Library as Platform

By David Weinberger on   September 4, 2012

In May, 2007, Facebook was generating over 40 billion page views a month by providing its users with carefully constructed and controlled services. Yet on May 24, 2007 Mark Zuckerberg took the company in a new direction: developers outside of the company would be given access to many of the services and data at the heart of the work done by Facebook's own development team. These external developers would be empowered to build whatever independent applications they wanted. The result was an outburst of creativity resulting in thousands and then hundreds of thousands of non-Facebook applications that expanded Facebook's services and integrated it into other sites — each app potentially making Facebook more valuable to its users.

Facebook is in many ways an anti-model for libraries, but from this one action libraries can learn much. On May 24, 2007, Facebook became a platform: a set of resources — services, data, tools — that enable independent developers to create applications. Interesting possibilities open up if we think of libraries as platforms…open platforms.

A library platform would be about developing knowledge and community, not primarily for developing software. Still, like an open software platform, it would:

Be open to all

Give access to every scrap of information it has, including its digital content, but also metadata about that content, its usage, and the social interactions around it

Enable new products and services to be built by anyone with an idea

Integrate everything the library knows into the entire Net ecosystem

Unlike a typical software platform:

The library platform would primarily serve a community bounded by geography, although in some cases by interest.

The library platform would be visible to end-users, unlike software platforms that more typically are directly visible only to developers.

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One aim of this switch is to think of a library not as a portal we go through on occasion, but as infrastructure that is as ubiquitous and persistent as the streets and sidewalks of a town, or the classrooms and yards of a university. Think of the library as co-extensive with the geographic area it serves, like a canopy, or as we say these days, like a cloud.

But there's another, and I think more important, reason to think about libraries as platforms: it focuses our attention away from the provisioning of resources to the foment those resources engender. A library as platform would give rise to messy, rich networks of people and ideas, continuously sparked and maintained by the library's resources. A library as platform is more how than where, more hyperlinks than container, more hubbub than hub.

There's a third reason to think of libraries as platforms. Facebook chose to become a platform because doing so increased its value. As a platform, a library will serve its users better, serve more users, better accomplish its cultural and educational missions, and build a bulwark of value against looming cutbacks. Further, and crucially, a library platform can *continuously increase its value by providing access to that which is built on it*.

But, what would it mean for a library to become a platform? This is not just a Gestalt switch or a marketing trick. It requires real work and investment. So, what would change? After all, physical libraries already offer services, data, and tools, just as software platforms do. The data are the books, magazines, DVDs, etc. The tools include electronic catalogs for finding works, and step ladders for reaching the high shelves. The services include the expertise of reference librarians, and the work done behind the scenes by, for example, the collection development team and the cataloguers. On top of this "platform" are built itineraries for family trips, genealogies, homework assignments, and happy summer afternoons reading Elmore Leonard.

But two pieces are missing from traditional libraries that keep them from actually counting as platforms. First, a platform should provide access to everything it can, including some treasures traditional have yet to make available. Second, the library as platform will enable social knowledge networks to emerge and flourish. With these two changes, libraries can change from portals to platforms.

ACCESS TO EVERYTHING EVERYWHERE

So, what isn't a physical library giving access to? Very little of what it currently can. After all, libraries are not in the business of holding things back. Increase the funding of your library (please!) and it will provide access to even more.

Matters change when we include the library's online presence. Indeed, one of the advantages of thinking of libraries as platforms is that we don't have to start with the distinction between the physical and the virtual. Rather, we start from the idea of the platform, and we see which data, tools, and services should be provided online, and which offline. The question of whether they are best provided through a physical or virtual presence is a secondary consideration. Platform first.

A library platform will give access not only to all of the content it has access to directly and indirectly — the items on its shelves, the e-items it has permission to provide, and the items (physical and virtual) within its network of collaborating institutions — but also to all the data it can find: Data from a curated set of reliable institutions, including scientific and non-profit. Data from the local government, and from all levels of government. Content contributed by local members, such as digitized shoeboxes of local scenes. Some of this data may be available elsewhere, but the library can provide the service of making this data more usable by aggregating it (or pointers to it), certifying it as reliable and interesting, cataloging it, documenting it, and helping users to navigate it and understand it.

But access in a world that includes digital content also means providing services to get more value from that content. So, what services should the library platform offer? That sounds like a reasonable question, but a platform gains value the less can be predicted about what will be built with it; when Facebook released its platform, it must have been delighted when it saw the crazy stuff developers built. Nevertheless, the services the platform provides will inevitably be driven by some well-grounded assumptions about the nature of its available data and of its likely uses. A library platform is likely to provide at least initially some of the following access services:

The data library platforms offer should also include lots of nontraditional data. The aim, after all, is to

An online public access catalog (OPAC) for end-user search and navigation.

Various ways of communicating with librarians and users by posting questions, chatting online, phoning, going to the physical library's "genius bar," etc.

The ability of a computer program to pose a query through an open, well-documented Application Programming Interface (API) to find items based on subject classification, standard metadata (subject, author, year, etc.), popularity or other usage indicators, etc. This will spur the development of innovative applications.

Clustering of works by semantic relationships, by recommendations ("people who like this…"), etc.

make openly available everything that libraries know, and libraries know a lot more than the combined content of the items in their collection. They know what librarians know. They know what cataloguers know. They know what their users know. And they know a huge amount about the social life of their works (to borrow a phrase from John Seely Brown and Paul Duguid). For example, by looking at usage data, libraries can see patterns of connection and value: this book is related to that article, and this set of works seems to have helped people asking this sort of question. This usage data is a deep resource, both within a community and across divergent populations.

But, if a library platform is going to provide the full measure of its value, it is going to have to weigh the value of this resource against the relative value of its users' privacy. This is a discussion libraries need to have with their users, especially since increasingly many of the users don't care all that much about the privacy their libraries are protecting; thinking of libraries as platforms can help to frame the discussion by making apparent some of the benefits against which the risks should be weighed.

Providing access to a platform that does not primarily divide itself into analog and digital partitions means providing access to humans who want to read or view something, to humans who want to build something, and to programs that want to do computerish things with the data. That means the services provided by library platforms should include new generations of OPACs, "library test kitchen" environments (as per Jeff Goldenson and Jeffrey Schnapp) that provide end-user tools for exploring data and content, and open APIs so that developers can take maximum advantage of the library's riches.

Finally, since the aim of this is to increase the value of libraries, it goes without saying (well, apparently not quite) that this platform should be open to as many people and to as many works as possible.

DEVELOPING KNOWLEDGE

Facebook became a platform so that every app written on top of it would add value to Facebook. Likewise, the Android platform enables apps to be written that make Android more competitive, and Microsoft's .NET platform makes it easier for developers to write apps that make the Microsoft operating system more valuable. The more apps, the more people use the platform, making it more attractive to developers to write apps for it. The more open apps, the more code developers can draw upon, making it easier to create the next app. The more developers, the bigger the community, the more support the community can give to more developers. You can call it a virtuous circle … or lock-in, depending on how you feel about the group that has built the platform.

Libraries as platforms will accrete value for the entire community, not just for developers. Or, we could say the same thing by expanding our concept of developers to include every user of the library who creates something based on research or even who is changed by her or his interaction with the library. Consider the range of development work a library platform enables:

A very small percentage of users will be software developers who do amazing things with the library platform's APIs. Many of the apps developed will lead users back to the library, but some may lead users away. Imagine, for example, an app that analyzes the anonymized usage data from a town library to provide recommendations for open courseware; users of the app are taken to college sites and may not even know that some of the data that led them there came from their library.

A much larger percentage will be non-technical users spending time in the library test kitchen (online, or in a "Maker" space in the physical building, as in the Westport and Fayette Libraries) pulling together civic data, creating their own special collections from existing library content (including from library platforms around the world), scanning in works and images of interest to the community, creating

personalized versions of online works, etc.

Some small but important percentage will use their local library platform as a way to publish their own works, from novels to memoirs to photo albums.

A high percentage will — one hopes — use the platform to engage with works in public and with other members of the community. For example, they might leave ratings and reviews, comment on other reviews, collaboratively iterate on assessments of works' significance, tag items, correct errant metadata, publish lists of items, draw connections among works, make public their highlightings and annotations of e-books, check in books they love by placing them in an "Awesome Box," etc.

A very high percentage of users will find value in talking with others about what they've read, heard, viewed, or interacted with. These may be undirected conversations, they may take a question-and-answer format, or they may have the urgency of a group of students facing an assignment's deadline. Those conversations have value not only to the participants but to future users.

Those last two tiers of users are especially important because they can so dramatically increase "what libraries know." It therefore makes sense for the library platform to include services that will encourage the development of this collaborative engagement, such as:

> Social tools that let users find and engage with one another.
>
> The metadata required to let items serve as social objects around which social interactions occur. The items need not be limited to books and DVDs. Rather, the platform might enable users to "follow" (i.e., subscribe to, in Twitter's sense) works, authors, other users, topics, Library of Congress or Dewey subject headings, library events, etc.
>
> Facilities for preserving and making public the interactions among people and items (of course respecting privacy as requested), as well any new items they create; for example, New York Public Library added to its collection a book created as part of an on-site game it sponsored.

Services like these will encourage the development of what can be though of as knowledge networks. These networks may be evanescent or long lasting — a casual interchange on a discussion board or a book club (physical or virtual) that lasts for decades; they may be serious or frivolous; they may include librarians and other experts or not; they may be open to the world or pull the blinds. They may be social networks among users, semantic networks among items, or, more often, both. But enabling these knowledge networks is one of the best reasons to think of libraries as platforms. They are a resource fundamentally important to communities that libraries can fully enable.

The importance of these networks highlight a distinctive feature of library platforms: They usually will do best if they are designed to serve a defined community. In many instances, those communities will be defined geographically, whether it's a town's local library or a university community; in some instances, the community will be defined by interest, not by geography. In either case, serving a defined community has two advantages. First, it enables libraries to accomplish the mission they've been funded to accomplish. Second, user networks depend upon and assume local knowledge, interests, and norms. While a local library platform should interoperate with the rest of the world's library platforms, it may do best if it is distinctively local. Universities generally provide a community most tightly bound by interests and norms, and thus library platforms may find a first home there.

Just as each project created by a developer makes it easier for the next developer to create the next app, each interaction by users ought to make the library platform a little smarter, a little wiser, a little more tuned to its users interests. Further, the visible presence of neighbors and the availability of their work will not only make the library an ever more essential piece of the locality's infrastructure, it can make the local community itself more coherent and humane.

Conceiving of the library as a platform not only opens a range of new services and provides for a continuous increase in the library's value, it also does something libraries urgently need to do: it changes the criteria of success. A library platform should be measured less on the circulation of its works than in the circulation of the ideas and passions these works spark — from how many works are checked out to the community's engagement with its own grappling with those works. This is not only a metric that libraries-as-platforms can excel at, it is in fact a measure of what has always been the truest

value of libraries.

In that sense, by becoming a platform the library can better fulfill the abiding mission it set itself: to be a civic institution essential to democracy.

Dr. David Weinberger is a senior researcher at [Harvard's Berkman Center for Internet & Society](#), co-director of the [Harvard Library Lab](#), a strategic marketing consultant, and author of books including [Everything is Miscellaneous](#) and [Too Big to Know](#).

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Comments

[Mace Ojala](#) says:
[September 6, 2012 at 8:53 am](#)

Cecare Concordia, Stefan Gradmann and Soerd Siebinga wrote an article called "Not just a digital library, not just a portal; A portrait of Europeana as an API" or something like that. Published in IFLA Journal if I remember correctly. Do check it out, it makes pretty much the same arguments with a case (Europeana).

[William Badke](#) says:
[September 6, 2012 at 4:26 pm](#)

Library as platform is already here in most academic libraries. We do have some barriers, however, primarily due to proprietary software (e.g. library catalogs) that prevent the development of new applications, and subscription restrictions that make databases accessible only to those approved to use them. We can do little about either. On the other hand, the idea that the

library is a nexus for the sharing of information is something we are already doing.

David Weinberger says:

September 12, 2012 at 10:12 am

William, there's no doubt that these ideas are already being acted upon to one degree or another. Thanks for making that point. I hope and expect we'll see the types of information expanded.

In a sense, I'm hoping in this article not to outline new technical possibilities, because I agree that librarians are well aware of the power of providing open access to info, and increasingly are providing tools for collaborative development of knowledge. Rather, I'm trying to encourage the trend of thinking of libraries from the point of view of the ecosystem they can spawn and participate in — networks of learning, knowledge, and discussion, primarily coextensive with their community's geography — no matter where the tools come from.

Peter Rousmaniere says:

September 7, 2012 at 11:49 pm

I have been searching for an article/book that conceptualizes the library's response to rapid changes in information technology and am lucky that I found this article. I have bought one of your books. I live in Woodstock VT, the picture perfect New England town with a new library director who comes from prior innovative library creation projects (such as the White House library). She and I are discussing this article next week. An example that came to us as how a small town library with a large population of educated residents over 55 could serve as a platform: address the yearnings of many to publish their manuscripts using the new publishing/self publishing technologies. Other ideas out there?

William Badke says:

September 8, 2012 at 12:07 am

This is a great example. The fact is that reference librarians can put patrons in touch with virtually any information need. Publishing platforms like Scribd and Kindle, or more commercial operations like iUniverse.com are easily findable, and a library program can fairly easily put together information resources to aid self-publishing. The very role of reference librarian is platform-like in that we are able to serve as a nexus between information needs and information resources.

Jindrich Mynarz says:

September 10, 2012 at 8:17 am

Two years back I wrote a few blog posts, in which I thought about similar topics.
– Library is a social network oriented around knowledge (http://post.ly/mfmK)
– Library is a habitat for knowledge interaction (http://post.ly/odul)
– Library is a social organism (http://post.ly/10guW)
– Peer to peer library (http://post.ly/116ZT)

David Weinberger says:

September 12, 2012 at 9:57 am

Hi, Jindrich. I enjoyed co-writing with you at the LOD-LAM conference.

In the version I submitted to LJ, there are some footnotes that didn't make it into this post. One of the first reads as follows:

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Ideas like this have been floating around and discussed in various ways in many quarters. For example, John Palfrey frequently talks about the Digital Public Library of America as a platform, for example here: "Future of Law Libraries: The Future is Now?" June 16, 2011 http://blogs.law.harvard.edu/palfrey/2011/06/16/future-of-law-libraries-the-future-is-now/. Hugh Rundle wrote a terrific post about this on April 4, 2012: "Libraries as software – dematerialising,

platforms and returning to first principles," at the It's Not About the Books blog, http://hughrundle.net/2012/04/04/libraries-as-software-dematerialising-platforms-and-returning-to-first-principles/. Barbara Fister has a highly trenchant response: "The Library as the Peoiple's API | Peer to Peer Review," in Library Journal, on April 19, 2012 http://lj.libraryjournal.com/2012/04/opinion/peer-to-peer-review/the-library-as-the-peoples-api-peer-to-peer-review/. (Hugh's view is of a "dematerialized" library, whereas in this essay I'm arguing for a platform view that includes both the digital and material aspects.) And, of course, Tim O'Reilly has been promoting the idea of governments as platforms for several years, for example, in Government as Platform http://ofps.oreilly.com/titles/9780596804350/defining_government_2_0_lessons_learned_.html.

—

I'll add some of your links. Thanks!

Matthew Battles says:

September 12, 2012 at 5:57 pm

The kind of approach David advocates to open data—library data, civic data, public-health data, environment and climate data, a vast universe of strings and numbers—is something that should seem deeply congenial to the spirit of the public-library movement over its long history. And yet there's something about the cultural and technical aspects of open data, which has its origins in network culture and the open-source software movements, that has eluded the library world—a professional domain that eagerly anticipated and participated in other advances in networked computing.

Perhaps a change is called for in the library schools. I'm imagining innovation labs, hackathons, open-source developers in residence, and other contacts with world of open data, APIs, and open-source development, which would serve to expose library-school students to emergent and impactful approaches to managing, linking, and programmatically interacting with data—not as individual items on shelves or subscription-limited resources, but as shifting, simmering ecologies of knowing and sharing. Is this sort of thing already happening at library schools anywhere?

> **David F. Flanders says:**
>
> September 25, 2012 at 7:44 pm
>
> +1 Without proper career paths for developers (and competitive salaries) in universities, how can we expect to achieve platform without the skills in place?

Matt Burton says:

September 14, 2012 at 8:00 am

Matthew Battles
You ask "is this sort of thing happening at library schools anywhere?" The answer is yes. The School of Information at the University of Michigan is a library school that transitioned towards thinking about libraries as platforms. We teach data mining, social computing, human-computer interaction alongside cataloging and metadata. We have faculty studying open data, digital preservation, and Facebook. We are, along with other iSchools, the kind of forward thinking library school you ask about. http://si.umich.edu

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K.G. Schneider says:

September 16, 2012 at 11:58 am

Very interesting concepts. It would be great to see these ideas grounded back into the quotidian activities (current and future) of working libraries.

Phil Simon says:

Interesting post, David.

You write:

There's a third reason to think of libraries as platforms. Facebook chose to become a platform because doing so increased its value.

I completely agree with the value of platforms, but Facebook didn't switch course to become a platform. Zuck from the early days thought of his company as a potential platform, not a website, not even a business.

Of course, this is easier for greenfield companies than brownfield organizations like libraries. Regardless, the need to build a platform has never been more essential, buoyed by companies like Amazon, Apple, Facebook, Google, and scores of others.

David F. Flanders says:

Why not all university systems as platform? Why just library?

David Weinberger says:

Why not indeed!

In university-wide platform, libraries may find a special place. They may become facilitators for some sorts of data and services for departments and groups that are not as expert. They may set standards for data access. Could be.

William Badke says:

We need to see library as platform as more than just data facilitation. Librarians serve as a platform for dialogue with users who often struggle to handle data well. Everything from helping them to optimize database searches to guide them in formatting citations. We do this sort of thing every day.

Warren Bremer says:

Go ahead and offer the world of content and search, stripped of sponsorship, to local constituents under fair use. Payment to authors would accrue by the number of anonymous seconds of attention paid to a piece of content. The value of a second of attention would be ((GDP/(national seconds of waking attention)-overhead). Developing nations would use a GGP base. Where an author is not signed up money would accrue in an escrow account waiting to be claimed.

A note on sponsorship. It's crucial to strip it out. Sponsorship in aggregate is censorship that undermines democratic systems and the mission of libraries through fair use is to provide access to information for informed choice. Hopefully, instead of a sponsor model based on snooping and distraction there will be a move to a more empowering model based on asking- a brokering platform. If there is some need to canalize, let it simply be a ticker showing what people are looking at on the site.

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