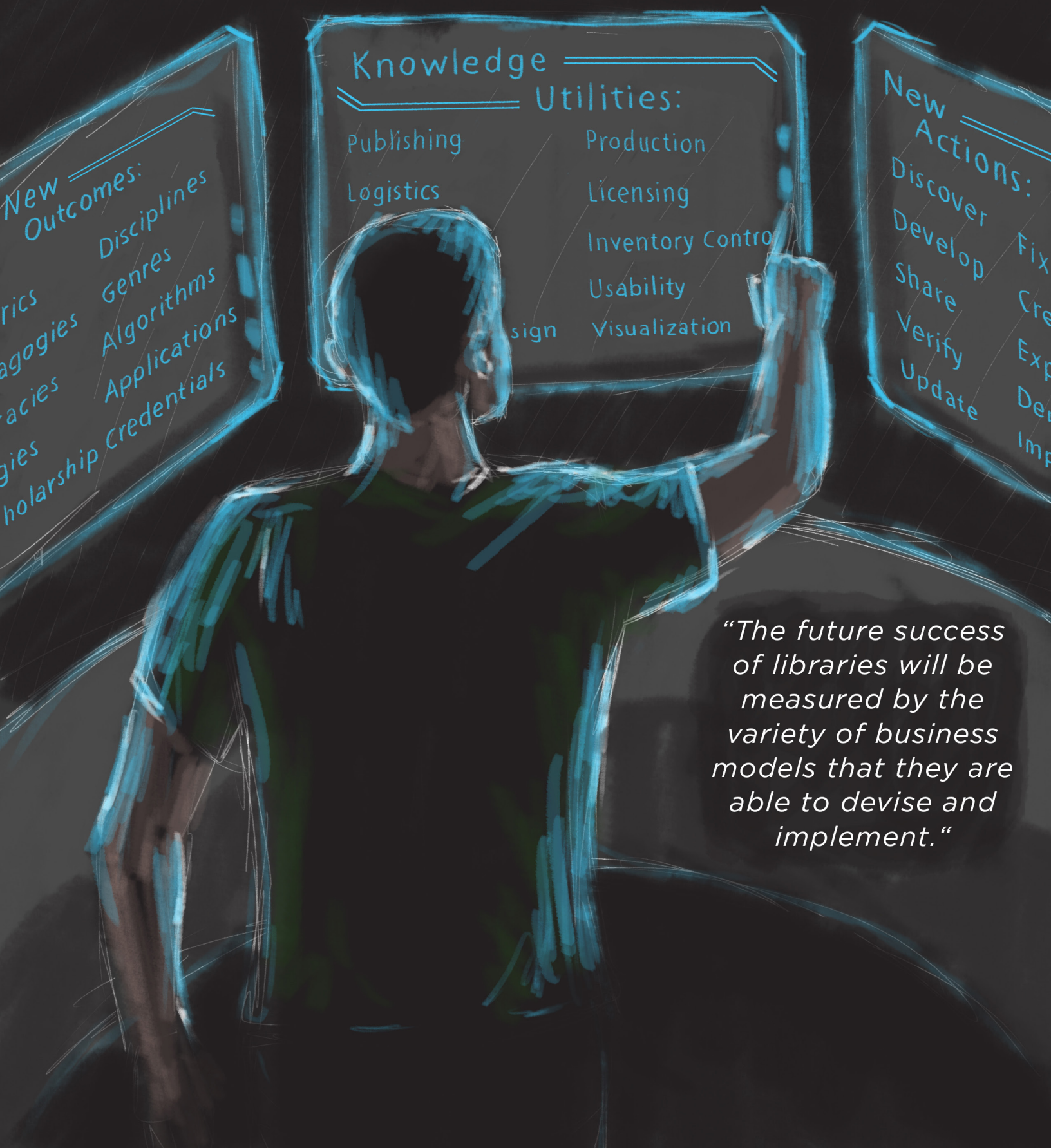
FLIP THE MODEL

Strategies for Creating and Delivering Value

Brian Mathews, 2013



"The future success of libraries will be measured by the variety of business models that they are able to devise and implement."

FLIP THE MODEL:

Strategies for Creating and Delivering Value

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PREFACE: Not So Quiet On the Set

The *Jazz Singer* is arguably the most disruptive film of all time. Released in 1927, it launched the transition from the silent film era into the talkies. Much more than an incremental improvement, this musical introduced a radically new technology (synchronized dialogue) resulting in a game-changer for the film industry. While silent movies didn't disappear overnight, it was obvious that "living pictures" were the future of the box office. By the end of 1929 nearly all films were talkies.[1]

Consider the impact on the established order. The musical *Singin' In the Rain* (1952) depicts this critical point where movie stars from one era struggled to adapt in the new environment.[2] Actors had to reinvent themselves, and many headliners simply could not adjust. The production side was similarly upended, demanding new processes and workflows. Sound engineers, technicians, screenwriters, and voice coaches were now in high demand.

The industry's support infrastructure was transformed as well.[3] Cinemas outfitted their buildings with new audio and projection systems. Studios developed new marketing and distribution models. Film critics altered criteria by which motion pictures were evaluated. The Academy Awards added additional categories. A new art form had emerged. Talkies opened creative possibilities that had previously been unavailable and even unimaginable.

Academic libraries are encountering a similar inflection point. In our case it isn't a single technology that is disrupting our established system, but a barrage of advancements in publishing, pedagogy, and user preferences. Higher education itself is in trouble. Both Moody's and Standard and Poor's recently issued troubling outlooks for public and private institutions. The landscape is shifting around us, and the future of scholarship requires us to develop new skills, design new environments, and deliver new service capacities. In short, we need new models.

INTRODUCTION: *"Why do people use the library?"*

A year ago I led a friend around Virginia Tech's main library. It was late in the evening and the building was quite busy. He was impressed with the number of students in the facility and asked the inevitable question: "*Why do people use the library?"* My friend was being polite when what he really wanted to know was: *since everything is online, why do we still need libraries?*

As we stood there I pointed out the different functions occurring around us: that group working on math equations; another assembling a PowerPoint presentation; that student reading her textbook; that one is browsing the web; and yet another scanning a document.

I told him that people came to the library to be productive; this is where they get things done. He nodded and we moved on. But his question lingered in my mind. *Why do people use the library?* I had told him *what* they were doing, but not *why* they were there. Students could meet and do homework nearly anywhere. So why were they there?

I realized later that I needed to reframe the question. I needed to flip it from wondering *why do people need libraries*, and instead ask: *what do people need to do and how might libraries help them?* That's the intent of this paper. My interest isn't in building a case around the notion that libraries are essential, but rather, that it is essential for libraries to adapt to the ever-changing needs of their community. We may not be essential if we can't evolve. Instead of blindly clinging to legacy values and nostalgia, academic libraries need to be shape shifters. That's our journey ahead.

WE'RE IN THE BUSINESS OF...

"People don't want to buy a quarter-inch drill, they want a quarter-inch hole."[4] This was a key insight developed by marketing guru Theodore Levitt. Customers don't want the tool; they want what the tool can do. A drill provides a means to an end such as hanging a painting or assembling furniture. This concept was derived from the domain of sales in which the objective is to sell the solution not the item itself.[5] People are not interested in purchasing products; they are interested in purchasing solutions to their problems. Faculty don't care *how* they get their scholarly materials, they just want what they need to fulfill their current project.

The reasons students check out books are more complex than just wanting bound volumes in their backpacks. They want to transform the content into ideas, essays, presentations, or personal understanding. Perhaps we should invest more interest in understanding *why* people use our materials instead of simply *what* they are using? By comprehending *how* our resources are used, we could potentially offer better services to users.

Levitt's influential work "Marketing Myopia" encourages leaders to reflect on what business they are really in.[6] He offers railroads as one cautionary tale, implying that their leaders viewed themselves as being in the "train business" rather than in the passenger or freight business. When automobiles and airplanes emerged as viable alternatives, the train companies missed opportunities to innovate or reposition their value. Levitt posits that they were too narrowly focused on improving what trains did (speed, comfort, efficiency) rather than adapting to the changing landscape around them.

Librarianship is a profession where the myopic approach is a prevalent theme. Although some may argue that we are constantly innovating, perhaps we are just applying new technologies to the same outcomes.

We should constantly be asking *what business are we in?* Are we in the book purchasing business, the book storage business, or the book lending business? And what happens when books change format? Some would argue that we belong in the much broader "information business" category, or the "learning business" or "the content business" or "the research business," but I contend that it is much larger than that. Academic libraries are in the business of being intellectual platforms. We need a new mission that stretches beyond the discovery and consumption of information and into the production, expression, and sharing of knowledge.

The decline of the railroad industry is a bit dated; perhaps a more contemporary metaphor is Blockbuster. They maintained their focus on operating storefronts and renting DVDs and video games rather than imagining themselves as part the larger entertainment industry. New business models sprung up around them, culminating in their bankruptcy. Juxtapose the fate of Blockbuster with IBM. The tech company started out in the hardware business and transitioned into the service business; they evolved from being about *computers* to being about *computing*. Today they help clients build solutions to their problems.

IBM offers an interesting model for libraries. Is it possible in the next ten to twenty years that we could see a shift in our identity from being providers of information to becoming consultants and application developers? Suppose that scholarly communication moves entirely to open access or that an iTunes-like scenario emerges in which academic publishing becomes easily and inexpensively available in various formats. A need may remain for organizing, packaging, licensing, and instructing but that all starts to blend into IT functions as content increasingly entails bytes, algorithms, and interfaces. So perhaps the vital question becomes: *will libraries shift from being collections-centered and redirect their attention to addressing other needs around campus?*

What I'm really talking about is disruption. Not noisy patrons but climatic shifts that alter business-as-usual. This happens to all human endeavors eventually. It happened to film, music, television, radio, magazines, newspapers and so on.[7] Clayton Christensen, a thought leader on innovation, defines disruption as the creation of a new market by applying a different set of options, which ultimately (and unexpectedly) overtakes an existing market.[8] The emergence of Netflix and RedBox disrupted the way people borrowed movies. Wikipedia disrupted Britannica. Mobile computing disrupted desktops. We have to assume that as the media and publishing landscape further transforms, libraries will need to as well-- not just in terms of how we provide access to information, but in how we provide value to users.

JOB-TO-BE-DONE: hiring a milkshake

Why do people buy milkshakes? Is there a deeply cognitive reason? Christensen and his research team worked with a fast food restaurant to explore this idea.[9] Initially they focused on customer demographics: *who* was buying milkshakes. But traditional metrics based on preferences and satisfaction didn't uncover anything useful.

They decided to take a different approach and looked at *when* and *why* people purchased the drinks. While interviewing these customers, the team uncovered that 40% of the shakes were sold via drive-thru and that people were using them as a breakfast substitute. The purchase went beyond satisfying a craving to fulfill a very specific role. Christensen refers to this as *hiring* a product; many people were "hiring a milkshake" to serve as a meal during a long commute.

This concept has evolved into the "Jobs-To-Be-Done" theory. It notes that there is a correlation between the products and services that we choose with what we are hoping to accomplish. In this framework, a job is simply a task that we need to get done. A power drill enables me to make a hole so that I can hang a picture. A milkshake sates my appetite so I'm not hungry when I get to work. A doctor gives me a prescription so I can treat an illness. A library provides a room so I can rehearse a presentation. We hire tools, food, physicians, and libraries in order to get things done.

In this manner, perhaps we need to conceive of ourselves as solutions providers, rather than as service providers. This identity shift requires us to ask some different types of questions:[10]

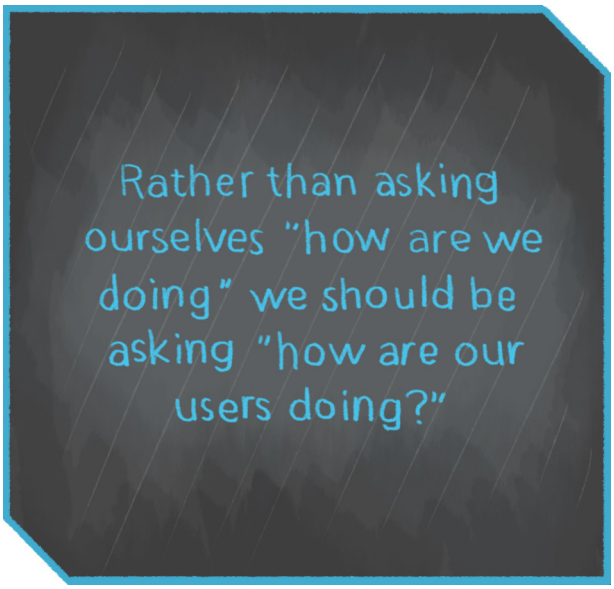
- » What are all the things that you enable your users to accomplish?
- » What tasks are they trying to get done?
- » What roles are they hiring you to fulfill for them?
- » What other related jobs do they need help with?

Let's say, for example that your library offers a plotter printer service. Students are *hiring* this technology to produce posters for their coursework. You could focus on providing the best printing services on campus—the latest technology, longer hours, personalized help—but you could also be more entrepreneurial and explore the adjacent possibilities: *what else could be done?* Do students need help designing their posters? What about hardware and software requirements or training? How about guidance in developing their concepts or clearly expressing their content? What about advising on how to present the poster verbally? Or do they need assistance uploading materials into an e-portfolio or institutional repository? Are you in the plotter printing business or in the knowledge support business?

This type of thinking encourages us to reflect on totality: the lifecycle of assignments. Printing is just one part of a much larger process. What other supplemental artifacts might students need to produce? One faculty member shared a compelling vision with me in which his students would develop a short film and design the associated promotional materials including print and digital art.[11] He took it a step further and expressed interest in their access to a 3D printer to create action figures or similar objects as part of the publicity package. This isn't a service that we currently provide, but perhaps we should.

As the curriculum evolves, students and faculty will have new demands and look for services to hire in order to accomplish related tasks. We could end up in a marginalized role as a printer/scanner/copier service provider, or we could seek additional opportunities to embed the library as a solutions provider and knowledge production partner.

The Jobs-To-Be-Done approach challenges us to reframe our thinking around the outcomes of our users.[12] The services we provide need to be aligned with what is important to them. Rather than asking ourselves "how are we doing" we should be asking "how are our users doing?" This represents a shift toward adopting a definition of value based upon how others perceive the needs that they are trying to satisfy.



BUSINESS MODELS: defined

An interesting conundrum emerges from the business literature. On one hand, people argue that the business model is one of the most important assets of an organization. Yet on the other hand, there is no universal definition. Opinions vary greatly between business professors and business owners, but even within the academic community there are widely diverging perspectives.[13]

The challenge becomes apparent in the overlap of terminology. The literature presents us with a lexicon of business models, business plans, business strategies, business architecture, brand, tactics, value propositions, revenue models, customer generation models, and so forth. There are many frameworks including the razor-blade model, the reversed-razor-blade-model, franchising, subscriptions, freemiums, and onwards. Entire books are devoted to deciphering these concepts.

My focus isn't on the jargon but on applications within a library context. This definition resonated most with me: business models are a process for creating, delivering, and capturing value.[14] Consider your library: how do you develop and provide value to your users? What do they consider valuable? What needs of theirs are you fulfilling?

Let's think about the moving industry for a moment. There are several business models each providing different solutions. Mayflower transports your belongings across the country. U-Haul enables you to move your possessions across town. PODS provide you with a portable storage unit. While all three companies help people move things, they create and deliver value in different ways. You likely would not hire a Mayflower semi truck to move a few blocks away. And similarly, you would probably need a lot of PODS to pack up an entire household. When you remove the attributes like price or convenience, you see that each company offers a unique solution to particular customer needs. Blockbuster, Netflix, and Redbox provide a similar service contrast. While all three enable video rentals, they create and deliver value through distinct methods.

Business models are not just about making money. Although financial sustainability is obviously important, they are actually more connected with what they enable customers to do. Think about automobiles.[15] Conventional engines operate differently than hybrids, just as standard transmissions vary from automatics—each creates different value (and limitations) for drivers. Likewise, a small car is better suited for narrow streets, a four-wheel drive truck is better for off-roading, and a minivan is ideal for transporting kids. Different models facilitate different jobs.

BUSINESS MODELS: higher education

Let's apply this framework to higher education. On a basic level there isn't much difference between colleges. Students pay tuition. They attend class. They read materials. They take tests and write papers. They complete credit hours. They earn degrees. Student loans and accreditation practices ensure that a comparable system exists. You can argue that some institutions perform better than others or that the quality may differ, but that's true in any industry.

Even though some curricula may be similar between schools, the differences emerge in the ways colleges create and deliver value. A large public university differs from an art institute, just as a fashion school has different characteristics than an auto repair school. There are clear distinctions based on purpose, quality, size, and other factors.

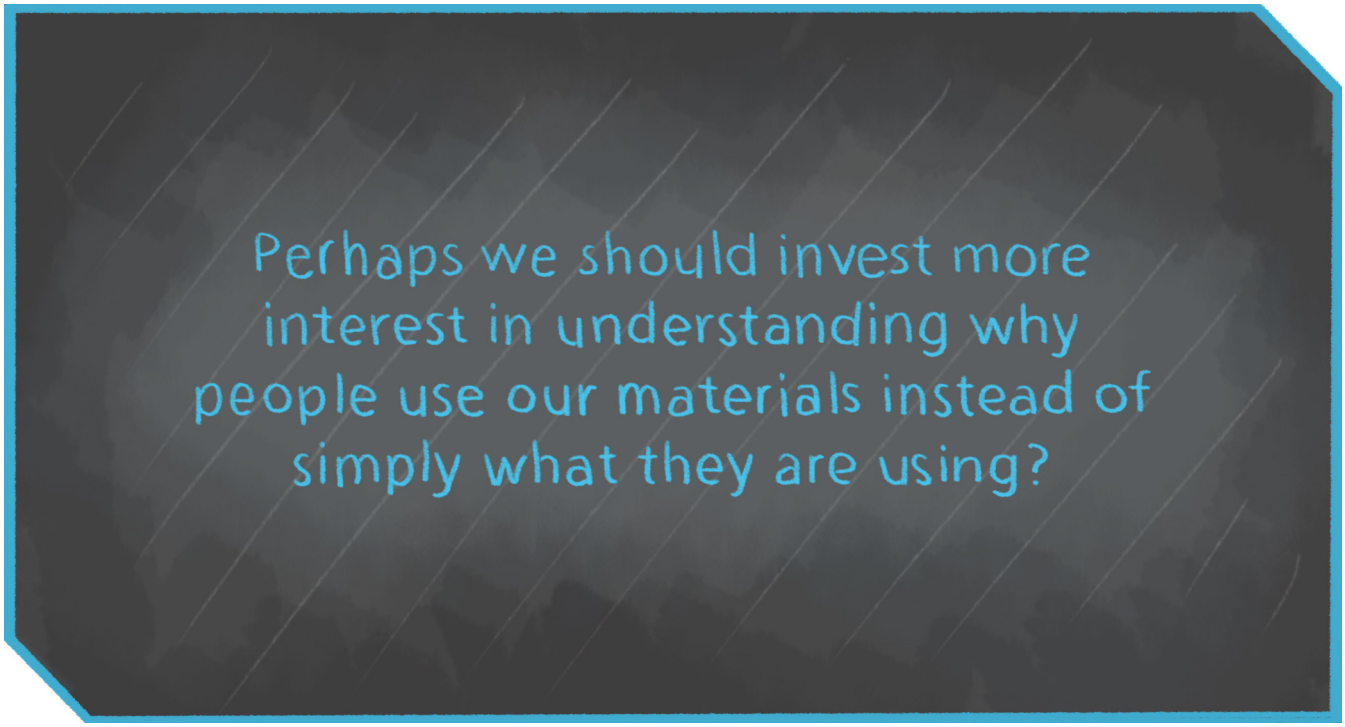
And what's interesting is that colleges can alter their business models, too:

Jacksonville University in Florida started as a private two-year community college and evolved into a private university. However, when a public university opened nearby, JU's enrollment suffered. They responded by reinventing themselves as a small private liberal arts university. A successful fundraising campaign led to the construction of new buildings that fit the style of their new vision.

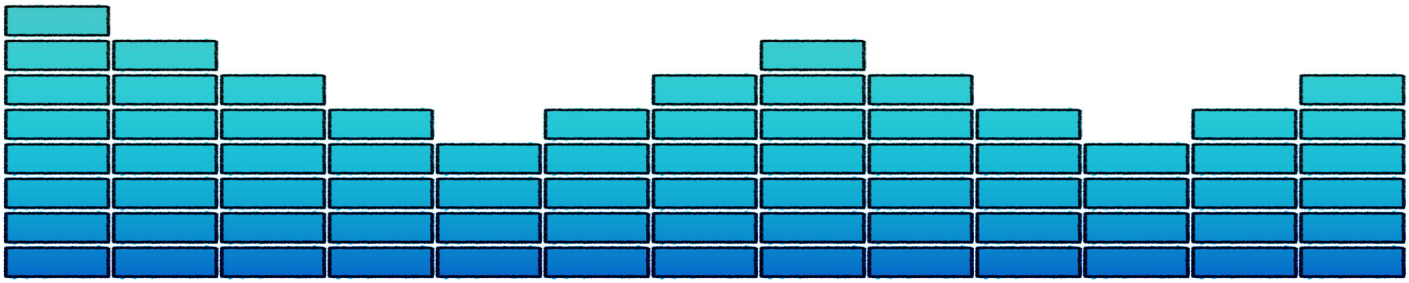
Liberty University is another good example. They were struggling financially and decided to expand their online education. Today they enroll 12,000 residential students and over 100,000 students online. The move has paid off resulting in over $1 billion in net assets and enabling them to renovate many of their facilities.

Both are private universities accredited by SACS with Division 1 basketball teams. One has swelled immensely while the other intentionally stays small. While students attending these schools earn diplomas, the exposure they gain is very different. Both schools employ different business models in order to craft a very particular type of experience.

While the teaching mission is a key component of the higher education business model, other critical factors include athletics and cultural endeavors, as well as research and commercial ventures. Colleges and universities create and deliver value through sports, exhibits, public lectures, performances, products, patents, medical treatments, and awards. They sustain these efforts through tuition, grants, merchandising, philanthropy, licensing, and other financial methods. We have to appreciate that higher education relies a wide array of business models in order to accomplish their missions



We need a new mission that stretches beyond the discovery and consumption of information and into the production, expression, and sharing of knowledge.



BUSINESS MODELS: academic libraries

Libraries employ a multitude of models to provide value to their users. In fact, nearly everything we do uses a different delivery mechanism. Some features are very open (general collection stacks, institutional repositories, study lounges) while others are protected (special collections). Some services operate on a first-come basis while others require reservations. We have things that are full-service, mediated-service, or completely self-service. Even the way we deliver reference is multimode, from on-demand (via desks, chat, text, and phone) to appointment-based consultations, to asynchronous support via email and social web platforms.

We offer many things to many people so variety is built into our service profile. But we should keep Christensen's milkshake study in mind: demographics are not always actionable. For example, we can't treat all undergraduates the same because they are hiring the library for different tasks. An engineering student's needs differ from those in art or agriculture majors. The resources, expertise, and spaces they require vary. Our emphasis should be on understanding what people are trying to accomplish and then adapting to those outcomes.

There are three core themes that I keep in mind when thinking about adjusting the ways we create and deliver value:

Shape. The design of a service is a critical attribute, and collections provide a good example. Obviously, the migration to digital has had an impact, not only in format but philosophically. First there occurred a shift from owning materials to licensing, sparking debate between just-in-case and just-in-time. Today, package deals for books and journals combined with demand-driven acquisitions and open access provide users with a wider spectrum of possibilities. We're moving toward immediacy, delivering what people need in real-time, wherever they are. User behavior may eventually play a larger role than librarians in shaping library collections.

Size. Another critical idea is the difference between large scale and niche audiences. Sometimes we want to attract wide appeal and other occasions are more suited from a smaller population. We want many students to take advantage of online learning modules that we host online, however, we don't want hundreds of people lining up all at once seeking reference assistance. When we host a campus-wide event we hope for a large crowd, yet other programs, like an exhibit in special collections or a book club session, work better with a more intimate audience. This distinction applies to collections, too; some are high demand, while others are of interest to a small fraction of our community.

Scope. Perhaps the best way to think about scope is comparing big box stores to boutiques. Supercenter services appeal to the masses, while boutiques are more specialized. Consider the difference between a computer lab and a GIS lab. The degree of service varies: in the computer lab you use common applications and can seek out assistance whereas a more subject specific lab would likely include different software and more personalized service.

We try to be many things to many different people and the result is that we assume responsibility for offering many services and programs. But these three themes (shape, size, and scope) can help us to adjust the way we deliver value. Consider the ways that patrons can access the general collection. Traditionally they can browse the open stacks for materials, but many libraries also offer a paging service where books will be pulled and available at the circulation desk. And another possibility is requesting books online and having them delivered to an office, campus location, or residence. In this manner we have changed the business model of obtaining books from "find it on your own" to full-service.

Here are two other examples of business model adjustments that I'm currently working on:

A branch library within our College of Veterinary Medicine is in the final planning stages for a complete renovation. The library is currently based on a classic model with a large footprint given to print and analog materials. The space is generally quiet and doesn't permit food. Staff sits at a service desk waiting to help users.

The College's administration has articulated interest in a new vision. They want to move predominately to digital collections including more on-demand materials. They want the space to be more commons-like, featuring a range of collaborative zones. Furthermore, they would like to see roving assistance in which library staff mingles with students and faculty within the space. This transformation necessitates more than just new formats and furniture; it is an entirely new business model requiring new skills, services, and attitudes.

Microform collections are another area with possible adjustments. My library currently holds several thousand square feet of micro-content cabinets. We use a self-service model, although help may be requested. Usage has declined and we are discussing several options.

One possibility is to keep the high-demand material onsite and moving the rest to a storage facility at the perimeter of campus. Scholars could request entry to the storage space and have full access there. They could request runs of film or fiche to be delivered to the library. We're also considering relocating one of our film viewers into a space near the humanities departments so faculty or students could request film to be delivered there as well. Additionally, we are considering making microfilm a part of our document delivery service, enabling patrons to request specific articles to be scanned and delivered via email.

While we are still exploring these various options, you can appreciate how the business model could evolve from centralized self-service into a full service (on-demand delivery) or mediated service (pull the needed materials) and providing several locations for reviewing content. This scenario could lead to more usage of a niche collection as well as more convenience for existing clientele.

FAILURE TO ADAPT

I recall watching the 2001 NCAA Basketball Tournament when Questia commercials aired. They were offering students access to peer reviewed scholarly journals along with research assistance for a low monthly membership fee. This was a game-changing idea. Here was a for-profit company directly marketing to students and encouraging them to bypass complicated library websites in favor of their more streamlined interface and research tools. They focused on the task of writing papers, attempting to align their service offering directly with student needs and interests.

Although Questia never really took off and was eventually purchased by Gale, I think it reveals vulnerability. Could library websites be replaced by apps such as BrowZine? Could someone else provide access to scholarly content? Or could it all someday be free or extremely affordable? The first computers cost millions of dollars and today you can purchase a laptop for $300. Is it not possible that journal subscriptions could someday cost 99 cents and be sold directly to users, rather than thousands of dollars and being brokered by librarians? I'm sure record executives in the 1990's could never have imagined an iTunes-like scenario, but we have to assume that access to scholarship will eventually transform. The question is: what will the role be for libraries once it does? Will we end up like record stores or will we find new ways to create and deliver value? What's the role of the gatekeeper once the gate is torn down?

These types of changes are happening around us all the time. The established order (remember the silent film era?) is challenged and becomes obsolete. Today's Fortune 500 Company may be bankrupt in five years. History provides us with many case studies of organizations that failed to adapt. Here are several examples:

Blockbuster. Blockbuster underestimated Netflix. They had an opportunity to purchase the upstart but didn't see any value. Blockbuster was stuck in the rental business rather than viewing itself as an entertainment provider.[16] Their flaw was in thinking that people wanted to come in to browse the shelves and ask staff for recommendations. They overconfidently assumed they knew what customers wanted. Once Netflix started to take off, Blockbuster responded with online rentals but it was too late.

Kodak. Kodak is another billion-dollar player that recently plummeted into Chapter 11. They pioneered photography in the 1880's with the simple "you push the button, we do the rest" marketing campaign. They never looked back, dominating their industry for a hundred years. In fact, in the 1970's they commanded 90% of photo film sales in the U.S.[17] But this success would contribute to their eventual downfall. Although they were the first to file patents for digital cameras, their leadership focused on the "film business" because that was their core revenue stream. As digital photography improved, Kodak's market share decreased rapidly. New technologies and business models emerged, leaving the industry titan bankrupt. The phrase "Kodak Moment" has evolved from meaning a timeless memory into a cautionary tale about failure to respond to change.

Intel. Intel offers a more encouraging example. They built their fortune around powerful computer chips and became a household name. In recent years, though, the industry has changed. Desktops are in decline as mobile computing gains popularity. The problem with Intel's chips is that they demand huge amounts of power and rapidly deplete battery life, rendering them of limited use to users on the move.[18] As the market turns to tablets, smart phones, and laptops, Intel was left behind. Yet, after much delay, they've shifted focus and are now placing greater emphasis on mobile and and wearable computers.

Disney. Disney has done well during the digital era. Twenty years ago its stock was around $10 and today it is valued over $60. Recent acquisitions of Marvel Entertainment and the Star Wars franchise will likely increase the bottom line. But not everything they do has the golden touch. When Euro Disney opened in 1992 it was a financial disaster. Attendance was low and there was even talk of closing the park, but experimenting with new business models turned it around.[19]

One example is dining. They assumed that Europeans would behave like Americans and graze on snacks throughout the day. Instead the majority expected to be served meals around the same time causing long lines, delays, and general dissatisfaction. The park overcame this by adjusting lunch and dinner options and designing a more appropriate experience for a European audience.

While these examples all derive from the commercial sector, their overarching themes offer insight to libraries. Underestimating, ignoring, or avoiding change can be costly. If your organization develops a reputation for not addressing evolving user needs, it may result in decreased usage and funding or worse, a loss of user confidence and intellectual bankruptcy.

Here are two more examples from the public and non-profit sectors illustrating the damage of perception:

Federal Emergency Management Agency. In 2012 when Superstorm Sandy crushed New York City, FEMA was unable to meet the emergency needs of many citizens. In fact, some offices closed their doors during this critical time.[20] This withdrawal opened an opportunity for the Occupy movement to provide direct support. One initiative was the establishment of an Amazon gift registry allowing citizens to purchase much-needed tools, rations, and supplies for the recovery effort. Occupy was able to reinvent itself from a protest mission into an emergency response team.

Habitat for Humanity. Following the 2004 tsunami in the Indian Ocean, Habitat for Humanity built 8,500 houses in Indonesia, Thailand, India and Sri Lanka within two years.[21] The organization received much criticism after Katrina devastated the U.S in 2005 because of their slow response. For example, after 18 months they had only built 36 homes in New Orleans, when many thousands where lost. One of the core problems that Habitat faced is that their business model was not suited for disaster response, yet that is what the community demanded. Habitat's focus was not on repairing damaged homes but building entirely new ones. This opened up opportunities for other nonprofits including Build Now and Make It Right.

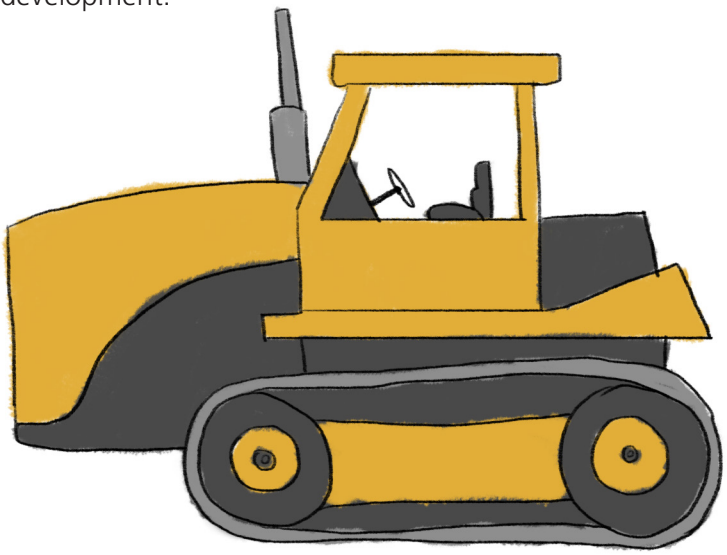
KNOWLEDGE UTILITIES

Caterpillar Inc. is a Fortune 50 company specializing in heavy equipment, but they didn't start out that way.[22] In 1883 they made wooden wheels for wagons and carriages. From these humble beginnings they branched out into developing horse drawn tractors and farm equipment. Over the years the company adapted as new technologies emerged, including steam, gasoline, diesel, and solar.

What I find to be particularly inspiring about Caterpillar is how they developed equipment for specialized needs: tractors designed for hillsides instead of flat farmland, for example, or smaller and more maneuverable vehicles for orchards. Today they build equipment for arctic conditions as well as desert environments. In fact, Caterpillar has even teamed up with NASA to design lunar vehicles.

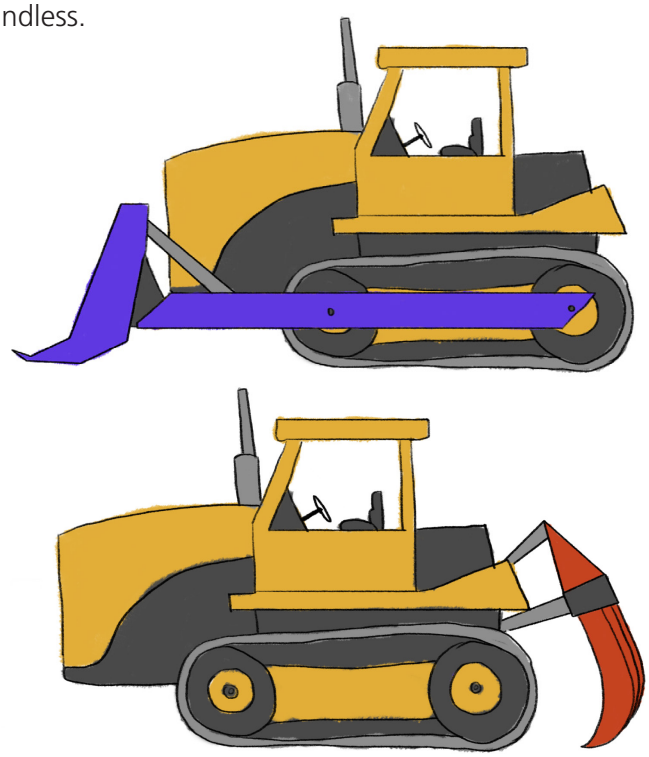
Another especially interesting aspect is Caterpillar's development of various accessories. Originally farmers purchased a tractor and subsequently added components, transforming the machine into a road grader, front-end loader, or bulldozer. These functions were interchangeable increasing their capacity and enabling their machines to tackle diverse tasks.

Caterpillar operated with duality. While they focused on improving the performance of their core products (speed, efficiency, cost-effectiveness) they also addressed specialized and niche needs. They aligned their mission with the jobs that people need to get done. This enabled them to support emerging industries like mining, highway construction, military, and urban development.



Consider how libraries might apply this concept to instruction. We have a core audience with needs related to information literacy, but there are supplemental areas, such as media literacies that could serve niche audiences. An entire college could choose to emphasize something like visual literacy or digital citizenship creating an entirely new need that the library could fulfill. Like Caterpillar, we don't want to be pigeonholed and instead should be on the lookout for underserved populations. We want to position ourselves as partners in the knowledge infrastructure, not just as purveyors of information.

My dean compares our work to the chemical conglomerate BASF with their tagline "*We don't make a lot of the products you buy. We make a lot of the products you buy better.*" Similarly, the design firm IDEO describes themselves in this manner: "*We help organizations build creative culture and the internal systems required to sustain innovation and launch new ventures.*" To me this is a large portion of our work in libraries, and this type of thinking represents growth potential. What needs do faculty have while working on grants applications or scholarly publications? Data? Contracts? Permissions? Storage? Virtual Environments? And what about on the instructional side? New pedagogies? New classroom environments? New social tools and media? Our engagement possibilities are truly boundless.



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A big part of business model innovation comes from identifying underserved or unserved needs around campus. Which populations don't receive a lot of attention? Do people have issues that no one else is addressing? Are there niche groups that others are ignoring or simply don't have time or functionality to handle? For example, a writing center that I've worked with found that international graduate students were some of their most frequent users. This insight opened up an entirely new audience resulting in the development of a specialized program.

As libraries shift from a collections-oriented perspective toward a more engagement-centered model, new ways emerge to help our communities thrive. While some argue for a shift from gatekeepers to gate openers, I advocate we push further by reorganizing ourselves as creative partners.[23] Venture capital firm Y Combinator provides an aspirational model. Not only do they offer seed money to startups, but they also help with ideation, advising, contacts, product development, and a cohort based seminar network. This shift not only requires us to think differently, but requires our communities to think differently about our role as well.

I encourage my staff not to ask "how can the library help you" but instead to inquire about the challenges people are encountering, the problems they are facing, and the types of projects they wish they were working on. I want them to think like designers who are constantly looking for problems. This encourages them to develop solutions, rather than approach matters from the point of view that the library already has the solution and that we just need to fit peoples' needs into our pre-configured offerings.

By aligning the utilities that libraries provide we can address all types of matters. These core library components include expertise in publishing, knowledge production, logistics, planning, inventory control, metadata, literacies, pedagogy, graphic design, data, usability, visualization, curation, licensing, and so forth.

By sharing our expertise in these areas we can uncover new ways to provide value to our communities. For instance, my library is developing a reputation for supporting collaborative environments. We've been invited to consult on other spaces around campus including residential commons, classrooms, and a biotech facility. We have been able to take the principles we've learned in our areas and apply them to a different context. Sharing these insights helps shift the way that our community perceives us.

Here are a few more examples highlighting this utility morphing approach:

Last summer a colleague and I visited with campus administrators to talk about changes in the library but also to understand how their units were evolving. We mentioned open source journal and conference publishing software that was just getting off the ground. One college was particularly interested but surmised that this could fulfill a different need. They wanted to use it as a grant writing utility allowing their staff to contribute different parts to an application, such as financial, technical, and administrative components. The college realized grant seekers needed a more centralized system to help move submissions through the pipeline. While this wasn't our intentioned use, it opened our minds to an unmet need.

Another example surfaced during conversations with our campus Career Center. While these units typically offer support to students seeking jobs, an emerging trend is to rent suits to use at interviews. The staff working on this project has many needs that are complementary to core library functions: inventory control, logistics, metadata and cataloging, and a searchable interface. They essentially want to run a library for professional clothing. This program affords us an opportunity to apply familiar technical service skills within a new context.

This semester, two faculty members from different departments approached me with pedagogical requests. They both wanted to incorporate blogs, mobile apps, and other digital tools into their courses. While others on campus provided insights into best practices and some technological guidance, what the professors really wanted was help in planning assignments and figuring out processes for student engagement. They also required some basic web programming. While this last activity is currently a niche service, it could easily grow into a more defined part of our service portfolio. Many instructors on my campus are looking to break from the learning management system and delve deeply into a social web environment. Can we help them explore these boundaries?

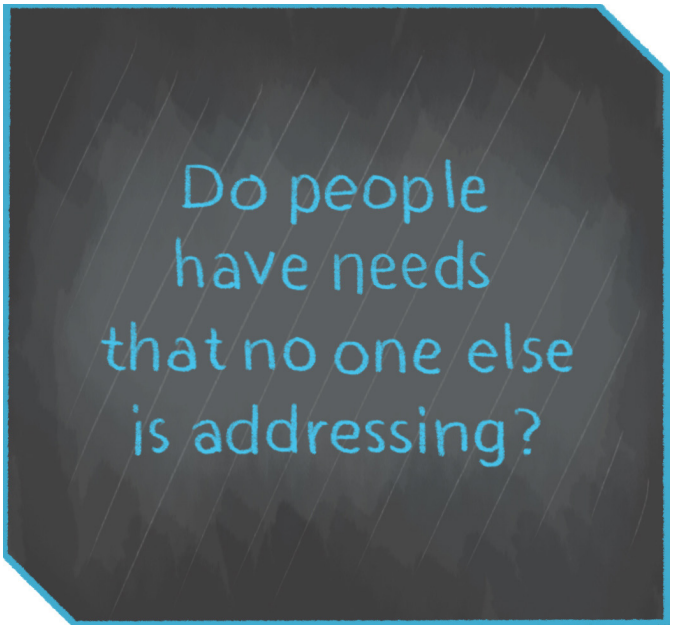
CONSTANT CHANGE: eye for innovation

Another company that inspires me is Corning; they embrace constant change as part of their organizational ethos and constantly reinvent themselves.[24] They had early success manufacturing light bulbs for Thomas Edison, bringing artificial light to the masses. More recently they worked with Steve Jobs to place Gorilla Glass into the hands of millions of iPhone users.

Corning relies on a robust R&D program to develop breakthrough innovations. This research includes everything from cookware and television tubing to catalytic converters, windshields and fiber optics. Their strategy isn't simply to make glass better, but to imagine how glass and related materials can solve industrial problems.

So, how can we position ourselves for constant change? How do we battle the preconceived notions of our users? How do we address the functional fixedness of some library employees? How do we prevent institutional memories from defining what a library is supposed to do? How do we learn to recalibrate our mission? How do we move beyond the mere migration to new formats and instead migrate to new capacities?

These tough questions will yield varied answers. When I speak at conferences administrators often ask, "How can I motivate my staff to embrace new things?" and librarians and staff wonder, "How can I get my administration to let me try new things?" We're in a challenging time when new identities are being forged. For some it is very hard to let go-- in fact, it is a type of grieving process that occurs. And yet others experience impatience; we're not moving fast enough.



There's no magic bullet, but we can work toward developing a culture that appreciates and aspires to innovative. Organizations like Corning, Proctor & Gamble, Google, and Xerox PARC thrive with R&D because of their organizational structure. Successful innovators bring together people from different disciplines with different skills and perspectives, and let them tackle problems. Some of the basic constructs we can absorb from groups like this are how to forget, borrow, and learn:[25]

- Don't be insular – include users and outsiders on decision-making
- Don't assign status based on size – larger doesn't mean better
- Rearrange moving parts – break silos by getting different people working together
- Build a new dashboard – how should we measure performance going forward?
- Promote new thinking about success – create a unique set of beliefs about success and reinforce them constantly
- Don't try to mix oil and water – old metrics and practices likely won't work with new initiatives
- Do less, faster – simplify plans but plan more often
- Measure what you don't know – identify useful metrics for resolving critical unknowns
- Analyze through a new lens – experiments are dynamic and can lead to information and insights beyond current operations

What does this look like in practice? Fujifilm provides an interesting contrast to Kodak.[26] The Japanese company adopted a startup mindset of *make it, launch it, fix it*, whereas Kodak was slow to change and sought to develop perfect products. As the demand for photographic film plunged, Fujifilm developed a three-pronged strategy: "squeeze as much money out of the film business as possible, prepare for the switch to digital, and develop new business lines."[27]

Fujifilm used its expertise in chemistry and engineering to enter growth areas including LCD panels, computers, television sets and other electronic devices, as well as cosmetics and medical applications. They moved from being a film company to a high-tech products company by applying its core competencies into new areas. Similarly, Facebook is evolving from a social network to a social operating system. Google is evolving from a search engine and advertising channel into a lifestyle company.

BRAVE NEW LIAISONSHIP:
new roles for new times

At Virginia Tech we are dabbling in R&D through the implementation of Hubs.[28] These thematic teams explore emerging trends and prototype service applications. We formally recognize the benefit of R&D and are using it as a way to enhance current services as well as to develop spinoff operations. For instance, we have an emerging literacies program with the objective of embedding fluencies in niche areas like financial, medical, nutrition, and civic literacy into various aspects of the curriculum. The team is tasked with designing assignments, generating partners, and mashing up disciplines. This work is separate from our core instructional program and represents new opportunities for the library.

The Association of Research Libraries publishes an ongoing series chronicling the evolution of liaison roles.[29] Instead of a one-stop-shop model, a multitude of individuals now work directly with students and faculty. Some librarians provide instruction or collections support, while others consult on publishing or data management needs. Some liaisons might be programmers or designers or instructional technologists or informaticists. The classic liaison model cannot address all of the diverse needs that our community demands, especially at research institutions. We are striving to recognize that there is a wide range of potential to create and deliver value.

Our future will be defined by how well we understand our users. This ongoing process requires us not only to behave differently through the accumulation of new skills and capacities, but also to be able to think differently about what we do, who we are, and how we help. A critical step includes moving beyond simply providing traditional services and instead learning to probe for new possibilities:[30]

» Why are our current services being used?
» What are people hoping to accomplish?
» What problems do we enable them to solve?
» What problems do they have that we can't or aren't currently solving?
» What services are others providing that we could do?
» What services are we providing that others could do?
» Are there niche areas that are underserved?
» Are there certain populations completely unserved?
» Are there ways to apply our expertise within new contexts?
» What are people doing before and after using our services? Is there a way to bundle these needs together?
» When we tell people "no" do we reflect on why not and consider amending our policies or providing alternatives?
» Who should we be partnering with?
» Who are we competing with?

A company that is excellent at asking these types of questions and turning them into opportunities is PetSmart. They constantly examine the lifecycle of pet owners and strive to fulfill their needs. PetSmart offers a wide variety of small animals and also partners with local rescue groups. You can buy accessories like food, toys, leashes, beds, cages and so forth. They also offer shots, checkups, and other veterinarian support, as well as grooming, training, and boarding services. Some stores even host social activities for pet owners as well as seasonal events like pet photos with Santa. PetSmart excels at providing a total support network for all the diverse needs of a particular population.

What might this model look like for us? What's the lifecycle of assignments that students are working on? What's the lifecycle of a digital humanities grant, a service-learning project, or a biological experiment? What about an art installation or a digital exhibit? What about a semester long program in a live-learn community? Or how about the process of transforming an idea into a patent? Consider all the unique steps involved with completing any one of these objectives. Are their multiple roles that libraries could fulfill?

People all over campus have diverse needs; we should not let our imaginations limit us. How can we help them advance the things they want to accomplish? Our goal should not be solely on improving our services, but constantly questioning what services we need to continue offering – or offering in a modified manner-- and which ones we need to launch in order to help us advance the needs of our communities.

CONCLUSION: the tale of two gyms

There are two gyms in my town with very different business models. While they both aim to promote fitness, they create and deliver value in unique ways. Both of them charge subscription-based memberships and offer a variety of weights, machines, and cardio equipment. Their product lines are more or less the same. But where they differ is in their operating philosophies. One of them is a classic "weight" gym that emphasizes resistance training, while the other provides minimal weights and a greater emphasis on treadmills, bikes, and ellipticals. The first gym offers trainers and classes, while the other one doesn't. The second gym has multiple locations open 24-hours, and it costs a little more.

As an employee at Virginia Tech, I actually have a third option: free access to a campus gym. But since that facility is often overcrowded I joined the 24-hour gym. After a few months I found myself skipping workouts and eventually I let my membership expire. A year later I joined the other gym, the one with trainers and heavier weights. While it does get busy, I find myself more dedicated. I'm working with a trainer, and my experience has caused me to reflect on how this facility creates and delivers value. The trainers provide expertise—how to use the equipment, how much weight to lift, the proper form, and so on. They provide nutritional support and planning. But most importantly, they offer motivation. This is the secret ingredient that attracts me as a customer.

I could get workout information online and recipes from a book, and I could download an app that recommends fitness plans. But a trainer-member partnership confers something intangible-- it's a form of positive peer pressure, but it is also a commitment on my part. Being surrounded by others who are pushing themselves is inspiring and keeps me coming back every week. I realize now that I'm not buying access to a gym, I'm buying the outcome of better fitness. I'm not hiring my trainer to help me work out, I'm hiring her for motivation.

Libraries operate in a similar context. We provide tools that people need for scholarly, creative, and cultural endeavors. From collections and spaces to classes and equipment, libraries are knowledge infrastructures. Beyond the physical and digital products that we provide, though, we foster some intangible qualities. When you are in a room filled with people thinking, designing, and sharing, it has an impact. Seeing others working hard on their assignments inspires you to work hard as well. An energy—a learning energy-- fills our buildings. It's why people are there. They could easily access books and articles from their rooms, and many do, but there is something unique and perhaps even magical about libraries. They bring people and ideas together and connect them in ways that would otherwise be impossible. Librarians enable this shared experience to thrive; we're curators of this creative commune. And it all hinges on our ability to help people accomplish the tasks they need to get done.

While physical spaces and what we place within them are vital considerations within our business model, they are not the only components. Our online collections and related scholarly tools will continue to be a growing part of how we impart value. Access to information is foundational, but the real danger that we face is limiting ourselves to a role as provisioner.

So what business are we in? Perhaps it is the relationship business: the ongoing interactions enabling personal transformation. The library is an experience, not a building, website, collection, or suite of services. It's the totality of those parts working in unison. That's the foundation of our future.

The objective of this essay is to stimulate thinking about the role of an academic library and to encourage leaders to consider more broadly the methods we use to create and deliver value. This is a challenging time for us as budgets are unpredictable and the outlook is largely unknown in terms of digital publishing, online learning, and other related areas. But within this chaos is the perfect opportunity to take risks, to be bold, and to reimagine what we need to do. It's actually not so dangerous as it sounds. In this paper I've tried to outline a single theme: we should define our success by the success of our users. Their accomplishments are a reflection of our work.

In order to become different types of organizations we have to think and behave like different organizations. This disruption involves exploring, developing, and implementing new models, new skills and attitudes, new metrics, new ways of looking at old problems, and new approaches for new problems.

In some ways we are becoming more like technology companies. We employ software developers and engineers. We hire multimedia experts and interface designers. Our collections are rapidly becoming more digital. We're writing code, launching software, and making contributions to the technological infrastructure on our campuses.

In some ways we're becoming more like consulting firms. We help people plan. We help them build ideas, whether that means a term paper, a manuscript, a

patent application, a website, or a video production. From copyright and licensing to logistics and project management, librarians are critical collaborators

In some ways we're becoming more like real estate developers. We are stewards of prime space on campus. Our task is to optimize these locations by providing a nimble mix of resources for a multitude of users. From media labs and collaborative zones, classrooms, cafes and quiet reading rooms, this is our storefront. This is how we enable interactions. This is how we bring people, ideas, technology, and collections together.

I'm not saying that we should operate exactly like technology companies, consulting firms, or real estate developers, only that we could learn a lot from these types of organizations. How do they deal with similar problems that we're facing? How do they incubate and implement ideas? What trends are they watching? What services are they planning? Who are their partners? What are they worried about? What are their customers trying to accomplish? And how do they perceive the future? These are important questions for us, too.

If we want to be perceived differently then we have to act differently. We need to use new language when we describe libraries. We need to position ourselves as leaders, contributors, and collaborators. We need to be creative partners and cofounders of new ventures. We need to be a reliable utility within the intellectual infrastructure. This degree of change requires us to devise and iterate new business models, new services philosophies, and new tactics and strategies. We need to discover underserved populations and unserved needs in our communities. We need to expand beyond a role as service providers and build our credentials as solution developers. And lastly, we need to invest more heavily on understanding the intentions and "jobs" of our users; our success should be measured by their outcomes.

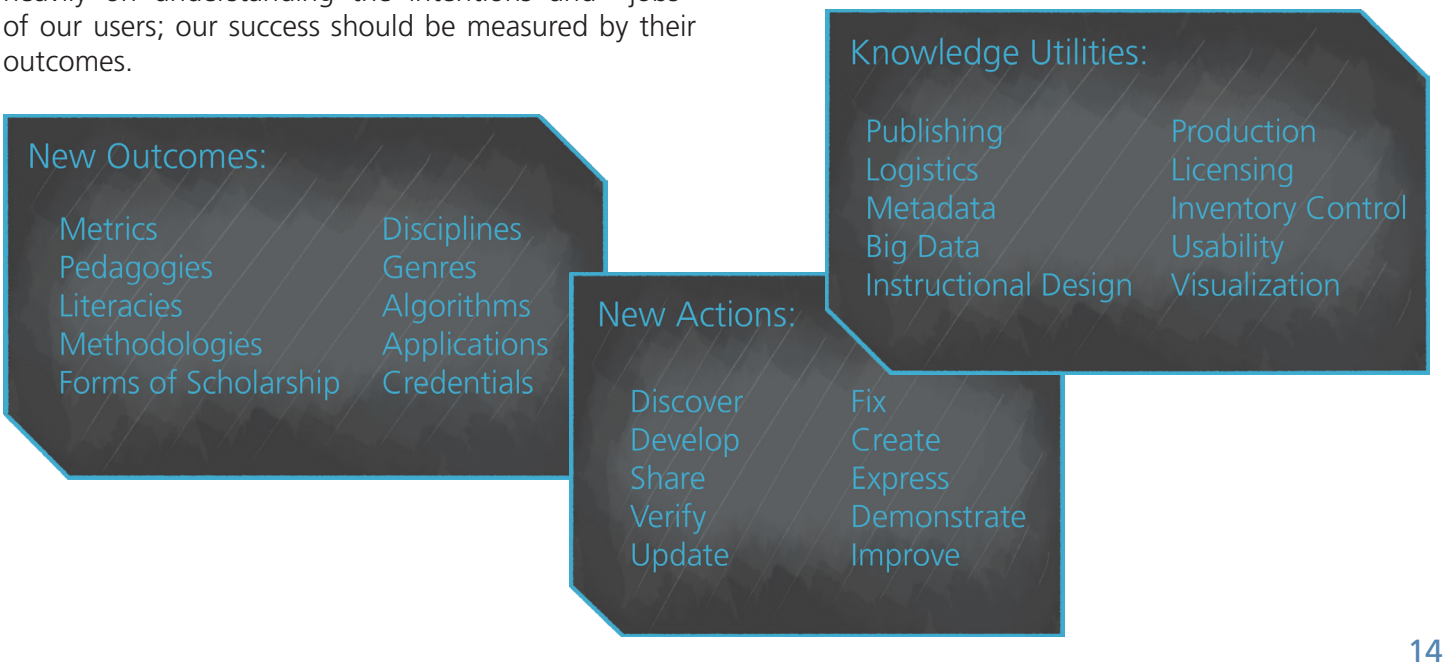
AFTERWORD:
"Why do people use the library?"

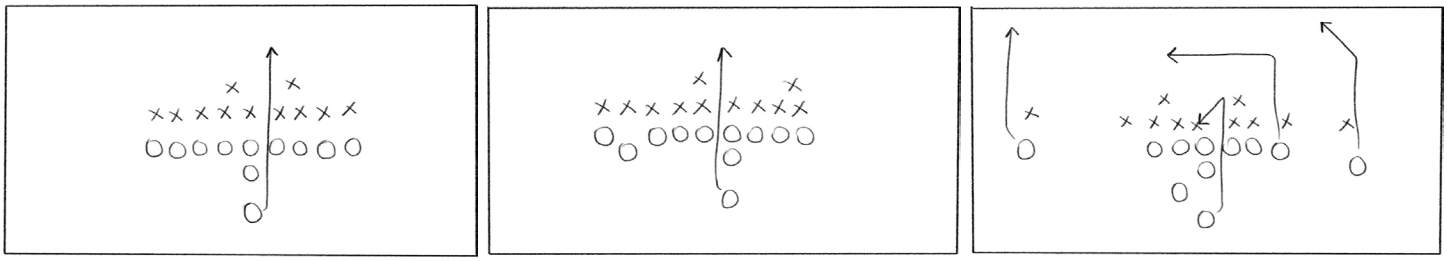
While writing this paper I texted my friend mentioned in my introduction who toured the library with me. I asked if he recalled our conversation—he didn't. I told him that it left an impression on me and that only now was I able to fully respond. The reason people use the library is because we transform the way they experience knowledge—how they find it, access it, use it, contribute to it, and share it. The library is a capacity-building enterprise. It is a platform for incubating ideas and a catalyst for getting things done.

He remarked "I thought you just provided eBooks now." I decided to let it go, but hopefully this paper sparked some new ideas for you. The goal of my writing is always to ask new questions and to reframe older ones. How we go about creating and delivering value to our users is important one to ask. In fact, I believe that the future success of libraries will not be measured by the collections they are able to provide but by the business models they devise and implement.

Some recommended readings:

- *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers.* (Osterwalder)
- *The Business Model Innovation Factory: How to Stay Relevant When the World is Changing*. (Kaplan)
- *Service Innovation: How to Go from Customer Needs to Breakthrough Services*. (Bettencourt)
- *Ten Types of Innovation: The Discipline of Building Breakthroughs.* (Keeley)





EPILOGUE: librarians as product developers

1906 was a pivotal year in the history of college football; it was the first time that a forward pass was legally part of the game. Prior to that, football resembled rugby where players muscled forward running on every down. The elite teams failed to embrace the passing game because their success was determined by having the biggest and strongest players who could plow downfield.

In the 1907 season however, the game changed forever. The Carlisle Indian Industrial School, a small college designed to "westernize" Native Americans, perfected the forward pass.[31] Their players were faster and more nimble compared to other teams. And that season they shocked the football world by beating many of the top schools.

The passing game changed everything about the way that football was played. Offense. Defense. Playbooks. Schemes. Rules. Penalties. This revamped sport required new specialized positions, such as cornerbacks and wide receivers. It reinvented the role of the quarterback as the playmaker. It added more excitement for fans because any play could be a heroic touchdown pass. But more than anything it changed football's infrastructure. What had worked before didn't work anymore. New knowledge was required. Teams had to experiment and learn from their mistakes. They could not rely on old metrics but had to develop new practices, benchmarks, and techniques in real-time. The parameters of the game had changed and everyone had to adapt simultaneously.

I think we're on the verge of something similar within academia. New forms of teaching and learning, combined with new forms research, scholarship, and publishing, combined with new forms of media and expression are resulting in a game-changing era for higher education.

Joan Lippincott, Associate Executive Director of the Coalition for Networked Information (CNI) reflects on this from her own experience.[32] During her undergraduate program she was interested in studying the impact of American founding fathers on the French Revolution. Her thesis advisor talked her out of it; noting that access to such correspondence was impossible. Today, resources such as HathiTrust, Google Books, and the Digging into the Data have made such inquiries more feasible. In fact, Lippincott notes that Stanford's Mapping the Republic of Letters provides just the type of information that might have enabled her to develop that topic.

Research that was impossible years ago is now imaginable because of the resources that exist today. Networked knowledge has expanded conversations and ignited possibilities. Libraries and their partners are enabling students and scholars to ask new questions and to tackle old problems in new ways. Our future will be filled with fertile and perhaps unimaginable collaborations resulting in the development of new tools, disciplines, methodologies, metrics, pedagogies, techniques, workflows, genres, art forms, practices, literacies, algorithms, interfaces, interpretations, formats, communities, programming languages, credentials, applications, distribution channels, frameworks, solutions, services, and business models. People will be able to investigate new problems and ask questions that have never been asked before. I think we're on the verge of the most exciting era yet in the field of librarianship.

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