Thank you very much. I’m proud to be part of this panel with such thoughtful and distinguished colleagues.

I’ve been leading our library at Cal Poly since 2011. In 2014, we we completed a library master plan with Shepley Bulfinch, and I’ll share how we went about this and what we’ve learned.

IMAGE CREDITS: Cal Poly San Luis Obispo; Robert E. Kennedy Library
This is an overview of what I’d like to share today: (~14 min)

briefly, talk about libraries as an interface where learning happens - 1 min
share a bit about our Institutional setting – 3 min.
outline the goals and achievements of our work in 2014 to create a Master Plan– 5 min.
offer some examples of the Master Plan in action today - 3 min.
summarize what we’ve learned from our process – 1 min.
and offer a few items for further reading - 1 min.

IMAGE CREDIT: Robert E. Kennedy Library
At its core, a library is an interface: a place of meeting and interaction. We think of libraries as primarily an information interface: a place where people meet and interact with information. That interface today is both digital and physical.

IMAGE CREDIT: Robert E. Kennedy Library
What information will people find in this interface? Traditionally, information in the university library “tent” includes books, documents, journals, reference books, and media - things that support the university’s curriculum and research.

In addition people find unique and archival information in the library tent: information added locally by curators and collectors.

Other types of information in libraries are less obvious – experiential information from events and presentations; and information that emerges through inquiry, dialog, conversation and other social processes.

**IMAGE CREDIT:** [http://postalmuseum.si.edu/artofthestamp/subpage%20table%20images/artwork/landscape/Chautauqua%20Tent%20and%20Buggies/BigChautauqua.jpg](http://postalmuseum.si.edu/artofthestamp/subpage%20table%20images/artwork/landscape/Chautauqua%20Tent%20and%20Buggies/BigChautauqua.jpg)
All this information is used in learning. And we get quite a different picture of the library as an interface, when we focus not on forms of information at the library interface, but on the forms of learning and engagement that the interface makes possible.

Some of these forms of learning, especially those connected with the curriculum, are directed, sequential and predictable. Others are more iterative, episodic, serendipitous. Either way, the learning may be other-directed, or self-directed; group, or individual.
Scott Bennett, former university librarian at Yale, has written for many decades about planning library spaces. In a recent essay Bennett makes the point that we should not mistake the things of learning, for learning itself, and that we should plan libraries around our understanding of “ownership and presence” in learning spaces.

While we didn’t begin with as clearly articulated a perspective as this, our institutional context led us to this approach, when we began our work on our master plan.
Cal Poly in San Luis Obispo is a selective public comprehensive polytechnic located in a small urban area about halfway between San Francisco and LA.

IMAGE CREDIT: Robert E. Kennedy Library
Cal Poly’s Kennedy Library is a 35-year-old, 5-story building with about 150K usable square feet. It was designed by the architect Robert Marquis in the late 1970’s, for a campus of 16 thousand students, in an era that was both pre-digital and socially progressive.

IMAGE CREDIT: Special Collections and Archives, Robert E. Kennedy Library
Today Cal Poly’s student population has increased by 25% to 20,000 students; the library’s 2000 seats accommodate only about 10% of those students. And those seats are crowded and they are heavily used: more than 85% of our students visit the library each week and we count an average of 71 visits per student per year. In our annual student surveys students consistently ask for more seating for study – both for quiet study, and for collaboration in groups.

DATA/IMAGE CREDIT: Robert E. Kennedy Library, Student Library Advisory Council 2016 survey results
In 2010, our print collections included over 800K physical items. Most were stored on site, with some in near-site storage. In 2010, we began aggressively culling print materials that no longer circulate, opening up space for learning. In three years, we reduced those print collections by 300,000 items.

In 2013, we contracted with Sustainable Collections Services to analyze the impact of that work. Their analysis demonstrated that our reshaped collection, is far from unique (90% titles are held by more than 50 other libraries). BUT, our collection is actively used (60% of items had more than 3 circulations).

We compare well in the CSU system, where a 6-campus peer group found that only 20% of their items had more than 3 circulations.

Our collection choices were also informed by the Ithaka faculty survey, which told us two important things about our faculty and our collections:

first, our faculty strongly favored digital books for the depth and breadth they could add to our print collections; and

second, our faculty placed surprisingly high value on providing their students with opportunities to engage with unique, archival materials from the library.

These collections include not only our institutional records, but invaluable manuscripts and papers of the Julia Morgan archive - and they are heavily used by students and researchers. As we were well aware, our special collections and archives were way beyond capacity and had no temperature or humidity controls.

So this was the backdrop for our master plan effort in 2014 – some fundamental decisions were needed about the
But we also wanted to create interfaces with all the other kinds of information we’ve added to the library tent. In fact, student engagement and learning at Cal Poly was a dominant consideration in planning library spaces.

Cal Poly’s style of learning is extremely active and hands-on – “Learn by Doing” is the campus motto, and students arrive on campus expecting to be actively engaged in learning, doing, and making.

Our campus library was a de facto academic hub for the campus, with recently added and heavily used university computer labs, and five important academic partner programs.

Cross-disciplinary interfaces were also important to us, because we are a polytechnic. Our students highly value exposure to other students’ disciplines, and they regularly engage in experiences such as project-based learning and co-curricular learning that involve crossing disciplinary boundaries.

IMAGE CREDITS: Robert E. Kennedy Library
Before we began the master plan in 2014, we had already started to do several big things to improve the library as a space for learning and engagement. Probably the most dramatic change was adding a café in 2009.

IMAGE CREDIT: Robert E. Kennedy Library
At the same time, we completely reorganized our print collection (the first BIG SHIFT), to open up an entire 2nd floor wing for collaborative work spaces including our first glass study rooms, or "fishbowls".

IMAGE CREDIT: Robert E. Kennedy Library
We also updated and expanded a computer lab, and opened it up 24x7; and created a new data and GIS studio.

IMAGE CREDITS: Robert E. Kennedy Library
And we updated and expanded our atrium and outdoor balcony seating, giving us over 100 new usable exterior seats in our temperate central coast climate.

IMAGE CREDIT: Robert E. Kennedy Library
These dramatic but ad hoc transformations were what brought us to the decision in 2014 to undertake a library Master Plan in partnership with Shepley Bulfinch.

IMAGE CREDITS: Shepley Bulfinch (2014)
Our goal was to create a systematic plan that was informed by holistic thinking about all library programs, and centered on learning. We needed to understand how far we could push the capacity and suitability of the building for new ideas and models of learning.

IMAGE CREDIT: Shepley Bulfinch (2014)
Our master plan was designed to help us achieve some important capacity goals: reducing our print footprint; increasing our Special Collections capacity; adding more seats; and increasing the number of group study rooms.

IMAGE CREDITS: Robert E. Kennedy Library
As of summer 2016, we’ve met 3 of these four goals: we’ve reduced our print collection by nearly 33%; added 16% more user seats; exceeded our target for adding new group study rooms, and added 2000 linear feet of temperature-controlled storage to our special collections capacity.

IMAGE CREDITS: Robert E. Kennedy Library
These quantitative achievements have been satisfying but our real achievement has been improving the quality of the learning environment.

How we improved the learning environment was based on what students told us they valued most. Through annual surveys and ongoing dialog, students told us that they wanted:
- increased openness and better navigability;
- exhibits, events, and dynamic displays that stimulate, inform, and inspire
- more choices and varieties of comfortable, spacious, self-service, technologically-supported group and individual learning spaces
- and better thermal comfort in a non-air-conditioned building filled with computers and people.

IMAGE CREDITS: Robert E. Kennedy Library
We’ve made great progress on some of these goals. We have changed the building entrance and color scheme, and linked digital and in-person building navigation. We created several actively used community galleries for exhibits, and use library meeting spaces for a growing variety of campus events. We created a computer lab that supports active learning principles; we created a simple media production space; and we’ve expanding our data and GIS studio services into a 24-hour peer-led hub for every flavor of digital scholarship. And finally, we’re working with our faculty and student experts, campus facility experts, and industry, to develop an energy model and a portfolio of affordable initiatives to improve the thermal comfort of the building.

IMAGE CREDITS: Robert E. Kennedy Library
These steps have given us a greater capacity for things, for people, and a better environment for learning. But the real question is, how is student engagement manifested in a library that is redefined not as a space, but as an interface, for learning?

We feel we've been successful because we see students are engaged in:
Crossing disciplinary boundaries
Joining together,
Encountering others,
Becoming, and
Risk-taking.

Here are a few of the ways we see students engaged in using the library as a learning interface. I have many examples, but will focus on just a few.
Our digital interface – with real-time physical seat and computer occupancy maps – allows students to visualize the entire physical, social, and computing environment of the library, and choose the best place to work.

IMAGE CREDIT: Robert E. Kennedy Library
When relocating the architecture book collections, we used low shelves so that we have generous, visible spaces where students can show off their architectural models – linking learning and doing.

IMAGE CREDIT: Robert E. Kennedy Library
We've added a digital piano near our collection of sheet music and music books.

IMAGE CREDIT: Robert E. Kennedy Library
Our library exhibit spaces are increasingly filled with student and faculty work. We’ve found our most powerful exhibits have shared and celebrated the stories of students’ diverse identities. What began as a faculty research initiative as part of a library-sponsored exhibit, I Am Cal Poly has now become an annual campus celebration and even a slogan for incoming students, touching hundreds and even thousands of students and their parents.

IMAGE CREDITS: Robert E. Kennedy Library
Our Data Studio, under the guidance of our science librarian has become a campus center for STEAM – STEM + Arts – through events that demonstrate the power and importance of combining creative and artistic vision with data, and adding historical and ethical inquiry to our understanding of technology.
We’ve used light-hearted technologies like Vine to share the experience of using our artists book collection, inspiring classes of graphic communications students to create their own artists books.

VIDEO CREDITS: Robert E. Kennedy Library
Students are actively engaged, as scholars, with our tangible archives in the process of digitizing them for others.

IMAGE CREDITS: Robert E. Kennedy Library; Special Collections and Archives
The mechanics of putting old sound into new digital bottles is as fascinating to student as to us: touching the old technology is a way of reaching into the experience of earlier generations.

SOUND CREDIT: Robert E. Kennedy Library
The library offers spaces for public conversations – some in the form of events, some as interviews – where students are using technology both to craft the experience they have imagined, and to share with others.

VIDEO CREDIT: Robert E. Kennedy Library
The library invites students to engage in reading as a social experience through reading aloud to children from the campus children’s center, or by publicly claiming their own favorite banned books.

Many of our events and exhibits include the opportunity to not just listen or look, but also to participate in actively creating something new: artist Tim Jenison displayed his work and also did a live demonstration and explanation to our students about how he uses technology to paint like Vermeer.

IMAGE CREDIT: Robert E. Kennedy Library
Students work 24x7 and we’ve doubled the 24 hour study space we established in 2010, while turning this wing of the first floor, into a digital research hub, that will be joined later this fall by...

IMAGE CREDITS: Robert E. Kennedy Library
... the Innovation Sandbox – a space for tinkering, invention, peer learning, and making. Now in the College of Engineering, the Innovation Sandbox will more than double in size and be easily accessible to students from every college.

IMAGE CREDIT: Robert E. Kennedy Library
In conclusion, what we’ve been able to do at Cal Poly can be seen as one path towards using a formula that Douglas Thomas and John Seely Brown offer for supporting the future of learning:

IMAGE CREDIT: Robert E. Kennedy Library

REFERENCE: Douglas Thomas and John Seely Brown: A New Culture of Learning
In their 2011 book, A New Culture of Learning, they call for two elements. The first is the information. But the second is the interface.

(1) A massive information network that provides almost unlimited access and resources to learn about anything.

(2) A bounded and structured environment that allows for unlimited agency to build and experiment with things within those boundaries.
Both are essential, and they not only co-exist, but should richly interact, in the new culture of learning.

(1) A massive information network that provides almost unlimited access and resources to learn about anything.

(2) A bounded and structured environment that allows for unlimited agency to build and experiment with things within those boundaries.

It is the combination of the two, and the interplay between them, that makes the new culture of learning so powerful.
Our effort to find and follow a learning-centered model for planning collections for learning, has taught us a few things. One of the things that is both obvious and important is that the needs that the library has responded to are not library needs, but student needs, and therefore UNIVERSITY needs.

As organizations that understand information in all its forms, digital and tangible, libraries understand that students need:
- flexible, adaptable, academic spaces
- spaces open for students to manage, control, change to fit learning needs
- spaces equally open to everyone
- spaces that bring disciplines together
In closing, I’d like to leave you with these five references that in different ways frame some of the key issues to consider in planning libraries for learning:

Scott Bennett – on libraries as “agencies of learning.”

Malcolm Brown – on self-empowered and informal learning through the lens of campus IT

My presentation on our people- and learning-centered approach to digital library planning.

Doug Thomas and John Seely Brown on creating structured learning environments needed in a world of abundant information that is constantly changing.

And finally, the UK on using activity data to help us understand access, attention, and activity as they reflect learner intent, pathways, and investment.

Thank you very much!

FURTHER READING:

5. UK/JISC. *Activity Data*. http://www.activitydata.org/