Office of Technology and Information Systems

Program Overview

The Office of Technology functions across all areas of the organization including Instruction, Operations, Maintenance, and Administration. The diverse responsibilities include: providing technology hardware and software for instruction and operational support; developing techniques for infusing technology tools into curriculum and effective delivery; providing and maintaining the Wide Area Network (WAN) and Local Area Networks (LANs and WLANs); installing and maintaining communications systems (email, voice, public address, etc.); deploying interactive multi-media systems (interactive whiteboards and real-time feedback responders, document cameras, projectors, etc.); complex auditorium theatrical lighting and sound systems; technical TV studios; maintain information security safeguards; development of application programs/data analysis reports; maintain operational and system support for administrative/business systems; and provide professional staff development/support across all functional areas of the organization.

The Office of Technology recognizes the necessity for continuous instructional technology training as a part of professional development. In addition, the goal of developing technology-rich, authentic and relevant learning environments is a crucial part of the instructional program to help to engage the learner and provide students with 21st Century work skills. Digital transformation of HCPS' classroom, curriculum, and delivery will become the center focus of the Office of Technology.

Highly skilled and trained network administrators, engineers and technicians are responsible for the design, installation, operation, and maintenance of the enterprise infrastructure including the wide and local area networks; virtualized environments and storage area networks; instructional and administrative support systems such as email messaging, Student Information System, Enterprise Resource Planning and SharePoint; telephony and public address communications; and multi-media systems. Additionally, a team of regionally based computer technicians provide just in time support for all end user computers, printers, and related peripherals. Outside contractors are used to augment the existing staff's ability to service and support the wide variety of highly technical equipment/systems.

The Office of Technology is responsible for the processing of all student data, including federal and MSDE reporting; financial records, payroll, requisitions, purchase orders, warehouse, inventory, accounts payable, budgeting, e-mail, and wide area network (WAN) while maintaining a secure computing environment.

Board of Education Goals – FY 2020

- Board Goal 1:   Prepare every student for success in postsecondary education and career
- Board Goal 2:   Engage families and the community to be partners in the education of our students
- Board Goal 3:   Hire and support highly effective staff who are committed to building their own professional capacity in order to increase student achievement
- Board Goal 4:   Provide safe, secure, and healthy learning environments that are conducive to effective teaching and learning, creativity and innovation

Departmental Objectives – FY 2020

- Provide a 1:1 level of access of devices to students in grades 3, 4, and 7 and maintain 1:1 device access for grades 5, 6, and 8 (Board Goal 1)
- Provide professional learning opportunities for Grades 3, 4, and 7 to support the meaningful use of technology in the classroom (Board Goal 3)
- Collect quantitative and qualitative data to measure the progress of the 1:1 initiative, identify gaps, and inform future implementation (Board Goal 1)
- Further develop the digital ecosystem, providing seamless access to digital tools and content, utilizing the HCPS' Learning Management System, itslearning, as the foundation (Board Goals 1 & 3)
- Develop a secure parent / guardian digital portal for parents to register new students, access digital school "take home" forms, and provide the ability to submit consent, survey or other input data (Board Goal 2)
- Redesign of HCPS.org website to meet ADA section 504 / 508 compliance (Board Goal 2)
- Develop a strategy to meet FCC's mandate of replacing microphones operating in the 600-700Mhz range (Board Goal 4)
- Develop single platform, digital signage solution with a centralized upload interface for school-based communications (Board Goal 2)
- Integrate building access control systems into a single system solution (Board Goal 4)

- Develop an environmentally responsible disposal plan of large CRT TVs from classrooms systemwide (Board Goal 4)
- Implement a streaming video over IP solution to replace antiquated CATV/media retrieval systems, eliminating the need for classroom TVs and maintaining existing video infrastructure (Board Goal 1)
- Develop migration plan to replace current analog phone/PA systems with a single voice over IP communication system (Board Goals 1 & 4)
- Replace end of life network equipment, wireless access points and switches at numerous sites throughout the district (Board Goals 1 & 4)
- Implement decryption of inbound Internet traffic and additional firewall segregation to provide additional security and protection (Board Goal 4)

Accomplishments – FY 2018

- In-house software development projects (Board Goals 1, 3 & 4):
  - APSASHC Evaluation System
    - Employee evaluation tool for non-school based certificated employees.
  - Medical Assistance Billing R2
    - Increase MSDE reimbursement for HCPS delivered Special Education services through accurate and timely reporting and submission of service log records. R2 specifically addressed audit findings regarding HCPS compliance.
  - Elementary Schedule Manager
    - Provide Elementary teachers the ability to adjust class rosters (regroup) without burdening the school office to process student schedule course adds / drops.
  - Magnet Program Applicants
    - Provide a digital mechanism for student application and admissions review to specialty curriculum tracks and Harford Technical HS.
  - Student Test Coordination
    - Software to guide Accountability and school-based test coordinator through the administration of mandated (Spring / Fall) standardized testing
  - Bullying & Harassment Reporting
    - Provided a mechanism to comply with MSDE mandates regarding the reporting of Bullying or Harassment incidents and the district's response.
  - Automate creation of network accounts for new-hire teachers
    - Provided a mechanism to detect new-hire teachers, generate and distribute AD credentials via SMS text messaging
  - Modernize student information system through deployed and staged software components (gradebook, Internet portal, school web sites, base SIS) in advance of July 2018 activation
- Implemented Phase I of 1:1 device program to all 5th and 8th grade students (Board Goal 1)
- Established the digital ecosystem through the itslearning learning management system, adopting and implementing IMS Global Standards with digital resource partners (Board Goals 1 & 3)
- Teachers received in 12,169 professional development hours to support the integration of technology into the classroom (Board Goal 3)
- Installed digital IP based security monitoring system at ABHS to improve student safety (Board Goal 4)
- Refreshed end of life network load balancers and data center power management to improve monitoring of central office data center power and cooling (Board Goal 1)
- Increased PC security and malware deterrence by implementing Microsoft App Locker and Windows Firewall technologies and implemented technology to allow management of HCPS Windows-based laptops and tablets off premise (Board Goals 1 & 4)
- Established a self-registration process for visitors requiring Wi-Fi access (Board Goal 1)
- Installed Wi-Fi devices in portable classrooms system wide to address equitable access (Board Goal 1)
- Established shared services between HCPS, Harford County Sheriff's Office and Harford County Government via the Harford County Metropolitan Area Network (HMAN). Examples include: HCPS use of county GPS system to track vehicles and utilization of county fuel stations. School Resource Officers access to Harford County Sheriff's databases (Board Goals 1 & 4)
- Updated image process in partnership with Vendor to allow faster deployment time of new computers, cutting 20-60 minutes off a deployment time of a new PC (Board Goal 1)
- Completed 19,436 work orders (Board Goals 1-4)

Office of Technology and Information

By Object Code

	FY17 Actual	FY18 Actual	FY19 Actual	FY19 Budget	19-20 Change	FY20 Budget
Salaries	$3,539,695	$3,794,333	$3,942,869	$4,091,599	($33,975)	$4,057,624
Contracted Services	$1,933,038	$2,391,063	$1,809,061	$2,312,282	$19,000	$2,331,282
Supplies	$1,760,194	$1,975,792	$1,683,918	$1,866,647	$0	$1,866,647
Other Charges	$1,161,744	$651,138	$659,061	$713,945	($70,000)	$643,945
Equipment	$187,552	$355,866	$225,730	$318,293	$0	$318,293
Total:	**$8,582,224**	**$9,168,192**	**$8,320,639**	**$9,302,766**	**($84,975)**	**$9,217,791**

Budgeted Full Time Equivalent Positions

	FY17	FY18	FY19	19-20	FY20
Administrator	1.0	1.0	1.0	0.0	1.0
Assistant Supervisor	3.0	4.0	4.0	(1.0)	3.0
Clerical 12 Month	1.0	1.0	1.0	0.0	1.0
Director	1.0	1.0	1.0	0.0	1.0
Printer	4.0	4.0	4.0	0.0	4.0
Teacher/Counselor	3.0	3.0	3.0	0.0	3.0
Technology Prog/Analyst/Tech	40.0	39.0	41.0	(2.0)	39.0
Total:	**53.0**	**53.0**	**55.0**	**(3.0)**	**52.0**

By State Category

		FY17 Actual	FY18 Actual	FY19 Actual	FY19 Budget	19-20 Change	FY20 Budget
	ADMINISTRATIVE SERVICES						
	Salaries						
1	MAINTENANCE/MECHANICS/TECHS Printing Services 101-XXX-022-025 51120 FTE: 4.0	$176,007	$182,029	$191,138	$193,206	$7,340	$200,546
2	PROFESSIONAL Office of Technology 101-XXX-023-045 51100 FTE: 6.0	$662,325	$698,850	$741,753	$730,959	$(61,528)	$669,431
3	CLERICAL Office of Technology 101-XXX-023-045 51110 FTE: 1.0	$52,168	$50,967	$56,197	$56,144	$1,884	$58,028
4	MAINTENANCE/MECHANICS/TECHS Office of Technology 101-XXX-023-045 51120 FTE: 19.0	$1,332,091	$1,431,899	$1,504,725	$1,503,885	$58,197	$1,562,082
5	TEMPORARY HELP Office of Technology 101-XXX-023-045 51140 FTE: 0.0	$10,941	$6,058	$263	$20,000	$0	$20,000
6	MAINT./MECH./TECH. - ADDT'L HRS Office of Technology 101-XXX-023-045 51160 FTE: 0.0	$32	$1,342	$0	$406	$0	$406
	Total Salaries	**$2,233,563**	**$2,371,146**	**$2,494,076**	**$2,504,600**	**$5,893**	**$2,510,493**
	Contracted Services						

By State Category	FY17 Actual	FY18 Actual	FY19 Actual	FY19 Budget	19-20 Change	FY20 Budget
ADMINISTRATIVE SERVICES						
Contracted Services						
7 OTHER CONTRACTED SERVICES Printing Services 101-XXX-022-025 52170	$891	$2,108	$0	$1,000	$0	$1,000
8 COPIER / MACHINE RENTAL Printing Services 101-XXX-022-025 52370	$296,747	$259,069	$253,654	$255,000	$0	$255,000
9 SOFTWARE MAINTENANCE Printing Services 101-XXX-022-025 52380	$7,930	$7,930	$7,930	$7,930	$0	$7,930
10 OTHER CONTRACTED SERVICES Office of Technology 101-XXX-023-045 52170	$392	$87,988	$200	$0	$0	$0
11 CONSULTANTS Office of Technology 101-XXX-023-045 52205	$80,497	$43,467	$57,543	$95,280	$0	$95,280
12 SECURITY & SAFETY Office of Technology 101-XXX-023-045 52270	$4,415	$6,269	$0	$5,000	$0	$5,000
13 COPIER / MACHINE RENTAL Office of Technology 101-XXX-023-045 52370	$1,122	$1,122	$1,122	$1,150	$0	$1,150
14 SOFTWARE MAINTENANCE Office of Technology 101-XXX-023-045 52380	$412,675	$413,393	$418,909	$420,000	$0	$420,000
Total Contracted Services	**$804,669**	**$821,346**	**$739,358**	**$785,360**	**$0**	**$785,360**
Supplies						
15 OFFICE Printing Services 101-XXX-022-025 53440	$0	$0	$0	$500	$0	$500
16 PRINTING Printing Services 101-XXX-022-025 53445	$123,920	$107,000	$119,507	$110,000	$0	$110,000
17 OFFICE Office of Technology 101-XXX-023-045 53440	$3,676	$5,725	$6,309	$6,000	$0	$6,000
18 POSTAGE/COURIER SERVICE Office of Technology 101-XXX-023-045 53450	$222	$9	$218	$0	$0	$0
Total Supplies	**$127,817**	**$112,734**	**$126,034**	**$116,500**	**$0**	**$116,500**
Other Charges						
19 MILEAGE, PARKING, TOLLS Office of Technology 101-XXX-023-045 54720	$6,921	$9,212	$7,670	$7,000	$0	$7,000

By State Category	FY17 Actual	FY18 Actual	FY19 Actual	FY19 Budget	19-20 Change	FY20 Budget
ADMINISTRATIVE SERVICES						
Other Charges						
20 INSTITUTES, CONFERENCES, MTGS. Office of Technology 101-XXX-023-045 54750	$37,817	$25,162	$14,842	$32,500	$0	$32,500
Total Other Charges	**$44,738**	**$34,373**	**$22,512**	**$39,500**	**$0**	**$39,500**
Equipment						
21 OTHER EQUIPMENT Printing Services 101-XXX-022-025 55170	$7,284	$0	$0	$14,000	$0	$14,000
22 OTHER EQUIPMENT Office of Technology 101-XXX-023-045 55170	$43,655	$124,421	$1,273	$38,833	$0	$38,833
23 SOFTWARE Office of Technology 101-XXX-023-045 55460	$1,981	$587	$125	$8,031	$0	$8,031
24 COMPUTERS/BUSINESS EQUIPMENT Office of Technology 101-XXX-023-045 55805	$0	$16,823	$669	$20,084	$0	$20,084
25 OFFICE FURNITURE/EQUIPMENT Office of Technology 101-XXX-023-045 55810	$83	$215	$0	$3,393	$0	$3,393
Total Equipment	**$53,003**	**$142,046**	**$2,066**	**$84,341**	**$0**	**$84,341**
Total ADMINISTRATIVE SERVICES	**$3,263,791**	**$3,481,646**	**$3,384,047**	**$3,530,301**	**$5,893**	**$3,536,194**
INSTRUCTIONAL SALARIES						
Salaries						
26 PROFESSIONAL Staff Dev. - OTIS 103-XXX-009-550 51100 FTE: 0.0	$144,245	$109,824	$58,879	$130,000	$(20,000)	$110,000
27 PROFESSIONAL - SUBSTITUTES Staff Dev. - OTIS 103-XXX-009-550 51101 FTE: 0.0	$24,205	$63,751	$30,569	$30,200	$20,000	$50,200
Total Salaries	**$168,449**	**$173,575**	**$89,448**	**$160,200**	**$0**	**$160,200**
Total INSTRUCTIONAL SALARIES	**$168,449**	**$173,575**	**$89,448**	**$160,200**	**$0**	**$160,200**
TEXTBOOKS AND CLASS SUPPLIES						
Supplies						
28 MATERIALS OF INSTR.- SOFTWARE Technology 104-XXX-001-215 53460	$1,397,597	$1,551,831	$1,301,230	$1,455,888	$0	$1,455,888
Total Supplies	**$1,397,597**	**$1,551,831**	**$1,301,230**	**$1,455,888**	**$0**	**$1,455,888**
Total TEXTBOOKS AND CLASS SUPPLIES	**$1,397,597**	**$1,551,831**	**$1,301,230**	**$1,455,888**	**$0**	**$1,455,888**
OTHER INSTRUCTIONAL COSTS						
Other Charges						
29 INSTITUTES, CONFERENCES, MTGS. Staff Dev. - OTIS 105-XXX-009-550 54750	$317	$0	$0	$0	$0	$0
Total Other Charges	**$317**	**$0**	**$0**	**$0**	**$0**	**$0**

By State Category	FY17 Actual	FY18 Actual	FY19 Actual	FY19 Budget	19-20 Change	FY20 Budget
OTHER INSTRUCTIONAL COSTS						
Equipment						
30 COMPUTERS/BUSINESS EQUIPMENT Other Instructional Costs, Technology 105-XXX-001-840 55805	$9,135	$115,968	$113,491	$113,941	$0	$113,941
Total Equipment	**$9,135**	**$115,968**	**$113,491**	**$113,941**	**$0**	**$113,941**
Total OTHER INSTRUCTIONAL COSTS	**$9,452**	**$115,968**	**$113,491**	**$113,941**	**$0**	**$113,941**
OPERATION OF PLANT						
Other Charges						
31 COMMUNICATIONS Operations, Technology 110-XXX-031-840 54765	$535,960	$450,606	$470,365	$550,170	$(70,000)	$480,170
32 INTERNET ACCESS FEES Operations, Technology 110-XXX-031-840 54766	$170,203	$154,200	$154,200	$104,400	$0	$104,400
33 WAN Operations, Technology 110-XXX-031-840 54767	$400,164	$0	$0	$0	$0	$0
Total Other Charges	**$1,106,327**	**$604,806**	**$624,565**	**$654,570**	**$(70,000)**	**$584,570**
Total OPERATION OF PLANT	**$1,106,327**	**$604,806**	**$624,565**	**$654,570**	**$(70,000)**	**$584,570**
MAINTENANCE OF PLANT						
Salaries						
34 PROFESSIONAL Technology - OTIS 111-XXX-990-840 51100 FTE: 2.0	$93,737	$181,768	$200,610	$200,571	$7,070	$207,641
35 MAINTENANCE/MECHANICS/TECHS Technology - OTIS 111-XXX-990-840 51120 FTE: 20.0	$1,018,968	$1,040,720	$1,134,552	$1,194,013	$(46,938)	$1,147,075
36 TEMPORARY HELP Technology - OTIS 111-XXX-990-840 51140 FTE: 0.0	$0	$4,437	$4,099	$0	$0	$0
37 MAINT./MECH./TECH. - ADDT'L HRS Technology - OTIS 111-XXX-990-840 51160 FTE: 0.0	$24,978	$22,686	$20,084	$32,215	$0	$32,215
Total Salaries	**$1,137,682**	**$1,249,612**	**$1,359,346**	**$1,426,799**	**$(39,868)**	**$1,386,931**
Contracted Services						
38 OTHER CONTRACTED SERVICES Technology - OTIS 111-XXX-990-840 52170	$101,296	$61,893	$83,621	$103,000	$0	$103,000
39 SECURITY & SAFETY Technology - OTIS 111-XXX-990-840 52270	$20,891	$10,170	$2,353	$20,000	$0	$20,000
40 BUSINESS MACHINES Technology - OTIS 111-XXX-990-840 52361	$100,520	$123,540	$98,302	$106,000	$20,000	$126,000

By State Category	FY17 Actual	FY18 Actual	FY19 Actual	FY19 Budget	19-20 Change	FY20 Budget
MAINTENANCE OF PLANT						
Contracted Services						
41 HARDWARE MAINTENANCE Technology - OTIS 111-XXX-990-840 52375	$408,093	$871,856	$403,619	$760,274	$(1,000)	$759,274
42 SOFTWARE MAINTENANCE Technology - OTIS 111-XXX-990-840 52380	$487,666	$497,123	$481,698	$532,648	$0	$532,648
43 AUDIO VISUAL Technology - OTIS 111-XXX-990-840 52495	$9,904	$5,135	$111	$5,000	$0	$5,000
Total Contracted Services	**$1,128,369**	**$1,569,717**	**$1,069,703**	**$1,526,922**	**$19,000**	**$1,545,922**
Supplies						
44 REPAIRS-COMPUTERS Technology - OTIS 111-XXX-990-840 53320	$78,141	$122,058	$88,439	$93,000	$0	$93,000
45 BUSINESS MACHINES Technology - OTIS 111-XXX-990-840 53361	$10,495	$12,789	$22,228	$23,000	$0	$23,000
46 OFFICE Technology - OTIS 111-XXX-990-840 53440	$1,726	$1,373	$878	$1,000	$0	$1,000
47 A/V Technology - OTIS 111-XXX-990-840 53495	$108,980	$149,859	$124,484	$129,259	$20,000	$149,259
48 COMMUNICATIONS Technology - OTIS 111-XXX-990-840 53765	$35,438	$25,147	$20,625	$48,000	$(20,000)	$28,000
Total Supplies	**$234,780**	**$311,227**	**$256,654**	**$294,259**	**$0**	**$294,259**
Other Charges						
49 MILEAGE, PARKING, TOLLS Technology - OTIS 111-XXX-990-840 54720	$10,218	$10,588	$10,602	$19,500	$0	$19,500
50 INSTITUTES, CONFERENCES, MTGS. Technology - OTIS 111-XXX-990-840 54750	$144	$1,370	$1,381	$375	$0	$375
Total Other Charges	**$10,362**	**$11,958**	**$11,984**	**$19,875**	**$0**	**$19,875**
Equipment						
51 OTHER EQUIPMENT Technology - OTIS 111-XXX-990-840 55170	$6,582	$0	$0	$0	$0	$0
52 P. A. SYSTEMS Technology - OTIS 111-XXX-990-840 55272	$4,021	$0	$0	$2,310	$0	$2,310

By State Category	FY17 Actual	FY18 Actual	FY19 Actual	FY19 Budget	19-20 Change	FY20 Budget
MAINTENANCE OF PLANT						
Equipment						
53 A/V EQUIPMENT Technology - OTIS 111-XXX-990-840 55495	$112,816	$87,008	$58,359	$107,000	$0	$107,000
54 COMMUNICATIONS Technology - OTIS 111-XXX-990-840 55765	$1,756	$6,680	$5,225	$5,155	$0	$5,155
55 COMPUTERS/BUSINESS EQUIPMENT Technology - OTIS 111-XXX-990-840 55805	$240	$4,164	$46,589	$5,046	$0	$5,046
56 OFFICE FURNITURE/EQUIPMENT Technology - OTIS 111-XXX-990-840 55810	$0	$0	$0	$500	$0	$500
Total Equipment	**$125,414**	**$97,852**	**$110,173**	**$120,011**	**$0**	**$120,011**
Total MAINTENANCE OF PLANT	**$2,636,608**	**$3,240,365**	**$2,807,859**	**$3,387,866**	**$(20,868)**	**$3,366,998**
Report Total:	**$8,582,224**	**$9,168,192**	**$8,320,639**	**$9,302,766**	**$(84,975)**	**$9,217,791**