Montclair Public Schools
Two – Year
Technology Plan
2015-2017

October 2015

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Powerpoint: Talking Points for BOE Oct 7 2015

Goal 1:

Support curriculum planning and ongoing sustained instructional professional development for 21st century learning environments for the adoption and integration of technology.

Considerations & Objectives

1. Deliver a K-12 Technology Scope and Sequence - *DONE*
2. Deliver a K-5 Technology Curriculum - *DONE*
3. Deliver a 6-12 Technology Curriculum
4. Provide routine, ongoing technology professional development
   a. Consider an annual commitment of $25,000
   b. Consider hiring an additional instructional coach for grades K-8
5. Provide routine adoption of K-12 technology integration activities
6. Develop a Grade 5 technology literacy assessment for 8.1 Standards
7. Develop a digital citizenship (guided by NJ Bill A3292) program for faculty, students, and parents

Strategies:

1. Deliver a K-5 Scope and Sequence, and a K-5 curriculum to ensure all K-12 students receive technology instruction to cover: the 8.1 standards, technology skills for the Common Core Standards, and the Social Media best practices dictated by both NJ Bill A-3292 and the 8.1.D –Digital Citizenship.

2. Deliver ongoing technology professional development. As the results of the needs assessment show educators across the district need sustained and ongoing professional development on integrating educational technology more effectively on a routine and regular basis to meet the needs of the 8.1 standards technology skills for the Common Core Standards, and the Social Media best practices dictated by both NJ Bill 3292 and the 8.1.D –Digital Citizenship.

3. Consider hiring an additional technology instructional coach for grades K-8 (similar to the MHS instructional coach Anthony Keys). See Appendix 1/1

4. Develop a Grade 5 *Technology Literacy Assessment* for 8.1 standards. Development of a benchmark Grade 5 Technology Literacy Assessment, based on the NJ-CCCS 8.1, 5th grade goals will determine if all students have attained proficiency in the 8.1 standards in order that they may apply these technology literacy skills in grades 6-12 and beyond.

5. Develop a *Digital Citizenship* program for faculty, students, and parents; to ensure our K-12 students have complete understanding of the *Digital Citizenship* standards; including: AUP, Cyber Safety, Cyber Bullying, Cyber Security, Citing Sources, and Copyright Standards included in: NJ Bill A3292 and NJ-CCCS in 8.1.D., E. to meet these standards, as well as community recognized practices, the district will develop middle school course standards for students, instructional practices for staff, and community outreach programs for parents.

Goal 2:

Create a technology organization and workflow that supports full systemic use of technology for best practices of 21st century learning environments.

Rationale

Currently the same data is routinely re-entered (re-keyed) into data systems (such as Edumet, Skyward, and IEP-Direct) by multiple staff members including staff at: the local school building, Central Services (HR, Registration, Operations/Business Office, Academics, and Special Services) and the technology department (for NJSmart). This can result in duplicate data, conflicting data, and missing data.

Considerations & Objectives

1. Provide an organization and enterprise system chart so all district administrators will be able to identify technology staff members responsible for specific tasks (phone issues, vs. projector installation) – *DONE.* See Appendix 3/2.

2. Provide the position of *Manager of Information Systems* so that all district administrators will be able to direct all data requests to one central services staff member – *DONE.* See Appendix 2/2.

3. Provide clearer job descriptions and a revised organizational chart so that all technology staff, including school-based technology teachers and technology coordinators, will be able to describe their specific roles with respect to technology support and integration within the organization. See Appendix 2/2.

4. Provide better, more efficient and timely data reports needed for more informed decision-making.

Strategies:

1. Develop a new district-wide technology organization chart – *DONE.* See Appendix 2/2.
2. Hire a new *Manager of Information System – DONE.* See Appendix 2/2.
3. Revise technology staff job descriptions (including roles and responsibilities) including expected technology certifications (Cisco [CCNA], Windows [MCSE], Linux, Apple [ACTM], SAP [Information and data reports]) to agree with the new organization chart.
4. Develop a department structure for better data-management and reporting, including:
5. Develop a chart of enterprise software interoperability – *DONE*. See Appendix 3/2.
    - Deploy a Zendesk/Helpdesk a district-wide technology department helpdesk ticketing system that facilities district technology work-order requests and priorities, and bring break/fix time down to an initial response of 48 hours for urgent and high requests.
    - Consider hiring an additional full-time, certified, break/fix, district-wide tech support staff member
    - Create a process workflow chart that allows central services staff to track data and reports for more informed decision-making.

Goal 3:

Create, maintain, and support enterprise technology systems for 21st century learning environments throughout Montclair Public Schools (MPS).

Considerations & Objectives

1. Provide a robust network infrastructure and wireless network for technology integration and *Bring Your Own Devices*.
2. Provide and maintain a:
   - 3:1 student to computer ratio throughout all schools. See Appendix 4/3.
   - 6-7 year equipment obsolescence rate for all:
     - students
     - teachers
     - administrators and staff

Strategies

1. Develop a budget to support purchasing infrastructure equipment needed for 21st century learning environments, including:
   - switch and network upgrades capable of supporting complete wireless access points
   - wireless access points installed ubiquitously throughout all schools

Initial cost for infrastructure – network and switch upgrades	Entire District --- Voted and approved by the 2015 BOSE	$760,000 Paid
Provide ubiquitous wireless access points in all schools/ (1 Access Point in every classroom)	MHS & the 3 – M.S. • 7 Elementary Schools • 3 MS • MHS 533 wireless access points + Fieldhouse	$750,000 (40% paid by e-Rate)

2. See financing proposal in See Appendix 5/3.

   Annual Budget Expenditures to maintain a 6/7-year obsolescent rate.
   - Student devices = $280,000
   - Teacher/administrator devices = $144,000
   - Classroom Projector Needs = $156,000

   Total Annual Funding = $580,000

Goal 4:

Create a technology report documenting district governance and practices of data systems and user access control. This report will include a plan for implementing a disaster recovery solution.

Considerations & Objectives

1. Create a report documenting all existing data systems, and their interoperability. Interpret results of the report: The IT team members will be discussing results to establish an appropriate strategy with respect to understanding and evaluating the information technology (IT) general controls environment and considerations relying on the entity's internal control environment.

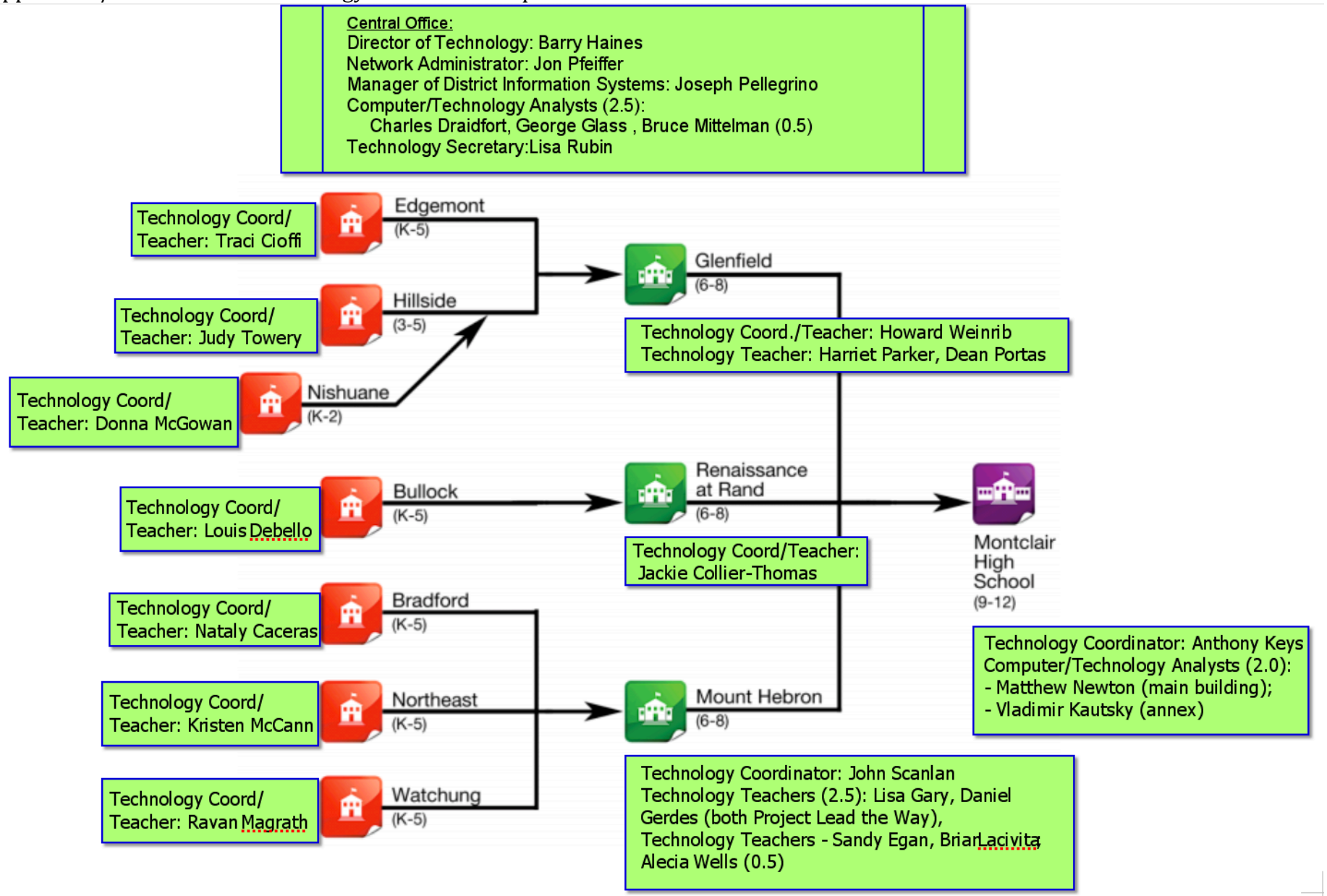
2. Plan a process to ensure that only appropriately authorized, tested, and approved program changes both routine and emergency are made to the applications, interfaces, databases and operating systems /networks that support key application and IT dependent manual controls within significant processes.

3. Review user access processes, including:
   New User Access
   Modified User Access
   Termination of User Access
   Password Policies (Note: This should include passwords for applications, operating system (including the security software system), database, network, and remote access.)

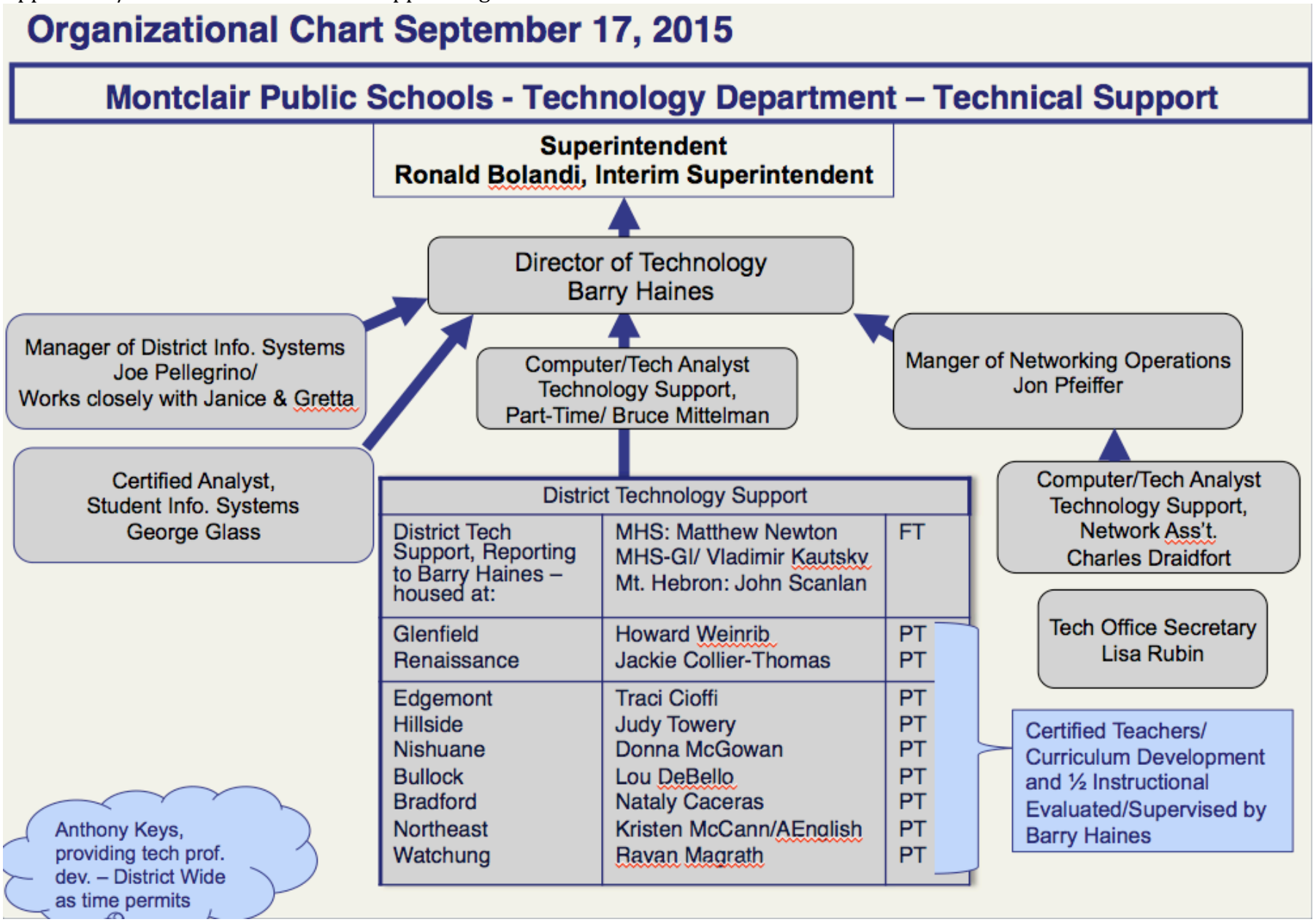
4. Review Strauss Esmay regulations/policies and consider best practices for implementation.

5. Create a plan for implementing a disaster recovery solution (such as Barracuda 490/690), on mission critical servers. For example: such as the off-site disaster recovery for the Exchange e-mail server.

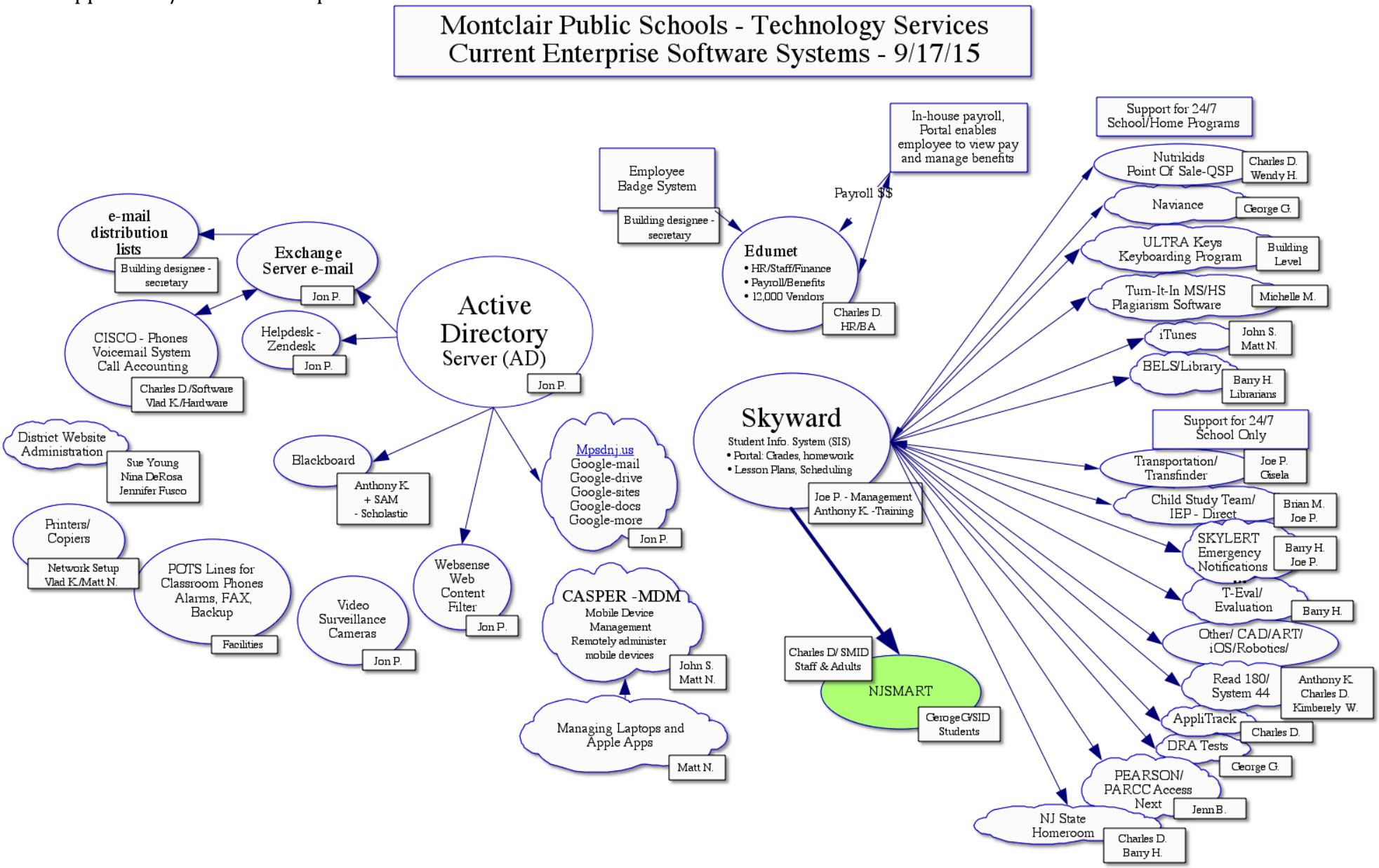
Appendix 1/ Goal 1 - MPS Technology Instruction & Operations Chart



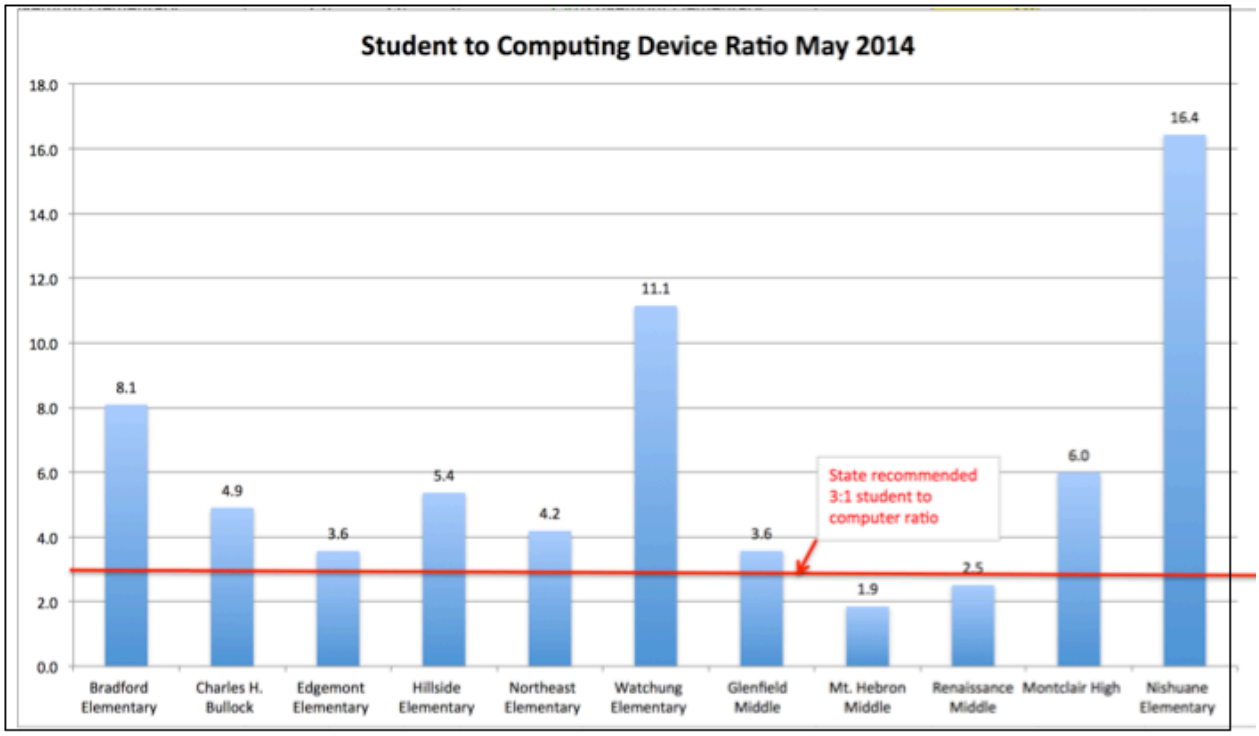
Appendix 2/ Goal 2 – MPS Technical Support Organizational Chart

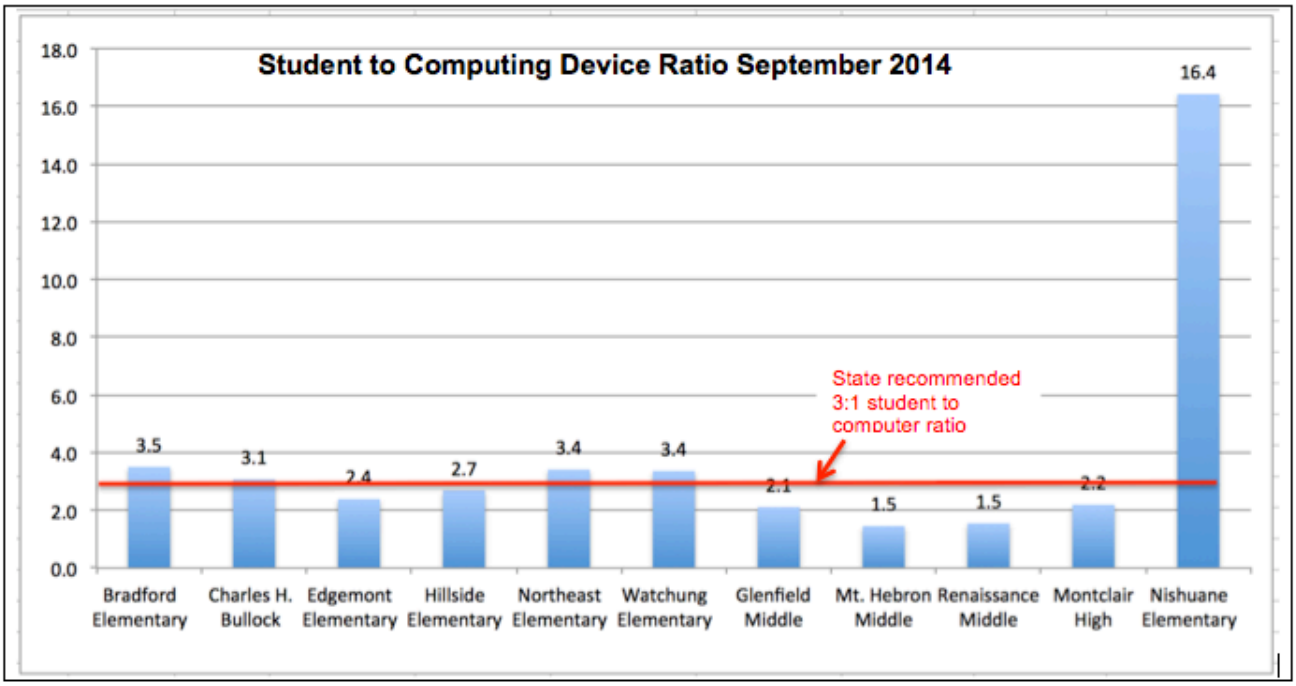


Appendix 3/ Goal 2 - Enterprise Software Services



Appendix 4/ Goal 3 – Student To Computing Device Ratio





III.A.1.a.2 – MPS – Student to Computer Ratio – September 2014

Appendix 5/ Goal 3 - Basic Annual Financial Commitments

Annual Funding Needed to maintain Student/Teacher/Administrator Devices,

- Student devices = $280,000 annually (includes an annual Lease/Purchase payment to Apple of $85,400.27 due on 9/1/2015; and 9/1/2016)
- (Note: Ongoing lease/purchase for chromebook devices – paid by Mt. Hebron and Glenfield for $10,708; to CDWG due annually on 9/1/2015; 9/1/2016)
- Teacher/administrator devices = $144,000 annually
- Classroom Projector Needs = $156,000 annually (as follows)
- Total Annual Funding = $580,000

Students

Average between chromebooks (@ $300.00) and macbook air laptops (@$900.00) = 600 per device.

With approximately 7,000 students at a 3:1 ratio (2,333 students/devices the annual number for a device replacement = 2,333 X $600. Or $1,400,000./year. On a 6 year obsolescence this = $280,000./year for device replacements

Note – Existing Four Year Repayment Terms

- 1st Year Lease/Purchase with Apple = $85,400.27 per year
  (for the years: 2014, 2015, 2016, 2017)
- Lease/Purchase with CDW for Chromebooks = $10,194.70
  - (for the years: 2015, 2016, 2017, 2018)

Teachers/Administrators (Providing elementary Teacher Laptop Computers)

With a typical staff/administrator/front office computer averaging approximately $900.00 per device.

With approximately 800 staff at a 1:1 ratio (800 staff/devices) ratio the annual number for a device replacement = 800 X $900. Or $7,200./year. On a 6 year obsolescence this = $144,000./year for device replacements

Classroom Projector Needs

Currently we have approximately 380 classrooms in the district. Approximately 1/3 of these have a recent mounted projector. So, there are approximately 260 classrooms needing a projector. The average projector installation costing is about $3,000/classroom. For a total district projector cost of $780,000. / 6 years of cycle through installation = $156,000/year