

# Current Technology Trends

## *How to Prepare and When Not to Pursue*

In the previous chapter, we discussed how to incorporate emerging technology trends into your library and explored ways to improve currently existing technology. In this final chapter, we focus on preparing yourself and your library for those emerging technology trends.

We will explore

- ways to prepare for rapid technology change
- fads, trends, and tipping points
- knowing when to pursue (and not to pursue) an upgrade

### Ways to Prepare for Rapid Technology Change

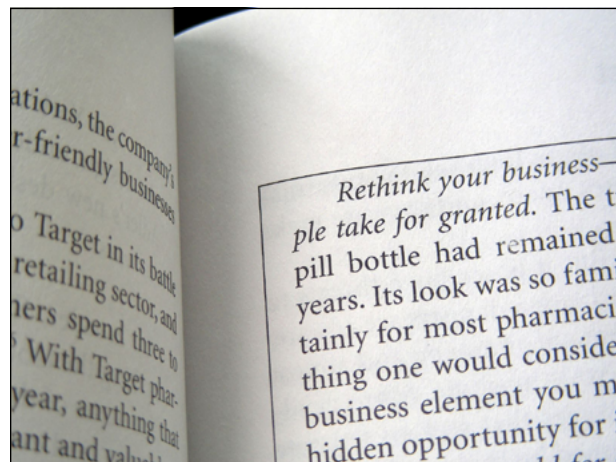
While we can't gaze into a crystal ball and know for certain what new technology will appear at your library in the future, there are ways to be prepared to capitalize on future developments—both individually and organizationally.

#### Individual Preparation

You can't always change an organization, but you can change yourself. Or at the least, you can prepare yourself for change. Here are some ways to prepare yourself to capitalize on future technologies.

##### *PURSUE LIFELONG LEARNING*

Lifelong learning is vital to the technological success of the library and to your professional development. For example, in reference services there are always new reference tools, new types of services to develop



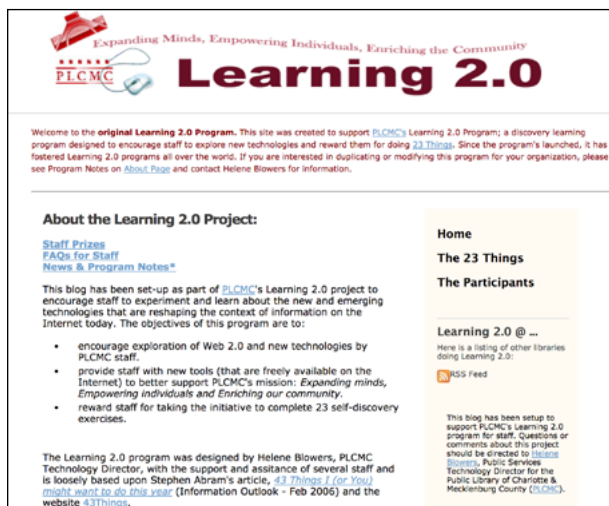
**Figure 4.1**  
Reading

for the library, and ever-changing questions from our evolving community. In fact, the very nature of our jobs—helping people find information—is based on continual learning.

Make sure to start learning, and to keep learning throughout your career. If your library provides technology classes, either for staff or for the public, sign up for them. You can also ask your technology staff to show you new products, services, and tools.

##### *ACTIVELY SEEK LEARNING OPPORTUNITIES*

You can find a lot of learning opportunities online. In 2006, the Public Library of Charlotte and Mecklenburg County created a fun, self-directed staff learning program—23 Things (figure 4.2)—that can still be mimicked in today's fast-paced technology environment.



**Figure 4.2**  
The original 23 Things website

23 Things inspired numerous other library efforts to promote staff exploration and learning. For those of you not familiar with the 23 Things program, it's an informal technology course that helps the student learn something new each week for twenty-three weeks. A more recent self-directed learning program is 23 Mobile Things developed by the Guldborgsund Libraries in Denmark and the State Library of New South Wales in Australia.<sup>1</sup>

Another way to promote personal learning opportunities is to use lists of library-related technology competencies as a personal training checklist. For example, Denver Public Libraries has published a list of technology core competencies.<sup>2</sup> Although parts of the list are specific to its libraries, some of the competencies are more general and work for multiple libraries.

Also, check out the Nebraska Learns program. The Nebraska Library Commission created its first 23 Things program in 2008. When the original program finished, it had so many requests to do more that it has developed a 2.0 version. From its About page:

Nebraska Learns 2.0 continues to be a self-discovery program which encourages participants to take control of their own learning and to utilize their lifelong learning skills through exploration and PLAY. There will be no formal classes or workshops offered to support this program. Instead, participants are encouraged to work together and share with each other their discoveries, techniques, and “how to’s,” both in person and through their blogs.<sup>3</sup>

#### TREAT WORK LIKE A HOBBY

If you have a hobby, you are probably a lifelong learner of that pursuit. Here's my advice: apply that mentality

to your job. This might mean setting up some of the listening tools mentioned earlier in this publication, reading about some technology trends, or doing a hands-on test of some new technology devices.

Don't give up your other hobbies. I'm not asking you to give up your membership at the YMCA to join the Linux Hackers Club. However, I am encouraging you to develop a healthy curiosity about technology and to expand your skill set to continually learn new technology and stay on top of emerging trends.

#### TRY NEW THINGS

If you read about a new social media service, think about testing it. For example, when Vine—a social media video service and video creation app—first came out, I experimented with it to see how the app might work for my library. With the Vine app you were able to create short, six-second videos, tag them, and share them with Vine and Twitter friends.

*Vine Archive*  
<https://vine.co>

Did these experiments lead to my library using Vine? Yes, they did—but only for a short period of time because Vine is no longer in operation. Vine folded in October 2016, but the archive is still accessible to watch videos.

Using Vine in our library illustrates some aspects of exploring emerging trends:

- Our library was relevant and forward-thinking—experimenting with a new technology tool and then implementing it and introducing it to our patrons.
- Sometimes fast-moving technology is just that—fast. Vine lasted for four years.
- We learned important things. In the case of Vine, we learned how to make quick videos on our smartphones. We learned about editing and how to quickly get to the point. (You have to be focused in a six-second video.) And we learned that video is not scary. My library now has a video team—in part because we experimented with Vine.

#### Organizational Preparation

Like individuals, organizations can also be lifelong learners. Your library can develop a culture of continuous learning that helps the library and library staff prepare for emerging technology trends.



**Figure 4.3**  
Training at Topeka and Shawnee County Public Library

#### LISTENING

As already stated, listening to customers (via setting up some online listening tools) can be a great strategy for learning about technology needs and interests. Set up formal focus groups with customers to ask about their current use of technology. Also, continually observe customers as you interact with them, and watch for emerging technology trends. Then work on matching the trends you observe with library services.

#### TRAINING

This one should be obvious. Libraries can organize training programs for learning new technology (figure 4.3). Workshops can run the gamut from a large, formal training program to an informal monthly gathering of staff sharing new things they have discovered.

#### LEARNING FROM FAILURE

Failure can be a good thing! Allow staff projects to fail in appropriate settings. For example, if you have created a pilot program to test a new technology trend, allow for both success and failure. If the pilot project succeeds, you can expand and grow as needed. If it fails, you have also learned about the trend, about running a pilot project, and about your community.

Here is an example of a time my library learned from failure: We set up shop in Second Life (figure 4.4) when it was a promising, emerging technology trend for libraries. We had a Second Life team at the library, with staff actively creating information to share via Second Life.

We had some successes: We were mentioned positively in the library press at the time and were used as examples of libraries doing interesting things in Second Life. But ultimately, the project was a failure because our customers never embraced Second Life. We closed up shop on Second Life and moved on to other projects.

Even though this project did not catch on, we learned we could successfully represent the library in a virtual setting—not a bad thing to know, since currently there’s a renaissance of virtual reality (VR) and augmented reality (AR) apps and experiences.

#### SHARING

Make sure to share things you have learned. Allow time during staff meetings for sharing about some-

thing you or your coworkers have learned or have experienced at a conference or class. You don’t even have to wait for a monthly meeting to roll around to start sharing. You could also share in these ways:

- Use the email distribution list at work.
- Post to the staff-only intranet or blog.
- Share in person at regular departmental meetings.
- Informally share with other staff members.
- Share with managers, and suggest ways to incorporate the idea into your library. (But be careful; if you make a suggestion, you might be asked to lead the pilot project!)

## Fads, Trends, and Tipping Points

Now that you are ready (and, I hope, willing) to face technology changes head-on, let’s look at emerging versus submerging technologies. How can you tell the difference between a trend and a short-lived fad, and what’s a tipping point?

### Trends versus Fads

There are some telltale signs when a technology trend is emerging: You will definitely hear about the emerging trend in online and traditional media. You might see stickers on a restaurant door or on the back of cars (figure 4.5). The morning radio DJ or TV personality might mention a trend. You might also notice library customers start to use and ask about the new technology.

A true trend takes time to emerge. As I wrote earlier, social media is a strong trend. It's at least ten years old, and it has changed dramatically every couple of years. But the key feature behind the evolving social media services—easy online communication and sharing—remains the same.

Smartphones are another great example of an emerging trend. Remember BlackBerries and Palm Treos? Both were phones that did more than just make calls. I had the Treo 650 around 2004. Suddenly, I could take photos, send emails, and use my phone for a calendar. Not too many people owned Treos. Compare that with today's smartphone-rich environment. According to Pew Research, 77 percent of Americans own a smartphone. A few years ago, in 2011, that was just 35 percent.<sup>4</sup> Smartphones and other mobile devices are a rocketing trend. My Treo doesn't exist anymore; it was a stepping stone within the larger trend.

Not every new tool will catch on, though. There are some strong warning signs that a technology tool is more of a fad than a trend:

- If a service stops being updated, that's a strong indicator the service might disappear soon. For example, Google Reader wasn't significantly updated for years. In the summer of 2013, Google discontinued the service.<sup>5</sup>
- If use of the service is diminishing, that's a good indicator of a fad. Myspace is an example. As newer social media tools appeared, people actively deleted their Myspace accounts or let them go dormant.
- The technology might be too difficult to use. Second Life and Minecraft are both virtual worlds, and a major activity in both is building things; however, Second Life was difficult to use and never became very popular. Minecraft, however, includes activities similar to those in Second Life, but it's easy to use, and kids love it. If you work in a public library, I'll guess that you had customers using Minecraft today.

Remember also that even though a specific tool or service might be a fad, the idea behind that tool or service might be part of a growing trend. Google Reader is a good example. People still subscribe to websites using RSS feeds or email addresses, but other services (like Feedly) have taken the place of what Google Reader used to provide.



**Figure 4.4**  
Standing with my Second Life committee outside our virtual building

Second Life is another example of a fad that represents an idea that is a trend. Second Life was (and still is) a virtual world, and today it would fall squarely into the virtual reality field. While Second Life didn't take off as a mainstream service, the idea of augmented and virtual reality has started to take off. You can see this in products like the HTC Vive or the Microsoft HoloLens, or even in the simple augmented reality that Pokémon Go provided on players' smartphones.

Finally, a Tipping Point is simply an emerging trend that hasn't yet been fully implemented by all libraries and/or library staff, for a variety of reasons. For example, a library having adequate Wi-Fi bandwidth might be considered a tipping point. Most library staff would agree that the library needs adequate bandwidth. However, when it comes to budget time and something needs to be cut from next year's budget, the Wi-Fi bandwidth upgrade might be cut. Or, the library might agree that more bandwidth is needed, but Internet providers in the area (especially in rural communities) might not be able to provide the bandwidth that the library needs.

## Knowing When to Pursue (and Not Pursue) an Upgrade

When the next new thing comes out, it's sometimes tempting to be ahead of the curve and to get that new thing in your library. Sometimes that's a great idea, and sometimes it's not. How can you tell when to jump and when to wait?



**Figure 4.5**  
Snapchat sticker in a Starbucks

First of all, I'll state this: You simply need to download computer software upgrades. Software companies fix bugs and under-the-hood issues all the time and then push those fixes out as software updates. They also offer new tools and services. And guess what? Those companies aren't going backward. If you really liked an earlier version of Microsoft Word, for example . . . you are out of luck. Microsoft eventually won't support it.

Instead of putting off the inevitable, go ahead and do regular updates and learn the new way to do things. Believe me, that type of incremental learning is much better than having to learn a lot of new things all at once.

For larger technology projects, tools, and services, here are some things to think about in relation to when it's time to update:

### It's Down Again

If you have older technology that is starting to have more downtime than it used to, it's probably past time to upgrade. The best way to deal with this problem is to not let it happen. This means when you buy new technology—even big-ticket items like an integrated library system—you need to think about that product's end date too and set a date to start looking

for a replacement. This date should be either to replace the tool itself or, at the least, to upgrade the underlying technology that makes that service work. One example would be a server replacement.

### Missing Opportunities

Sometimes, you might notice you are missing opportunities by not upgrading. For example, my library's computer training lab has used the previous Microsoft operating system (OS), and patrons started to ask when we would upgrade the computers, so they could learn the new Microsoft OS. That meant we were behind and needed to upgrade. By not upgrading, we were missing some training opportunities in our community. So, we upgraded.

### End of Life

If you have a data center in your library, you know that servers and software often have an "end of life" date after which your vendor will no longer provide support for that software or hardware device. Keep track of those dates, and upgrade before you go past end of life if possible. The same thing applies to your computer: Try to replace it every four or so years.

### Experiencing Growing Pains

Sometimes, a new technology project will present itself because of growing pains. Some of you may remember how your internet signal would slow down in the afternoons when the kids got out of school and congregated around your library's computers and internet access. That's a great example of needing more bandwidth.

Recently, my library's bookmobile staff shared that they have customers visiting the bookmobile with their tablets. Those customers want help downloading e-books. Unfortunately, the bookmobile staff can't help because we don't have Wi-Fi available on the bookmobiles for customers to use. We use Verizon MiFi hotspots for the bookmobile staff computers to connect to library systems, but we don't allow customers to connect to our MiFi devices.

Our enterprising bookmobile staff created a possible solution to the problem. They suggested that the library install a second MiFi device on each bookmobile and use that for public Wi-Fi on the bookmobiles.

It's a simple solution that should help address those growing pains.

## Embrace Emerging Technology Trends

Technology, emerging trends, and the accompanying change those trends bring can be a bit intimidating—both to library customers and to library staff who haven't yet figured out how to navigate technology change.

I hope the ideas presented in this issue of *Library Technology Reports* have shed a little light on some simple ways to help you keep up with technology changes and embrace those changes, rather than having changes thrust upon you.

You can start slowly. Think about just one new technology challenge you are having and learn that new technology product or service. Keep on learning—be

a lifelong learner—and you will be on your way to growing and changing along with technology.

## Notes

1. About page, 23 Mobile Things, accessed November 7, 2017, <http://23mobilethings.net/wordpress/about>.
2. Denver Public Library Staff Technology Training Committee, "Core Staff Technology Competencies—Denver Public Library," last modified September 4, 2012, WebJunction, [https://www.webjunction.org/documents/webjunction/core\\_staff\\_technology\\_competencies\\_Denver.html](https://www.webjunction.org/documents/webjunction/core_staff_technology_competencies_Denver.html).
3. About page, Nebraska Learns 2.0, accessed November 7, 2017, <http://nlcblogs.nebraska.gov/nelearns/about>.
4. "Mobile Fact Sheet," Internet and Technology, Pew Research Center, January 12, 2017, [www.pewinternet.org/fact-sheet/mobile](http://www.pewinternet.org/fact-sheet/mobile).
5. "A Second Spring of Cleaning," Google Official Blog, March 13, 2013, <http://googleblog.blogspot.com/2013/03/a-second-spring-of-cleaning.html>.