Amesbury School District Five Year Technology Needs

Capital Planning

May 4, 2015

Amesbury School District
5 Year Capital Planning Goals

- Continue infrastructure upgrades at AHS, AMS, AES and CES
  - Centrally manage wireless through AHS controller
  - Upgrade network switches for speed/reliability
- Add additional Mobile Carts to each school
  - Provides lab environment in any classroom
- Continue 6-Year upgrade cycle for computers
  - Provide reliable technology for classroom learning

Amesbury School District
Existing Wireless Network

- Amesbury School District has limited wireless connectivity
  - Wireless Access Points are placed in areas that require access
  - Laptop Carts have dedicated Access Points
  - Wireless System is at End Of Life (Installed 2008)
  - Many Access points are typically used for residential use
  - 9 New Enterprise Access Point installed for Teaching and Learning are centrally managed

Amesbury School District
Existing Wireless Coverage

- Amesbury High School
  - Some classrooms, laptop carts, Netbook Cart
- Amesbury Middle School
  - Library and Lobby Performance Center
- Amesbury Elementary School
  - Library and Technology Classroom and Pre-K Classroom
- Cashman Elementary School
  - Library, Technology Classroom, Pre-K Classroom and Main Office

Amesbury School District
Computers Over 7 Years Old

- Amesbury School District has older systems with no warranty coverage
  - Amesbury High School
    - 306 systems over 7 years old
  - Amesbury Middle School
    - 108 systems over 7 years old (11 over 10 years)
  - Amesbury Elementary School
    - 80 systems over 7 years old (34 over 10 years)
  - Cashman Elementary School
    - 80 systems over 7 years old (53 over 10 years)

Amesbury High School
Infrastructure Upgrade – 5 Year Capital Planning

- AHS is pre-wired for 35 Wireless Access Points
  - Wiring will support 100% coverage
  - Infrastructure Upgrade
    - Edge Switch Upgrade FY16 - $3,500
    - Phased switch upgrade FY17 - FY20
    - 20 Wireless Access Points FY16 - $15,800 ($790 each)
    - Redundant Wireless Controllers FY16 - $11,800 ($5,900 each)
    - Controllers will be utilized district wide

Amesbury High School
Hardware Upgrade – 5 Year Capital Planning

- Amesbury High School has 306 systems that are over 7 years old (372 total systems)
  - Develop a 6-Year replacement leasing cycle
  - Begin upgrading older systems first
    - Begin upgrades in FY17
    - 200 systems per lease cycle - FY17 – FY19 (1st Lease)
    - $37,200 per year
  - Add additional mobile cart for use in classrooms
    - Netbook Cart FY16 - $8,000
    - Replace Laptop Carts – FY17 – FY19

Amesbury Middle School

Infrastructure Upgrade – 5 Year Capital Planning

- AMS requires wiring installation for Wireless Access Points
  - Network Upgrade
    - Edge Switch Upgrade FY16 - $3,110
    - Replace 7 End of Life Switches - $9,560 ($2,390/ea)
      - Replace 6 24-Port Switches with 3 48-Port Switches
      - Replace 1 48-Port Switch
      - Phased switch upgrade FY17 - FY20
    - 13 Wireless Access Points - $15,800 ($790/ea)
    - Connect to Wireless Controllers at AHS
      - Central Management of Wireless Access Points

Amesbury Middle School

Hardware Upgrade – 5 Year Capital Planning

- Amesbury Middle School has 108 systems that are over 7 years old (249 total systems)
  - Develop a 6 year replacement leasing cycle
  - Begin upgrading older systems first
    - Begin upgrades in FY17
    - 125 systems per lease cycle - FY17 – FY19 (1st Lease)
    - $23,300 per year
  - Add additional mobile cart for use in classrooms
    - Netbook Cart FY16 - $8,000

Amesbury Elementary School
Infrastructure Upgrade – 5 Year Capital Planning

- AES requires wiring installation for Wireless Access Points
  - Network Upgrade
    - Edge Switch Upgrade FY16 - $3,300
      - Phased switch upgrade FY17 - FY21
    - Enterprise wireless solution
      - Begin deployment in FY17
      - $790 per Access Point
      - Centrally managed through AHS Wireless Controller

Amesbury Elementary School
Hardware Upgrade – 5 Year Capital Planning

- Amesbury Elementary School has 87 systems that are over 7 years old (176 total systems)
  - Develop a 6 year replacement leasing cycle
  - Begin upgrading older systems first
    - Begin upgrade in FY17
    - 88 systems per lease cycle - FY17 – FY19 (1st Lease)
    - $16,400 per year
  - Add additional mobile cart for use in classrooms
    - Netbook Cart FY16 - $8,000

Cashman Elementary School
Infrastructure Upgrade – 5 Year Capital Planning

- CES requires wiring installation for Wireless Access Points
  - Network Upgrade
    - Edge Switch Upgrade FY16 - $3,300
      - Phased switch upgrade FY17 - FY21
    - Enterprise wireless solution
      - Begin deployment in FY17
      - $790 per Access Point
      - Centrally managed through AHS Wireless Controller

Cashman Elementary School

Hardware Upgrade – 5 Year Capital Planning

- Cashman Elementary School has 80 systems that are over 7 years old (197 total systems)
  - Develop a 6 year replacement leasing cycle
  - Begin upgrading older systems first
    - Begin upgrade in FY17
    - 99 systems per lease cycle - FY17 – FY19 (1st Lease)
    - $18,500 per year
  - Add additional mobile cart for use in classrooms
    - Netbook Cart FY16 - $8,000

Amesbury School District
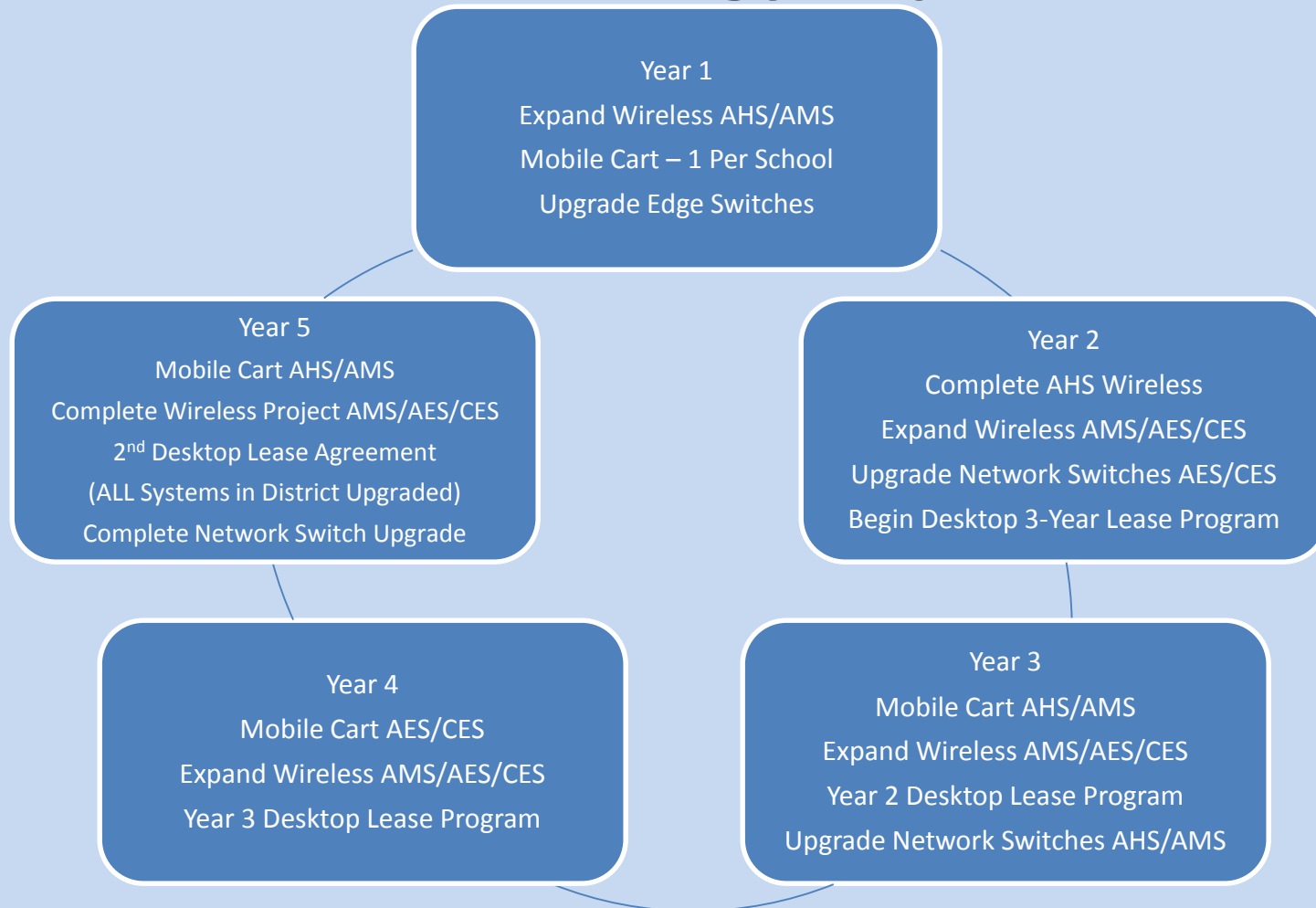## Technology benefits to students/learning

- Expand Teaching and Learning Opportunities
  - Increases the number of labs in the district
  - Provides mobile technology for classroom use
  - Provides reliable computers in the classroom
  - Increases the connectivity for Mobile Learning Devices (iPads, mobile readers, document cameras)
  - Allows on-line testing to occur district wide

Amesbury School District
5-Year Technology Capital Plan Breakdown

Location	Project	Year 1	Year 2	Year 3	Year 4	Year 5
AHS	Wireless	$27,600	$11,850			
	Hardware	$3,340	$40,540	$40,540	$40,540	$40,540
	Mobile Cart	$8,000	$8,000	$8,000	$8,000	$8,000
	Network Switches	$3,500		$10,000		$10,000
AMS	Wireless	$10,270	$3,950	$3,950	$3,950	$3,950
	Hardware	$3,340	$26,640	$26,640	$26,640	$26,640
	Mobile Cart	$8,000		$8,000		$8,000
	Network Switches	$12,670		$10,000		$10,000
AES	Wireless	$0	$3,950	$7,900	$7,900	$7,900
	Hardware	$3,340	$19,740	$19,740	$19,740	$19,740
	Mobile Cart	$8,000			$8,000	
	Network Switches	$3,300	$10,000		$10,000	
CES	Wireless	$0	$3,950	$7,900	$7,900	$7,900
	Hardware	$3,340	$21,840	$21,840	$21,840	$21,840
	Mobile Cart	$8,000			$8,000	
	Network Switches	$3,300	$10,000		$10,000	
Total		**$106,000**	**$160,460**	**$164,510**	**$172,510**	**$164,510**

Amesbury Public Schools
5 Year Technology Capital Plan

Year 1

Expand Wireless AHS/AMS

Mobile Cart – 1 Per School

Upgrade Edge Switches

Year 2

Complete AHS Wireless

Expand Wireless AMS/AES/CES

Upgrade Network Switches AES/CES

Begin Desktop 3-Year Lease Program

Year 3

Mobile Cart AHS/AMS

Expand Wireless AMS/AES/CES

Year 2 Desktop Lease Program

Upgrade Network Switches AHS/AMS

Year 4

Mobile Cart AES/CES

Expand Wireless AMS/AES/CES

Year 3 Desktop Lease Program

Year 5

Mobile Cart AHS/AMS

Complete Wireless Project AMS/AES/CES

2nd Desktop Lease Agreement

(ALL Systems in District Upgraded)

Complete Network Switch Upgrade

Appendix A - Amesbury School District Five Year Technology Plan

Amesbury Public Schools
MIS Team

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School District/City

Martine Fabre
District Network Manager
Amesbury Middle School

Susan Lang
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AES/CES