Makerspace Implementation Plan

East 38th Street Branch

Indianapolis Public Library

[Prepared by Joanna Conrad]

[for Andrea Copeland]

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Introduction

The East 38th St. branch of the Indianapolis public library has been charged with creating a makerspace for our patrons, in keeping with the goals of our strategic plan. Ten thousand dollars has been earmarked from the budget to complete this project.

The branch's total base population is 32,289. Those under the age of 18 comprise 22.38% of the population, with 62% between the ages of 18 and 64. 24% of the population has been to college without earning a degree. 37% have earned a highschool diploma, while 18% have not graduated highschool.

With 21.65% of the population unemployed, 24.83% of the service population lives in poverty. 14.78% make less than $10,000.00 a year. 26.4% earns between $10,000 and $25,000 dollars. 30% earn between $25,000 and 50,000, while 14% earn $50,000 to $75,000 dollars.

The foreign-born population is 2%, with half of those immigrating from Mexico. English is primarily spoken by 96% of the population. Spanish is spoken by 3%. Within the service boundaries there are 114 places of worship, 44 schools, and 102 daycare centers.

As can be seen, a makerspace at our branch has the potential to offer informal education that might be otherwise inaccessible to patrons. Practical skills with employment demand, such as soldering, can be offered in the library in partnership with community-service makerspaces such as local non-profit, Club Cyberia Ltd. Creation of this makerspace supports almost 20 separate strategic plan goals, but those most relevant are:

1-19 focus on developing programs that address a variety of literacies.

1-35 Offer skill building tutorials that teach web development and other marketable technology skills.

2-11 Provide public access to conferencing and production equipment.

3-18 Seek community groups and individuals willing to share their knowledge.

3-19 Create a method for connecting innovators and target audiences.

3-20 Redefine spaces for community innovators to showcase their products for public experimentation and learning.

3-21 Create places to incubate new ideas and allow for creativity by the public.

3-22 Create dialog in the community about the role of the library as a location where the everyone can experiment with new technologies for free.

Research

To ensure that the makerspace is addressing needs of the community, or even *if* a makerspace would address the needs of the community, additional research should be undertaken. The patrons who use urban libraries have different needs than patrons of suburban or rural libraries where makerspaces are much more common. Research should include consultation with potential partners, schools, and local employers to determine how they might utilize the resources a makerspace might provide. In particular, it should be determined if a library makerspace would duplicate the services our partnership with Club Cyberia already provides. Our makerspace budget might be better utilized in supporting this partnership.

Visits can be made to other nearby libraries who have makerspaces and advice and ideas solicted. Professional publications and organizations offer best practices and guidelines. Informal professional associations, such as Facebook groups and mailing lists can also provide information.

Team Assembly and Management

E38 already has two employees dedicated to assisting patrons specifically with computer use and education. These staff members are obvious choices to participate in creation of the space. The adult, teen, and children's librarians should be involved as well. The branch manager will ultimately oversee the process and report activities to upper management.

Community Partnerships

Club Cyberia is a non-profit, community service makerspace located within our service area. The branch already partners with this organization for programs within the library. The services they provide the community range from informal and low-cost welding classes, to computer programming and CAD/CAM design, to a competitive teen robotics team. The equipment they have available to members and non-members alike is far more extensive than anything the library could hope to provide.

Additional partnerships should be sought with community service organizations (or current partnerships integrated), particularly job placement services who can help patrons turn informally learned technical skills into meaningful employment. Ongoing support should be sought from current community partnerships.

Physical Space

E38's physical space is inadequate for current needs. It will be a significant challenge to incorporate the dedicated equipment required of a makerspace into the current floorplan. There are no study rooms available to patrons, and the single community room is booked daily.

At best, the newspapers and magazines could be moved from the portion of the building where the teen collection is housed and a cabinet installed. This cabinet could store specialized equipment and supplies. A collection of technology-related books and

resource lists could occupy a bookcase nearby. One or two specialized computer stations could be moved to this area and dedicated to technology tutorials, MOOCs (Massive Open Online Courses), and other maker resources.

Existing Resources

Existing Resources at E38 are few. Crafting programs generally aren't held, as patron needs tend toward economic improvement, so there are no craft materials available. Even the children's department has little more available than crayons. There are several laptops, a projector, a couple of eReaders and an iPad. These are not generally made available to patrons, but could be utilized. Partnering with Club Cyberia we have access to some of their equipment, loaned 3-D printers, for instance.

Equipment

Again, the money budgeted for this project might be better spent on interactive literacy displays in the children's area or creating a comprehensive teen program. But should it be determined that the branch will go ahead with the makerspace by installing a cabinet and dedicating computers, the following equipment might be considered.

Electronic kits:

Car Headlight Warning Kit - $19.95
Frost Indicator Warning Kit - $19.95
Windshield Wiper Interval Timer Kit - $24.95
Digital Tachometer Kit - $29.95
Snap Circuits Experiment Kit $60.00
Elenco Delux Digital Analog Trainer with Case and Tools - $234.95
PIC Programmer & Experiment Board Kit - $28.95
Fiber Optic Educational Kit - $29.95
Programmable Dice Kit - $22.95
Classic Pong Video Game Kit - $24.95
DuinoKit Essentials - $261.95

Machining and crafting resources

Form Box Tabletop Vacuum Mold Machine - $350.00
Die Cut machine - $150.00
Sewing Machine - $150.00

General crafting supplies

Paper
Markers
Paint
Brushes
Yarn
Knitting needles
Crochet hooks

Quilting swatches

Tape

Glue

Hot glue guns

$300.00

Computers (2)

$1000.00

Open-source software

CAD/CAM

Graphic design

Programming tutorials

Proprietary

Autodesk Inventor (available free to any makerspace)

Programs

Children's programming, at the moment is organized and presented through the library system's programming department. Though the branch has a teen librarian, no specialized teen programming is occurring. A makerspace has enormous potential to connect these patron groups to stem and literacy learning opportunities. These programs should be explored further after evaluating branch programming and deciding whether or not a makerspace will be created or what form it will take.

As stated, adult programming will revolve around informal learning of employable technology skills. The first program will provide an overview of informal learning, examining online resources, such as MOOCs and tutorials, how the makerspace supports informal learning, and how these resources can lead to better jobs. This program should repeat every three months.

Additional programming will cover subjects such as electrical circuitry, web development, CAD/CAM design, soldering, vacuum forming, and sewing. The library will continue to partner with Club Cyberia to cover more advanced topics.

Marketing

E38 actively participates in many community service organizations within our service area. These are excellent places to promote the makerspace and provide training opportunities to those organizations with similar employment promotion goals. Additionally, the space will be marketed in house, throughout the rest of the system, through social media, and local traditional media outlets.

Conclusion

At this point in time, a makerspace is probably not the best use of E38's resources. However, if specifically directed to utilize the earmarked funds for such a purpose, there are ways to adapt the resource to our community's needs. This document serves as a starting point for further evaluation, research, and planning.