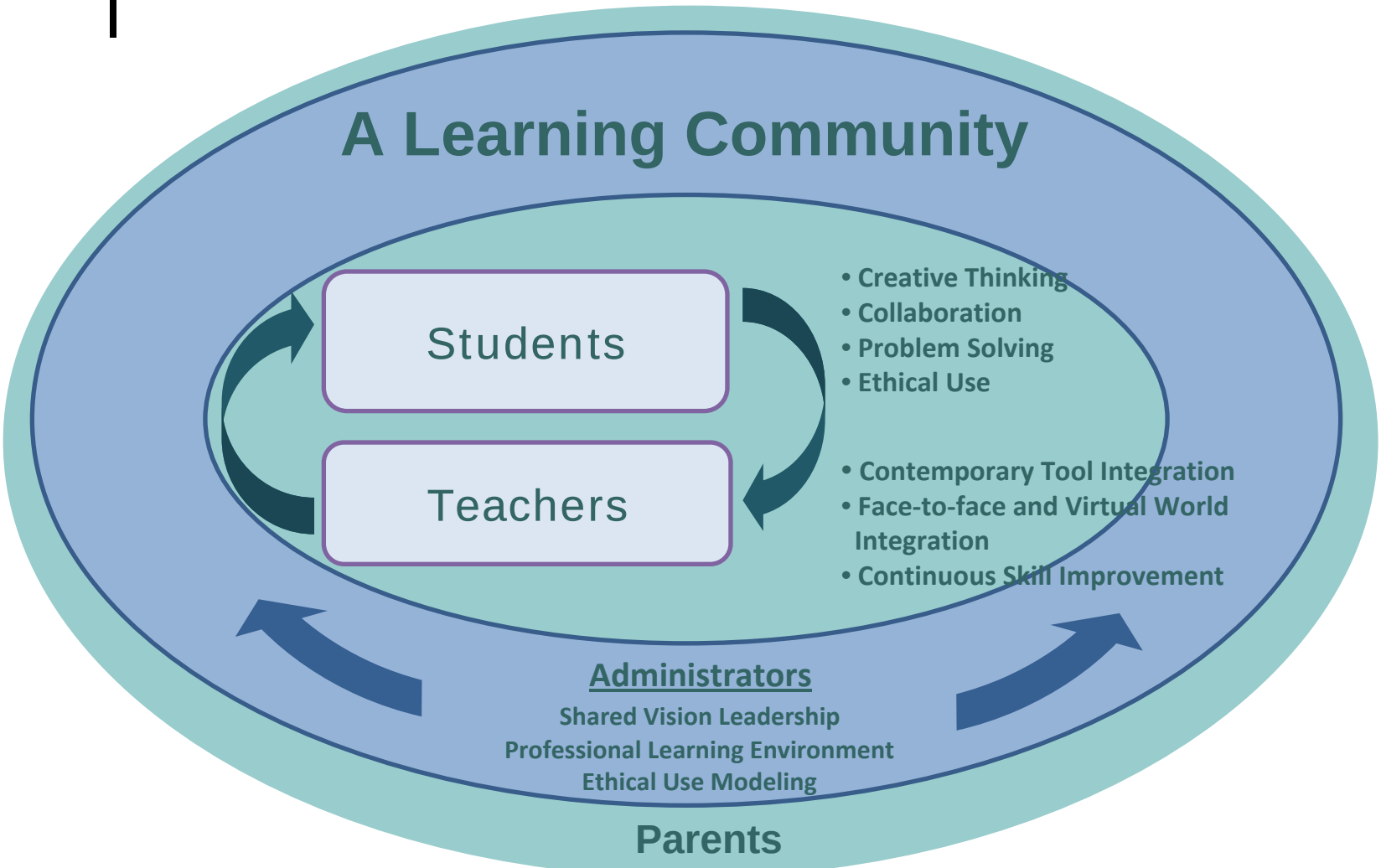
- Alan Michel
- Ann Hamel
- Bonnie Zahorik
- David Eckman
- David Birnbach
- Chris Farina
- Jonathan Harris
- Kate Margolese
- Pam Lathrop
- Frank McCall
- Theresa McGuinnessDarby
- Raymond Tode, Chairman

Special Thanks to:

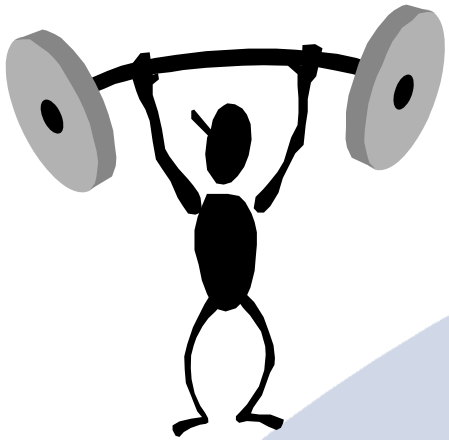
- Alan Michel
- Ann Hamel
- Bonnie Zahorik
- Kate Margolese
- Frank McCall

It’s about saying yes to learning

Our vision is to ensure technology furthers the learning throughout the community



To RAISE the Bar
We need To bridge the gap between the Present and Future



Reduce Costs
- Free Software
- Student devices where appropriate
- Cloud Computing

Allow Flexibility
- Cloud Computing
- Device Independence

Integrate into Classroom
- Curriculum
- Ethical & appropriate use
- Training
- Support

Secure Access for Everyone, Everywhere
- Device independent
- Infrastructure
- Bandwidth
- Home/School
- Equitable

Enhanced Learning
- Global perspective
- Problem solving
- Communication
- Creative Collaboration
- Differentiated Learning

Andover Technology Mission

The Andover School District is committed to providing responsive technology and digital literacy for all students and the entire Andover Public School community that will prepare our students to thrive in an ever changing globally competitive world.

An Osborne Executive ($1500) portable computer, from 1982, and an iPhone, released 2007. The Executive weighs 100 times as much, cost 10 times as much, and has 100 times less processing power than the iPhone (.

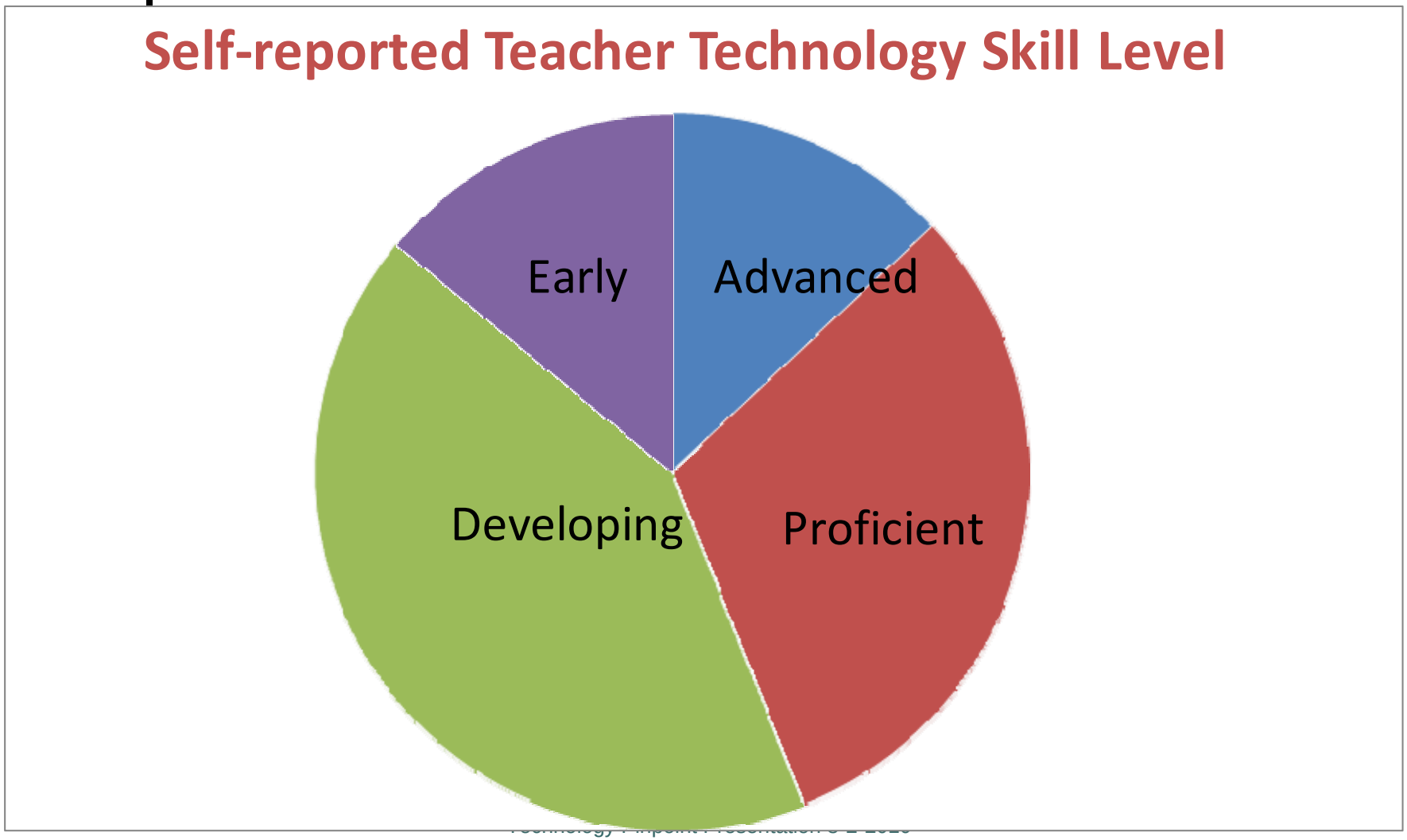
Ubiquitous Access

Online applications, platforms, and media which facilitate interaction, collaboration, and sharing content.

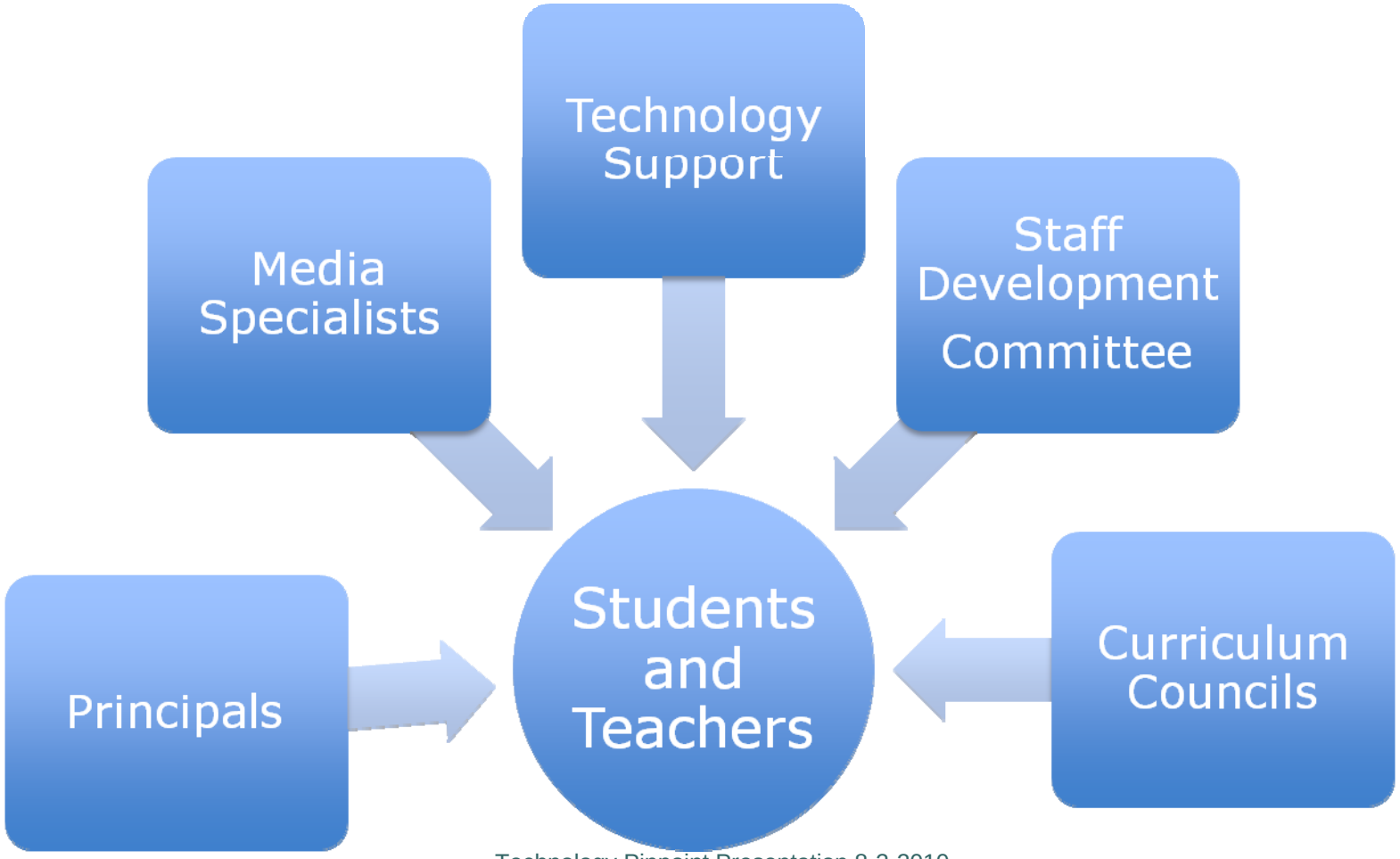
Our world is interactive. Our educational arena is global.

Challenges

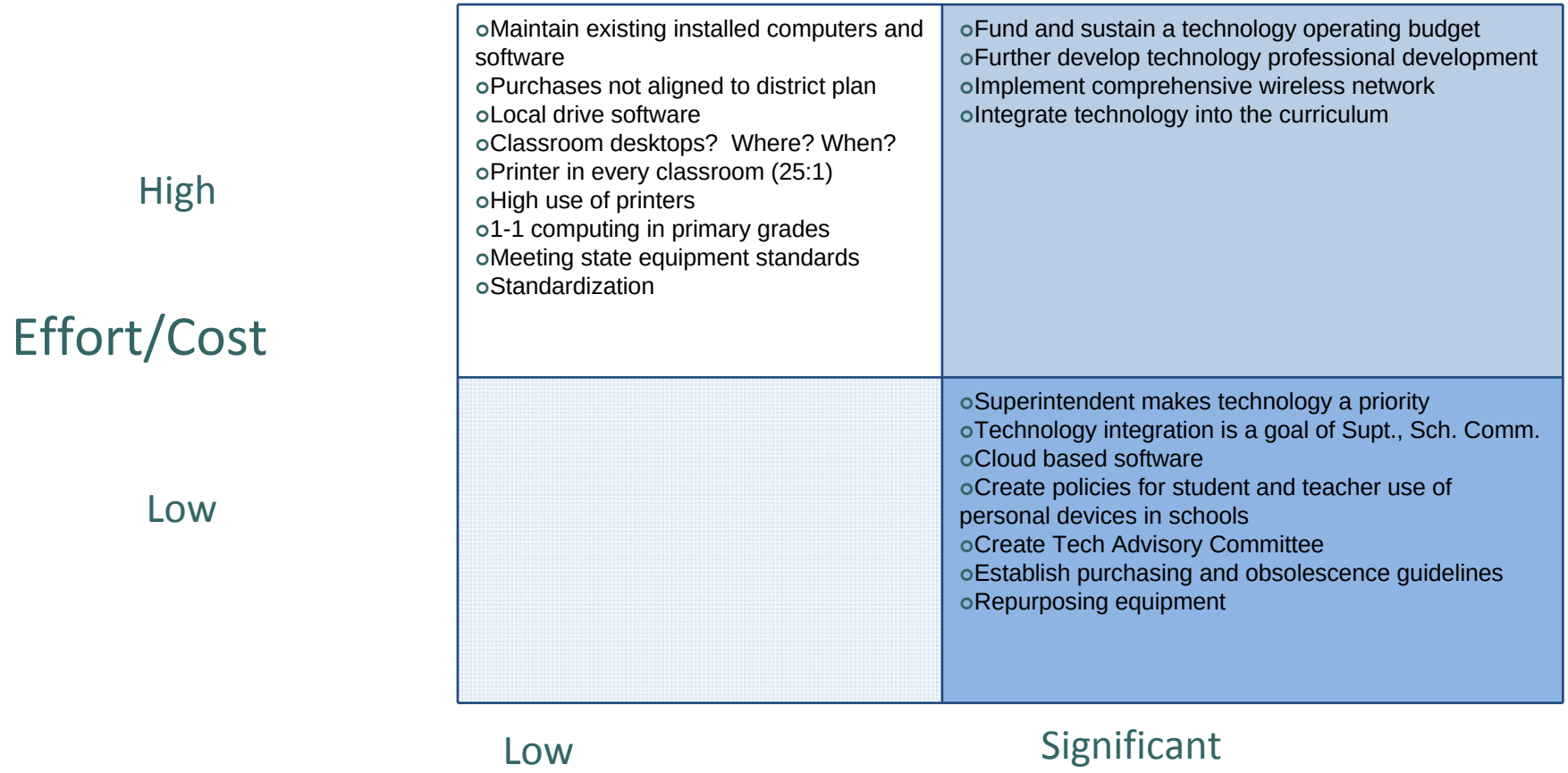
Less than 50% of Teachers are Proficient or Advanced in Technology Skills



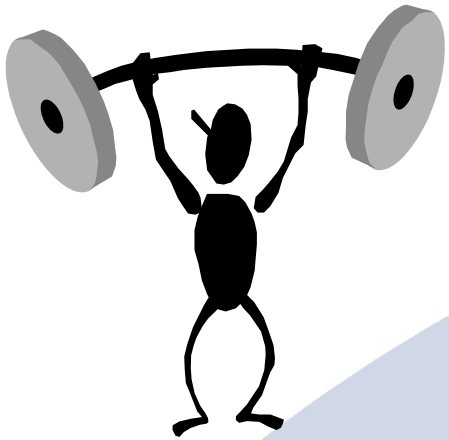
Staff in many areas are key to ensuring success of technology in our schools



Action focus for maximum impact



To RAISE the Bar
We need To bridge the gap between the Present and Future



Reduce Costs
- Free Software
- Student devices where appropriate
- Cloud Computing

Allow Flexibility
- Cloud Computing
- Device Independence

Integrate into Classroom
- Curriculum
- Ethical & appropriate use
- Training
- Support

Secure Access for Everyone, Everywhere
- Device independent
- Infrastructure
- Bandwidth
- Home/School
- Equitable

Enhanced Learning
- Global perspective
- Problem solving
- Communication
- Creative Collaboration
- Differentiated Learning

Appendix

Andover Public Schools
Internal Technology Assessment

- Strengths
  - Good wide area network infrastructure
  - Good local are network infrastructure
  - Good server and data storage system
  - 50 Mbps/2 Mbps filtered access to Internet
  - Networked desktop computer in every classroom
  - Networked laser printer in all classrooms
  - Most K-8 teachers assigned laptop computers
  - District-wide closed circuit television system

Andover Public Schools
Internal Technology Assessment

- Weaknesses
  - Limited technology professional development program
  - Inconsistent funding of the technology program
  - Inability to comply with a technology equipment and software replacement and upgrade schedule
  - Limited reliable wireless access in schools
  - Policy prohibiting private computer equipment to operate on school network
  - Policy prohibiting students to use PDAs, Smart phones, etc, in schools
  - Inability to provide graduated Internet filtering for different OUs on the network
  - Currently students and teachers do not have access to their home directories from outside the school district
  - All classrooms are not equipped equitably, i.e. Smart boards, scanners, telephones, etc.
  - Age of computer equipment
  - High technician to computer ration (1:794)
  - Average time to respond to repair ticket 10.4 days

Andover Public Schools
Technology Equipment Inventory

	Student Population	Classroom Teachers	Desktop Computers	Teacher Laptops	Mobile Wireless Laptops Labs 30 computers	Networked Laser Printers	Stand-alone Inkjet Printers	Scanners	Interactive Whiteboards Systems	Student Response Systems	LCD Projectors	Switches Managed Gigabit	Switches Unmanaged 100MB	Wireless Access Points
AHS	1769	138	416	47	0	122	47	21	4	1	42	22	0	1
DMS	553	24	145	43	2	52	30	6	2	2	4	5	8	6
WMS	530	24	98	40	2	47	17	4	4		2	6	6	11
WHM	403	18	117	43	3	59	7	8	6		1	9	0	13
BAN	469	21.5	81	34	1	42	13	6	5	4	0	7	0	5
HPE	524	23	79	47	3	62	7	5	8	1	4	8	0	11
SAN	355	17.5	69	26	1	39	12	3	3	1	13	4	6	4
SHA	283	16	53	26	0	22	12	1	1		6	4	2	7
SOU	577	25	84	32	1	44	12	2	5		2	4	5	15
WEL	677	30	75	54	2	48	18	2	11	1	2	7	4	13
Totals	6140	337	1217	392	15	537	175	58	49	10	76	76	31	86

Andover Public School
Teacher Technology Skill Inventory

Early Technology Skills	14%
Developing Technology Skills	42%
Proficient Technology Skills	31%
Advanced Technology Skills	13%

Draft April 2010

Mission Statement

Andover School District is committed to providing responsive technology and digital literacy for all students and the entire Andover Public School community that will prepare our students to thrive in an ever changing globally competitive world.

Vision Statement

We envision using technology to further a learning community where ***Students***:

- **demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology;**
- **use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others;**
- **apply digital tools to gather, evaluate, and use information;**
- **use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources;**
- **understand human, cultural, and societal issues related to technology and practice legal and ethical behavior;**
- **demonstrate a sound understanding of technology concepts, systems and operations.**

Source: ***ISTE National Technology Standards for Students, Teachers, and Administrators***

Vision Statement

We envision using technology to further a learning environment where ***Teachers***:

- Use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments;
- Design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes outlined in the vision for our students;
- Exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society;
- Understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices;
- Continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources.

Source: ***ISTE National Technology Standards for Students, Teachers, and Administrators***

Vision Statement

We envision using technology to further a learning environment where *Educational Administrators* will:

- **Inspire and lead development and implementation of a shared vision for comprehensive integration of technology to promote excellence and support transformation throughout the organization;**
- **Create, promote and sustain a dynamic, digital-age learning culture that provides rigorous, relevant, and engaging education for all students;**
- **Promote an environment of professional learning and innovation that empowers educators to enhance student learning through the infusion of contemporary technologies and digital resources;**
- **Provide digital-age leadership and management to continuously improve the organization through the effective use of information and technology resources;**
- **Model and facilitate understanding of social, ethical, and legal issues and responsibilities related to an evolving digital culture.**

Source: ***ISTE National Technology Standards for Students, Teachers, and Administrators***

Values and Beliefs

Values / Criteria against which solutions should be assessed:

- Support student centered learning
- Support differentiated learning / teaching
- Ubiquitous access and use of technology at home and at school
- Device independent, flexible
- Leverages cloud computing and open source (to reduce cost and increase access and flexibility)
- Low cost (to the school)

Objectives of Any Solution:

- Improve the Learning Process
- Improve the Teaching Process
- Reduce Equipment / Operating Costs
- Reduce Maintenance Labor costs
- Reduce TCO (Total Cost of Ownership)
- Increase ROI (Return on Investment) value to community

Goals

- Achieve excellence – raise the bar
- Enhance Learning
- Effectively Integrate Technology into the Classroom
- Reduce Cost
- Allow flexibility
- Provide Universal Connectivity
- Equitable Access

Goals
Enhance Learning

- Technology should be a tool to support the overarching learning goals of the district
- Universal connectivity
- Facilitate collaboration and best practices
- Differentiated Learning
- Enabled by one-to-one Student: device ratio
- Reuse and modification of lesson plans for continuous improvement and for substitutes
- Parent and students can access teacher lessons at home
- Make databases available within schools for reference material
- Use the forces of social networking for good

Goals
Effectively Integrate Technology into the Classroom

- No matter how great the technology is, if the teachers and students don't embrace it, it will have no benefit.
- Accessible and compelling training is essential to ensure technology investments are not wasted.
- Technology available in classroom and throughout school
  - Connectivity
  - Devices
  - Content
    - Student work
    - Reference materials
    - Curriculum
    - Lesson Plans
- Teach ethical use of technology
- Increase teacher comfort with multiple platforms and technologies
- Incorporate teacher training and support of all new technologies
- Formal training
- Community of learner/peer mentoring
- Self study
- Support resources

Goals
Reduce Cost

Many strains already exist on our budget, keeping the cost of technology low is critical.

- Use free software solutions where possible
- Leverage free or less costly content
  - Electronic textbooks
  - Online resources
  - Curriculum
- Allow students to use their own devices where appropriate
- Take advantage of cloud computing
  - Implement efficient and scalable solutions
  - Reduce capital expenditures
  - Reduce software acquisition costs
  - Eliminate initial deployment and upgrade cost

Goals
Allow Flexibility

- Technology and the world into which our students are graduating are both changing rapidly. To ensure that we can quickly change technologies at a low cost as better and more economical solutions become available and/or new learning needs are identified our technology infrastructure needs to be flexible.
- Use cloud computing to allow access to data and applications both at school and home and to allow more collaboration
- Device independence
- Student and Faculty file access of files from anywhere

Goals
Provide Universal Connectivity

- While this is a subset of enhancing learning, it is so significant that it be highlighted independently. Students and staff need access to the internet, to on-line databases (which may be local), to their school work while in the school buildings or at home in order to work efficiently and effectively.

Measure of Success

The School District has:

- Shared proactive vision for educational technology
- Empowered leaders
- Consistent and Adequate funding
- Equitable Access to current and emerging technologies
- Skilled personnel- Educators and support staff
- On-going Professional Development
- Technical Support
- Curriculum Frameworks that are aligned with and support digital learning and work
- Student Centered Learning
- Assessment and Evaluation system to determine the effectiveness of the technology initiative and ability to make course corrections when necessary.
- Engaged Communities
- Supportive Policies

Source: ***ISTE National Technology Essential Necessary Conditions***

Interim Targets

- Consensus of Building Principals on Technology vision and its implementation
- Administrators and Teachers are actively implementing technology in the learning environment and supporting the implementation of technology in their schools and classrooms
- Teachers have ready access to the technology resources they need for instruction
- Instructional Technology Specialists are available to assist the classroom teacher with the application of technology to the learning process
- Focused, timely technology professional development which supports the district technology initiatives
- Appropriate skilled technical support to ensure rapid deployment, repair, and maintenance of equipment and services
- Published technology frameworks that are incorporated into the core curriculum classroom lessons and activities
- Student oriented projects requiring the application of knowledge and technology to identify creative solution to real world problems
- Annual technology review that will focus on the effectiveness of our vision, professional development, infrastructure, processes, and most importantly how technology is assisting our students to become valued productive citizens.

Action Plan

1. Convene an Technology Seminar for the Administrative Council to begin the process of building a consensus around a district-wide technology initiative
2. Develop a strategy for acquisition of future equipment, infrastructure, and professional development;
3. Develop policies and procedures for providing students and teachers access to the Internet using their own equipment in school.
4. Develop a strategy, budget and implementation plan for anytime, anywhere access to teacher/student data.

Today's learning models require a change in how we invest in technology

Present

- Technology as an experiment option
- Technology as standalone curriculum
- Inconsistent funding
- Project and pilot based
- Inconsistent professional development
- etc

Future

- Technology as a requirement for success
- Technology integrated into curriculum
- Consistent baseline funding
- Integral to Strategic plan
- Ongoing training & support
- etc