Opening:
The meeting was opened at 7:00 p.m. by Edward Hickey, Chairman.

Committee Attendees:
Edward Hickey
Angela Blanchard
Emmanuel Dockter
Joan Port-Farwell
Wayne Moores
Sandra Hayes
Jerry O'Hearn
Brandon Freeman
Gavin Little-Gill

Other Attendees:
Bill Hartigan, Director of Technology
Thomas Raab, Business Manager
Matthew Ferron, Superintendent of Schools
Anthony Marino, Assistant Town Manager
Libby Corbo, School Committee Member

Review of Meeting Minutes
Emmanuel Dockter made a motion to accept the minutes from December 14, 2016 as written. This was seconded by Gavin Little-Gill. All were in favor and the motion passed.

Discussion with Bill Hartigan, Thomas Raab & Matthew Ferron
Matt Ferron stated that he is very confident in the technology budget for FY18 and introduced the Director of Technology Bill Hartigan. Bill Hartigan presented a PowerPoint which included an Abrahams study of suggested improvements to the Town wide technology infrastructure and software. Also included were projects to be explored in the next 3 to 5 years, a detailed list of equipment currently in use, current and projected staffing, a review of the proposed FY18 budget and draft FY18 capital requests.

Jerry O'Hearn inquired regarding having a second, separate location for another server in case of an emergency or disaster. Bill Hartigan stated that locations for this are being considered such as the police station or library. Edward Hickey inquired if network security was up to date and sufficient. Bill Hartigan stated that firewalls are in place and virus protection is current. Our network has not had any exposure. Edward Hickey stated he would like to see technology upgrades on a 1 to 3 year timeframe versus a 3 to 5 year timeframe. Gavin Little-Gill stated he agrees with that idea but would like detailed cost figures since residents are already facing increasing tax bills. Thomas Raab stated that leasing equipment may be a cost effective option, and spreading the cost over multiple years would be preferable. Matthew Ferron stated that leasing may be wise given the rapid rate at which technology equipment becomes obsolete and wireless systems need to be able to handle 3 to 5 devices per person in some facilities. Thomas Raab explained in detail the future staffing needs of the technology department. Bill Hartigan explained each of the technology FY18 capital requests.

Edward Hickey inquired with Thomas Raab regarding some facilities department FY18 capital requests. Thomas Raab stated he is in favor of converting unused space under the high school auditorium seating to storage space. At the time of the schools construction, budgeting was tight and the extra work couldn't be undertaken. Utilizing the space now will be an excellent benefit. Thomas Raab also stated he is in favor of replacement of kitchen equipment at Cedar School and the middle school as he believes some of the current condition present safely challenges for kitchen staff. Mr. Raab is also in favor of the addition of AC to the high school kitchen area which also includes some office space. The current conditions present an extremely hot and difficult working environment. Mr. Hartigan, Mr. Raab and Mr. Ferron departed at 8:23 pm, and the Committee thanked them for their time.

General Discussion
The Committee briefly discussed the Council on Aging Planning workshop. Joan Port-Farwell expressed disappointment that more people did not attend. Anthony Marino stated that regardless of turnout, he believes the final report will be valuable information.

The Committee briefly discussed the search for a candidate for the vacant Director of Finance position. Edward Hickey stated that the Board of Selectmen would like to be closely involved in the compilation of the list of candidates. Anthony Marino informed the Committee that because of the vacant Director of Finance position, he will attend all meetings to assist the Committee in its preparations for Annual Town Meeting.

Edward Hickey stated that a response to the Committee's memo was received from Town Manager Troy Clarkson but he believes further information must be obtained.

The Committee discussed the possibility of having the Community Preservation Committee attend the next meeting.

Joan Port-Farwell asked that the Committee be provided with the current overlay figures. Anthony Marino stated that he will provide the figures at the next meeting.

Edward Hickey asked the Committee members to review in detail prior year budget figures for their assigned liaison departments prior to the next meeting.

Next Meetings
The Committee's next meeting will be on Tuesday, January 31st. The Committee will also attend the Board of Selectmen's meeting on February 13th.

Adjournment
Emmanuel Dockter made a motion to adjourn. This was seconded by Joan Port-Farwell. All were in favor, and the meeting adjourned at 8:51 pm.

HANOVER PUBLIC SCHOOLS
Town IT Update
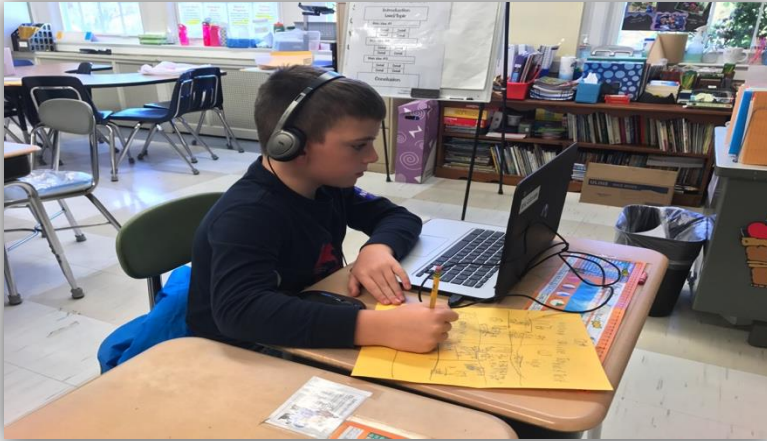
January 23, 2017

Presentation Outline

- Abrahams Group Study

- The Future of Hanover Technology

- Device Analysis/Replacement Planning

- Technology Staffing

- Consolidated Technology Budget

- FY '18 Technology Budget Summary

- FY '18 Technology Article Request

- FY '18 School Budget Summary

- Discussion & Questions

The Abrahams Group Summary

In summary, we recommend that the Town and School Department adopt a consolidation plan that suits their needs and eliminates the current duplication of services and redundancy of consultant services. The consolidation of the network and email systems should generate substantial savings. As IT service needs expand on the Town side, it is imperative that staff be added to cover the needs. The Town cannot reasonably expect one person to provide the expanded services. By consolidating the Town and School Departments, new service needs of both Town and Schools could be met with minimal new staff. Individuals handling technology in individual Town departments would continue to be the experts within their department, but would not have technical responsibilities for the network.

The Abrahams Group Recommendations

- Consolidate Town and School IT under Chief Information Officer
- Move away from Microsoft Office
- Improve usage of SPED software (eSped or Aspen Special Ed)
- Consolidate all Town and School networks to one data center at HHS
- Town and School utilize one VOIP solution (i.e. Net Tel One)
- Implement High Speed fiber to all Town and School buildings
- Utilize GAFE and see how Town can utilize GAFG (est. save $30k)
- Reduce/consolidate outside consultants (i.e. Lighthouse, MX)

Technology – The Future

Projects to be explored over the next 3-5 years
Consolidate town E-mail and web hosting platforms
Install town-wide fiber optic network
Move to automatic refresh of equipment, average fleet age of desktops/servers 6 years, laptops 4 years, tablets 3 years
Update internal network equipment at HHS, reconfigure network to current best practices and town-wide scheme
Eliminate reliance on outside consultant for HFD and HPD

FY' 18 Device Analysis

	CED	CEN	COA	HFD	HHS	HMS	HPD	SAL	STAFF	SYL	TH	Grand Total
Chromebook												
ChromeOS Total	120	30			241	239			41	60		731
Chromebook Total	120	30			241	239			41	60		731
Desktop												
macOS Total	235	137			271	288		20		104		1055
Windows 10 Pro 64 Bit Total				1	1	1					1	4
Windows 7 64 Bit Professional Total			2	11	29	27	1	4			38	112
Windows 7 Professional Total			8		2						8	18
Windows XP Professional Total				1				1			1	3
Desktop Total	235	137	10	13	303	316	1	25		104	48	1192
iPad												
iOS Total	75	66			18	80		14		26	7	286
iPad Total	75	66			18	80		14		26	7	286
iPhone												
iOS Total				6								6
iPhone Total				6								6
Laptop												
macOS Total	11	4			98	25		16		5		159
Windows 7 64 Bit Professional Total			1	2	2			2			6	13
Windows 7 Professional Total				2								2
Windows Vista Business Total											1	1
Windows XP Professional Total											1	1
Laptop Total	11	4	1	4	100	25		18		5	8	176
Tablet												
Windows 7 64 Bit Professional Total											2	2
Windows 8.1 64 Bit Total				2								2
Tablet Total				2							2	4
Grand Total	441	237	11	25	662	660	1	57	41	195	65	2395

CED=Cedar School, CEN=Center School, COA=Council on Aging, HFD=Hanover Fire Department, HHS=Hanover High School, HMS=Hanover Middle School, HPD=Hanover Police Department, SAL=Salmond School, SYL=Sylvester, TH=Town Hall, STAFF=School Staff

FY' 18 Desktop by Operating System and Age

	CED	CEN	COA	HFD	HHS	HMS	HPD	SAL	STAFF	SYL	TH	Grand Total
Desktop												
macOS												
2006	114	40				90			1	48		293
2009	88	47			205	130			9	41		520
2010	5	2			54	10			4	3		78
2011	24	23			2	51			2	3		105
2012	1	1				2			3	1		8
2013	3	24			5	2			1	8		43
2014						3						3
2015					5							5
macOS Total	235	137			271	288			20	104		1055
Windows 10 Pro 64 Bit												
2016				1	1	1					1	4
Windows 10 Pro 64 Bit Total				1	1	1					1	4
Windows 7 64 Bit Professional												
2011					26						2	28
2012				4	1						8	13
2013			2	1		26			1		12	42
2014				3	1						2	6
2015					1	1		1	2		6	11
2016				3					1		8	12
Windows 7 64 Bit Professional Total			2	11	29	27		1	4		38	112
Windows 7 Professional												
2010			3								1	4
2011			5		2						7	14
Windows 7 Professional Total			8		2						8	18
Windows XP Professional												
2000											1	1
2006									1			1
2009				1								1
Windows XP Professional Total				1					1		1	3
Desktop Total	235	137	10	13	303	316		1	25	104	48	1192

7

FY' 18 Laptops by Operating System and Age

	CED	CEN	COA	HFD	HHS	HMS	HPD	SAL	STAFF	SYL	TH	Grand Total
Laptop												
macOS												
2016								1				1
2006								1				1
2007					1	1				1		3
2008								1				1
2009	3				91	11		4				109
2010	1					1		1		1		4
2011					1	1		2				4
2012	1	2			1	4				2		10
2014	1	1			1	3		4				10
2015	5	1			3	4		2		1		16
macOS Total	11	4			98	25		16		5		159
Windows 7 64 Bit Professional												
2012											3	3
2013					1							1
2014			1	1							2	4
2015				1	1						1	3
2016								2				2
Windows 7 64 Bit Professional Total			1	2	2			2			6	13
Windows 7 Professional												
2012				1								1
2014				1								1
Windows 7 Professional Total				2								2
Windows Vista Business												
2008											1	1
Windows Vista Business Total											1	1
Windows XP Professional												
2008											1	1
Windows XP Professional Total											1	1
Laptop Total	11	4	1	4	100	25		18		5	8	176

FY' 18 Other Devices by Operating System and Age

	CED	CEN	COA	HFD	HHS	HMS	HPD	SAL	STAFF	SYL	TH	Grand Total
Chromebook												
ChromeOS												
2014						28						28
2015	25					85	158			24	26	318
2016	95	30				126	80			16	34	381
2017						2	1			1		4
ChromeOS Total	120	30				241	239			41	60	731
Chromebook Total	120	30				241	239			41	60	731
iPad												
iOS												
2010		1										1
2011	6	5				3	3		10	2		29
2012	4								1			5
2013							2					2
2014	21	12				1	2			10		46
2015	44	36				5	65		2	14		166
2016		12				9	8		1		7	37
iOS Total	75	66				18	80		14	26	7	286
iPad Total	75	66				18	80		14	26	7	286
iPhone												
iOS												
2016					6							6
iOS Total					6							6
iPhone Total					6							6
Tablet												
Windows 7 64 Bit Professional												
2011											2	2
Windows 7 64 Bit Professional Total											2	2
Windows 8.1 64 Bit												
2015					2							2
Windows 8.1 64 Bit Total					2							2
Tablet Total					2						2	4

Technology Staff levels

- Current Staffing – 4.5
  - Directory of Technology Operations – 1
  - Data Manager – 1*
  - Computer Coordinator – 1
  - Technology Staff - 1
  - Technology Assistant - .5
  - Technology Contractor – 1*

- FY '18 Staffing – 5.5
  - Directory of Technology Operations – 1
  - Computer Coordinator – 1
  - Technology Staff – 2
  - Systems Developer - 1
  - Technology Assistant - .5

Consolidated Technology Budget

Technology Consolidated	FY 2015		FY 2016		FY 2017	FY 2018
	Budget	Actual	Budget	Actual	Budget	Budget Proposed
Salaries	$399,825	$401,481	$372,581	$359,134	$342,820	$389,960
Expenses	$364,484	$425,427	$485,442	$467,445	$390,275	$429,593
ATM (includes carryover)	$14,617	$13,915	$100,702	$93,361	$107,341	$103,580
Grand Total	**$778,926**	**$840,823**	**$958,725**	**$924,169**	**$840,436**	**$923,133**

- Consolidated July 1, 2015
- FY '16 Mr. Hartigan as Director as of November 2015.
  - Did not fill network administrator role – hired a temp. technician
- FY '17 Data Manager Resigned, left position open and filled with temp. technician
- FY '18 Re Organized Data Manager Position to Systems Developer and added permanent technician position.

FY '18 Technology Budget Summary

Salary		FY '18 Proposed	
	Tech Dir	$91,899	
	Tech Staff	$284,021	
	Tech Asst	$14,040	
		$389,960	
Expenses			
	Contracted Services - School	$132,580	
	Contracted Services - Town	$177,322	
	General Tech Exp	$55,400	
	Instructional SW - School	$64,291	
		$429,593	
	School Exp	$196,871	
	Town Exp	$177,322	
	General	$55,400	
	Total Tech Budget FY'18	$819,553	
	SW and Services	$374,193	87.10%
	Hardware	$55,400	12.90%

FY '18 Technology Article Request

Technology Annual Town Meeting Article	FY '18 Cost
Chromebooks to replace obsolete school staff laptops	$8,000
Town-Wide WiFi Upgrades	15,580
School Server Replacements/Upgrades	65,000
PC Upgrades for obsolete Town Computers	15,000
Grand Total	**$103,580**

Discussion and Questions