

Two Year Technology Plan for The Super Information Library Octosphere (SILO)

Dr. Manhattan, Library Director

The Super Information Library Octosphere (SILO)

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July 1, 2012 to June 30, 2014

Type of Library: Special

Patrons: Superheroes

Authors of Plan

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Vision Statement

SILO ensures the survival of the multi-verse by providing superheroes with information resources and state of the art technology, communication, and trained staff. Library patrons have access to the information they need immediately, in order to save the world quickly. Due to the immediacy of this goal, most library resources are electronic.

The budget to for the necessary technological and informational needs of superheroes is quite large; therefore, SILO has looked to our patrons for monetary endowments. However, such endowments do not allow patrons to dictate either the technology offered by the library, or the use to which library resources are dedicated. All recommendations and requests for technology and resources shall be submitted to the SILO Board of Directors.

Technology History

During the last few years, SILO has made the following technology upgrades.

- Installed ten additional public access computers, one additional card catalog computer, and one printing station, bringing the total number of public computers to 25. Of these computers, 20 offer *Microsoft Office Suite*, Internet, and a variety of other programs. Three of these machines are designated as OPACs, and two utilize as printing stations.
- Installed *Print Manager Plus (Library Edition)* software to facilitate printing queues.
- Added a wireless access point to the library to effectively bring the entire building onto the wireless grid. Cisco routers power this wireless Internet.
- Purchased four new laser printers. One is reserved for staff use, while the other three, including one color printer, is available for public use.
- Purchased ten new iPads for use during presentations and collaborative groups and meetings.
- Technologies purchased for use in the newly constructed meeting rooms, which is available for public use include five overhead projectors, one Blu-Ray DVD player, two overhead sound systems, all using touch pad controls mounted on the wall for easy accessibility and functionality.
- Contracts created for subscriptions to multiple crime related databases, including *Criminal Justice Abstracts*, *Military & Government Collection*, and *Psychology & Behavioral Sciences Collection* through EBSCOHost; *Military & Intelligence* from Gale Cengage; and *PsycINFO* from CSA Illumina.
- Adopted computer replacement schedule stating all CPUs will be replaced on a three year rotation (or as the Incredible Hulk smashes them).
- Maintenance and upkeep schedule was created and is currently being followed as defined.

Year 1 Technology Goals

Install durable computer equipment that offers all patrons equal access without the chance of breakage due to superhuman strength and provide equal access for a special needs patrons.

- Purchase 30 high density keyboards (\$3,000)
- Install giant monitor (\$2,000), jumbo keyboard (\$250), easy to read icons, and a never-fail system (\$400) on one computer to keep certain angry green giant patrons calm
- Supply five additional desk chairs of various sizes for different sized patrons (\$1,500)

Budget required: \$7,150 one-time fees

Amount budgeted: \$7,150

Install simple and easy to use voice automated OPACs to save time searching all e-resources, databases, and library catalog instantaneously.

- Purchase three new OPAC machines (\$3,500 total)
- Buy three desks for OPAC machines (\$300)
- Purchase and install *Dragon Naturally Speaking Ultra* voice-to-text and voice recognition software (\$360)
- Purchase and install heavy duty, ultra sensitive microphones on all 28 public access computers (\$440)
- Purchase and activate 20 suit transmitters with visors with augmented reality to allow superheroes to easily find materials on the shelf (\$10,000)
- Purchase large storage cabinet for transmitters (\$350)

Budget required: \$14,950 one-time fees

Amount budgeted: \$14,950

Improve assistive technology.

- Purchase Juliet Pro 60 Braille Embosser (\$4,495)
- Purchase PIAF Tactile Fuser (\$1,395)
- Purchase Swell paper for use with Tactile Fuser (\$140 per 100 sheets of A3-sized paper and \$140 per 200 sheets of A4-sized paper)

Budget required: \$5,890 one-time fees; \$840 annually for swell paper

Amount budgeted: \$5,890; \$840 annually

Improve building and technological security with retina and fingerprint scanners for computer log in, and entrance to the library, voice recognition, and advanced firewalls on all servers.

- Purchase and install 28 retinal/finger scanners from Liberty Retina (\$40,560 for equipment; \$8750 for installation)
 - Perform extensive background checks* on the five Liberty Employees installing scanners
- Voice recognition software (*Dragon*) installed on all computers (see two goals prior) will also improve security
- Install triple layer ultra-advanced firewall on servers to block all incoming super villain hackers trying to break into SILO (\$5,630 annually)
- Upgrade antivirus software (\$2,000 annually)
- Hire* new Security Technician to maintain and deter breach of digital security protocol

(\$100,000 annually)

* Costs associated with employment and personal history checks come from our Personnel Budget.

Budget required: \$49,310 one-time costs; \$107,630 annually

Amount budgeted: \$156,940

Year 1 upkeep expense

- 5% of Year 1 budget for existing technology upkeep

Budget required: \$4,247

Amount budgeted: \$4,247

Unplanned Expenses

- Any unforeseen expenses associated with any of the above costs.
- Examples include: power extension cords, shipping costs, power supplies, compatibility equipment, etc.
- 10% of each year of the budget goals

Budget required: \$11,502

Amount budgeted: \$11,502

Year 2 Technology Goals

Create a virtual reality area for patrons who want to access information and training games through an entirely immersive manner.

- Obtain 30 full-body haptic suits complete with haptic gloves and visors (\$150,000)
- Purchase ten storage/display cabinets with spotlights to display suits and equipment (\$30,000)
- Purchase and install 30 new state of the art BOXX 8550 Xtreme Series workstation CPUs to connect the suits and visors to the augmented reality through which to experience virtual worlds, access the library databases and attend virtual classes to share with superhero's on distant planets (\$255,960)
- Hire* AR Technician to perform haptic augmented reality suit/PC maintenance (\$100,000 annually)

* Costs associated with employment and personal history checks come from our Personnel Budget.

Budget Required: \$435,960 one-time fees; \$100,000 annually

Amount Budgeted: \$535,960

Fortify a massive library database, security, and Internet network which reaches all levels of society in order to help superheroes monitor criminal activity.

- Network connecting to multiple information databases worldwide including traffic and security cameras, multiple federal government's security bureaus (e.g. FBI, CIA, NSA, and international counterparts), police databases (\$75,000 annually)
- Hire* Database Specialist who creates, manages, and navigates the massive database for patrons and staff (\$100,000 annually)
- Contract with DigitalGlobe, global satellite imagery, to spot and monitor emergencies such as man-made crises, political instability, and natural disaster (\$25,000 annually)

Budget Required: \$200,000 annually

Amount Budgeted: \$200,000

Create a conference room for meetings and planning

- Install two holographic imaging transmitters/holodecks (\$6,000)
- Build a large, hemispheric bank of computer screens inside the large meeting room with 12 60" LED Samsung TVs (\$18,840)
- Global satellite imagery contract with DigitalGlobe, allowing spotting and monitoring of emergencies such as man-made crises, political instability, and natural disaster (budgeted in previous goal)

Budget Required: \$24,840 one-time fees

Amount Budgeted: \$28,840

Year 2 upkeep expense

- 5% of Year 2 budget for existing technology upkeep

Budget required: \$28,040

Amount budgeted: \$28,040

Unplanned Expenses

- Any unforeseen expenses associated with any of the above costs.
- Examples include: power extension cords, shipping costs, power supplies, compatibility equipment, etc.
- 10% of each year of the budget goals

Budget required: \$61,384

Amount budgeted: \$61,384

Staff Training

Because SILO is a state of the art facility that has technology and equipment in beta stages, or has yet to reach production for mass production, much of the training is initiated by the creators of the

hardware and software SILO utilizes. These creators often are also the superheroes which SILO assists; SILO understands that time is of the essence, and therefore has created a unique training program for SILO staff members. Librarians and technical support staff receive a top-down type of training, similar to the trickle-down effect. The creators demonstrate technology uses to the Head Trainer (a SILO staff member), who then formulates training materials and trains the remaining SILO staff members so that the staff members can assist the superheroes, our patrons, with any equipment they need to access. Any new equipment and technology is thusly treated, reducing the amount of time creators need to interact with each individual staff member. Creators always have the prerogative to participate with the training process, if they so desire. Furthermore, creators specifically design their technologies to be highly intuitive so only basic training is necessary. The majority of our training budget is spent on mock simulations.

Budget required: \$100,000 annual salary; \$25,000 annually for training materials and expenses

Amount budgeted: \$125,000 annually

Evaluation

Completion of the items in the timeline portion of this document will serve as a measure of success. Measuring satisfaction of certain projects may be harder, but feedback from patrons and staff in the form of surveys, anecdotal information, and staff observations will help determine their impact.

Each year the SILO Board of Directors has a workday. At that time, the previous year is reviewed, and both short- and long-term goals of the library are discussed and updated. Any changes to the technology plan can be determined at this time.

Budget Breakdown

Year 1 Budget		Year 2 Budget	
Equipment		Equipment	
Keyboards	\$ 3,000	Haptic suits	\$ 150,000
Giant monitor	\$ 2,000	BOXX 8550 Xtreme PC	\$ 255,960
Jumbo keyboard	\$ 250	Holographics	\$ 6,000
OPAC computers	\$ 3,500	Hemisphere computers	\$ 18,840
Microphones	\$ 440		
Augmented reality suits	\$ 10,000	Furniture	
Braille embosser	\$ 4,495	Storage/display cabinet	\$ 30,000
PIAF Tactile Fuser	\$ 1,395		
Retinal/finger scanners	\$ 40,560	Annual: Software	
		Database network	\$ 75,000
Installation		Satellite imaging	\$ 25,000
Liberty Retina	\$ 8,750		
		Annual: Training	
Furniture		Training expenses	\$ 25,000
Various sized desks	\$ 1,500		
OPAC desks	\$ 300		
Storage cabinet	\$ 350		
Software			
Never-fail system	\$ 400		
Dragon Naturally Speaking	\$ 360		
Annual: Software, Single-use, Training			
Firewall	\$ 5,630		
Antivirus	\$ 2,000		
Swell paper	\$ 840		
Training expenses	\$ 25,000		

Year 1 Subtotals			Year 2 Subtotals	
Equipment	\$ 65,640		Equipment	\$ 430,800
Installation	\$ 8,750		Furniture	\$ 30,000
Furniture	\$ 2,150		Software	\$ 100,000
Software	\$ 8,390		Training	\$ 25,000
Single-use	\$ 840			
Training	\$ 25,000			
Year 1 Upkeep Expense	\$ 4,247		Year 2 Upkeep Expense	\$ 28,040
Unplanned Expenses	\$ 11,502		Unplanned Expenses	\$ 61,384
Year 1 Grand Total	\$ 126,518		Year 2 Grand Total	\$ 613,840
Annual: Salary			Annual: Salary	
Security Tech	\$ 100,000		Security Tech	\$ 100,000
Head Trainer	\$ 100,000		AR Tech	\$ 100,000
			Database Specialist	\$ 100,000
			Head Trainer	\$ 100,000

Appendix

1) Describe how you, as a group, went about creating your Technology Plan. Did you research other libraries? How?

When originally discussing the technology plan, we thought it would be a good idea to query the libraries at which two of our team members currently work. In this way, we hoped to find other real life examples from those provided by the instructor. However, we were surprised to discover that neither library had a sample to share. One of the libraries is an academic library, and they explained that their technology plan is subsumed within the technology plans of the university as a whole. So, while they do provide input on the plan, the plan is not exclusive to the library. The other library was a public library, but it also did not have a structured technology plan. Instead it has technology “goals.” There was no real explanation as to why the library doesn’t have a formal technology plan; however, the library has received e-funds in the past. Melendra was unable to verify if the current state of the technology planning was acceptable for gaining the e-funds or if either the library no longer receives funds or receives them through the North Central Kansas Library System.

The Fayetteville Free Library and their FabLab with its 3D printers and CNC machines was also an inspiration. We also referred to WebJunction’s *Six Step Technology Planning Tool* and Techsoup for Libraries’ *Cookbooks: Planning for success*.

2) Did you research technologies? How?

David listened to the audiobook [Ready Player One](#) by Ernest Cline about a futuristic world where everyone spends most of their time in an online virtual reality world called “The Oasis.” This was an inspiration for adding the virtual reality suits and haptic gloves and visors.

In regards to assistive technology, we considered different tactile printers based on John Walsh’s article “Improving Web Accessibility for the Visually Impaired.” Originally, we wanted to add the map making printer, but the software and hardware for this device were not new technologies. Instead they were older tools that have been repurposed and knowing how to use them would not be intuitive. So, Melendra researched the tools that the Art for the Blind website utilizes. This technology was better explained and it was easy to find the tools necessary to use it. As a team we discussed the differences between a Braille printer and the tactile printer because there was some question about whether we needed both. We concluded that the map making, tactile image options of the PIAF Tactile Fuser offer a significant advantage in relation to crime fighting so that both the Braille printer and the PIAF would be important tools for our library.

3) Did you enlist expertise of professionals in the field? Who and/or why?

Tiffany spoke to the tech guys at the academic library where she works. However, since it's a university library, there is no technology plan specific to the library. They said the entire university had one, but we were unable to acquire a copy of it.

4) Did you break out different areas of the plan to different group members? How? Did you start out with an outline, or a wiki, or some other method to get your ideas on paper?

We did not assign specific duties to individual team members until late in the project. Instead we counted on individual team members to step up and contribute throughout the project.

After initial emails through Blackboard, and a face to face meeting, the team settled on using Google Docs to organize and complete our plan. We based the original document on the outline created at our first face-to-face meeting in June. Each team member was assigned a color for typing on the document, so that some "history" of the work would be apparent. We also utilized the Google Docs to communicate with one another while creating the plan.

4) What did you find to be some of the biggest challenges you encountered when creating your plan?

Creating a budget was probably the most challenging aspect because of the high tech equipment and salaries. We also included quite a bit of technology that is yet to be in existence, or not readily for sale, so pricing was either nonexistent or hard to find online within our allotted time frame.

5) Items you chose to include and items you chose to omit within your plan, and why.

We considered the issue of providing materials designed for entertainment in addition to the main focus of the library, that of aiding in the protection of the world. A number of the technologies included in our plan would even be useful as entertainment; however, we decided that superheroes have access to public libraries, and they could more easily access these resources through such a venue. We therefore eliminated e-books, e-readers, for-entertainment games, and other similar items from the technology plan.

Resources

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