ARL STRATEGIC THINKING & DESIGN

ARL membership meeting
Columbus • May 5–8, 2014
A Belief

The challenges we face are both fundamental and substantial.

We have moved from an era of equilibrium to a new normal—an era of constant dis-equilibrium.

Our ways of working, ways of creating value, & ways of innovating must be reframed.

John Seely Brown
BEFORE 1991
TWO MAJOR SHIFTS IN THINKING

1. From information as curated and cataloged with incremental knowledge construction to information as ubiquitous, pervasive, and knowledge construction as a fast and moving target.

2. From 20th-century learning as push-based along discipline lines with requisite authority and canons to 21st-century learning as pull-based, inquiry-driven, individually motivated, collaboratively constructed, and with lifelong potential.
THREE MAJOR NEW FORCES

1. WWW creates an unprecedented volume of information – big data – and unprecedented connectivity – access to big data and to each other. how to make sense of this...

2. DIGITAL TECHNOLOGIES let us operate differently (from the digital humanities to digital 3-D fabrication) and EMERGING VISUALIZATION METHODOLOGIES let us see differently. a new (21st century) ontology is emerging.

3. We are engaged in A NEW SET OF CHALLENGES AND CONFLICTS without a clear set of solutions or end states. this requires crossing traditional boundaries of what we do and who we do it with.
IMAGINING BEYOND INCREMENTAL MOVEMENT FORWARD

A Belief
The challenges we face are both fundamental and substantial.

We have moved from an era of equilibrium to a new normal—an era of constant dis-equilibrium.

Our ways of working, ways of creating value & ways of innovating must be reframed.

The Competency Trap works against change!

- to produce a product family
- to see new patterns
- but what blocks one from seeing new patterns?

John Seely Brown
A Story of a Competency Trap (and a conceptual lock-in)

Clipper Ships facing off with the Steamship in 1800’s

Glenalvon  France II  Preussenn  Thomas W. Lawson
A Story of a Competency Trap (and a conceptual lock-in)

Clipper Ships facing off with the Steamship in 1800’s

LESSON LEARNED . . .

incremental change lands you on the rocks.
so what we are doing?
designing a SYSTEM OF ACTION to shape the future of research libraries
SYSTEMS OF ACTION

EL SISTEMA a program of social rescue at four scales
SYSTEMS OF ACTION

EL SISTEMA A STRUCTURE OF ADAPTATION:
“The idea of El Sistema must in no way be understood as something static. It is more of a structure in perpetual transformation and change, and a structure of adaptation according to circumstances – beautifully evolving.”
SYSTEMS OF ACTION

VISION
VEHICLE
CONCEPT
DESIGN
A NETWORK OF PARTNERS
SoA’s are collections of inter-related components that affect the way people do things. They are transformative in intent, affecting both explicit behaviors and embedded habits, and enabling small actions to affect a larger social ecosystem.
VISION: In 2033, the research library and university will be a rich and diverse learning / research ecosystem.
SYSTEM OF ACTION
THE RESEARCH LIBRARY

VEHICLE: The research library, which shifts from its role as a knowledge service provider within the university to become a collaborative partner that catalyzes evolution.
SYSTEM OF ACTION
THE RESEARCH LIBRARY

CONCEPT: The Research Library takes on new roles and partners with four layers of interaction.

DESIGN: System of Action Components.

NETWORK OF PARTNERS: New roles and new partners within a network of networks.
process
What is the role of the research library for the ecology of knowledge in 2033?

Why 2033? A space of permission to worldbuild.
ARL Strategic Thinking & Design
The October 2012 ARL Fall Forum opened with a rousing ovation for this talk by John Seely Brown: “Changing How We Think about and Lead Change” (PDF)...

http://www.arl.org/about/arl-strategic-thinking-and-design
STRATEGIC THINKING AND DESIGN PROCESS

Research (July 2013-March 2014)
- Data mining of strategic plans
- Interviews with directors of collaborative projects
- Stories taxonomy

Regional meetings with member libraries and other stakeholders interested in the future of research libraries (Oct 2013-April 2014)

Design Studio Work (Oct 2013-Feb 2014)
- Vision and Worldbuilding
- Designing a System of Action
REGIONAL MEETING VENUES

Minnesota (10.01.13)
ARL Fellows in DC (10.08.13)
Los Angeles (10.17.13)
Chicago (10.23.13)
Toronto (11.08.13)
Washington DC (12.04.13)
Houston (12.17.13)
Philadelphia (01.23.14)
Seattle (03.04.14)
Boston (04.22.14)
342 PARTICIPANTS

150  ARL Library Staff Members
87   ARL Member Representatives
16   ARL Member Institution Campus Administrators
  1   ARL Affiliated Organization (CNI)
26   Directors + staff of non-ARL Academic and Public Libraries
  1   Director of a Community College Library
  3   Press Directors (ARL Libraries)
16   Library Related Associations
  2   Museum Directors
  2   Federal Agencies
10   ARL Institution Graduate and Undergraduate Students
  8   ARL Institution Faculty Members
10   CLIR Fellows and Research Fellows
10   ARL Staff
STRATEGIC THINKING AND DESIGN PROCESS

Research Project

Inaugural Regional Meeting: Minneapolis

Regional Meetings
October-April
Major US and Canadian cities

Design Studios
5 total, every 3 weeks in DC

Draft Vision presented at February Board Retreat

Draft Vision and SoA plan presented at May Membership Meeting

Refine Vision and draft Systems of Action

Test draft vision and systems of action at April Regional Meeting
PROCESS TIMELINE

DESIGN STUDIOS

REGIONAL DESIGN MEETINGS

0 1 2 3 4 5 6

FIRST CONVERSATION
WORLDBUILDING - STARTING
WORLDBUILDING
WORLDBUILDING
WORLDBUILDING
WORLDBUILDING
3 WHAT-IFS
BUNDLING 3 WHAT-IFS, SOA
SYSTEM OF ACTION

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RETREAT 1
2 0

PROTOTYPING STORIES + VISION, STORIES + VISION GOALS
STORIES + VISION CHARRETTE
STORIES + VISION CHARRETTE
STORIES + VISION CHARRETTE
STORIES + VISION CHARRETTE
WORLDBUILDING
WORLDBUILDING
WORLDBUILDING
3 WHAT-IFS
process components
DESIGN PROCESS COMPONENT PARTS

1. FRAMING THE DESIGN PROBLEM

2. STORIES of “sharks in the water” and “cool cats” to discover patterns and anomalies

3. VISIONING CHARRETTE for imagining what the research library should be in 2033

4. WORLDBUILDING to build out that image across multiple domains

5. DESIGN STUDIOS in DC
1. FRAMING:
WHAT ARE WE AIMING AT . . .
and relative to the university . . .
2. STORIES:
LOOKING FOR PATTERNS & ANOMALIES
CREATING A TAXONOMY

SHARKS IN THE WATER

COOLEST NEW THING
3. WALL CHARRETTEs: WHAT IS THE ROLE OF THE RESEARCH LIBRARY FOR THE ECOLOGY OF KNOWLEDGE IN 2033?
4. WORLDBUILDING: IMAGINING COHERENT NEW CONTEXTS THAT SCALE
DOMAINS FROM ALEX MCDOWELL:

world
building
media
lab
DOMAINS FOR THE RESEARCH LIBRARY:

- Physical contact
- Digital contact
- Library
- Researchers
- Students
- Services
- Community
- Social/cultural place
- Physical space
- In
- Out
- Librarian
- Air traffic controller
5. THE DESIGN STUDIOS: BROADENING & FOCUSING WORK WITH A CONSISTENT GROUP OF PARTNERS
“WRITING ON THE WALL”
WORLDBUILDING
WHEN WE ASKED:

What is the role of the research library for the ecology of knowledge in 2033?

Why 2033? A space of permission to worldbuild.
THREE CRITICAL & PROVOCATIVE QUESTIONS EMERGED

In an era of Google Glass, what is the role of the research library?

What is the symbolic legacy of the research library and how do we update it for the 21st century?

How do we rethink the economics of the research library so that it can optimize its own evolution?
THESE LED TO THREE RECURRING ‘WHAT-IF’S

an augmented information lens?

• Downloading for personalized information access and use; uploading for provenance and enriched context.

a convener of ‘conversations’ for knowledge construction?

• an inspiring host; a boundless symposium; an incubator; a 3rd space both physically and virtually; a scaffold for independence of mind; and a sanctuary for freedom of expression

a global entrepreneurial engine?
TRENDS WE TOOK AS ASSUMPTIONS, 1

AKA “logic points”

That the research library of the future will be a mega-library at different scales; that it will aggregate vast amounts of data, text, and media-rich content.

That local collections and expertise will be increasingly valuable.

That technology will be ubiquitous and will function in a more seamless interaction between humans and machines; physical and virtual spaces will be more responsive.
TRENDS WE TOOK AS ASSUMPTIONS, 2

That the research library can and will increasingly unbundle itself from a predominantly service role to a single home institution.

That the research library has less inertia than the university. It can and should assume a leadership role in the evolution of the larger university system.

That a new financial model is necessary.
TRENDS WE TOOK AS ASSUMPTIONS, 3

That the *university of 2033* will be different, shifting:

- from stocks to flows—from courses to information on demand;
- from push to pull—from 4 years × 8 courses to endless content on demand;
- from content to context—from generalized to specific and contingent;
- from certainty to ambiguity—from facts and optimized methods to inquiry;
- from robustness to resilience—from domains to meta-disciplinary collaborations.
VISION
If the research library shifts from its role as a knowledge service provider within the university to become a collaborative partner
then it becomes a more valuable knowledge and service partner for the university, which is, itself, becoming more distributed and more connected.
And if we think about unbundling research libraries from single sites—single universities—then they can take on other roles and other partners.
TAKING ON OTHER ROLES AND OTHER PARTNERS:

AUGMENTED INFORMATION LENS
relationships with individual users

BOUNDLESS SYMPOSIUM
conversations within the institution

META-LIBRARY ECOSYSTEM ENGINE
conversations among networked institutions

COMMUNITY KNOWLEDGE MESH
societal role

LIBRARY SERVICES AS 4 LAYERS OF INTERACTION
AS AUGMENTED INFORMATION LENS:

- IN AN ERA OF GOOGLE GLASS, WITH INFORMATION ON DEMAND, THE RESEARCH LIBRARY’S ROLE IS TO FACILITATE INFORMATION **IN CONTEXT**
- DOWNLOADING FOR PERSONALIZED INFORMATION ACCESS AND USE.
- UPLOADING FOR PROVENANCE AND ENRICHED CONTEXTUALIZATION.
- DIGITIZATION OF EMBODIED EXPERIENCE
- EMBODIMENT OF DIGITIZED INFORMATION
AS BOUNDLESS SYMPOSIUM:
INSPIRING HOST, INCUBATOR, AND/OR SKUNKWORKS ENGINE FOR EXCHANGE—an active stimulator/orchestrator of conversations and projects

Bringing external stimuli and research partners into campus

- Providing space, technology, and strategic partnerships
- Direct engagement with faculty research and process: data analysis, process analysis, tools, technology
- Sometimes means leading, sometimes serving, sometimes partnering
- Being an active partner in research/discovery/exploration

A NEUTRAL 3RD SPACE WITH “EXPANDED CONSCIOUSNESS,” BOTH PHYSICALLY AND VIRTUALLY
AS META-LIBRARY ECOSYSTEM ENGINE:
ACTIVE ENGINE FOR EXCHANGES WITH OTHERS OUTSIDE THE INSTITUTION TO STIMULATE CONVERSATIONS AND PROJECTS

WHO: “LIKE” INSTITUTIONS AND RELATED INDIVIDUALS

- Other research libraries and their home institutions
- Research Teams
- Unaffiliated think tanks
- Independent scholars
- Cultural organizations
- Governmental agencies
- Corporate partners
- Media/journalists
- Unaffiliated individuals or organizations (out in the world) with which we have a relationship and they have an information need.
AS COMMUNITY KNOWLEDGE MESH:

- REINFORCING AND AMPLIFYING THE BROADER SOCIAL FUNCTION OF THE RESEARCH LIBRARY
- SCAFFOLDING THE FOURTH ESTATE
- WHO: UNAFFILIATED INDIVIDUALS AND GROUPS OF INDIVIDUALS
- LOCALLY FRAMED WITH ACCESS TO “ABOVE THE LIBRARY” RESOURCES
- A 3RD SPACE WITH PERVASIVE ACCESS
- THE SOCIAL WOVEN TOGETHER WITH ACCESS TO INFORMATION
PUTTING IT ALL TOGETHER

WHAT SERVICES ARE NEEDED FOR EACH ROLE?

WHAT SKILLS ARE NEEDED?
• Existing skills amplified; new skills; less critical skills

WHAT TOOLS ARE NEEDED?

PHYSICAL SPACE? VIRTUAL SPACE?

WHAT ARE THE RESOURCE ECONOMICS?

BUSINESS MODELS?
LIBRARY SERVICES AS 4 LAYERS OF INTERACTION:

AUGMENTED INFORMATION LENS
relationships with individual users

BOUNDLESS SYMPOSIUM
conversations within the institution

META-LIBRARY ECOSYSTEM ENGINE
conversations among networked institutions

COMMUNITY KNOWLEDGE MESH
societal role
THE ARISTOTELEAN CYCLE OF KNOWLEDGE UPDATED BY THE RESEARCH LIBRARY OF 2033

- Downloading with increased personalization
- Sensemaking through existing and new tools
- Working within communities of practice that extend beyond the academy
- Orchestrating and capturing conversations around work
- Uploading new knowledge with provenance and broader contextualization provided by conversations

PARTICIPATING AT EVERY STAGE
VISION
The research library engages in knowledge creation in a community of practice with differing degrees of expertise from novice to expert.

In 2033, the research library will have shifted from its role as a knowledge service provider within the university to become a collaborative partner within a rich and diverse learning and research ecosystem.
BEGINNING
a system of action plan
“IN 2033 OR AFTER . . . WE WILL NEVER HAVE ALL THE CONTENT NOR WILL IT MATTER.

WHAT IS OUR PLACE IN THE ECOSYSTEM? WHAT WILL MAKE US MORE VALUABLE?”

Tom Hickerson
SYSTEM OF ACTION COMPONENTS
Things and actions that are put into the system to affect the system as a whole, scaling change through emergent responses

1. COORDINATED MANAGEMENT OF COLLECTIVE COLLECTIONS - A PLATFORM FOR SHARING KNOWLEDGE THROUGHOUT THE ECOSYSTEM
2. SCHOLARLY PUBLISHING AT SCALE
3. ARL ACADEMY
4. BUILDING A BOUNDLESS SYMPOSIUM
5. A FIRST SUITE OF SMART LIBRARIES
6. INNOVATION LAB AND (VENTURE) CAPITAL FUND
COORDINATED MANAGEMENT
OF COLLECTIVE COLLECTIONS

A PLATFORM FOR SHARING KNOWLEDGE THROUGHOUT
THE ECOSYSTEM

A FEDERATED NETWORK OF PRINT REPOSITORIES
A FEDERATED NETWORK OF DIGITAL REPOSITORIES
A FEDERATED NETWORK OF DATA REPOSITORIES
A FEDERATED NETWORK OF ???
SoA component 1, 2

WHAT IT SOLVES FOR

- Collective investment that respects the local
- Governance—we coalesce around what we need to share
- Economic model at collective not individual level
IT’S ABOUT

- Access
- Retention
- Preservation
- Trusted relationships
- Internationally networked
- Exchange of expertise among practitioners
- Collective management with universal strategies
- Scaffolding an inter-operable way to describe collections
- Finding ways to get things done collectively (like Kuali OLE, Hathi)
COMPONENTS

- Governance
- Shared protocols
- Best practices
- Decision tree
- Trusted relationship models
- Descriptive financial model
- Transparency of who is doing what
- Systems of access (Shibboleth, ORCID)
- The ARL exchange: Systems of exchanges (like carbon credits)
SoA component 2, 1

SCHOLARLY PUBLISHING
AT SCALE (short + long forms)

SUPER-ACADEMIC
COMMUNICATION ECOSYSTEM

(bringing it back home)
WHAT IT SOLVES FOR

• The economics of the current model of publishing are unsustainable
• The flow and use of published information are at odds with the needs of the research enterprise
• The data behind the metrics of publishing, which influence decision making, are not controlled by the academy
IT’S ABOUT

• Shared-infrastructure at-scale “press” (including copyediting, design, and distribution)
• Unbundle current metrics—accelerates unbundling
• Driven by scholarly metrics
• Facilitates use/workflows that allow faculty to stay in control
• Intellectual assets (agile and traditional) are not locked into form
• Key component of institutional/disciplinary decision making
SoA component 2, 4

COMPONENTS

• Durable access
• Require irrevocable license to the university
• Shared learning “ecosystem”—is this different from publishing?
• Ability for quick turnaround
• Culture of rights institutionally blessed, unbundling, unfettering
• Sustainable financial models
• Experiment with a pilot
• Build a coalition of the willing
ARL ACADEMY

SPECIAL ACADEMY FOR FORMING LEADERS AND LEADERSHIP TEAMS

RESHAPING THE “PROFESSION” FOR THE 21ST CENTURY

THIS IS FOR “THE ARL TWO GENERATIONS OUT”
WHAT IT SOLVES FOR

• Creating a diverse field of practitioners with 21\textsuperscript{st} century skills
• Creating catalytic agents for the research library of the future
• Scaffolding those agents w/ a strong network of alumni + mentors
IT’S ABOUT

Creating a new cadre of creative leaders with skill sets in:
- New technologies
- Strategic thinking and design
- How to build a smart library
- Data mining
- 21st-century financial and funding models
- “Special” collections domain expertise

Creating an agency with pool of talent to be drawn on by libraries
SoA component 3, 4

COMPONENTS

- Use local expertise; pro-actively recruit talent
- Decentralized teaching model
- Develop a different kind of diverse workforce: thinking beyond computer scientists, copyright lawyers, deliberately engage w/others
- Partner with successful programs in adjacent fields
- Design the curriculum
- Create a coalition of partners
- Library school as partner
- Future specialists not just from the MLIS profession
- Deliberately and strategically engage with others
- A pro-active well-connected alumni network and mentorship program
BUILDING A BOUNDLESS SYMPOSIUM

Designing, funding, and building a prototype that provides new opportunities for:
- Meta-collaborations working on projects
- Conversations that lead to new insights
IT’S ABOUT

- Creating a new type of meta-collaboration
- Orchestrating meta-collaborations for working on projects
- Orchestrating conversations that build new insights, knowledge, and even fields (data ethics, for example)
- Helping disciplines to update themselves
- Helping individuals, teams, and disciplines to forge new intra- and inter-institutional partnerships
- Building agile and robust meta-institutional networks
COMPONENTS

• Space with technology for embodying knowledge
• Visualization labs, video and audio capture, modeling (things and systems; physical and virtual)
• Tools for everyone
• Symposium leader and team to orchestrate, stimulate, and support
• Campus partnerships
• Conversations and projects
• Defining a practice in action with projects and events
• Pop-up and flexible teaching environments
SoA component 4, 4

STARTING
• Broker a five-university experiment / prototype
  • A constellation of five that have a reason to work together
  • Each designing and implementing it locally in their own way
  • Urban / rural; different disciplines; public / private; large / small
  • Set criteria: the design "brief"
• Start with a few key disciplines that are working on complex —"wicked"—problems or just have the interest or need: (engineering, health sciences, psychology, environmental, theater)
  • look for already shared resources and joint appointments
• First set of projects and a first set of events
• Establish tools and protocols
A FIRST SUITE OF SMART LIBRARIES

Designing, funding, and building a coalition of libraries that: create personalized content delivery; collate data to support decision making in all kinds of university and research activities
IT’S ABOUT

• Working on the “smart library”
• Sharing data across all systems: course management, research trends, student life - what is going on in classrooms, labs and dorms
• Data for the smart library is different than federated content
• If it’s data, the library is good at it. Nobody owns this territory yet
• It contextualizes and connects all data related to how one does research, how one teaches, and health and welfare of the community
• It changes the status of the research library
SoA component 5, 3

COMPONENTS

- Integrated Learning Management System and data analytics platform
- Research agenda surfacer platform; *(The Startling Conundrum Newsletter)*
- Health and student life management system
- Tools and protocols to surface, integrate and connect all components and systems
- Viable technology to: anticipate and deliver contextualized content; and create context for work done
- Consortium model
- Design and operations team
- Student success centers
SoA component 5, 4

STARTING

• Broker a first prototype: A constellation of willing that have shared interests across their institutions
• Start with establishing the design “brief” (desires and constraints)
• Inventory existing platforms, tools, and protocols
• Identify most valuable data first
• Take on privacy issues
INNOVATION LAB
and (VENTURE) CAPITAL FUND

INNOVATION IN OUR FIELD AROUND TOOLS AND PRACTICES
STAYING OUT AHEAD OF THE GAME
HOME LAB AND A PRACTICE OF “POP-UPS”
IT’S ABOUT

- A think tank / innovation lab that does “next stuff” (Harvard Library Lab, Weiss Institute, MIT Media Lab)
- Holding the big-picture view; doing the research
- Expanding and managing scope of discussions
- Advising individual institutions around innovation, projects, investment Creating a culture around innovation as an ecosystem that tolerates partial successes and “non-successes.”
- Better ways to organize our capital
- Funding assistance for projects that, when collected and curated, are greater than the sum of their parts
- Finding new capital, using investment to spur innovation
COMPONENTS

- ARL innovation lab
- A practice of pop-up innovation labs and experiments
- Scouting team to keep abreast of new innovation or best practices that are happening across the ecosystem
- Events / fora that hold conversations around cutting-edge questions, technology (Highlands Forum as a precedent)
- First question to take on:
  - Communication and dissemination mechanisms for this work
  - Mix of lenses and consultancy around different budgeting models
ARL’S ENGAGEMENT

• Working with things already in the system: leveraging, combining, and augmenting them
• Designing new things and mechanisms
• Building new things and mechanisms

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introduce, catalyze, encourage, connect, liaise, mediate, scaffold, structure, support, design, influence, build, run, and/or spin off
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