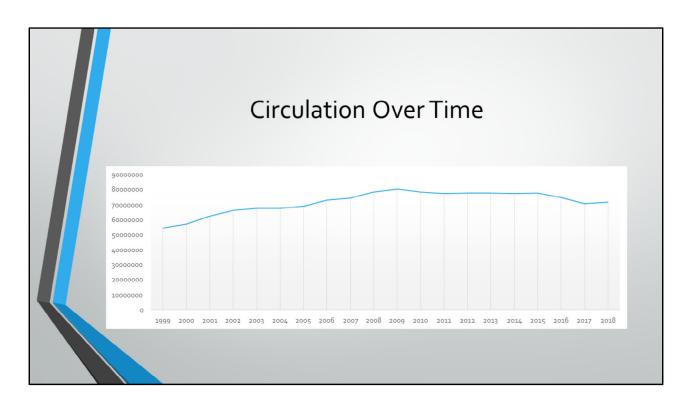


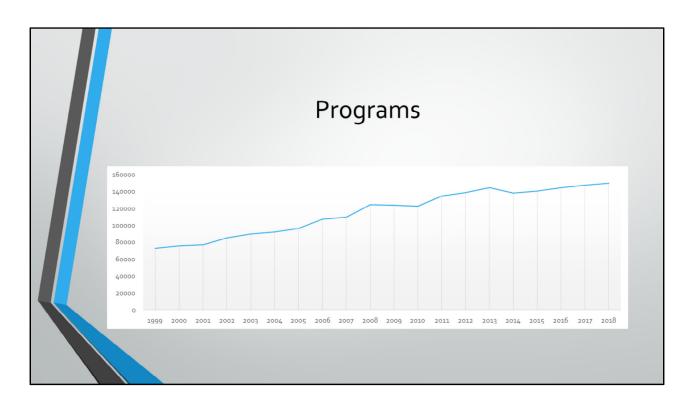
Aren't we all sick of this question?



E-resource really boosted circs in the early ought's.

Whenever there's trouble in the economy, there's an increase in library usage.

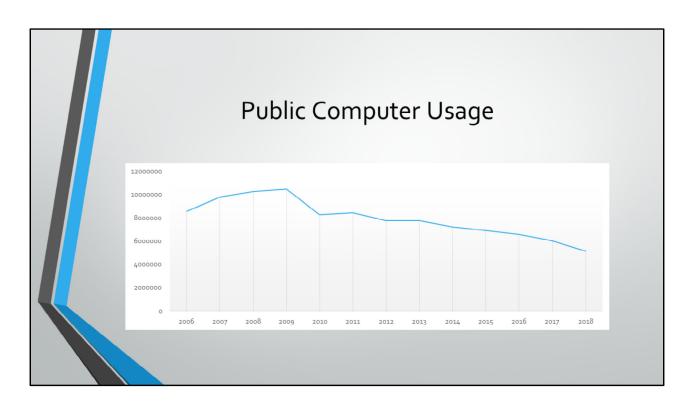
Use a piece of paper to block the earlier parts of the chart. It looks like there's a decline in circulation, and that is true, but (remove the paper) look how much more we're circulating now that we were 20 years ago. We can weather these downturns in statistics. It's not all gloom and doom.



Right about 2007-2008 we had a statewide discussion about Public Library standards. We at the state library and many of your colleagues, maybe even yourselves, worked together to update the standards. One big theme in all those discussions was, "libraries are not just reading rooms." So, we included a standard for the first time about a minimum level of programming a library should do. I would also point out that the data for this slide include all the programs at the library. Here we are including when community groups use the library meeting space for some program. It is not an official library program, but it is an official use of the library as a resource, and worth counting.

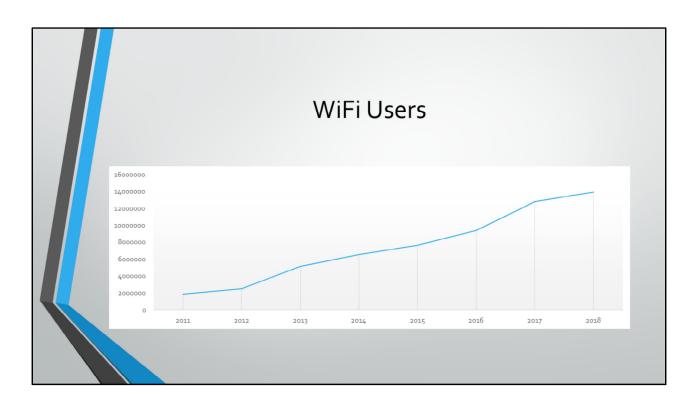


Okay, here's the closest we'll come to gloom and doom today. This is downward trend, with a small uptick around the Great Recession. But that's not necessarily evidence that libraries are becoming extinct. Think about how much the Internet has changed our lives. Think about how many times you've purchased something form Amazon and saved yourself a trip to the store. The key take away I want you all to leave with regarding this slide is, your library must have a virtual presence as well. We will talk about going to where the patrons are, and being a trusted entity online is one way to do that.

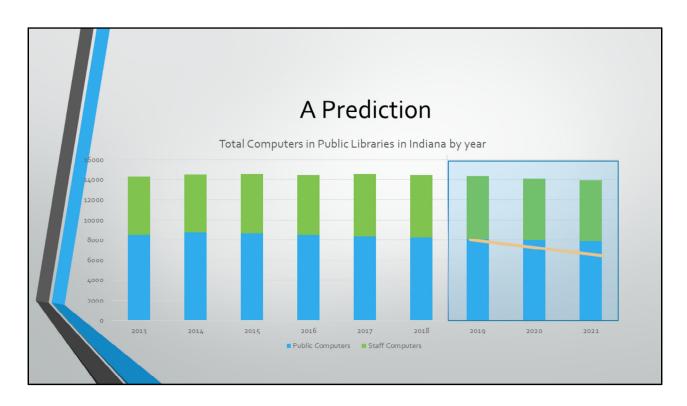


Okay, here again we have a pretty markedly downward trend. But it makes perfect sense when you think about how much as changed. Just think about the number of computers in this room. (Point out any laptops or tablets). And how many of us have our cell phones too? You may have set all of these to work on the state's WiFi this morning. You may only have set the tablets and laptops to do this, but the potential is there for you to get online without using any of our computers.

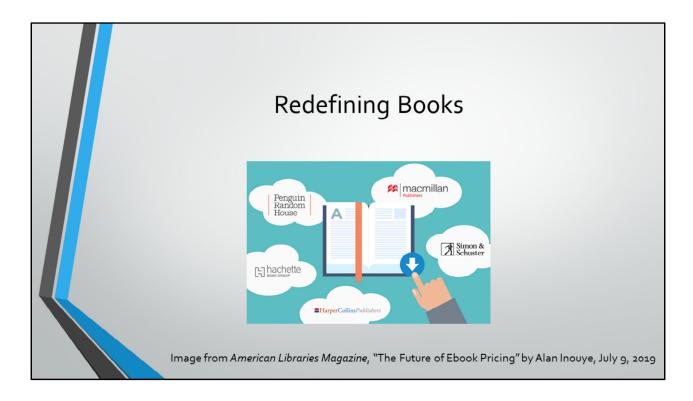
One caveat on this. Next year will be the first time the Census is taken mostly online. Beginning in April 2020, people will start getting postcards asking them to go online to complete their census. While many people will just do this in the comfort of their own homes, the postcards will suggest they go to a library if they need computer or Internet access. We do have a potential to see this particular chart have a peak in 2020 that will be more of an anomaly.



And this is the rest of that story. Yes, usage of library owned computers is going down. But this can be a good thing in the sense that libraries may not need to invest as much in those resources. You could spend more on other resources, on collection development, on staff. We had a long period of time where we had to make sure we had computers available, and back to the Great Recession, we had to make sure we could provide access to things like filling out unemployment vouchers. But more and more people are traveling with their own computers, and we just need to provide them a conduit to the Internet.



Okay, to the previous two slides really gave you the reason I feel pretty confident about this prediction. It will be important to keep up the computer used by staff, and to make sure that everyone has the access to a computer to do the parts of their jobs that require. More and more of every job, as we all know. So, I believe the number of staff computers will stay fairly steady, barring any major changes to the number of staff employed in libraries. However, I think as more and more people are bringing in their own devices, I think it will be easier for libraries to not replace every public computer one for one. I think we'll see a gradual decrease in the number of public computers, but I think this just gives the libraries more freedom than we thought we might have had even 10 years ago.

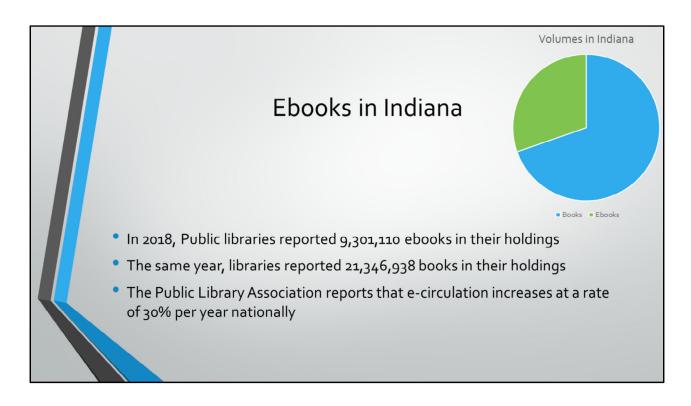


There are so many directions we can take this part of our conversation today. One key thing I want to be sure you're all aware of is the fact that libraries are at the mercy of the publishing industry in this arena. If you haven't heard, the latest embargo being set is by MacMillan and will impact all their titles going forward. By limiting libraries to only one copy for the first 8 weeks, please be aware that you're going to have some very angry patrons when the waitlists get ridiculous. This is exacerbated by the fact that libraries are so good at resource sharing that we set up the great consortia for e-books. So, this new embargo means that one copy of the latest MacMillan book will be available for all the patrons of whatever Overdrive consortium you're in, so we're talking about one copy for maybe 1,000,000 people. At least for the first 8 weeks.

The other point I try to make sure everyone outside the library industry knows, is that libraries don't get the same pricing models our users get. Where I can buy a copy of an ebook for \$10 or less and have access to it for as long as the company is around, maybe longer if I download it and keep it. My library will pay at least \$25 for that same book and after a period of time or a number of checkouts, the library will not have access to that book without shelling out another \$25.

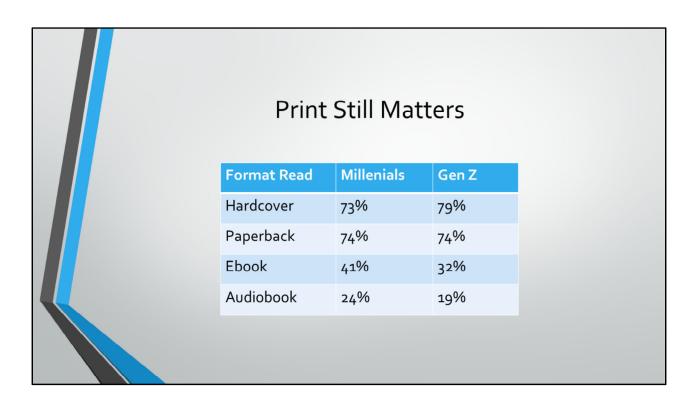
We're not taking this lying down. There's great work being done on the national level by ALA and the Chief Officers of State Library Agencies, and others around the country.

Michael Blackwell, a library director in Maryland, and library advocate, had published some great data that uses the information made public by the publishing companies and the data available across the library community to dispel the myths that libraries would put publisher out of business with unfettered access to ebooks. When Tor started the pilot program for embargoing for Macmillan, he pointed out that the New York Public Library has 1,168 ebook editions of 500 individual Tor titles and his own library held 149 copes of 45 titles from Tor. He then took these number and applied them not to the number of libraries, but to number of patrons. Essentially he found that for one title, 3.5 million Marylanders share access to 17 copies of that book. Now of course, not all 3.5 million folks want to read that one book. But we as librarians know that patrons are forever finding new titles and authors in our collections they would never just go out and buy.



First Sale Doctrine of the US Copyright act provided libraries more opportunities when applied to physical books. So we have a better system with physical materials. And the publishing industry was not always thrilled with the idea of public libraries loaning their books out "for free," anyway, But obviously the publishing industry has just grown over the decades.

I believe that the two stories this slide tells are that, (1) Indiana libraries are responding to their communities needs for e-books as best they can, and (2) the annual increase in circulation of 30% annually really demonstrates how libraries have adapted and even begun to thrive by providing this access their communities want and need.



Millenials—currently between the ages of 23 and 38 Gen Z—born after 1997—but only those 16-22

Gen Z patrons are visiting libraries as much as all the other generations, but they are borrowing fewer items. They have really responded to the libraries' move to become a "third place" for the community.

In the same article, 60% of Millenial readers purchased a book after they checked it out from the library and 77% purchased other books by the same author, after borrowing a book from a library.

Redefining Service • Broadband • More than books • Pop-up Libraries

Okay, that's enough about traditional library services for today. There are a lot of stories to tell, and there's a lot of great work being done in libraries.

But now I want to shift and talk about some more non-traditional ways libraries are rising to the challenge of serving an ever-changing community.

I'll talk a bit about the importance of good, solid broadband access to libraries over the next few minutes. Then I want to cover some non-book materials and services available to libraries, and I want to talk about something we've been talking about as an industry for at least the last 15 years—we need to meet our patrons where they are.

Broadband in Libraries

- FCC's bandwidth target for libraries:
 - Population of fewer than 50,000 people served—100Mbps
 - Population of over 50,000 people served—1Gbps
- WiFi usage is growing, and likely will continue

Google has included drones along with balloons (Project Loon) and low orbit satellites as possible means of providing internet access, especially in remote places.

And there's a possibility that 5G could reach some of the most remote communities that don't have fiber built out to them. But there are two things I want to point out about 5G. The signal doesn't travel a great length. There will need to be multiple access points to get the network to really stretch. And let's be honest, no one wants a cell tower in their line of sight. There will likely be compromises that have to be made to get good solid access to everyone. Which is why I want to talk about this next group of people.



Roberta Gallardo is with the Purdue Extension group in West Lafayette. He has real passion for getting rural America access to all the tools they'll need to succeed in the 21st Century and beyond. Before we watch this very short video of Roberto, I wanted to mention a particular segment of the population that I guarantee is in every one of your communities.

The people who are in "Digital Distress," may have fiber networks going right down the street in front of their house or businesses, but that doesn't mean they have access to that network in their homes. They may not have a computer, they may only have a cell phone. And how many of you have tried to fill out forms on your cell phone? Web designers are doing their best to make it easier, but to be honest, the government is very late to this game. Many of our forms are not mobile friendly. And we don't have the developers to really change that in the near future. So, it's more than just people who have or don't have access to the Internet any longer.

[Play video]

So, libraries have done a great job of prettying up that first face he mentioned. And we've really built out great networks to libraries and schools all across Indiana, but that doesn't mean all Hoosiers have fully adopted using all the tools available. Educating users on why they should care is an important role for libraries going forward.



So these are not the newest trends, and I know that Indiana libraries have really embraced these to great degree. But I want to talk for a minute about thinking about Maker Spaces in a new light. Sure 3D printers and scanners are cool, and you can come up with millions of ways your communities can use them. But don't just think about those trendy items. Maker spaces can be where your local community can grow it's artistic or literary persona. And you all have local history collections, you're a great place for those local artists, photographers, authors and more to get access to a wider world.

I have to put in a plug here for Hoosier State Chronicles. This chart actually lists "Crowdsourced History Projects" as a function of Maker Spaces in libraries. If you're not familiar with Hoosier State Chronicles, this is the State Library's program to digitize hundreds of thousands on pages of newspapers going back as far as possible, and making them discoverable online. So we work with a number of your libraries, and our extensive newspaper collection here, and we digitize lots and lots of microfilmed newspaper. (And yes, microfilm is still the preservation standard). Then we run these pages through Optical Character Recognition software so the computer can make it's best guess about what's on the page. But of course, they aren't perfect. With Hoosier State Chronicles, you can search it, and you'll get the best results available at the time. But while you're reading a particular page that sparked your interest, you may find where the computer thought a "u" was an "a". And maybe the searchable text refers to a "compater". With Hoosier State Chornicles

you can create your own account, and log in to fix the incorrect OCR. We've been doing this now at least the last decade, and we've had great success. In fact, some users really find this addicting. One trend you'll times hear about is "gamification," and this has a great example of that. We can see a leaderboard of who has submitted the most corrections over time.

Okay, and one last thing—Maker Spaces aren't just staying in the libraries. Libraries are also adopting a "Library of Things" mindset to curate collections of tools for any number of needs the community may have and making those available with a library card. It might be difficult to see here, but this picture has tons of sporting equipment, so you can try it out and see if your kids will play with it for more than 30 seconds before you go spend hundreds of dollars on equipment. I also love the picture in the lower portion that shows all the kitchen tools that can be reserved for holiday entertaining. I was just a library this week that recently got new meeting room furniture and one idea they have is to loan out some of the old tables to patrons who are doing yard sales or gatherings of another kind.



Also, just this week I heard about a really successful program at the Union County Public Library called "Loads of Love" where the library friends group has donated the money to purchase some basic supplies and make available to patrons, quarters while they are at the Laundry mat. Patrons just check out the machines with their library cards. One thing I loved about this story was how it built on another topic that we've been seeing a lot in the library literature. This first picture is from an articles in the NYT about libraries taking story times to laundry mats and barber shops. Meeting the people where they are. And I know it's not always a popular idea when boards first hear about it, but if you're not at your local community fairs/county fairs, you're missing some great opportunities to connect with people who may never walk in the library otherwise.

Redefining Reality • Artificial Intelligence • Blockchain • Linked Data • Corporate Influence

Artificial Intelligence isn't coming. It's here. And it's more than just in Siri and Alexa. It's running a lot of things. Amy Webb calls this the "odd paradox." Once a new technology is used widely, it becomes invisible to us. Autocomplete functions, spam filters and even anti-locking breaking systems are examples of AI. Essentially when a machine receives some data, and makes a decision without the user having to take action, this is AI.

"Building a distributed, permission-less metadata archive has perhaps the most disruptive potential. Because blockchains operate as a type of informational ledger that don't require a centralized gatekeeping organization, they could be used to build a truly distributed metadata system for libraries and related organizations. A blockchain OCLC, if you will. Such a system would be accessible to any organization who wishes, with no additional expenditures. The system would scale cleanly, while still maintaining quality of data through selective reading/output choice based on hash signing."

Starbucks ruin education? Sure the point of most education is to eventually get a job, so corporate influence into curricula through the use of tuition reimbursements are necessarily evil. Where we could run into problems, and where we need to keep our antenna up is, we need to remember that education is really about teaching the students how to think. And there are a number of ways we do that in formal education, and through the library, that will never be part of an MBA program. So making sure we have access to

the arts and humanities as well as business and science will be an important role for all of us.



This is a personal favorite topic of mine. There are so many applications made possible in VR that were the stuff of science fiction a decade ago, but what's important to libraries, I believe, is that this is the next medium for story telling. We've adopted the practice of collecting and making available new media as it's penetrated the greater population, and I think libraries are a natural fit for VR because of this role.

Additionally, there are so many practical educational and vocational uses.

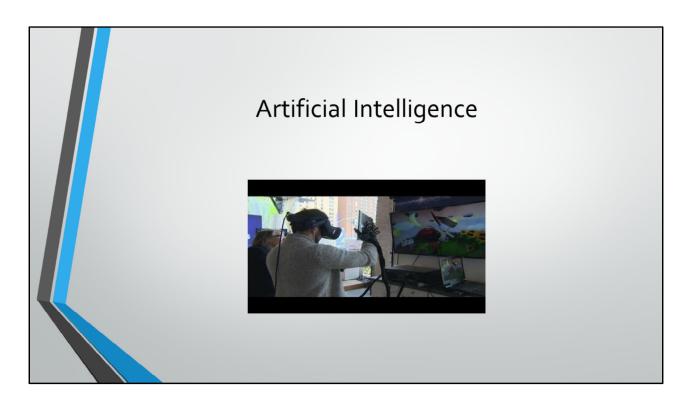
"VR's applications are **impacting almost every aspect of our lives**. Caregivers are using VR to <u>treat dementia</u>, helping patients to regain memories and enriching <u>elderly lives</u> in other ways. <u>Churches</u> are using VR to help shut-ins connect with social groups. VR is letting people virtually scale Mount Everest, tour museums and attend concerts, athletic events and Broadway. VR has been used to <u>solve crimes and influence juries</u>. Training exercises for pilots, soldiers, astronauts, teen drivers, and factory and construction workers utilize VR to permit training without unnecessary risk. *The New York Times* and other media have released <u>special VR news stories</u>. Google notes that global searches for the term "VR" are <u>up 400 percent</u> since last year."



But what I think is most interesting is not going to end with VR. I think Augmented Reality is going to really be a game changer akin to smartphone adoption.

[Start video]

There's no sound on this video, but I'm just so excited about how this library is using AR to enhance the experience of browsing in the library for their patrons. I think there are so many possibilities for this to enhance our knowledge of our community and to partner with strategic partners to really improve the lives of our citizens. I think about the Historical Markers we have all over the state. Those are awesome for remembering our past. But they are limited. It's something like 130 character per side of the sign. Imaging if we could use AR to incorporate a tour guide who can tell you more and point you to nearby places of note that might be interesting.



I think it's really important for us to keep an eye on what's going on in adjacent industries. Just take a look at this brief clip about the South by Southwest festival.

[Play video]

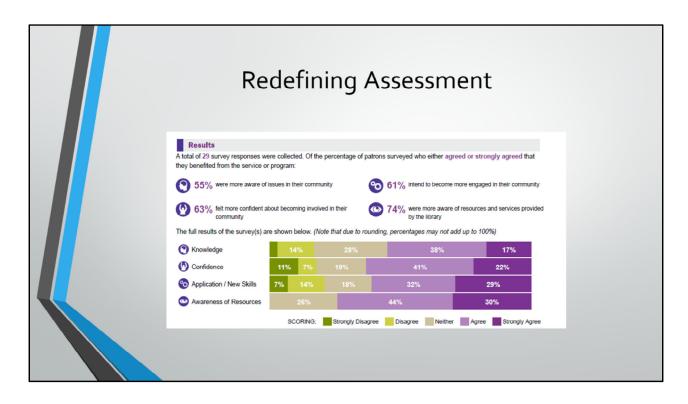
They're demonstrating some commercial uses for AR and VR that could be widely adopted in the future, but the did also mention that because these tools are available now, they way we're educating our kids is evolving. And it should. We've long known that talking head presentations only go so far. The more hands on experience we can get, more we'll retain about any subject.



US Age Pyramid becomes a rectangle [Start animation)

Okay, so this is a trend that is much bigger than libraries. But there are a lot of implication for libraries in seeing this pyramid become a rectangle. There's talk in all kinds of corners about how as we're living longer, and the lucky ones are spending more time in retirement, there's more and more we can do to serve a growing segment of the population.

And I just want to point out here, that all of this folks are of voting age. These are not just some of our key users, but they are some of the people we want to have become our users, too.



Civic/Community Engagement at all public libraries in Indiana for YTD 2019

Project Outcome is a FREE program from the Public Library Association. Not a lot of Indiana libraries have adopted it, yet, but I wanted to talk about it because I know we're not the only industry that is focused on measuring more than outputs (like my first few slides) and really telling the story of why we do what we do with outcomes. This is a tool that libraries can take pre-written and vetted surveys to give to patrons after they've used a library service or program and they can indicate how the service or program changed them. Either through awareness or engagement. This is a small section of really nice 4 page report I ran earlier this week using all the data from the Indiana libraires who have used this tool for Civic/Community Engagement at their libraries. I ran this report in about 5 minutes just by logging into the website and clicking a few boxes. Then I got this infographic, plus additional charts and data, and Project Outcome plugged in some important research about the value of community engagement from a number of sources. Creating a really slick, professional report that tells a great story about libraries in Indiana.

We cannot neglect the traditional literacies. And in Indiana, we're doing a great job at the libraries of promoting early literacy and even adult literacy. But there are other literacies we need to be aware of, because we are a trusted community partner. With the Digital and Media literacies, we can do so much to educate our patrons about what all the talk about fake news and user privacy means (or doesn't mean) today. We aren't just throwing everyone to the wolves, we're equipping them with tools to be great digital citizens.

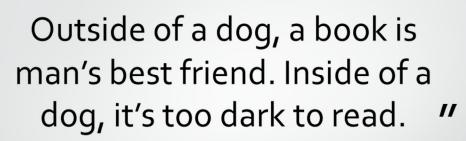
Financial literacy is a great example of where libraries can partner with strategic partners to develop programming and resources for the community. I'm no accountant, but I know the Secretary of State's office really gets onboard with the national Money Smart Week, and really tries to reach every Hoosier with some tools they can use. They've reached out to all of the public libraries through us, and I'm sure that will continue. I also know that several librairies have formed partnerships with local banks to curate resources fo their communities.



Take one topic we talked about and use the framework to think through how we can be thinking about that trend in libraries.

Resources

- 2019 Emerging Tech Trends Report, Future Today Institute
- American Library Association: Center for the Future of Libraries
- American Libraries Magazine
- The Big Nine by Amy Webb
- FCC's Second E-rate Modernization Order
- Library Journal
- Pew Research Center
- Project Outcome
- The Signals Are Talking by Amy Webb
- The Wednesday Word



Groucho Marx

For more information or full bibliography, please contact

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