WPLC Potential R&D Project Research

I. Background
At their October 22, 2019 meeting, the Board expressed support for further research on two potential projects:

1. *Site for statewide advocacy and marketing* testimonials. In conjunction with the recent conversations at LD&L about needing more stories from users, it was agreed that this project could have statewide impact. The WPLC Board could potentially partner with LD&L on this project, showcasing some of the things that libraries are doing, like the Oshkosh tour mentioned, along with stories. There could be a button or visual that could easily be added to all WPLC/DPI/System sites. Stories collected could be output for libraries to use locally.

2. *Augmented reality historical society projects.*

As a next step, project managers collected further information around these topics for discussion at the Board's next meeting.

II. Augmented Reality and Virtual Reality
What is AR/VR
It may be helpful to think about the different "realities" on a spectrum:
Real environment ➔ Augmented Reality (AR) ➔ Virtual Reality (VR)

Augmented Reality (AR) overlays digitally-created content into the user's real-world environment. It is technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view. It occurs in real time and it registers in 3D. Well known examples include Pokémon Go and the first down line on a football broadcast

Virtual Reality (VR) creates a digital environment that replaces the user's real-world environment. It uses, most commonly a head-mounted display (HMD) to offer an immersive experience. Major players in Virtual Reality include HTC Vive, Oculus Rift and PlayStation VR (PSVR).

Mixed Reality (MR) is also in the mix and is defined as an experience that seamlessly blends the user's real-world environment and digitally-created content, where both environments can coexist and interact with each other

Why is might useful for libraries
AR might be most useful for libraries when it is used to enhance an experience or show patrons something new or something that they could not see any other way. VR can be used for programming, helping workforce development, and showing that libraries are on the forefront of technology. It is also an ideal place for community members to try out new technology in a non-cost prohibitive way.

Examples of AR/VR use
AR
- Enhanced wayfinding in a library
- point of interest tool or exhibit enhancement

- interactive, engaging experiences such as [Holotats](#) (temporary tattoos that can be viewed with an app)
- augmented books

VR
- Programming
  - Senior programs
  - Teen programs
  - In Cedarburg, the library works with Portal Industries, a service organization for people with limited mental or physical abilities. Portal brings groups to the library to try out and use the VR as part of their therapy.
- Immersive storytelling
- Workforce training and skills practice
- Gaming
- Some libraries, like Mukwonago Public Library, have equipment that can be checked out and used at home.
- It is becoming common for VR equipment to be part of a library's makerspace

Key findings
- VR may be more accessible for libraries at this time. The purchase of equipment and staff time for learning how to use it, developing policies and programming, and upkeep may be manageable for many libraries.
- The more sophisticated the AR experience, the more expensive it will be to create or to work with a vendor to create. Carroll County Public Library spent $22,000 developing two animations.
- As AR becomes more and more common, platforms will likely be introduced making it easier and more affordable for libraries to create their own AR experiences.
- AR and some VR for public libraries seems to rely heavily on partnerships and collaborations. The technology, its application, and the development of applications is likely beyond the capacity of most libraries.

Case Study
[Union Mills: Early Industry Comes Alive](#)
Call with Jen Bishop, Emerging and Digital Technologies Manager and Dorothy Stoltz, CCPL's Director for Community Engagement
1/6/2020

Background
The library had been experimenting with different aspects of virtual reality over the past four years and decided to try working with AR. They wanted something that would be far reaching and communicate that libraries are about emerging technology and can connect the community with it. Prior to the Union Mills project, AR was implemented with temporary tattoos and coloring sheets – both of which were nice introductions to Pokémon Go AR, but they wanted something more relevant.

The library then pulled together a grant application and collaborative partnership with the Union Mills History Center and a local technology company, with the main intent to be a practical

application of AR/VR and to use to tell a story that isn't being told through existing, traditional mediums. Additionally, the project hoped to allow people to access the museum items without attending the in-person exhibit and ultimately drive use of historical museum.

Project Overview
Carroll County Public Library, The Union Mills Homestead, and Balti Virtual to engage the community in local history. This project combines a traveling exhibit of artifacts with augmented reality animations to offer an interactive experience. This project was funded by a Library Services and Technology Act Grant from the Institute of Museum and Library Services and the Maryland State Library.

Carroll County Public Library and the Union Mills Homestead had an existing strong relationship and the library had a connection to Balti Virtual. The company had provided the holographic tattoos and coloring book technology and the library has hosted VR/AR developer meet ups as well. This existing relationship made it easier to approach the company with the idea.
The in-person exhibit was made up of two display cases with three panels and iPads with self-directed actions. The exhibit traveled to 22 locations over 1.5 years and needed a van to move exhibit, two people to carry and set up the exhibit, and a staff member dedicated to local arrangements. The size was problematic and if the library were to do the project again, they would have a simpler display and no iPads and would rather encourage phone use.

The AR animation began first as it would take the most time. The grant allowed for two animations based on pricing from the vendor. The library knew they wanted to do the mill to show the inner and outer workings of the building and the AR developers went to the museum to see the site and determine the second. The tannery was selected because with the AR, that story cannot be told – the building is no longer on site.

The museum provided images and helped with descriptions. The library acted as the project manager as well as researched exhibit best practices, recorded narrations.

The exhibit was promoted using coasters which had the images that could be viewed via a phone and downloaded app. It was also promoted at larger events and festivals.

Funding
This project was made possible with a $28,000 LSTA grant. While money was used for the exhibit cases and equipment, most of the money, approximately $22,000, was paid to Balti Virtual for the animations and a two year hosting fee.

The project is now at the 2-year mark and the physical exhibit is at the museum. The museum is now responsible for determining if they will keep the animations active and pay the hosting fee. This was written into the project agreement. The museum is talking about extending, but library is not paying for it.

Preservation
Balti Virtual gave the library 3D models and shared it through Sketchfab (a free account is possible). However, the AR piece is proprietary. Libraries need to consider this at frontend of project and think about what they want to get back or how they can preserve the work. For this project, the

work was too sophisticated for the library to do in an open source platform, but the technology is changing rapidly and it may be possible now or in the very near future.

Impact and Outcomes
The combination of unfamiliar technology and location interest as well as the expertise of the team at Carroll to pull together a project that was more far reaching than anticipated. It was easy to talk about the project with stakeholders of all types. People used the app and anecdotally, everybody was impressed. This project told the community that the library was a happening place and shared something that surprised people. Local TV got excited; it had all age appeal; and it showed that the library is much, much more than you think it is.

The project was also useful helped people excited about an upcoming makerspace project (currently underway and due to open in 2021). The makerspace needed community support and the AR project was a lead in/promotion for the much larger project.

Collaboration was fantastic. There are a lot of tech companies in Baltimore and these relationships are being grown at the library and with the library.

The project was undertaken to connect community with AR but it was also a learning project for the library. The library decided it was worth getting grant funding to learn best practices and design an AR exhibit. In the future they would love to do this on a scale on their own. The library intends to continue to grow their expertise.

The exhibit was shared at the MD state senate house and even went to Antietam battlefield. The library has been asked to present on the project several times and it has put library/museum at forefront of technology.

The animation has had 7500 views – mostly of the mill. The information the library has is limited and they could only tell if the views happened on site via the table or not. Most views were from non-iPad devices. Next time might ask that question, but there was no geographic or demographic information captured.

There were typically spikes after large events, but the museum had no official way of telling if people came to the museum because of the exhibit. Anecdotally they got good feedback.

Top advice for others
- With traveling exhibit – have people use their own devices; iPads were hard to care for and people did force restarts and set up would have to be re-done. Too much tech support was required.
- Consider having an exhibit that requires only a single person to do set up.
- It does take a team; might be difficult for a small library to handle.
- Making friends with the IT department is critical and a project like this might be difficult if a library has to go through municipal IT or has a culture that is not open to experimentation.
- Work out a checklist for what is needed at the locations. This made it easier to figure out set up and locations.

Other exhibits
- Folgers Shakespeare library – 2015 traveling exhibit for the first folio
- Most libraries doing AR are University libraries
- Baltimore County Public Library – AR Storywalk, space themed. More of a 2D plane experience. Brought panels to life.

Policies related to AR/VR in the library
VR is used in demos or in programs. The longest experience is 30 minutes and all experiences are facilitated. Therefore, the library, at this time, doesn't feel a need for formal policy related to age or time limits. The library may want to institute some polices (13 or up; time limits) if the experience changes.

Further Reading:
- [The Future Is Now: Virtual, Augmented, and Mixed Reality in Public Libraries](#) webjunction webinar developed after the blog post, [How Maryland Libraries Are Using Virtual and Augmented Reality (and How Your Library Can Too)](#), was published.
- [Augmented Reality in Libraries: Technology Trends that Aren't "Out-There" Anymore!](#)
- [Virtual and Augmented Reality: Creating special spaces within the library](#)
- [In a Virtual World: How school, academic, and public libraries are testing virtual reality in their communities](#)
- [Challenges and Strategies for Educational Virtual Reality](#)
- [Center for the Future of Libraries Virtual Reality](#)
- [Library Ideas to Launch AR/VR-enhanced Children's Books](#)
- [Ready Card Holder One](#)
- [Madison startup testing augmented/virtual reality technology in southeast Wisconsin schools](#)

Recommendations:
- WPLC should decide what the main outcome of the effort should be. Is it:
  - Create a statewide augmented reality historical project?
  - Identify and create a template for implementing individual augmented reality historical projects?
  - Educating WPLC members about VR/AR and implementing experiments with VR/AR

III. Advocacy/Marketing: User Generated Content

What is user generated content
- User generated content is media is often contributed by individual users of a website or social media platform.
- In this case, it is generated by users of the library's website or social media or possibly simply users of the library.
- It includes photos, videos, graphics, stories, and quotes.

Why it is useful
- Coming up with content is hard work; let your library users help with the burden by providing meaningful content for library communication. The easier it is for library users to share their

stories, videos, and photos, the more likely it is they will share and the easier it is for the library to use.
- Patrons who share their stories through words, video, or images are often voters in the community – this could be particularly useful in generating communications to government officials.
- An opportunity for libraries to increase engagement with the public.
- It can show how libraries support their communities by using the voices of the community.

Key Findings
- Dedicated staff and a fully articulated process will help ensure success
- The campaign should have routine pushes for new content to remind users of the campaign and to freshen the campaign.
- Costs are hard to gauge until a campaign type and tool is selected. If an app is needed or the campaign is reliant on website features not currently available, the costs will increase. Costs should consider staff time spent training others (at libraries) to promote and use the campaign and help their patrons to do the same.
- Once a process is determined, it is an effective way to gather and communicate out qualitative data from library users.
- In Wisconsin, there is some use of user generated content, though no campaign-like use. Examples include:
  - Using qualitative data from surveys in annual reports and other communication efforts
  - Waupaca Public Library has created and just started a "Compliments and Complaints" google form that staff are asked to access when they get feedback from patrons on services, programs or the library in general. The intent is to use the compliments as we present our annual report and for general advocacy.

Examples of User Generated Content Campaigns
[Toledo and Library Love](#)
Telephone Interview with Terri Carroll, Director of Communications, Innovation and Strategy
Toledo Lucas County Public Library
December 20, 2019

Terri came from Bowling Green (state university) and started Falcon Pride. When she started at Toledo, she implemented a similar campaign. It was implemented to meet the challenge of content marketing – to get first person narratives.

The library works with an outside design firm that created the form and provide technical support. The design firm also was responsible for a really good website which made it possible to easily implemented the campaign.

Basic process is a library user submits their story using a very easy web form. This form goes to a dedicated staff member via email, who looks at the copy and reviews for appropriateness and does some light editing. It is a light lift to edit and post. Submitters get an automatic reply when the form

is submitted and once the submission is published, they are emailed a link to their submission on the site (contact information is not required).

When the campaign was first introduced (about 2 years ago), there were a lot of responses and this died off. The library therefore re ups the campaign periodically through social media posts (usually will share an example and then ask for submissions) and updates to the webpage. For each ask, the typically get 25-50 response.

The marketing department coaches staff to encourage sharing stories and if a patron has particular compelling story or example, libraries ask them to submit to Library Love. In some cases, librarians will type in handwritten notes, especially for seniors.

The information is used on the website, but they are also used for a [New Year's Video](#) and to support strategic plan reports. It is used for any project that needs qualitative data and voices from the community. For example, quotes are used in reports shared with legislators on Library Legislative Day. It is hard to quantify the value, but Ohio did get a very slight increase to funding. The library has a fairly robust marketing and communications department. There are 5 staff members, in the department that has an ad agency structure. There is a production manager, digital content coordinator, media relations coordinator, and two graphic designers. The library also has a part time content creator who was once a reporter (freelance writer who writes for and edits). Library Love is part of the daily duties of the digital content coordinator.

The library will need to refresh in some way in a year or so, to update and find new interesting ways or obtaining and sharing this data. Toledo recommends building in maintenance and change into timeline. It is also important that the daily work is built into a position (it is about two hours a week now that the process is up and running).

The website and form/tool would likely cost thousands of dollars, but there may be some open source solutions available.

The library has found the campaign to be very successful and has met the objectives laid out. In fact, Terri wouldn't change a thing. One thing to note is that Toledo has made budget decisions to focus on content creation. On example is that the library no longer does any ad purchases and instead has invested in the freelance writer (15-20 hours a week).

[Vancouver Public Library and Library Stories](#)
Blog content that highlights impactful uses of the library. No recent posts, last was in 2018 and in total there were 7 stories.

1. What lead to the creation of Library Stories? What objectives did the library hope the effort would meet? Did it?

Many of these stories were developed for our annual report when it was a format similar to a magazine-style community report. They've also been used in advocacy campaigns, strategic and stakeholder materials, newsletters and other materials. The overall objective was to highlight different areas the library has had a positive impact in the community.

2. How did you do the work? How were the people/stories picked? Was it one staff person who did the interview and writing? Was someone responsible for the website piece?

The stories themselves emerged from leads throughout the year by library staff. The process typically involves library staff liaising with patrons and one of the marketing staff will interview them and write the story and obtain release forms, while a photographer captures the photo. This web section only highlights a few of the stories.

3. Why have you stopped collecting stories in this way and have you moved to another method?

VPL changed its annual report format in 2019. Story generation and development take on a more fluid approach now, depending on current strategic needs. For example, to increase patron engagement, social media has always been earmarked as an area of high growth potential for the library. Once the library was able to resource a full-time employee to grow this portfolio, it's allowed VPL to showcase community impact in a more frequent, dynamic and less-formal way.

4. Is there anything else you would share with another library or organization that is considering a similar effort? What would you do differently? What would you do again?

As with any new project, it's always ideal to ask the key questions i.e. what's the objective, who is the target audience, what is this helping the organization achieve, etc. Some thoughts on logistics you might find useful: 1) knowing what types of formats these stories will be delivered in is helpful in collecting all the material you will need when the time comes 2) if this will become a regularly featured activity, it will need a continuous source of resources, content and story leads to feed the "story machine."

[Wisconsin Libraries Transform](#)
Efforts led by SCLS. Information provided by Mark Ibach, Consulting Services Coordinator, SCLS

Workflow
Libraries are asked to collect the stories and write them up (or audio/video record). They are then sent to me with photos, and I forward them to staff at Madison Public Library who manage the website for the project.

Challenges
The challenge has been, and continues to be, getting a commitment from libraries to collect stories. We started with a pilot project, and in the year since we opened it up system wide hardly any libraries (including the original pilot libraries) have submitted stories. It's been very difficult to get libraries to make story collection part of their daily workflow.

Successes
Original excitement of the pilot libraries was excellent, and the site was well-received. However, since the pilot ended it has been a struggle.

Content Use
Not sure how everyone used it, but I know that Madison planned to use it in newsletter and other promotional efforts.

Post-pilot Stage
It did [go past the pilot state], but it has lagged. Not sure I know how to make it successful. We could try and have someone go and collect the stories, but that assumes libraries are making note of stories when they arise. I really feel that library staff hear the stories, say thank you, then move on to the next work at hand. It isn't until later when they re-tell the story that someone says they should capture that, but the staff member doesn't know the person. Or, they are just uncomfortable asking people to tell their stories. This is such an important thing for libraries to do, but I don't know how to make it part of daily life in the library.

Tap Into It (UW Extension)
Advocacy campaign that was intended to be used into the future, but it is no longer active and the main administrator is now the Chancellor of U of Alaska. Illustrates that for a campaign like this to be successful, there needs to be a person (or better, people) that are dedicated to keeping the sight maintained, updated, and shared.

Further reading
- Telling Your Non-Profit's Story through User-Generated Content
- How to Leverage User-Generated Content to Promote a Non-profit
- 6 Examples of Advocacy Marketing Strategies Used by Top Companies

Recommendations:
- WPLC should decide what the main outcome of the effort should be. Is it:
  - Gaining awareness of the library and the services it provides?
  - Getting feedback on services and events?
  - Increasing engagement with libraries?
  - Gathering qualitative data to support library initiatives?
- WPLC should determine what the voice of the campaign is. Is it:
  - Informative
  - Emotional
  - Action oriented
- WPLC should determine who is generating the content?
  - Library patrons?
  - Library staff?
- WPLC should decide the platform/tool for the campaign
  - Will the campaign be on the WPLC site?
  - Will it be a hashtag for social media that libraries across the state would be encouraged (and given content and training) to use?
  - Will it be an app or website feature that libraries would be encouraged to use and embed on their sites?
- WPLC should determine the staffing model, workflow, and the length of the campaign effort.
  - Is this intended to be in place in a short time or extended period?
    - How will content be refreshed?
  - Who will add the content?
    - Patrons / public
    - Librarians
    - WPLC
    - Someone else

- How will the content be used?
- How will users be acknowledged and thanked?
- When is campaign complete and how will content be preserved (will it be preserved?)?
- Example ideas
  - Interactive map of Wisconsin with certain data points that tell a larger story of Wisconsin public libraries, with a focus on outputs. Would need to allow libraries to easily embed on the sites and set their location as the starting point.
    - Possible tools: Google Maps (free); Batch Geo (monthly fee); Tableau?
  - Wisconsin Library Love campaign: similar to Toledo campaign but would need to be modified for a state wide effort.