

AMES FREE LIBRARY
5-YEAR TECHNOLOGY PLAN
FY2018 THROUGH FY2022

Ames Free Library
53 Main Street
N. Easton, MA, 02356

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EXECUTIVE SUMMARY

The Five Year Technology Plan (FY2017-2018 through FY 2021-2022) provides a set of goals that enable the library to fulfill technological aspects of its mission:

The Ames Free Library/Easton's Public Library provides materials and services to help the residents of Easton obtain information to meet their personal, educational, professional, and recreational needs. Emphasis is placed upon supporting students of all ages, particularly stimulating younger children's interest and appreciation for reading and learning. The library serves as a learning and educational center for all residents of the community.

This plan is aligned to support key elements of Ames Free Library's Five Year Strategic Plan. These goals are transformative and will require significant technology and fiscal resources to achieve.

INFORMATION TECHNOLOGY ADMINISTRATION

The Head of Technology & User Experience (one FTE) oversees all aspects of technology use at the library. In addition to oversight responsibilities, this working manager is directly responsible for planning, installation, programming, and maintenance of network equipment, services, public workstations, staff workstations, printers, and multimedia resources. This position coordinates any necessary vendor maintenance contracts to maintain equipment and licenses.

By the mid-term of this plan, the implementation demands of the new technologies will require additional staffing in the IT area. Staff in other departments will be retrained to support various elements of these systems as they pertain to their areas of responsibility.

CURRENT INFORMATION TECHNOLOGY ENVIRONMENT AT AFL

The following section details the equipment, software, and services that comprise the library's Information Technology. For some items, the year of equipment acquisition is listed in parenthesis.

Public Computing and Technology Resources

Computers: 26

- 7 Available for in-house use, 2 for check-out: 9 Acer Chromebook C720 series (2013)
- Reference: 7 Dell Inspiron 3000 Series (2016), Windows 10
- Children's Services: 2 Awe All-in-One Early Literacy Stations (2016)
- OPAC: 1 ASUS Chromebox-M004U desktop (2017), 1 Raspberry Pi model B (2014), 1 Dell Optiplex 755 (2013), 1 iPad (2016)
- Digital Media Lab: 3 Apple iMac desktop computers (2014)
- Fireplace Room: 1 DLSG KIC open face book scanner (2016), Windows 10;

Computer Security: Avast Antivirus, Symantec, Faronics Deep Freeze Enterprise, Windows security policies and registry changes

Applications: Microsoft Office 2010, Google Chrome, Adobe CC (DML)

Peripherals: Two Canoscan LDF Mark II flatbed scanners for public use, 2 Wacom Intuos Pro Tablets & stylus pens (DML)

Time Management: Envisionware limits patron usage to 60 minutes per session. Patrons without a library card can receive a "Guest Pass" for 1 session. Patrons with a valid library card can sign in for up to 3 sessions daily.

Printers: One Xerox Phaser 6600 (2014) color printer (Reference Services)

Copiers: One WorkCentre 5355 (2015) monochrome copier with coin and bill acceptor for cost recovery (Barrel Vault Room)

Print Management: Cost recovery for printing is done by honor system and money is collected from patrons by the librarian on duty at the Reference Desk.

Staff Computing & Technology Resources

Computers/Tablets: 17

- 13 Dell Optiplex 755, Windows 10, Windows 7 Pro (2015): Administrative Offices (4), Reference (1), Youth Services (1), Circulation (4), Receiving (2), Adult Services (1)
- 2 Quantum Byte Mini Desktop PC, Windows 10 (2016): Administrative Offices (1), Queset House (1)

- 2 Apple iPad Mini, 16GB, Wi-Fi (2015): Reference Desk (1), Administrative Offices (1)

Applications: Microsoft Office 2010; Symantec; Avast Antivirus; other software in use on a limited basis includes Adobe CC and Adobe Photoshop Elements

Printers/Copiers/Faxes/Scanners: Two Xerox WorkCentre 6605 (2014) color printers provide central copy, fax, scan, e-mail, and network print services (first floor, Circulation; third floor, Administration); one Xerox Phaser 6600 (2015) color printer (Queset House Office)

Data & Voice Network

Switches: Two Cisco Catalyst 2960-S series switches (2013) and one Juniper EX2200 switch (2013); One Cisco switch serves the Queset House and is located on the third floor; The other Cisco switch and the Juniper switch serve the main building and are located in the first floor mechanical room.

Routers: Cisco 866VAE (2013) performs inter-VLAN routing

Firewall: Two ASA 5505 (2013)

Wireless: Nine Ruckus Wireless ZoneFlex 7363 (2013) dual band access points distributed throughout the library (4) and Queset House (5) controlled by a Ruckus ZoneDirector 1100 at the main building (2013) and a Ruckus ZoneDirector 1000 (2013) at Queset House. The two wireless networks provide unfiltered internet access for both staff and patrons.

WAN: Verizon Fios (Ethernet over Fiber), 75 Mbps Internet, serves the Main Library Building's wireless network; Comcast Business Class, 75 Mbps Internet (provided through SAILS Consortium), serves the staff's wired desktop computers, Comcast Business Class, 25 Mbps Internet, serves Queset House patrons and staff.

Telecommunications: Telephone service is provided through Verizon Business over a VOIP-based Avaya system. AFL contracts with Inspired Technologies to provide a PRI circuit for local and long distance PSTN service. All desktop phone users have access to in-house voice mail.

Servers and Services

Integrated Library System: The major service used by the library is a shared Integrated Library System (ILS). This system is WorkFlows by SirsiDynix, shared with other libraries in the SAILS consortium. The system is hosted by SirsiDynix, and AFL connects to it over the Internet.

Envisionware: Envisionware provides time management for our public computers. The Envisionware system runs on the Reference Desk staff computer, a Dell Optiplex 755 (2015).

Web Hosting: The library's website (amesfreelibrary.org) is remotely hosted by EpbRI.

E-Mail Hosting: Staff utilizes Gmail for an E-Mail service, which is administered through SAILS and is hosted by Google.

Video Surveillance: Video surveillance is provided by a network of four Ethernet-based, 1.3 MegaPixel Samsung PoE cameras (2013) strategically placed inside and outside of the Queset House and NLSS Unified Security Gateway that has 500GB of internal storage for video recording. The Gateway is managed via any internet browser and can be accessed outside of the network via an internet connection and provides live and archived streams to authorized staff directly on their desktop PCs.*

(* Please note, the Security Gateway currently in place is non-functional and as such the current security camera system is unusable. Suggested course of action can be found in the "Goals" section of this 5- Year plan.)

Support Services: The staff Desktop PC at the Reference Desk hosts Deep Freeze Enterprise Console, an application that automatically powers on and off the public computers each day and provides a layer of security for our public accessible PCs.

Multimedia Resources

Queset House Presentation Commons: The following equipment is available in the Presentation Commons, located on the first floor of Queset House:

- Mitsubishi DLP Projector and drop-down screen
- Sony Multi-Channel AV Receiver
- Sony Blu-Ray/DVD player
- Apple TV

Queset House Conference Room: The following equipment is available in the Conference Room, located on the second floor of Queset House:

- Wall-mounted 60" Sharp Aquos LCD HDTV
- Overhead speakers for pervasive audio
- Blu-Ray/DVD player
- Apple TV
- Wall-mounted control touch panels for full room control

For presentations, users may interface their equipment via the use of wall jacks located in both rooms for HDMI, VGA, and audio inputs or via wirelessly Apple TV if they have an Apple device. The entire Queset House has WiFi networking, so presenters and attendees may bring wireless devices such as laptops, tablets, and phones to enjoy Internet access. Both presentation rooms at Queset House may be combined for simultaneous video presentations on both screens as well as combined room audio.

Digital Media Lab: The Digital Media Lab located on the second floor of Queset House includes 3 Apple iMac desktop computers, two Wacom drawing tablets, access to Adobe Creative Cloud, a CanoScan Cannon flatbed scanner, VHS to DVD converter, and a multi-disk DVD/CD copier.

Queset House Gaming: Queset House also has available for in-house use three gaming carts, two of which come equipped with 32 inch LCD displays. The systems include one each of the following: Nintendo Wii U, Microsoft Xbox 360, Sony Playstation 3.

Ames Free Library Teen Den: The Ames Free Library Teen Den, the newest addition to our public spaces and located on the first floor of the main library building includes a 32 inch flat screen ROKU enabled television and a Nintendo Wii U.

SUMMARY OF PREVIOUS TECHNOLOGY GOALS (FY 2012-2017)

The following summarizes the success of our major technology goals from our last Strategic 5 Year Plan. The success of each plan goal is rated from zero to three stars.

0 stars no progress	★ minimal progress	★★ moderate progress	★★★ goal achieved
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1. Set up wireless access in Queset Garden: Expansion of our wireless network to the Queset Garden was not implemented. This remains an ongoing goal.
2. ★★★Increase use of credit card payment availability in newly installed self-check machine: Our expansion of our capability to accept credit card transactions has been two-fold. The SAILS consortium has expanded our patron account functionality to allow patrons to pay fines and fees online via a credit card for a nominal 25 cent transaction fee. Additionally, the Ames Free Library has implemented Square credit card transaction technology, which includes a virtual storefront for online transactions as well as mobile technology that allows the AFL to accept credit card payments with the use of an iPad mini.
3. ★★★Home loan of e-readers to the Easton community: We have several e-readers available for circulation with multiple devices pre-loaded with reading materials aimed at different demographics of Easton’s population. (Children, YA literature, Summer Reading materials, Adult literature, Book Club selections) The community has eagerly embraced these additions to our circulating collection as evidenced by significant circulation numbers.
4. ★★★Provide and promote mobile phone display customization for library web pages: In 2015 the AFL underwent a complete website overhaul. Part of the overhaul included moving to a responsive web design in order to optimize website layout for various screen sizes, including smart phones.
5. ★★★Increase use of local public cable television outlet for televising library programs: We regularly video library programs suited for recording through the use of ECAT equipment. The videos are compiled, edited, and aired by ECAT on their channel.
6. Meet monthly with already established Technology Advisory Committee: Regular meetings of this group did begin strongly, but due to scheduling conflicts and other various influences, this group eventually dissolved prior to the current Head of Technology coming on board in 2014.
7. ★Develop technical programs to inform the community using the expertise of

Technology Advisory Committee members: Multiple one-time programs have taken place at the AFL, taking advantage of the unique skill-sets and knowledge base of Jason Daniels and the rest of the ECAT staff.

8. ★By the end of FY12, the Library will develop plans to enable patrons outside the library to participate in and receive transmission of library programs, events, discussion groups and collection updates via videos, webcasts, podcasts, etc.: Thanks to the Library's website redesign, recorded library programs that have aired on ECAT are archived on our website for online viewing.
9. ★★★Store programs in Internet Archives or similar. List program content in the library catalog and publicize content through website, Facebook, and e-Newsletter mailings: Recorded programs are edited and compiled by ECAT, hosted online, and made available on both their website and the library's. Additionally, physical DVD copies of these programs are put into the Library's collection and are available for check-out. They are listed in our catalog and are fully discoverable via a search of our collection. Additionally these programs and their recordings are promoted via our website, multiple social media streams, and our various e-Newsletters.
10. ★★★Acquire cameras and editing software to manage in-house production: A Sony HD handheld digital video camera was acquired in 2015 and a subscription to Adobe Creative Cloud provides staff and patrons alike with full access to Adobe's suite of video, audio, and image editing software.
11. ★★★Utilize and expand the current 5,000 name patron e-mail list, highlight programming and other library services, and increase open rates by using commercial media techniques: Currently, the AFL sends out roughly 17,300 emails per month to a list of 9,215 subscribers divided among eight regular e-Newsletters (New DVDs, New Fiction, New Non-Fiction, Weekly Events, Monthly Events, Knitting, Quilting, and Foodie Group), by switching from our previous e-Newsletter service, Constant Contact, to the more comprehensive MailChimp, we have managed to redesign our e-Newsletters from the ground up. By utilizing MailChimp's data collection features, we have been able to optimize our email campaign open rates by tracking subscriber engagement metrics such as time of day emails are opened, what items are most viewed, etc. The current average combined opening rate of our newsletters is roughly 35%.
12. ★★Expand key capabilities of library staff by offering training opportunities twice a year for senior staff members: We provide regular opportunities for staff members to attend technology webinars and in-person training sessions offered by the SAILS Consortium. In addition, all staff (and patrons) have full access to Lynda.com, a database full of interactive tutorials and training sessions on virtually any consumer technology. The Head of Technology & User Experience also provides on-site one on one sessions with staff on an as-needed basis as well as by request.

13. ★Create a plan for increased allocation of fundraising efforts toward technology needs and pursue grant opportunities and community connections to assist in reaching technology goals: Approved funds allocated annually to the AFL Technology budget has seen a modest increase over the past few years. The current allocation for technology costs per fiscal year is \$10,000 (July 1, 2016 to June 30, 2017) to cover annual recurring technology costs, whereas in 2013 annual recurring technology costs totaled approximately \$8,200 per fiscal year. Our current technology budget funding is sufficient only to cover the expense of our current technology services and not for improvements, expansion, or replacement of any aging or obsolete tech.

Recurring Technology Costs FY 2016-2017:

● SAILS SUPPORT	\$500/year
● PC SUPPORT	\$554/year
● ENVISIONWARE SOFTWARE (3 year contract)	\$234.83/year
● SIMPLYBOOK.ME RESERVATION SOFTWARE	\$96/year
● QUICKESIGN DIGITAL SIGNAGE SOFTWARE	\$198/year
● MAIN LIBRARY BUILDING WIFI (Verizon Fios)	\$1,464.48/year
● Queset House Internet (Comcast)	\$239.40
● PRINTER MANAGEMENT (NCS)	\$6,708/year (approx.)
● TOTAL ANNUAL RECURING COST:	\$9,994.71

Discussion

As with any plan, let alone a technology plan, adjustments have to be made in order to accommodate the unforeseen. With this in mind, However, the general and overarching vision of a plan reminds us of targets that we need to hit in order to continue to be the superior resource our residents and patrons have grown to expect and depend upon. If there is any single summary of technology plans, it is this.

Reviewing our previous plan’s history, two major points emerge. First, while modest increases in funding for technology have been implemented, so too have the costs associated with simply maintaining what we have in place. It is fully expected that this trend will continue to grow each year as Information Technology becomes more pervasive in additional areas. We effectively managed to react to two major unanticipated needs. First, due to effects of a combine hardware failure and low performance metrics, the AFL recognized the need to switch from a Thin Client based computer system to a higher performance siloed computer network in 2013. Secondly, the AFL implemented a redesigned from the ground up web site to improve

functionality, provide a framework conducive to expansion and adaptation, and improved aesthetics. Finally, we recognized the need to replace our aging fleet of patron accessible desktop computers with new desktop models in 2016. This exemplifies the AFL's ability to identify unplanned needs, diagnose problems, and implement a course of action to alleviate the problem when the will to do so is there.

Every technology plan we produce has aggressive budget demands. The AFL has been resourceful and fortunate in finding extra-budget funds to meet our goals. We have gratefully benefitted from generous support from individuals and organizations in the community and expect to continue to do so.

GOALS FOR FY2018 TO FY2022

1. Upgrade Networks

Goal: The library will improve its data network to bring it in line with current standards.

No technological piece of the library's system is as important as their network. Every aspect of computing at the library requires a solid, responsive, reliable network. The current network hardware was installed in 2013. A WiFi network realistically should be upgraded every 3 to 5 years and generally, wired networking devices, such as physical switches and routers, should be replaced every 5 years. The SAILS consortium is half-way through a 5 year plan that includes improving their internet speeds to 300Mbps by 2020. The AFL will strive to match that increase.

- FY2018-19: Switch Queset House ISP from Comcast 25Mbps to Verizon Fios 75Mbps.
Upgrade Main Library Verizon Fios ISP from 75Mbps to 150Mbps.
- FY2019-20: Replace aging WAPs, switches, and routers. Get network installation and service contracts from at least two providers.
- FY2020-21: Maintain library network.
- FY2021-22: Increase Queset House Internet speed from 75Mbps to 150Mbps. Increase Main Building Internet speed from 150Mbps to 300Mbps.
- FY2022-23: Maintain library network.

2. Upgrade Copying & Printing Support

Goal: The library will upgrade copy & printing capabilities.

In 2013, the library signed a 5 year contract with Northeast Copier Systems (Now Northeast Office Systems) for 2 Xerox WorkCentre 6605 color printer/scanner/copiers, 1 Xerox Phaser 6600 color printer, toner supply, and machine maintenance and repair. This contract ends in 2018. The library has experienced growing print needs for staff and patrons as well as significant resource (paper, toner, revenue) loss due to a lack of any cost recovery system. To address this need, we are considering Envisionware's LPT 1 print cost recovery solution. It would integrate seamlessly with our existing Envisionware time management software.

- FY2018-19: Negotiate new lease agreements for new copier/printer/scan technologies.
Upgrade staff printers as necessary to address wear and tear.
- FY2019-20: Implement print release system for print cost recovery and to minimize material waste.
- FY2020-21: Upgrade staff printers as necessary to address wear and tear.
- FY2021-22: Upgrade staff printers as necessary to address wear and tear.
- FY2022-23: Upgrade staff printers as necessary to address wear and tear.

3. Maintain High Quality Staff Computing Resources

Goal: The library will replace each of its staff computers and software releases every three to five years.

The library has 15 computers dedicated to staff functions. In addition, it has two tablets for mobile use. In terms of software, our staff uses Microsoft Office, Norton Antivirus, Adobe Creative Cloud, and Google products. It is important for maximum productivity to provide staff with reliable and efficient hardware and software.

- FY2018-19: Maintain current computers and software.
- FY2019-20: Upgrade to new staff computers; upgrade from current Microsoft Office 2010 to newest proven build of Microsoft Office.
- FY2020-21: Maintain computers and software.
- FY2021-22: Maintain computers and software.
- FY2022-23: Maintain computers and software.

4. Maintain Public Services Computing Options

Goal: The library will replace each of its public computers and software releases every three to five year.

The library has 17 computers and 9 Chromebooks available for the public to use as catalog stations and Internet computers throughout the AFL campus. Public computers are particularly susceptible to wear and tear. We are also committed to maintaining current releases of application software in order to provide optimal resources for bridging the digital divide.

- FY2018-19: Replace oldest OPAC (2013) with either Chromebox or iPad; maintain computers and software.
- FY2019-20: Replace Children's Room OPAC (2014) with either Chromebox or iPad; replace aging fleet of Chromebooks (2013) with new mobile computing technology.
- FY2020-21: Replace Queset House DML Apple iMacs (2014)
- FY2021-22: Maintain computers and software.
- FY2022-23: Replace Patron PCs (2016); Replace Childrens Room AWE Stations (2016)

5. Maintain Video Surveillance System

Goal: The library will maintain a functional video surveillance system.

Our current video surveillance system, maintained by the Head of Technology & User Experience under consultation with the installing vendor, FTG, is non-functional due to hardware failure. It consists of a web based control system and four strategically placed cameras within Queset House.

- FY2018-19: Replace malfunctioning hardware to bring existing camera security system back online; install additional additional security cameras and integrate them into current system. (1 in Queset Garden, 1 in rear of Queset House)
- FY2019-20: Maintain video surveillance system.
- FY2020-21: Maintain video surveillance system.
- FY2021-22: Maintain video surveillance system.
- FY2022-23: Maintain video surveillance system.

6. Continuing Education (Professional Development)

Goal: The library will develop knowledge and understanding of Information Technologies for library staff through continuing education opportunities.

The library cannot underestimate the impact of new technologies on the dynamics and responsibilities of employees. While technology is often perceived as a means to eliminate positions, it also creates positions requiring higher skills and training. We expect to see staff redeployed to support goals in our Strategic Plan as well as in this Technology Plan.

Examples of skill areas that will need training and staff development include, but are not limited to:

- Digital signage: graphic design and content management
- Web presence: marketing, community relations, content management, social media, graphic design
- Streaming technologies: videography, sound recording, video and audio editing, streaming content management
- Consumer technologies: eReaders, collection management software, mobile devices

FY2018-19: Continue training as needed on all platforms.

FY2019-20: Continue training as needed on all platforms.

FY2020-21: Continue training as needed on all platforms.

FY2021-22: Continue training as needed on all platforms.

FY2022-23: Continue training as needed on all platforms.

7. Maintain Catalog of Circulating Technologies

Goal: The library will maintain and expand our collection of technology based “non-traditional” items.

The library provides technology based “non-traditional” circulating and in-house use items to our patrons. These items include ROKU video streaming boxes, eReaders, WiFi Hotspots, and videogame systems.

FY2018-19: Replace the two oldest eReaders (2011) in our collection; replace existing ROKU; renegotiate WiFi hotspot service contract, increase number of circulating hot spots by 50% devices with newer models and increase number of devices in

collection.

FY2019-20: Replace the two oldest eReaders (2012) in our collection; upgrade to current generation gaming systems.

FY2020-21: Replace the two oldest eReaders (2014) in our collection.

FY2021-22: Replace the two oldest eReaders (2016) in our collection.

FY2022-23: Add two additional eReaders to our collection.

EVALUATION

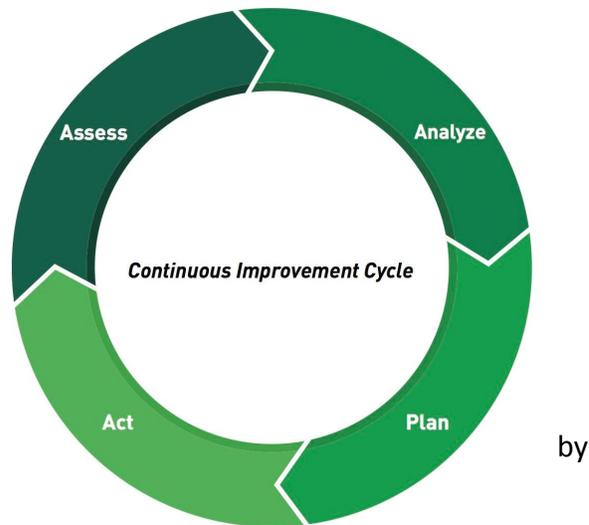
Ongoing evaluation of this five year plan's progress is handled by the library's administrative team, which consists of the Library Director, Assistant Director, and Head of TUX.

This team evaluates the use of technology at the library and follows a four stage continuous improvement model.

Stage 1: Assess/Reassess

The assessment (and reassessment in future plan cycles) stage is the point where the team examines the technology-based services used by the library. Typical and relevant questions asked the team at this point would include:

- Is this the most recent version of a given software product?
- Does the vendor still support this equipment?
- Does this equipment meet the needs of our patrons?
- How much is the cost of the maintenance contract on this machine vs. its replacement cost?
- Are there new technologies available to meet unsatisfied needs of patrons or staff?
- What services or capabilities should we sustain, expand, or phase-out?
- What new technologies are emerging in the market that should be implemented in future plan years?
- How did the expenditures during the past year's implementation compare to the budget?



When applicable, the team may conduct surveys of staff or patrons, examine case studies, and make site visits to other libraries to aid in the decision-making process.

Stage 2: Plan and Design

During the plan and design stage, the team will update the 5 Year Technology Plan to reflect the outcome of the assessment stage. Also, all aspects of the technology plan will be reviewed against objectives and goals of the library's 5 Year Strategic Master Plan.

The Head of TUX will translate plans into workable design documents to ensure all necessary components and interactions have been considered.

At the end of this stage, the updated 5 Year Technology Plan will be presented to staff for comment, and subsequently, to the library board for approval.

Stage 3: Implement

During implementation, the Head of TUX will manage the projects, technology budget, and schedule to ensure that timely, complete, and quality project completion occurs.

Stage 4: Evaluate

During the evaluation phase, the team will study the recent implementation of the plan and consider several questions:

- Were the goals and objectives of the plan met?
- What difficulties were encountered in meeting these objectives?
- Is there a measureable improvement in library service having met a given objective?
- Which goals were not met and why?

Data resulting from the evaluation stage will be brought into the reassessment stage, especially that pertaining to unmet goals and objectives from the previous plan year.