By looking at the development process of the Digital Public Library of America, this paper explores relevant takeaways for innovation within public libraries. The extensive open planning process, public input, and early success of the project has many implications for public libraries, and new models of service in digital spaces. I also briefly consider the implications of startups, and how a public testing model can be adapted for use within public libraries. Through preliminary analysis of the DPLA, the private sector, and current public library projects, strategies are identified that can be applied widely across the profession.

Headings:

Crowdsourcing

Information technology projects

Libraries -- Technological innovations

Public libraries

Strategic planning
REINVENTING LIBRARIES: WHAT PUBLIC LIBRARIES CAN LEARN FROM THE FOUNDING OF THE DPLA

by
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1. Introduction

As libraries move towards different service models, and new ways of providing access to their patrons, there is a push to be more nimble and less reactive in developing and adopting new digital products. And though public libraries are still one of the most beloved government services, with 91% of Americans over 16 stating that libraries are important to their community, that is not an invitation to stagnate (Pew Internet & American Life Project, 2013, p. 4). In many ways, solid community support is a call to action, and gives libraries the freedom to come up with new ideas for a public hungry for new digital technologies.

However, budget constraints, tight staffing, or past failures hold many libraries back from undertaking large technology projects. Typically, technology projects that are undertaken are low-risk and have been proven to be successful. Experimentation and risk-taking in online spaces is not typically part of library culture, and holds libraries back from digital innovation (Bell, 2013). So, the libraries that are taking risks can say a lot about how public libraries can begin to pilot new ideas and involve their patrons in new ways.

The Digital Public Library of America (DPLA), while not a public library in the traditional sense, is an excellent example of successful innovation. With only 4 staff members at its launch, the DPLA was able to put out a platform that aggregates metadata and a portal that provides access to millions of items from institutions around the U.S. By looking at their extensive planning process and how they outsourced the development of their product to the public, many conclusions can be drawn about how public libraries can implement digital projects of their own while keeping costs low (DPLA, 2013). This paper will also look
at some public libraries that have developed their own processes and innovations in order to investigate whether such projects that can be innovative and risk-taking without being overly costly or time-consuming.

1.1 Where Public Libraries are Today

Public libraries are well positioned within their communities to make an impact through traditional means, as they possess a special access to the members that live and work in the areas they serve. These institutions are even adept at innovating within their physical buildings, with unusual space designs and ever-changing services. Interesting changes are popping up all over the country, from small libraries offering musical instrument checkouts to Boston Public Library renovating its historic building to include a retail space (Seelye, 2014). However, public libraries are traditionally not as adept at experimenting and innovating in an online space. Many libraries have only static informational websites, that don’t offer any interaction or interest to their patrons. As Ann Slaughter, Director of Technology Services at Reaching Across Illinois Library System (RAILS), put it, “I think as a profession we’ve gotten past the website as a static brochure for the library” (PLA Conference, 2014).

Many libraries are extremely aware of the need to catch up to where their public is. In the 1980s, there was an effort to get outside the physical library buildings and into the community, and thus outreach was born as an accepted and now expected concept (Ford, 2000). Today, libraries are beginning to push for changes in the digital life of the library, and meeting the community in these new spaces. While not every library is making large efforts in this capacity, it is clear that it is a priority for the profession. This was evidenced at the Public Library Association (PLA) 2014 Conference, in which they introduced a new series of talks called “Big Ideas,” where they featured speakers from
outside the library profession to energize and excite the attendees. Most notably, speakers talked about the importance of being allowed to fail, and learn from failing, leadership tactics, social psychology, and how technology has made us smarter as individuals. The credentials of the speakers ranged from academia to the startup world to authors to motivational speakers to a combination of the above (PLA, 2014). These talks show an effort by the profession to see things in a new light, and shake up old concepts.

In addition, many libraries around the country are leading the way in technological innovations with responsive websites, mobile apps, Hack-a-thons, online gaming, and much more. However, much of the innovation that goes on in the public library today is happening within an old model, and is not presented in the way that users, especially digital natives, use technology.

1.2 Where the People Are Today: Technology Trends

Technology use is up in a variety of forms. There are many new ways of accessing information, via both mobile and traditional means. Smartphone and tablet ownership is on the rise, with more than half of Americans now owning a smartphone (56%) and 50% of Americans now owning either a tablet or e-reader as of 2014 (Pew Internet & American Life Project, 2013, 2014). In fact, the United States has the highest percentage of smartphone users in the world, and cell phone ownership (of any kind) is at its highest level ever, at 91% (Pew Internet & American Life Project, 2014). Despite multiple new ways to access the Internet, there is still a minority of American adults that don’t use the Internet at all (15%) (Pew Internet & American Life Project, 2013).
With such a high number of Americans using the Internet, it is clear that libraries need to have a meaningful presence in these online spaces, and particularly in ways that can be accessed on the devices being used. David Lee King, Digital Branch Manager at the Topeka-Shawnee Public Library, points out that if you have a library website, it’s already mobile because it can be accessed on a smartphone or tablet. “It just might not be delivering the best experience” (King, 2013).

A particular demographic of interest in looking at technology trends are the Millennials. By most counts, these are users born between 1979 and 1994, also called Echo-Boomers or Generation Y, and approximately between the ages of 20 and 35. This group has been of interest for some time, due to their “digital native” upbringing—growing up with devices that most of other generations learned at an older age. While the particular age isn’t as important, as there is now an entire generation below the Millennials, ostensibly more digitally savvy and moving on to newer, faster modes of digital consumption, the literature written about the change in expectations and use patterns is still valid, even if the devices themselves continue to change. In 2005, a series of focus groups were conducted to analyze this group with these basic conclusions: “They expect the flexibility, geographic independence, speed of response, time shifting,
interactivity, multitasking, and time savings that digital networked services provide” (Sweeney, p. 170). Taking into account the importance this held in 2005, it is only more important now, in 2014, that the service models we are using match with the needs of a wide variety of users. The different ways Americans are accessing the internet means that “meeting them where they are” is not as simple as having a static website.

1.3 Public Perceptions

The overwhelming support that libraries have from Americans as a whole shows that libraries are not in decline, but are in a period of transition and new types of growth. And while there is widespread affection for the library, there is not necessarily widespread understanding of the types of innovations public libraries are capable of. The importance of programs and services like books, librarian assistance, the library space, and in-person programming still top the charts for the majority of library users (Pew Internet & American Life, 2013). These are all incredibly important aspects of the library, and do not exist in opposition of new digital experiences in the library. However, it’s clear that either respondents aren’t being asked the right questions, or they don’t have a clear concept of what the library could be. That being said, younger users—from older teen to young adult—indicate interest in projects like mobile GPS apps to find materials inside the library (Pew Internet & American Life Project, 2013).

On a more local level, some library users and non-users understand the changing world and how libraries can change with it. Charlotte Mecklenburg Library in Charlotte, North Carolina, for example, polled its community on many perception issues related to the library and received some surprising results, especially from non-users. When asked why library use would increase, they stated that population growth and need for Internet
access are the two biggest reasons. Non-users actually answered this more strongly than users, as well as the next most popular reasons: economic development and need for education/information. Users felt much more strongly than non-users that books would play a role, though it was a small factor for both groups (Charlotte Mecklenburg Library, 2013, p. 70). And while this cannot be used to show a trend for the entire country, it is an interesting example to look at for this particular community.

**Why will Library Need Increase?**

In addition, community members who do not use the library often cite having the Internet at home as a reason for not using the library (Pew Internet & American Life Project, 2013, p. 2). This speaks to a public perception that the physical building of the library is the only way to “use” the library. The public does not generally think of the library website as a portal to anything more than hours and a library catalog.

**1.4 Librarian Attitudes**

Public librarian attitudes towards technological innovation and experimentation are mixed. As a profession, it is clear that a move towards the innovative and open-minded exploration of new models is consciously being made. However, the Pew Internet
& American Life Project’s study of libraries in the digital age polled librarians on the topic, and there is clearly resistance in certain areas within the profession. In many cases, it is not a hostile resistance, but more of an indifference:

“I am not personally excited about the mobile technology—it doesn't apply to me or most of my staff. We are considered dinosaurs, but we have our reservations based upon our own experiences about the need for privacy, possibility of identity theft, social media problems. We understand that the younger generation will live like this probably forever, not especially concerned about negative issues at all. On that note, I would enjoy learning and watching more real-life examples of various apps for mobile devices. With time, some of us old-timers will probably relate to some of it, just like we have adjusted to computers” (Pew Internet & American Life Project, 2013, p. 74).

As with any profession going through a major transition, there is tension between old and new. This was particularly evident when San Antonio announced its plans for its “bookless library.” The launch of this space that housed only computers, e-readers, and digital content was heavily talked about before and during its opening, and this was not without a librarian backlash. Comment threads on articles across the Internet warned of the end of libraries, the waste of money, and more significantly, an indefinable feeling of discomfort associated with daring to have a library without physical books. One librarian commented on an article featured on Bookriot.com: “I would suggest that this is not actually a library at all. And also, that as a librarian this makes me feel like I might cry and/or hibernate until this thing goes away” (Nelson, 2013). This is not to say that books should be done away with, they are still by far more popular than e-books, but the reaction is telling of a profession that has a complicated relationship with change.

However, this is only a piece of the profession. It is clear that many librarians are hungry for change, and excited about new models. There is increased investment in librarians and staff that have technological know-how, from experience in app
development to knowledge in User Experience (UX) design. There is an underlying curiosity about new technologies and how they can help public libraries reach and engage their public in new ways. Many quoted in the Pew Internet and American Life Project study echoed this sentiment: “I would like to further...technological innovations and push the envelope on the public's perception of what libraries offer” (2013, p. 71).

With leadership focusing on the future with an eye towards the digital, the overall attitude is hopeful. The same basic tenets of providing access and resources is still there, just in a different form. The 2014 PLA Conference featured a total of 17 sessions related to this very topic, over the 4-day conference (PLA, 2014).
2. Literature Review

The literature on innovation in the public library focuses on the importance of creating a culture of innovation, the benefits of crowdsourcing, and not being afraid of failure and public testing. It is no secret that libraries have undergone, and continue to undergo, a tremendous shift, and dealing with that shift is spelling success or stagnation for systems all over the country. As the famed management thinker, Peter Drucker put it: “The greatest danger in times of turbulence is not the turbulence; it is to act with yesterdays’ logic” (Gipson, 2012, p. 380). Libraries are beginning to take this business think and apply it to their own missions and strategies. It is often argued that libraries don’t have the time or staffing to spend sitting around trying to come up with new ideas (Holcomb, 2008, p. 587). And this is true, to a point. Libraries must take into account their budget and their staffing limits, but innovation does not have to mean a big investment (Imholz, 2008, p. 342). There is significant library literature that argues this very point, focusing on these three areas: culture, crowdsourcing, and public testing.

Creating a culture of innovation is a relatively new concept for libraries, both academic and public. Much of the literature discusses known management techniques for successful collaboration, such as staff buy-in, adequate training, and an understanding of overarching goals (Horton, 2013, p. 67). These aspects remain relevant for creating a culture of innovation, with the added element of decreasing the fear of failure: “Decrease the fear of failure to increase creativity. That’s the essence of a culture that will lead to innovation needed to advance the library mission” (Bell, 2013, p.1).
And in response to the concern about time and money, much of the literature advocates for creating specific processes to facilitate idea creation, specifically noting that “Busy library managers and their staffs don’t have the luxury of waiting for a bright idea to fall from the sky a la Newton” (Holcomb, 2008, p. 587). Developing teams and groups that work together, and aren’t just made up of library management is a key point, as well (Holcomb, 2008, p. 591) (Imholz, 2008, p. 342) (Horton, 2013, p. 66). By developing internal processes that foster creativity and discussion, libraries can keep ahead of trends, and innovate on their own terms, which in turn makes them more fundable: “To catalyze change it is important to create programs which showcase innovation so that the perceived value of additional investments can foment a call to action” (Imholz, 2008, p. 337).

There are, however, limits to staff time. Crowdsourcing can be used successfully to complement staff work. On this topic, the manager of the NYPL Lab, Ben Vershbow, says “A million heads on the internet are better than one” (Schwartz, 2012, p. 22). As many public library managers and staff are aware, staffing is the biggest cost (Schwartz, 2012, p. 22). Vershbow adds that crowdsourcing “allows volunteer labor to supplement the limited funding and staffing that even NYPL can afford to devote to cool-but-not-core projects” (Schwartz, 2012, p. 22). Soliciting user feedback and work can be used as a “bright-idea incubator,” where crowdsourcing is not only used to do work that library staff doesn’t have time for, but can brainstorm when library staff cannot (Holcomb, 2008, p. 591). “We are coming to see crowdsourcing not only as a way to accomplish work that might not otherwise have been possible, but as an extension of our core institutional duties” (Vershbow, 2013, p. 95).
Though the concept of crowdsourcing is new for many libraries, and relinquishes a level of control libraries are accustomed to, it can relieve staff and improve community engagement. There is a move for libraries to interact with patrons in new ways, with increased levels of content creation coming from patrons themselves (Vershbow, 2013, p. 91). Similar to the start-up model of user feedback, libraries need to look at how the resources are actually used because patrons often use or repurpose resources in ways that the library never would have anticipated (Schwartz, 2012, p.23). The trend of developing public Application Programming Interfaces (APIs) that the public can mix, mash, and repurpose using library data is an often-cited example of successful crowdsourcing (Schwartz, 2012, p. 24).

An organizational culture that incorporates crowdsourcing is one that is more experimental and risk-taking than libraries have traditionally been in the past (Varnum, 2008, p. 1). This speaks to a larger shift in library culture as a whole, of allowing for public testing, and within that, failure. Much of the literature points to the importance of experimentation, and the need for a start-up mentality, of piloting ideas and then scaling them up (Miller, 2013, p. 1) (Varnum, 2008, p. 1)(Vershbow, 2013, p. 80). Design labs are in the beginning of their development for public libraries, most notably the NYPL. This concept has been successfully implemented in the private sector and academia, and is now being adapted for the public library model (Imholz, 2012, p. 335) (Greenburg, 2013, p.1) (Miller, 2013, p.1).

As libraries adapt their model for the new technological reality, they must be more nimble and flexible in order to plan for new advances, rather than react. The strategies of the successful start-up show that multiple failures before a success is normal,
and even celebrated (Bell, 2013, p.1). Much of the literature gets at this very concept: library world’s obsession with perfection. Perfection is problematic in a digital age, and to successfully create products that users will actually use, we must learn to beta test and scale up, in the way the private sector does (Miller, 2013, p. 1) (Bell, 2013, p.1)(Cohen, 2013, 1). This new way of developing library products and services is not so antithetical to traditional library values, in that is brings the library closer to the user and allows for a real collaboration between library and community (Schwartz, 2012, p. 23).
3. The Founding of the DPLA

The Digital Public Library of America (DPLA) is a highly collaborative national project that provides a portal for accessing digitized resources from all over the United States, and a platform for using and repurposing these resources. By bringing together the efforts of libraries, museums, foundations, and archives, the DPLA provides a way for people all over the country to access and use resources that have previously existed only within their own communities. The DPLA doesn’t actually hold the items that it collects, but rather aggregates all the metadata to make these items discoverable. This is done using all open source technologies and open data, which means the collections are available to the public in the form of open Application Programming Interfaces (APIs), which the public can use to create whatever they want (Cohen, 2013).

3.1 The Idea

In October of 2010, the concept of a national digital library was not new. Once the very first digital libraries were developed, the idea of a universal online library was not far behind. This was a popular topic in the 1990s, and as the tools available began catching up with the ideas, the concept began to become more real. Organizations like the Library of Congress, Hathitrust, and the Internet Archive began developing free and open digitized materials for the public, but these resources were not connected. As more and more resources began to become available, it became clear that a way to tie the big online repositories and the small institutional digital collections was needed. Someway to connect these resources that was easy to use and universally accessible would become
necessary in an increasingly digital world. But, in many ways, this was seen as a massive project and an extraordinarily difficult undertaking (DPLA, 2013).

With libraries experiencing budget and staffing issues as it is, how could the resources for such a colossal project be found? By beginning with a large planning process that included a wide variety of stakeholders from all over the country, incorporating constant public input and expertise, keeping all aspects of the project completely open, and launching with a core staff of just 4 people, the Digital Public Library of America was able to create an innovative and nimble way of bringing all these organizations together.

3.2 Planning Process

The Digital Public Library of America (DPLA) planning process began informally in October 2010 in Cambridge, Massachusetts at the Radcliffe Institute for Advanced Study. Forty leaders from a variety of backgrounds, including research libraries, foundations, academia, and technology projects were in attendance. A key decision was made early on in the process, to keep all record of planning and discussion completely open to the public. Every meeting and discussion was recording on a Wiki, and is now archived for public viewing (DPLA Planning Initiative Wiki, 2013).

By December of 2010, the Berkman Center at Harvard University officially announced a planning initiative to define the scope, architecture, costs, and administration for a proposed Digital Public Library of America (Press Release, 2010). In their public announcement, they stipulated that the initiative would be guided by a steering committee made of library and foundation leaders, who would announce a working timeline in early 2011. The remaining participants were organized into a variety
of workstreams, including audience and participation, content and scope, financial/business models, governance, legal issues, and technical aspects.

This timeline came out of discussion with various groups and industry leaders, most notably Europeana, the international digital library of Europe. The steering committee also made the decision to outsource the work of deciding what the DPLA should look like on the web. In May 2011, John Palfrey, the chair of the steering committee, announced the ‘Beta Sprint’, which would open up a contest to the whole country in which participants would pitch their ideas for the DPLA’s platform and portal. This culminated in an event in October of 2011 in Washington D.C., where the selected entrants presented their Beta Sprint ideas (Palfrey, 2011).

Following the design of the beta version of the DPLA, they conducted several Hack-a-thons and Appfests, in which they put forth an open call for creative ways to use the DPLA data:

“Consider building or pitching an app that recommends cultural heritage content such as maps and photographs based on user preferences or a certain set of criteria/ an app helps kids find content related to the topic of their upcoming history paper / or an app that visualizes metadata in new ways” (DPLA Wiki, 2013).

They continue to utilize crowdsourcing and volunteer work today, as they continually add to and improve the platform, portal, and associated apps (DPLA 2nd Call for Community Reps, 2014). The DPLA officially launched in October of 2013, after a delay due the Boston bombings near the Boston Public Library, where the event was to take place in April of 2013.
3.3 The Beta Sprint

One of the most interesting aspects of the DPLA planning process, was the way they developed their platform and portal. Rather than spend money on existing catalog or library models, the Steering Committee felt a strong need to develop something new that dealt with the many issues faced by libraries currently. They were able to do this by launching a crowdsourcing effort to build their beta version. They launched a “Beta Sprint” in which they asked the public for written proposals related to what a DPLA platform and portal should look like (DPLA Beta Sprint, 2011). The chair of the Steering Committee, John Palfrey, encouraged participants to submit proposals on a wide variety of aspects, including the database structure, protocols, the interface, and potential different audiences and institution needs (Press Release Beta Sprint, 2011).

Within a few weeks of this announcement, participants were to submit ideas to the Steering Committee. They received 60 statements of interest from individuals and groups (Beta Sprint Meeting Notes, 2011). The Steering Committee set up a panel of 8 experts to judge the submissions from institutions such as MIT, Hathitrust, and several public libraries (Beta Sprint Expert Panel Press Release, 2011). Next, participants built out some aspect of their idea into either a presentation or a full application. The 6 groups who had ideas selected by the panel then presented at a public plenary meeting in Washington D.C. on October 21, 2011. These ideas ranged from plans for open linked data for government publications to metadata interoperability services. The final 6 selected included ideas such as a collaboration structure for the National Archives, Smithsonian, and Library of Congress; metadata interoperability; and open linked data & crowdsourcing plans for government publications.
This process was innovative in its openness, its scope, and its depth. They were able to quickly put out a beta version of the portal for the public to search. They beta tested and let the public see this version once it “opened” with the items they had access to at the time of this launch. And though this has been an overall successful tactic for the DPLA, there was some resistance to this level of openness from even the supportive within the library community. Library Journal’s Gary Price warned that the launch was too highly publicized, and while the portal is “very pleasing to the eye” it isn’t a completed product, and the public shouldn’t view it as such (Enis, 2013).

3.4 Launch & Public Reception

The Digital Public Library of America (DPLA) hosted its official launch in Boston, Massachusetts on October 2013, which was free and open to the public. The kick-off was not able to accommodate the overwhelming demand, and so also offered the entire conference as a livestream, which they also archived. This event involved a range of talks and collaborative meetings, similar to other events the DPLA hosted before its official launch.

During the launch several announcements were made, including the addition of new “hubs.” As discussed, the DPLA aggregates metadata to provide access to digital collections across the country. This was done by developing two different types of partnerships (1) Service hubs, and (2) Content hubs. Service hubs are state or regional digital libraries that collect information on the digital content for their state. The DPLA currently has service hubs in Massachusetts, New York, Kentucky, Minnesota, Utah, Nevada, southern Idaho, Arizona, North Carolina, Texas, and South Carolina. The content hubs are the larger partners that directly provide access to content on a large-
scale. These partners include a variety of types of institutions, including: ARTstor, Biodiversity Heritage Library, David Rumsey Map Collection, Harvard Library, Hathitrust Digital Library, New York Public Library, The Smithsonian, Internet Archive, and others (DPLA Hubs, 2013).

The reactions to the launch of the DPLA ranged from the wildly complimentary, speaking of the utopian nature of the project, mirroring that of the founding fathers, to the skeptical who claim this is isn’t a public library at all, and is a project created for and by academics (Darton 2011, 2013). Through the open planning process, the DPLA was able to make the launch a conversation, in which skeptics and huge fans alike could lend their voice. Librarians and the public have both taken to the media to discuss this project and what lies ahead. From NPR, to the New York Times, to Library Journal, the DPLA has been widely talked about, with a particular presence on Twitter. While most of the reactions to the DPLA have been overwhelmingly positive, the project is still in its infancy. While the DPLA has millions of items in its collection currently, the hope is to expand this to the entire country, making it a true national digital library. As the president of the DPLA Board of Directors, John Palfrey phrases it, “In its first year, with only a tiny fraction of the people and materials involved that could be involved, the usage of the materials in the DPLA makes a slam-dunk case for building it out at a national scale” (Publisher’s Weekly, 2014).

That being said, the impressive engagement metrics within the short time the DPLA’s site has been live speak to a real interest in what is being offered. With one million unique page views—10% of which are viewing 20 pages or more at a time—the DPLA is well positioned for a scale up. Another important aspect of this is the public
Application Programming Interfaces (APIs), which are central to the DPLA’s mission of accessibility. These APIs allow users to communicate with the DPLA content and information in different ways. An API, more generally, sets up a defined method of communicating with a software system, and bringing the user a response. By publishing and maintaining its open API, the DPLA ensures that anyone—from a big institution to an individual user—can use the data within the DPLA to increase use and access. What this means, it that the DPLA can be used through third parties, so some users never actually see the DPLA website itself. There are currently 17 apps that use the DPLA’s API, such as apps that allow users to search DPLA photos based on your smartphone’s locating service. The DPLA’s heavy use of crowdsourcing in this and other projects has brought comparisons to Wikipedia, and other open-access projects (Borman, 2012). Like these projects, its broad and utopian vision is only achievable due to the decentralized nature of its structure. By relying heavily on volunteers and a lean staffing structure, the DPLA is able to dream big and work small. As John Palfrey phrases it “If we don’t aim for what we want, we’ll sell ourselves short. We need to get in front of this mob and call it a parade” (2012).
4. A Culture of Innovation

As has been discussed, trying new things in the digital realm has not been easy for the library profession, public libraries in particular. With increased demand for service and reduced funding for those services, libraries are constantly having to prove their worth to funders in increasingly complex ways. Many library systems have moved towards an output model of measuring impact, in order to better argue their worth to stakeholders. Gatecounts and circulation statistics are no longer enough when the library is competing for a small amount of funds against other county or city departments (Gorman, 2014).

This does not create an environment that breeds innovation. Fear of budget cuts, and worry about the future causes many libraries to stick with what is safe and what is cheap. Even in library systems that have open-minded and forward-thinking staff, there is a tension with a fearful library administration.

“The largest obstacle to . . . innovation in my library is a general reluctance to take the first step forward—the administration is overly hesitant to make any changes to services, even small ones, for fear of what repercussions could be for other branches in the library district and for other programs. I do not see these repercussions as risks, however, but as positive moving forward” (Pew Internet & American Life Project, 2013, p. 73).

The problem with this reaction to difficult economic times is that it actually makes things worse. Experimentation is the way to keep an organization relevant and in tune with its users, and it does not have to be a scary and expensive process.
4.1 Dan Cohen: “Perfection is Problematic in a Digital Age”

The director of the Digital Public Library of America, Dan Cohen, came to the organization from academia, and for many years ran the Roy Rosenzweig Center for History and New Media at George Mason University. His background in digital archives, new media, and historical research made him a good fit for running the DPLA. However, in running such a new project, it could be argued that his attitude about the project is as important as his credentials (degrees from Harvard, Yale, and Princeton) (Cohen, n.d.).

Once becoming director of the DPLA, Dan Cohen began making the rounds within the library profession, and has served on many panels talking about the future of librarianship. A particularly critical piece of advice he gave during a panel for Library Journal’s virtual conference The Digital Shift: Reinventing Libraries 2013, was that “perfection is problematic in the digital age.” He stressed the importance of beta testing, trying things out, and launching things in order to let the users tell you what they want (The Digital Shift, 2013). Others on the panel echoed this sentiment, stressing the need to create a culture that allows for failure, saying it would “indicate more creative thinking and risk-taking by librarians that will be needed to keep libraries relevant in the face of technological changes that can’t be predicted” (Chant, 2013).

In his role as director, Dan Cohen continues to keep the importance of openness, a willingness to fail, and crowdsourcing alive. His work on open-source projects such as Zotera, PressForward, and the September 11 Digital Archive clearly show his commitment to accessibility. His visibility on Twitter (13K followers), at library conferences, and at public speaking events around the country all show a commitment to this project’s success and its inclusiveness. By being present on the national stage and by
showing what risks the DPLA is willing to take in order to gain success, Cohen is setting an interesting example for libraries, apart from his overall mission of a democratized history.

4.2 Twitter, Foursquare, Youtube: Beginnings in Failure

Extremely successful startups can offer some interesting insight into this concept of a ‘culture of innovation’, and perhaps more importantly, a culture that allows for experimentation, and yes, failure. Eric Ries, an entrepreneur, business strategist, and author of *Lean Startup*, discusses this in both his writing and talks. His discussions of the “Pivot”—which he defines as a change in strategy without a change in vision—illuminate some of the big successes in the tech world, that could have very easily been huge failures if these companies had not been able to successfully change direction. For example, Youtube began as an online dating site, and only after users began uploading lots of videos did they make the pivot to a video site. Flickr was an online game, but users only ever used it to upload pictures. As Ries puts it, “You make the world’s best online photo uploading service, even though you meant to make an online game.” Twitter began as a podcasting service. Groupon started as an online petition service called “The Point” that only “tipped” if 100 people signed it. And even after pivoting to social commerce, they struggled. Ries comments, “The reason the Groupon founders understood the power of selling 20 free pizzas was that they had failed for a year to get anybody to buy anything at all. It actually made them excited enough to try the next experiment and the next and the next. That’s what a pivot is, it’s redeeming the failure because we learned so much about what’s possible” (Ries, 2012).
Based on the examples Ries discusses in this talk, it’s clear that successful startups pay close attention to the way their product is actually being used, which isn’t necessarily the way it was intended. When making money is involved, this makes sense, as if you are not profitable, you clearly need to try something new. However, if you take that profit component out completely, and just look at the ideas and experimentation that is taking place (regardless of the motivation), what you see is new ideas being developed out of an organic conversation with users. Users clearly will show how something should be used or what services it should offer, and will not use a service that doesn’t work well or doesn’t fill a need. Failure allows companies to have this conversation with their users and revamp their products.

### 4.3 DPLA as a Startup

The DPLA’s approach to developing its workflows, products, platforms, and staffing model was all built upon a vision of giving free and open access to our cultural heritage via the holdings of institutions of all sizes and types—as Dan Cohen puts it, “democratizing history” (Cohen, 2013). This vision has not changed in its basic idea since the project was first discussed in October of 2010. However, the mechanisms that facilitated bringing this mission into the real world have been fluid and responsive. Through their extensive open planning process, the DPLA was able to emulate the startup mentality—if not the exact strategy—by crowdsourcing much of the development, and relying heavily on user and expert feedback to fine-tune beta versions.

By having completely open Application Programming Interfaces (APIs), they are allowing this conversation and change to continue, without having to overhaul their basic architecture. By hosting Hack-a-thons and Appfests and generally encouraging the
programming public to be creative with their data and resources, the DPLA has allowed users to tell them what they want to do with these cultural and historical materials. This minimizes the risk of the start-up, in that you are not pivoting to such an extreme, but you are allowing users to take risks with your content.

In addition, the heavy focus on the planning component of the DPLA means that a huge quantity of ideas were collected, even if they don’t fall under the current scope. As Dan Cohen put it in his final podcast episode before leaving George Mason University for the DPLA,

“When you go from planning which always tends to be a little amorphous and a little blue sky...when you move to implementation, you obviously need to narrow things a bit and articulate exactly where you’re going to start—even though you know in the back of your mind you’d like to do more things down the line.”

(Digital Campus Podcast, 2013)

This collection of ideas from a diverse group of professionals coupled with the ongoing collection from the public allows the DPLA to be more responsive than most public libraries have traditionally been able to be.

4.4 The Public Library as a Startup

Public libraries have a complicated relationship with innovation. As a chronically underfunded profession, public librarians across the United States have developed ways to create new programming and services cheaply by often taking on the extra work themselves. From baking cookies at home for a library game night, to reusing discarded materials for craft workshops, public librarians are fairly comfortable with trying new things and innovating in physical spaces (Graham, Helmick, 2014). They have found ways to try new things that might fail for little or no money, in other words, little or no risk. This has not been easy to do when we are talking about online spaces, as the
perception is that there are starter costs of technology that can’t be footed by extra time put in afterhours.

This is partly a misconception, as there are many low-cost and no-cost open source technology tools that librarians can get started with. Librarians at Burlington Public Library in Iowa have even been able to host technology sandboxes without any cost, by having the participants bring their own devices (tablets, smartphones, etc) to the library for the event, allowing patrons to try out new devices and talk tech with each other. It is clear that many librarians have the right mindset for innovation when it comes to physical resources and spaces, we just have to be able to translate that to a new medium.

And while most people would not compare the public library model of doing business to that of a startup, it is interesting to look for ways that startup culture can be inserted into the world of the public sector. In Eric Ries’s book *Lean Startup*, he writes, “Startups are organizations dedicated to creating something new under conditions of extreme uncertainty” (2011, p. 27). In this sense, public libraries and startups are not so different. Public libraries struggle with experimentation because there is increased demand to prove worth for each expense. Battling other county or city departments for funding can mean the library must cut costs in arenas seen as “non-essential.” Public libraries do not typically have the funding to crash and burn huge technology projects, nor do they have the luxury of failing for a year to figure out what works. In many ways, public libraries are the ultimate startup challenge.
5. Current Efforts

Despite these challenges, many public libraries are taking charge and innovating on their own terms. Forward-thinking directors and other library leaders are getting ahead of the trends by taking the time to plan for the future and put mechanisms in place that will allow the library to take part in the increasingly digital environment their communities are living in. Outlined below are examples of different approaches, including an internal innovation lab, a strategic level library planning initiative, and an innovative crowdsourcing project out of D.C.

5.1 New York Public Library Labs

New York Public Library (NYPL) is an iconic institution, one of the oldest in the United States, and one of the biggest system in the country terms of its holdings (ALA, 2011). However, NYPL is known for its innovation in digital formats and projects. The NYPL Lab is an experimental design and technology lab that “works to re-imagine The Library for the Internet age” (NYPL Labs, 2013). What makes it especially unique in the public library domain is that its staff is not all librarians—only two have Library degrees. The 6-person team is made up of three application developers, one interaction designer, a product manager, and the lab manager. Rather than having librarians seek outside partners to develop technology projects, this team develops projects internally by working closely with the librarians and archivists of the NYPL.
And while this model may not be replicable by smaller or less well-funded library systems, it’s an interesting one to look at because it shows the kinds of things that can come out of close partnerships between librarians and tech experts. And despite having a dedicated team, NYPL Labs does a lot of crowdsourcing to help with projects. They are a small team of 6 people with a multitude of projects going on any one time, and a huge population of users to draw from. They have their own open APIs that users can use for a variety of purposes, and encourage crowdsourcing in many different capacities. For example, the “What’s on the Menu” project puts out historical menus and asks volunteers to help turn them into structured datasets of culinary and economic history (Riordan, 2013). The APIs allow a conversation to take place between the huge amount of data available by the volunteer and the data being added by the volunteer to make the data usable in different projects. The project is “aimed at not only digitizing physical collections but at turning their digital versions into data that can be sliced and diced with all of today’s tools” (Schwartz, 2012).

Dan Cohen of the DPLA has called the Lab “some of the most innovative digital library work anywhere” (NYPL Labs, 2013). And perhaps even more notably, they have earned great respect from the non-library world, in particular Dan Sinker of the Knight-Mozilla OpenNews project: “Show[s] just how much of a force for awesome experimentation a library can be today” (NYPL Labs, 2013).

5.2 DC By the Book, DC Public Library

DC Public Library, along with many local and national partners began work on a project called DC By the Book in Fall of 2012. With support from the Institute of Museum and Library Services (IMLS) Technology Act grant program, DC Public Library
was able to begin development of an innovative geocoding project that was not archival in nature. Many projects that map materials to locations using geocoding, i.e. longitudinal and latitudinal data, do so to connect historic materials to neighborhood, areas of the country, etc. The DPLA does this, in that you can click on a map to search for materials by geographic location. However, DC By the Book is unique in that it maps popular materials, and mostly local materials to its neighborhoods. The project takes novels that are set in Washington D.C., and maps passages to the areas and neighborhoods discussed. What makes this especially interesting is that they do not map fiction that is focused solely on the Federal Government, the White House, or other non-local aspects of life in D.C. The mission is to “explore the richness of non-Federal civic life in Washington and its character as a city, as brought to life by fiction” (DC By the Book, 2014).

In order to map these novels to neighborhoods, DC By the Book relies heavily on crowdsourcing. DC residents can peruse lists of books that have been added to the site but have not yet been mapped, and then go through the steps of adding the needed information. As the project team describes the workflow: “This is a collaborative effort between librarians, experts in local fiction, local history organizations, and anyone who comes to the site” (DC By the Book, 2014). Using grants, project partners, and crowdsourcing, DC Public Library was able to innovate with very small staff. Tony Ross and Kim Zablud of DC Public Library started the project and grew it to what it is today. In a presentation on the project at the 2014 Public Library Association (PLA) Conference, both co-founders discussed the challenges associated with crowdsourcing, as well as the future of the project—including an app that would enable walking tours through mapped neighborhoods (Ross, Zablud, 2014).
5.3 Charlotte Mecklenburg Library Digital Strategy Project

Charlotte Mecklenburg Library is a large library system in Charlotte, North Carolina with 20 different locations within the Mecklenburg County. After a devastating budget crisis in 2009, which resulted in a 39% cut to the library budget, downsizing by 148 staff, and the closing of 12 branches, the library reinvented itself in a number of ways (Charlotte Mecklenburg Library, 2009). In part, this took the form of a big push towards strategic and efficient use of resources. In 2013 the library launched its new Strategic Plan, and out of the Strategic Plan came a unique project called the Digital Strategy Project (CML Strategic Plan, 2013).

This project was born out of the following strategic goals that were identified during the strategic planning process: (1) 20%+ of Library Circulation/services/programs delivered digitally (2) www.cmlibrary.org becomes a preferred favorite locally, and (3) CML becomes an industry leader in digital access (CML Strategic Plan, 2013). The project was designed to plan the digital direction for Charlotte Mecklenburg Library (CML) over the next several years. Rather than jumping on trends, the library would develop a well-researched plan that would guide them towards smart, innovative decisions. Similar to the DPLA’s planning model, CML divided up the work into different workflows. The project was open to all staff who indicated interest in a particular workgroup by filling out an online survey. Of the 85 staff that answered the survey, all were given a spot on the project.

The library executive leadership team worked together to develop the overall structure, but then handed off leadership to the staff. The teams were made up of a Steering Committee and 5 workgroups focusing on Content, User Experience,
Digitization, Community, and Infrastructure. An advisory group comprised of some of
the executive leadership team, a community advisor, and a graduate student intern
worked together to appoint team leads and get the project off the ground. From that point
on, it was in the hands of the staff.

All five workgroups spent December of 2013 through April of 2014 researching
their focus areas and developing sets of recommendations to present to the Steering
Committee. The project, which is divided into three stages (1) Research (2) Analysis (3)
Implementation, has just completed the Research phase as of this writing. Following this
phase, there will be a writing of a compiled draft, as well as a collection of staff and
community input.
6. Conclusions

While this is not a comprehensive guide for implementation, we’ve looked at some important models of innovation. Public libraries have undergone a wide variety of changes in the last decade—not just technological. By looking outward for models that can be applied within public libraries, we can shake up existing expectations and create nimble and reactive institutions. As we have seen, many public libraries are already finding success with this.

By analyzing different aspects of the DPLA’s planning initiative, we can draw conclusions from their early success. Not every aspect of the DPLA’s process is applicable in a public library setting, but many basic recommendations can be found.

- Public Application Programming Interfaces (APIs) increase interaction and participation with the community. By releasing data to the public, you allow the community to create new products, and it also shows an openness and willingness to reach out to the community.

- Crowdsourcing projects can help balance staff and volunteer time, allowing bigger projects to get off the ground with fewer staff. Crowdsourcing initiatives have also been found to engage the community in new ways.

- Having an open planning process shows an effort to engage the community throughout your internal processes, and include feedback at multiple points. Workflows that are allowed to be conversational rather than rigid and closed allow new ideas to naturally flow in and out.
• Creating iterative process and not being afraid to beta test services allows you to do small tweaks rather than huge overhauls. You can then be more responsive to current demand, minimizing long periods between redesigns.

Based on the public library examples outlined here, it is clear that elements of this planning process can be successfully implemented in the public library setting. While not every aspect of these recommendations makes sense for every type of library, there are great opportunities for engaging with communities in new spaces, in new and exciting ways.
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