ACT

NeXT SPACE

No. 19

ACT

~~THINK~~
GLOBAL
ACT
LOCAL

OCLC
WorldShare™

It's an 'e' world ...

2,267,233,742

Internet users worldwide, up from 1,319,000,000 in 2007

www.internetworldstats.com/stats.htm

644,275,754

Number of websites as of March 2012, up from
155,230,051 in 2007

http://news.netcraft.com/archives/2012/03/05/march-2012-web-server-survey.html

47,097

Magazines, newspapers, newsletters, newswires
and TV/radio transcripts around the world that offer
online full text, up from approximately 5,500 in 2000
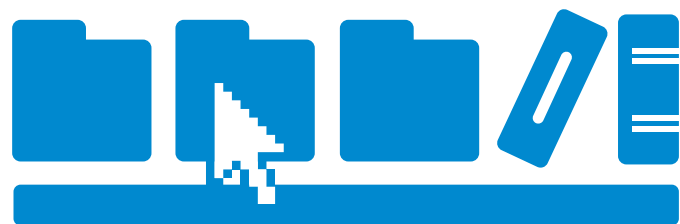
www.fso-online.com

183%

Percentage by which public library e-book
collections increased in 2011

www.thedigitalshift.com/research/ebook-penetration/

112

The number of e-mails sent and
received each day by the typical user,
up from 42 in 2005

http://www.radicati.com/?p=6904

88

Number of journal titles out of 5,400 that remain in print at Welch Medical Library,
Johns Hopkins University

www.oclc.org/research/news/2012-02-14.htm

NeXTSPACE

Contents

Charlotte
Mecklenburg
Library

It's been a great adventure!

As I prepare to retire on June 30 as OCLC's fourth President and CEO, I would like to thank all of you in the OCLC community for your support and encouragement over these past 14 years.

We have done much together.

Permit me to present some statistics. Since 1998, the number of libraries participating in the OCLC cooperative has grown from 30,000 to more than 72,000. The number of participating institutions outside the U.S. has increased from 3,200 in 64 countries to 16,215 in 170 countries. The number of bibliographic records in WorldCat has grown from 39 million to more than 264 million, and the number of holdings has increased from 668 million to more than 1.8 billion.

While these numbers are impressive, they are only part of the story. The OCLC cooperative is really about people, information and technology. Let me discuss my tenure in that context, starting with technology.

Technology

We have seen vast changes in technology, including the ubiquity of the Web, the dominance of search engines such as Google, and the rapid adoption of mobile access to information. Against this backdrop, OCLC's technology has also evolved. In 2000, we started providing all OCLC services via the Internet. That same year, we began to move OCLC from an environment in which it had built and maintained its own proprietary system for more than 30 years to one of hardware and licensed software with widespread industry adoption and open architectural models.

Today, OCLC uses rapid application development techniques and continuous improvement based on user feedback. We operate eight engineering centers in Australia, Germany, the Netherlands, the United Kingdom and the United States. We assemble local and virtual teams to develop Webscale services for libraries around the world. In 2008, we expanded our development resources with the launch of the OCLC Developer Network, which today has nearly 500 registered library developers who propose, develop and test OCLC Web services.

Since 1998, OCLC has been registered to ISO 9001, the international standard for quality assurance in design, development, production, installation and servicing. This year, we became registered to the ISO 27001 standard for information security management, which means that we have robust security processes in place to protect the cooperative's data and privacy information around the world.

In 2000, our stated objective was to weave libraries into the Web and the Web into libraries. We have done that through such innovations as WorldCat.org; WorldCat Local, including mobile access; and most recently, through WorldShare Management Services. The latter is a radically different approach. Perhaps the crowning achievement of the OCLC cooperative these past 14 years was to start making the WorldCat database available to people everywhere on the Internet in 2006.

Going forward, OCLC will continue to adopt new technology as it evolves. Indeed, OCLC staff are already preparing to move WorldCat to a new environment in 2013 that uses Apache Hadoop and HBase software, which will provide greater efficiencies as well as new capabilities for libraries.

While these numbers are impressive, they are only part of the story. The OCLC cooperative is really about people, information and technology. Let me discuss my tenure in that context.

WorldCat growth since 1998
Millions of records

Perhaps the crowning achievement of the OCLC cooperative these past 14 years was to start making the WorldCat database available to people everywhere on the Internet in 2006.
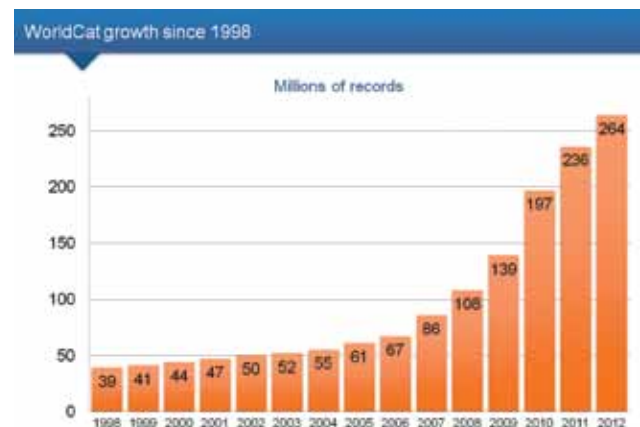
Information

Since 1998, we have developed new ways to manage and display the OCLC cooperative's information. Today's bibliographic record is graphically appealing, includes cover art, recommendations and easy ways for users to find items in nearby libraries. The type of information that OCLC handles is also changing. We are rapidly extending WorldCat to represent the collective collection of the OCLC cooperative, including books and journals, licensed digital content and the growing array of local content that is being digitized. With the new WorldShare Platform, we are starting to handle member libraries' circulation and usage statistics.

We are making our data work harder. For example, WorldCat Identities, which was created by OCLC researchers, provides summary pages for some 25 million personal and corporate authors mentioned in WorldCat. We are now turning the Virtual International Authority File (VIAF), another research project, into an OCLC service. The VIAF combines name authority files from 22 national libraries and agencies from 19 countries into a single name authority service. It is an example of linked open data, which will play an increasingly important role in the OCLC cooperative.

We have developed new information for our members, through ongoing OCLC Research reports. We have also created an advocacy program whose surveys and studies provide libraries with the information they need to enlist support in their local communities.

People

In any equation involving people, information and technology, people are the most important part. The OCLC cooperative comprises a vast group of people around the world who are committed to OCLC's public purposes of furthering access to the world's information and reducing library costs. WorldCat continues to be a living tribute to the work of thousands of catalogers around the world who, keystroke by keystroke, have created an incomparable library resources used by millions.

I have been exceptionally privileged to work with the 1,250 people on the OCLC staff in our 20 offices in Australia, Canada, China, France, Germany, Mexico, the Netherlands, Switzerland, United Kingdom and United States. First and foremost, they believe strongly in OCLC's mission and public purposes. That shared belief unites them and motivates them to work hard on behalf of the OCLC membership. They are smart and talented. It is an honor for me to have been their leader.

The people who have served on the OCLC Board of Trustees, the Global and Regional Councils, and various advisory committees and task forces these past 14 years have contributed immeasurably to the success of the cooperative. I am grateful for your willingness to invest energy and intellect in the governance of OCLC. Libraries and library users have benefited from your expertise and wisdom. Thank you.

Together, we have put the world in WorldCat, so that today fully 60 percent of its records represent languages other than English.

I leave holding members of the library profession in the highest esteem. It is your passion and dedication to providing equitable and affordable access to information that truly raises the quality of life for millions of people around the world. ∎

Jay Jordan

Jay Jordan
OCLC President and Chief Executive Officer

ACT ~~THINK~~ GLOBAL ACT LOCAL

BY ANDY HAVENS AND TOM STOREY

What does a text-message news service in rural India have to do with how your library will meet the challenges of a radically changing information landscape? Two words: innovation and cooperation.

No matter where you go in the world, startling technological transformations are happening almost instantly. Innovators with no idea of "what's impossible" from a traditional standpoint are doing extraordinary things with communications and information technology. Entrepreneurs in the private sector, government employees, people at nonprofits or in schools, universities and libraries… they're all using the globally available tools of the 21st century to solve local, regional and global problems.

The Web has turned the refrain "Think global, act local" on its head. It is now possible to think and act at the global level and the local level simultaneously and transparently.

As the Web scales, our world scales

The first wave of the digital revolution was about altering workflows to improve efficiency using computers at the level of the corporation or government. The second wave personalized this shift, giving everyone the ability to use computers in their daily lives, studies and jobs. The third wave was the Internet and World Wide Web, which connected computer networks and people using a standard protocol. The fourth wave was social networks and hand-held devices and tablets—the digital media and technology that consumers use to interact digitally with each other and organizations. The world is now just beginning to understand what it means when all of those tools are connected to each other across the entire globe.

In the OCLC discussion document, *Libraries at Webscale*, the authors make the point that both the world, and the Web, now provide—and encourage—new opportunities and applications that scale up from individual efforts to include groups and even global participation. As the authors wrote:

"Barriers have been lifted on how we can communicate, conduct commerce, conduct research, share data, create communities and deliver products. Leaders can now apply the dimensions of geography and scope to almost every decision they make. Their organizations can tap into tools and resources, and serve communities and markets that are global, national, regional, local—and even personal.

In short, the Web scales. And it allows our organizations to dynamically increase or focus capacity. Organizations now have access to infrastructure and platforms that enable them to reach broad, geographically diverse communities and at the same time scope their services to focus on meeting the specific needs of a single person."

When working on addressing either global or local challenges, it is now necessary to include scalability in our thinking as we research, plan and implement programs. This means considering how individuals can impact large, regional or even global efforts—scaling solutions up from personal interactions—and how global resources can be applied hyper-locally—scaling down from worldwide platforms.

Sarah Lacy sees entrepreneurs in the developing world overcome incredible circumstances to create new opportunities in their communities.

Scaling down

In her book *Brilliant, Crazy, Cocky*, Sarah Lacy talks about her extraordinary journey through the developing world and her encounters with entrepreneurs who use global technology to effect incredible local changes. In her words, "The emerging world isn't a fad. It contains half of the world's population and more than half of them are under the age of 25. They will be the force that shapes our world."

She continues: "Unlike America, where there is a shrinking middle class, in the emerging world there are growing middle classes. When people think about the emerging world, they tend to focus on big countries like China, India, Brazil, Russia and Indonesia—because the numbers are so staggering and it's such a no-brainer that *something* big will be built there."

"But the best innovation," she points out, "doesn't always come from huge companies. Think about Israel: A tiny country whose entire population is half the size of one of Asia's megacities. And yet, Israel had more Nasdaq-traded companies in the late 1990s than anywhere other than Silicon Valley. In Western Europe, Sweden has had one of the better track records of innovation in Western Europe. Chile and Colombia have recently been aggressive with 'smart policy' to attract entrepreneurs and investors as well. This is not a prize that small, nimble countries are ceding to the big markets. They want jobs, too, and they know local, high-growth entrepreneurship is the best way to get them."

The 140-character story bursts published by SMSOne, a mobile news company in India, brought communities together to save the lives of a depressed woman and a little girl born with a hole in her heart.

In short, the Web scales. And it allows our organizations to dynamically increase or focus capacity.

Innovative delivery: the story of SMSOne

Sarah tells the story of her favorite example of global-to-local entrepreneurship: SMSOne. This company provides a village-level, local newsletter using SMS technology on low-cost cell phones. A local reporter texts out daily news stories, announcements and ads to hundreds or thousands of readers. And while this sounds like a (relatively) low-tech way to deliver information, the implications of this simple technology have been literally life-changing for members of the communities SMSOne serves:

- In villages where government water pipes are turned on for one hour a week at irregular times, SMSOne reporters alert villagers to show up to get their week's worth of water.
- Birth and death announcements and marriage invitations go out over SMSOne, connecting the community.
- When the DMV or healthcare workers come to villages to provide services, everyone can find out and stay in from the fields when they are coming. This often saves them from missing one or more days of work to go into a city to get these services.

Sarah also shared even more personal stories. For example, a robbery that the community might have previously turned a blind eye to was foiled when several men in the village—inspired by the newfound sense of community SMSOne provided—risked their lives to go stop the robbery. They were written up as heroes. And in a slum just outside of Pune, India, where SMSOne had united a neighborhood, an older woman tried to commit suicide because she felt so alone, and so hopeless about her economic situation. The local SMSOne editor, Anil, found her after she'd poisoned herself, rushed her to the hospital and posted a story about what happened. A neighborhood full of people who barely knew the woman personally all came together and donated whatever they had to pay her bills, ultimately convincing her that she wasn't alone and that her life was worth living.

> ''If 400,000 people put a man on the moon, what can we do with 100 million? What would be the Internet equivalent of a moon shot? We just can't think big enough.''

Carnegie Mellon computer scientist Luis von Ahn wants to channel via the Web the collective brainpower of millions of people to work on tasks that are useful for humanity.

Scaling up: the global 'flipside' of personal computing

Just as technology now allows individuals to harness the power of the Web, so too can the Web leverage the combined power of many individuals. And Luis von Ahn can tell you something about that. An associate professor of computer science at Carnegie Mellon University, he has been combining people and computers on a global scale for 10 years to tackle large-scale problems that can't be solved by individuals alone. He calls it Human Computation—a brand new area he is defining and developing that studies how best to harness the combined power of humans and computers.

Massive, online collaborations are helping to digitize books, create metadata and teach foreign languages using hundreds of millions of people on the Web. You may be familiar with his efforts: CAPTCHA, a Web security application; ESP, a game to describe images on the Web; and Duolingo, an online effort to translate the Web. They are excellent examples of using the scale of the Web to connect individuals in ways that accomplish global goals.

"At the height of its construction, 44,733 people worked on the Panama Canal," he explains. "The Great Pyramid of Giza required 50,000 workers and the Apollo Project 400,000. Humanity's largest achievements have been accomplished with less than a few hundred thousand workers because it has been impossible to assemble—let alone pay—more people to work together until now. With the Internet, it's possible to coordinate the efforts of millions of humans. If 400,000 people put a man on the moon, what can we do with 100 million? What would be the Internet equivalent of a moon shot? We just can't think big enough."

Luis is the creator of the CAPTCHA program (Completely Automated Public Turing test to tell Computers and Humans Apart), the world's most ubiquitous computer security application. A CAPTCHA program prevents automated spamming by making a human decipher and enter distorted characters presented in squiggly lines—something a computer cannot easily do—at the bottom of a Web registration form. With more than 200 million uses every day, it is a highly successful Internet standard.

In Luis' mind, however, this successful security protocol represented something else: 10 seconds of time to enter the text, multiplied by 200 million uses a day. Which amounts to more than 150,000 hours of work. He wondered: how can he make that effort useful? To any individual, a 10-second piece of work may seem insignificant. But 150,000 hours a day? That's some serious brainpower. The answer was reCAPTCHA, a new and improved way of recognizing humans … and digitizing text.

With reCAPTCHA, users decipher two words from distorted characters, one of which comes from a book digitization project where the computer could not distinguish the word. The unrecognized word is paired with one that the computer knows. If you type the correct word for the one that the system knows, it has some confidence that you typed the other word correctly. And if you repeat this process with 10 other people, and they all agree on what the new word is, one more word is digitized accurately.

Luis says that reCAPTCHA is digitizing about 100 million words a day, which is the equivalent of 2.5 million books a year, without the users even knowing it.
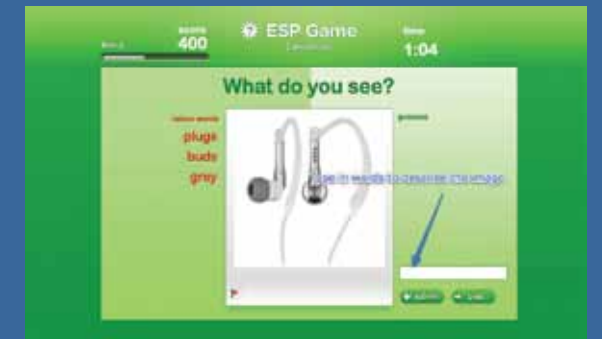

A game? Build Web intelligence while you play

Also developed by Luis von Ahn is the **ESP game**, a two-player, online game where people label images on the Web with descriptive keywords. Luis wanted to channel the billions of hours that Web users spend on games into something more useful: image description. Having proper labels associated with each image on the Web could allow for more accurate image retrieval, improve the accessibility of sites and help users block inappropriate images.

Here's how ESP works. A player is paired with a total stranger elsewhere in the world and given a random image. The goal is for you and your partner to type the exact same word, given that the only thing you have in common is that you both can see the same image. The faster you make that happen, the more points you are rewarded. It turns out that the word the players agree on is usually a very good label for the image—since it comes from two independent sources—and provides searchable, descriptive text.

The game went viral and became very popular. In one four-month period, 13,000 players produced 1.3 million labels for some 300,000 images. Over time, the game attracted 200,000 regular players, and Google licensed it and used it as the Google Image Labeler to improve the accuracy of the Google Image Search.

"Although the main application of the ESP game is to label images, the main contribution stems from the way in which we attack the labeling problem," Luis says. "Rather than developing a complicated algorithm, we have shown that it's conceivable that a large-scale problem can be solved with a method that uses people playing on the Web. We've turned tedious work into something people want to do."
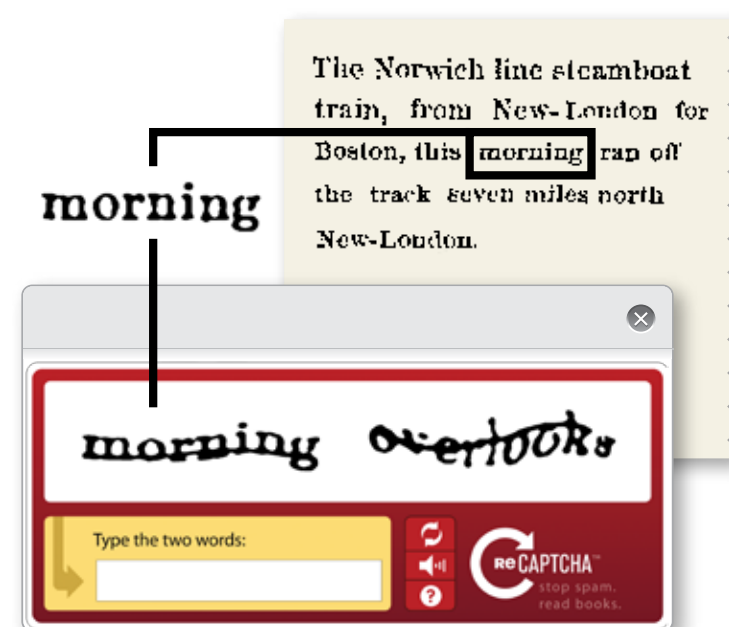
"My favorite number is 750 million," says Luis. "That is the number of people who have helped transcribe at least one word out of a book through reCAPTCHA, which is a little over 10 percent of the world's population. 750 million people have helped us digitize human knowledge."

Luis's calculus of scaling many individual efforts into a useful global service is the flipside to Sarah's chronicle of local, high-growth entrepreneurship. The innovative projects Sarah discovered take globally available technology and apply it to unique community situations, while Luis scaled the individual efforts of millions of people into a massive, global online collaboration. Both use the scale of the Web to reach beyond traditional means and do new things cleverly and quickly.

New ways of thinking

What does the increasing scalability of resources and services mean for libraries? As Karen Smith-Yoshimura points out in our OCLC Research story for this issue (see page 18), many individuals can work together to provide social metadata for a library collection, vastly improving its collective value. She provides several examples of how library projects allow individual efforts to "scale up," including that of the National Library of Australia's *Historic Australian Newspapers 1803 to 1954* project, where more than 9,000 digital enthusiasts have edited 50 million lines of scanned text in 40 million articles over the past four years. While the digitization of newspapers gets part of the way to filling the need of the project, small and distorted text makes many articles less useful. Just as in the case of reCAPTCHA, the project harnesses the work of many people who make corrections to one word, phrase or sentence at a time. And, similarly to the ESP game, users can also tag photos to help provide more context and historic information.

Many individuals can work together to provide social metadata for a library collection, vastly improving its collective value.

''When the same technology can connect millions of people to a central set of resources while also empowering individual, local innovation … that's a powerful recipe for change.''

"Libraries have a massive user base and both broad and specific subject areas that have wide appeal," says Rose Holley, Digital Library Specialist, National Library of Australia. "Libraries could get hundreds of thousands of volunteers. Anyone with an Internet connection is a potential volunteer. A shift in thinking is required by libraries to fully embrace the potential of crowd sourcing. Crowd sourcing has not been attempted on any significant scale by libraries to date, but could prove to be the most useful tool a library can have in the future."

On the other end of the continuum, there are examples of large-scale cooperative library projects such as WorldCat, HathiTrust and Europeana, which allow local libraries to leverage global databases in order to meet the specific, personal needs of students, researchers and citizens. And while we have been more accustomed to worldwide data collection efforts, it is only now becoming apparent that activities as well as information can be scaled using Web-based tools.

Robin Murray, OCLC Vice President for Global Product Management, puts it this way. "More and more people have moved their information-seeking behavior to the Web. In parallel, more people have started contributing to this global information network. This means that a growing audience of people are becoming accustomed to both getting things done on the Web, and developing services for others to get things done on the Web."

"Technology platforms," he continues, "such as Amazon's cloud services, Apples iOs for mobile apps and OCLC's new OCLC WorldShare Platform (see page 10), provide a way to leverage local talent in a global environment. Any developer, from any organization, of any size, now has access to tools and data that were available only to large corporations just a few years ago."

''Because of when these people [entrepreneurs] were born, where they were born doesn't matter.''

– Sarah Lacy

"These platforms," he concludes, "are the key to the scalability of today's most important services. When the same technology can connect millions of people to a central set of resources while also empowering individual, local innovation … that's a powerful recipe for change."

Where will your ideas come from?

What is clear from studying the work of Sarah Lacy and Luis von Ahn is that innovation and cooperation are the keys to success for any entity that hopes to survive in our new, rapidly changing information ecosystem. The capacity of Webscale platforms to enable easy scalability is an important part of that equation.

As libraries move forward in this environment, it is instructive to look at the two ends of the scalability spectrum embodied by reCAPTCHA and SMSOne. How can millions of users, connected by shared technology across the world, work together to solve large-scale problems? And how can global platforms and cooperative data sets be focused down to provide striking, life-changing solutions for individuals and their communities?

As Sarah Lacy said about the entrepreneurs she encountered in her travels, "Because of when these people were born, where they were born doesn't matter."

In an information environment where people and organizations can now act both globally and locally at the same time, understanding how Web-based platforms can efficiently scale local, group and global efforts may be what distinguishes truly successful innovations. ■

Webscale services allow organizations to scale up for global and regional uses … and down to local and even personalized solutions.

GLOBAL REGIONAL LOCAL PERSONAL

OCLC WorldShare
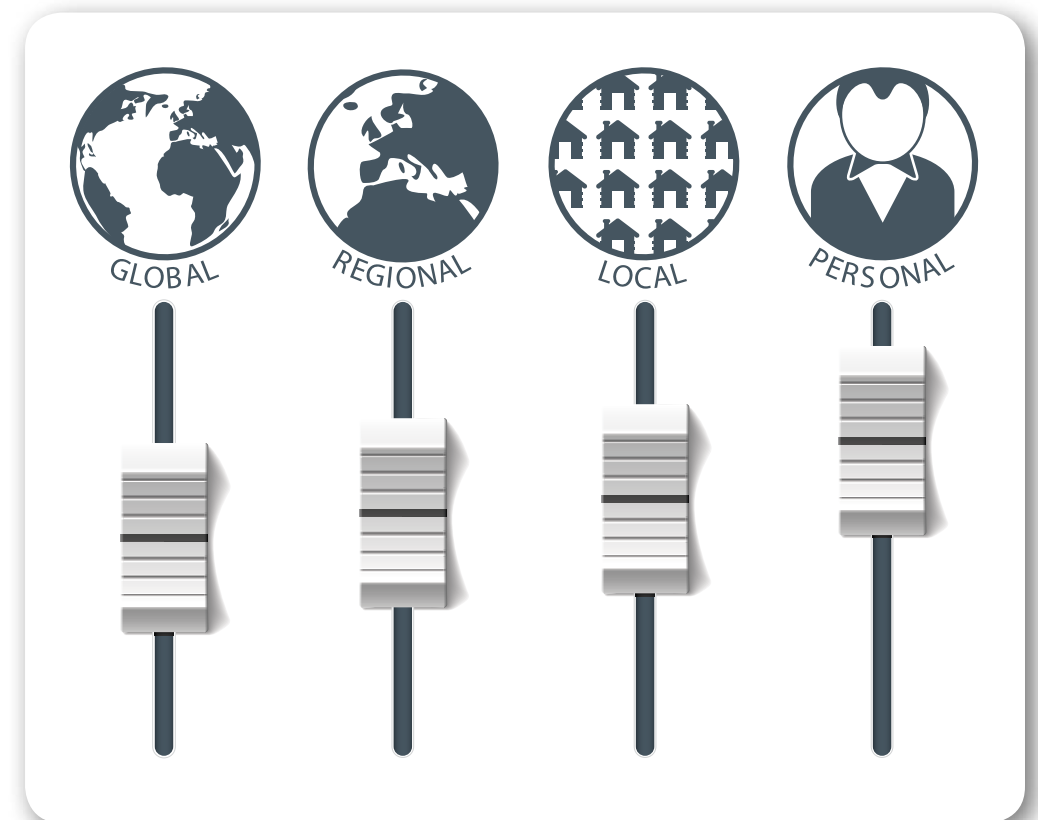
The power of cooperation.

Recent surveys of OCLC member libraries have revealed that across organization types, geographies and sizes, libraries share very similar concerns about the future. Topping this list is a focus on improving and demonstrating the relevance of libraries in the digital information ecosystem. Members are also concerned with efficiently managing and delivering resources across physical, digital and electronic collections.

To reach these goals, OCLC members have asked for flexible tools that connect library workflows and learning environments. Developed collaboratively with members, the OCLC WorldShare strategy provides a platform and tools that enable more kinds of cooperation. Shared data promotes better discovery and delivery for users. Shared workflows save time and money. And shared innovation lets everyone reap the benefits of libraries' collective creativity.

The importance of Webscale

By Webscale, we mean something simple: operating at the scale of the Web. Many service providers in recent years—Facebook, Amazon, Expedia, Etsy—have achieved Webscale by concentrating capacity in platforms whose benefits can be broadly shared. These platforms aggregate data and infrastructure. They also build strong communities—networks of participants who communicate, share or trade on the platform.

Individual libraries are naturally "institution scale"—optimized to provide services at the level of the institutions or the communities they serve—the university or college, the city or township, the school or the company. Tailoring services to the needs of institutions and communities has historically meant that libraries have had to manage a significant amount of local infrastructure. As library users increasingly build their expectations around network-level tools, systems need to deliver local services as well as integrate with Web-based services.

Working together at Webscale, libraries, vendors, publishers and communities of users will be able to continually innovate, creating whatever new, customized functionality and capabilities are required. Some of that innovation will be global, affecting the thinking of the profession as a whole. Some will be local, to address specific needs. In both cases, the ability for libraries the world over to share data and activities will enable new ways to address both current and future challenges.

Developed with input from members, the OCLC WorldShare vision supports the idea that, together, libraries can overcome obstacles through cooperation.

WorldShare provides a common strategy encompassing three major elements:

• A Web-based platform for collective development and innovation

• Interconnected services for library management and discovery

• A commitment to large-scale collaboration by, with and for libraries globally.

WorldCat is a remarkable example of successful, Webscale library cooperation. This asset now helps millions of people around the world connect to library resources online. With WorldShare, OCLC members can build on this foundation. Cooperative innovation, services and applications will leverage shared library data in new and exciting ways.

OCLC WorldShare: Sharing at Webscale

Libraries are built on a foundation of sharing. They are the places where communities bring together important, unique and valuable resources for the benefit of all. OCLC WorldShare extends those values to allow all members to benefit from the shared data, services and applications contributed by each individual institution.

OCLC WorldShare is more than a new set of services and applications. It is the philosophy and strategy that will guide the cooperative in its efforts to help member libraries operate, innovate, connect, collaborate and succeed at Webscale. WorldCat data provides the foundation for WorldShare services. And WorldCat discovery and delivery applications help connect information seekers to library resources.

While the philosophy is broad, it also includes two very real, very specific sets of resources that can help libraries make the move to Webscale today: the **OCLC WorldShare Platform** and **OCLC WorldShare Management Services**.

A platform for cooperative innovation

In a learning community, one person's breakthrough improves everyone's experience. With the WorldShare Platform, librarians can now build applications to meet specific needs while benefiting from the innovation of the global community. The WorldShare Platform is a global, interconnected Web architecture that supports OCLC's Webscale services and applications, and provides flexible, open access to library data through APIs and other Web services.

Community

| Library-built Applications | Partner-built Applications | OCLC-built Applications |

App Gallery

Web Services

Data

Infrastructure

OCLC WorldShare Platform

The WorldShare Platform facilitates collaboration and app-sharing across the library community, so that libraries can combine library-built applications, partner-built applications and OCLC-built applications. This enables the benefits of each single solution to be shared broadly throughout the library community.

Applications are loaded and shared through the OCLC WorldShare App Gallery. This provides a central place for viewing and installing apps into work environments. Information is available on the OCLC Developer Network community site for those interested in helping to create and build new apps to share through the gallery.

Cooperative innovation, services and applications will leverage shared library data in new and exciting ways.

The WorldShare Amazon App takes information about orders from the WorldShare Acquisitions Web service and combines it with pricing and availability information from Amazon's Advertising API. Librarians can then see pricing and availability for particular materials and choose to purchase them from Amazon via a cart created on the fly.

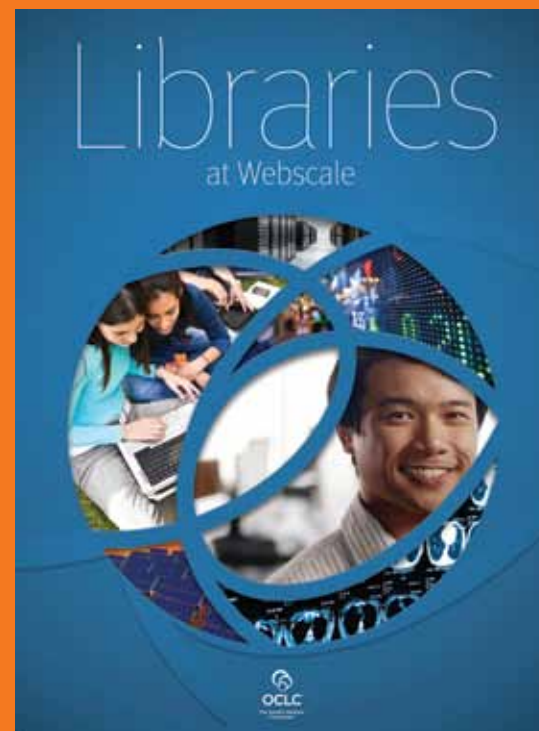## Managing your library, not your technology

OCLC WorldShare Management Services enable libraries to share infrastructure costs and resources, as well as collaborate in ways that free them from the restrictions of local hardware and software. WorldShare Management Services bring network effects and dramatic efficiencies to managing print, licensed and digital materials—unified collection management in a library system for the first time. Early adopter WorldShare libraries have reported being able to reduce duplicative efforts by a factor of 5-to-1 in some cases.

WorldShare Management Services include all of the applications to provide a Web-based cooperative library management service for cataloging, acquisitions, license management and circulation, and provide a next-gen discovery experience for library users:

- Acquisitions for physical and electronic collections
- Circulation and patron management
- Discovery and delivery
- Cataloging tools for data creation and enrichment
- The WorldCat knowledge base
- OCLC WorldShare License Manager.

Over time, all OCLC services will adopt the WorldShare architecture, beginning with OCLC WorldShare Interlibrary Loan in 2012 and continuing with OCLC WorldShare Metadata Management in the near future.

OCLC WorldShare Management Services bring network effects and dramatic efficiencies to managing print, licensed and digital materials.

With WorldShare, libraries can scale services to meet the global, group, local and user-specific needs of information seekers.
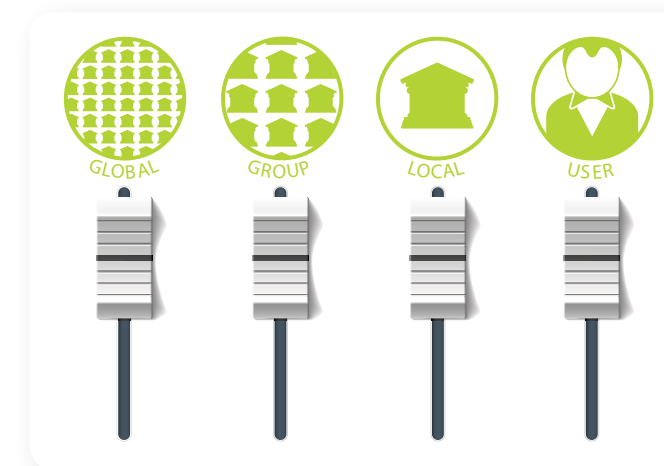
All together now

OCLC members have shown that it is possible for thousands of libraries to work together to create something incredible: the largest bibliographic database in history. WorldCat was not built by private software companies, governments or industry groups, but by libraries, working together towards common goals.

It is time to build on this success and create the principles, platform and processes that will encourage and inspire libraries and their supporters to do the same thing again.

Libraries collect the best ideas from all over the world and make them available to patrons, students, scholars and entrepreneurs. They are incubators of education, lifelong learning and success. WorldShare leverages the collective innovation of the community to create new services and value around the assets of libraries. ∎

www.oclc.org/reports/webscale

Recently, OCLC published the discussion document, *Libraries at Webscale*. This document explores the impact of the Web on our rapidly changing information landscape, and presents an overview of the opportunities and challenges that operating in a Web-connected world provides for libraries and library users. The essays provide a backdrop for the conversation:

- **Seth Godin** believes that the Web requires us to stop focusing on mass communication and instead support individual and community-specific conversations so that we can focus on their goals.
- **Kevin Kelly** describes the "universal library," where we move beyond being "people of the book" to become "people of the screen."
- **Thomas Friedman** explains how the only path to success in our newly flattened world is innovation ... powered by education.
- **Ellen Hazelkorn** reflects on the challenges of sustaining education at a time when utility and efficiency are driving funding and rating issues (see page 20 for the full text of Professor Hazelkorn's article).
- **James G. Neal** points at the forces of innovation, collaboration and deconstruction of library collections.
- **Steven Berlin Johnson** identifies innovations that demand new models and platforms for sharing and collaboration ... BIG collaboration.
- **Leslie Crutchfield** and her colleagues at FSG outline how social organizations can become real agents of change and social advancement by working together to enact sustained, collective impact.
- **OCLC Global Council Delegates** share their views on the challenges and opportunities facing libraries.

The document also contains excerpts from interviews with dozens of library leaders about the future of libraries and key challenges and opportunities they face today and will face in 2016.

Connecting with the community

How the Charlotte Mecklenburg Library realigned its priorities and restored $2 million in funding with help from its friends, neighbors and funders

BY JENNIFER PEARSON

For the Charlotte Mecklenburg Library (CML), like so many libraries, the past two years have not been easy. This award-winning library saw its budget shrink 39 percent, from $34.6 to $21.7 million from fiscal 2009 to 2011, a devastating blow that required closing four libraries, reducing library hours by 50 percent and shedding about a third of the library workforce.

From budget cuts come opportunities

In the midst of this crisis, though, a new partnership was forged by library staff, a group of library stakeholders and the Mecklenburg Board of County Commissioners (BOCC) to deal with the funding challenges facing the library. They formed a 17-member, citizen-led, task force to examine the library's programs and operations and to make recommendations for a stable funding platform for the future. By May 2011, The Future of the Library Task Force had helped the library bring back about $2 million in lost funding in time for fiscal 2012.

"The information the task force gathered and the evidence it provided in its report were critical to demonstrating the economic and cultural value of our libraries," says Library Director David W. Singleton. "And the deeper, more collaborative working relationship it built with our community and our county officials made them strategic partners in defining our future. We are grateful for its work."

What did the task force do?

The task force was charged with determining a sustainable future for the library. It brought together community leaders with diverse backgrounds and opinions. The chair was Dr. James Woodward, Chancellor Emeritus, University of North Carolina at Charlotte, among the most respected citizens in Charlotte.

One of its first undertakings was compiling peer reviews of other libraries to see if CML was overfunded or overbuilt in comparison. Libraries compare themselves to one another all the time, but task force members took the novel approach of using the Chamber of Commerce to help them pick peer cities. Why? By comparing itself to libraries in other cities that Charlotte was competing with for new businesses gave community leaders a comparison that mattered to them.

The studies found that CML was neither overfunded nor overbuilt— it was in the middle of the pack compared with 13 peer communities. The study also found that CML received the second greatest decrease in local funding at 39 percent. The task force posited that this disproportionate funding decrease occurred because the goals of the library were not aligned with the goals of Mecklenburg County. It was this thesis that drove the task force and the library to undertake an alignment of priorities.

Charlotte Mecklenburg Library

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Results and impacts

Task force recommendations were both fiscal and operational and included suggestions for establishing a stronger working relationship between CML and county commissioners.

Among the recommendations that highlight the importance of priority alignment and partnership:

- The county benchmarking/scorecard process will be refined annually to reflect library and county goals. The results of the library benchmarking will become part of the library board's annual evaluation of the library director.

- The library's annual operating plan and strategic direction for service development and capital improvements will include input and feedback from the county manager.

- A county representative will serve on the library board as a nonvoting member, and the library director will participate in county department meetings.

A future based on partnership and mutual goals

CML is working on the recommendations of the library task force as well as its own strategies for strengthening its position as a central entity in the community. The following major initiatives are part of its strategy of ensuring that the library is in synch with the priorities of the community:

- *Early childhood literacy and lifelong educational success.* CML is working to become the entity that is responsible for school readiness for kindergarteners. CML also wants to be the hub for educational success at any level along the lifelong learning continuum.

- *Workforce development.* As Charlotte continues to recover from the economic recession, the library has become the place where people go to help them find employment, retrain for new job skills and complete online job applications.

- *Future of the main library research.* At the recommendation of the task force, the library is working with another citizen committee to evaluate the best way to utilize space at the main library to fit the changing needs of the community.

In less than two years, CML has gone from reeling from the drastic cut in funding to a much stronger position in the fabric of the Charlotte Mecklenburg community. By being unafraid to seek out and accept ideas from their funding partners and their community, its leaders are securing the future of the Charlotte Mecklenburg Library for the coming generation.

"The task force united our community and provided a path paved with strategy and vision," says David. "We are poised for continued success, thanks to staff and volunteers, and we look forward to providing Charlotte Mecklenburg residents with invaluable resources that empower them at every step in their lives." ∎

Sixty-nine new staff and 22 additional weekly service hours were made possible this year at the Charlotte Mecklenburg Library thanks to the efforts of The Future of the Library Task Force.

EMEA Regional Council meeting

Americas Regional Council meeting

''This event helps build a community despite the challenges of distance and diversity.''

— Andrew Wells
Chair, Asia Pacific Executive Committee

OCLC's regional councils meet to build community and shape the cooperative's path

OCLC's governance structure is made up of three regional councils: The Americas, Asia Pacific, and Europe, the Middle East and Africa (EMEA). These councils meet annually to discuss issues of common interest and to provide OCLC staff and management with valuable input about the state of the libraries and other cultural heritage institutions in their regions. The agendas are planned jointly by the executive committees of the regions and OCLC staff. Here are reports on the three most recent meetings.

Nearly 160 delegates from 11 countries and territories attended the third membership conference of the OCLC Asia Pacific Regional Council.

Asia Pacific Regional Council
Andrew Wells, Chair

In October 2011, 159 delegates gathered in Taipei, Taiwan, for the 3rd Membership Conference of OCLC's Asia Pacific Regional Council. The National Taiwan University Library hosted the two-day conference. The high level of participation was gratifying— the first conference in Beijing attracted 100 delegates, followed by the second in Tokyo with 110. Delegates came from Australia, Hong Kong, Japan, Korea, Malaysia, New Zealand, the Philippines, Samoa, Singapore, Taiwan and Thailand. This reflects the great diversity of this region of the world, as well as the large distances members traveled to attend the conference.

Our conference program featured national presentations covering a wide range of topics, including digital library services, collaboration, social networking and consortia. One of our keynote speakers was Dean B. Krafft, Chief Technology Strategist, Cornell University Library, who contributed insights into research data management.

An open forum gave delegates the opportunity to provide input to and ask questions of OCLC leaders. One theme that emerged in the question-answer session was contributions to WorldCat: How can the collections of libraries in remote areas get into WorldCat. These libraries want to share their heritage with the rest of the world, and Web technologies are making WorldCat contribution easier every year.

While these are early days for the Asia Pacific Regional Council, this event helps build a community despite the challenges of distance and diversity. I am happy to say that the OCLC cooperative is growing its footprint in this region.

Americas Regional Council
Bill Maes, Chair

The Americas Regional Council (ARC) met at the American Library Association's Midwinter Meeting in Dallas, Texas, on Friday, January 20, 2012. About 200 people attended in person, with another 205 online attendees.

My presentation invited people to get more involved with the cooperative. I talked about ARC's new Ambassador Program, where members become official envoys of the cooperative to reach out to librarians locally at regional associations, conferences and informal groups. This will help OCLC identify new issues and solutions at the local level with local and global contexts.

I also talked about what a powerful force we could become through the OCLC WorldShare strategy, which can bring the library community together and provide a platform—the way that Google provides a platform—under which and with which we can operate locally and globally.

Our keynote speaker, Sarah Lacy, enthralled the audience with stories of how technology—relatively simple technology by Western standards—had transformed lives and futures in countries with developing economies. Sarah is founder of the new technology site Pando Daily and author of *Once You're Lucky, Twice You're Good* and *Brilliant, Crazy, Cocky: How the Top 1% of Entrepreneurs Profit from Global Chaos*.

After Sarah's remarks, we discussed a recent OCLC membership survey, which indicated we have a lot in common. Libraries across all regions and all library types today face some universal challenges: funding, relevance in a digital world and providing access to e-content.

We also discussed follow-up activities to last year's report of the Cost Sharing Models Task Force, especially an ongoing review of the credits and incentives program, which has been in place at OCLC for nearly three decades. Following the meeting, we enjoyed a brief reception where we continued our conversations and discussions with fellow members.

The presentations and the accompanying PowerPoint slides are available on the OCLC Americas Regional Council website: www.oclc.org/multimedia/2012/alamw-arc-meeting-and-symposium.htm.

Europe, the Middle East and Africa Regional Council
Robin Green, Chair

Birmingham's new £193 million library, a centerpiece of civic place-making due to open in 2013, was the subject of the keynote at this year's EMEA Regional Council meeting in Birmingham, U.K., February 28–29, 2012. The importance that Birmingham attaches to its new library was underlined by the media attention the meeting received, and many of the 250 delegates from 22 countries were pleased to see the event featured on BBC TV breakfast news.

The confidence of Brian Gambles, Birmingham's Library Director, and architect Francine Houben, as they laid out their shared vision, set an exuberant tone with lots of interaction for the two-day meeting.

More than 460 tweets from attendees summarizing the sessions were posted. Two of the tweets, 'The Library is about place-making, inclusivity, celebrating creativity and innovation, the Library Experience' and 'Libraries need to move from transactional model based on books as products, to transformational service which changes lives', picked up on the theme of a new blend of library.

RLUK Unique and Distinctive Collections Project Manager Alison Cullingford's steadfast belief in the continuing relevance of special collections was impressive, and was described in one tweet as "so much enthusiasm, infectious."

David White, from the University of Oxford, argued that libraries remain relevant by understanding user behavior. Francine Houben told the audience that she spent time observing the city and its people before designing the Birmingham Library.

By the end of the event, delegates were energized after spending time with fellow professionals who, despite today's challenges, continue to promote the transformational power of libraries. The presentations and the accompanying PowerPoint slides are available on the OCLC EMEA Regional Council website, at http://www.oclc.org/multimedia/2012/emearc2012.htm. ∎

Supporting social metadata

To enrich descriptive metadata created by libraries, archives and museums, we need to share and aggregate contributions added by users in many diverse environments

BY KAREN SMITH-YOSHIMURA

Social metadata provides an opportunity for libraries, archives and museums (LAMs) to connect with their communities while enriching the descriptive metadata for their collections. Social platforms help users improve the discoverability and evaluation of materials for others, initiating a virtuous cycle that provides benefits for both the institution and its audience.

Members of the OCLC Research Library Partnership were eager to study the advantages of such user contributions. Spurred by this interest, a 21-member working group from five countries collaborated for two years, reviewing 76 websites that support social media features. We conducted a survey of site managers, interviewed some of them and reviewed the relevant literature. The group synthesized everything we learned in a series of three reports under the title, *Social Metadata for Libraries, Archives and Museums*.
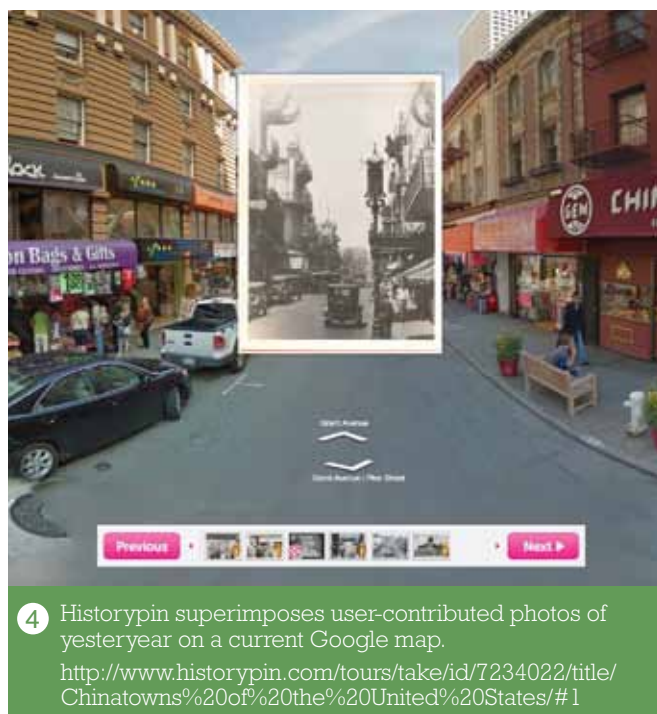
We considered a wide range of user-contributed "social metadata" that helps people understand or evaluate LAMs' resources better: annotations, audio, comments, images, links, lists, ratings, recommendations, reviews, tagging, text editing and videos.

We found that the most vibrant sites—the ones with lots of user-generated content—shared one or more attributes. They tended to:

• be national or multi-institiutional based;

• serve a specific discipline; or

• have a community or national "brand."

Sites with these features attracted more contributions and traffic.

Although many LAMs are adding interactive features to institutional websites, they also increasingly recognize the value of third-party services such as blogs, wikis, social media sites and social networking sites where users are already active.

④ Historypin superimposes user-contributed photos of yesteryear on a current Google map.
http://www.historypin.com/tours/take/id/7234022/title/Chinatowns%20of%20the%20United%20States/#1

"Social platforms help users improve the discoverability and evaluation of materials for others, initiating a virtuous cycle that provides benefits for both the institution and its audience."

When we began our research, many of the LAMs had added social media features relatively recently. In the survey we conducted in October–November 2009, more than 70 percent had been offering social media features for two years or less. Sites are also becoming increasingly multimedia; although still images and text predominated, more than one-third also offer video and audio. We noticed that regardless of how fascinating sites' content was or how many interactive features they offered, most institutionally based sites were attracting only moderate user participation. The notion of, "If you build it, they will come," did not prove true.
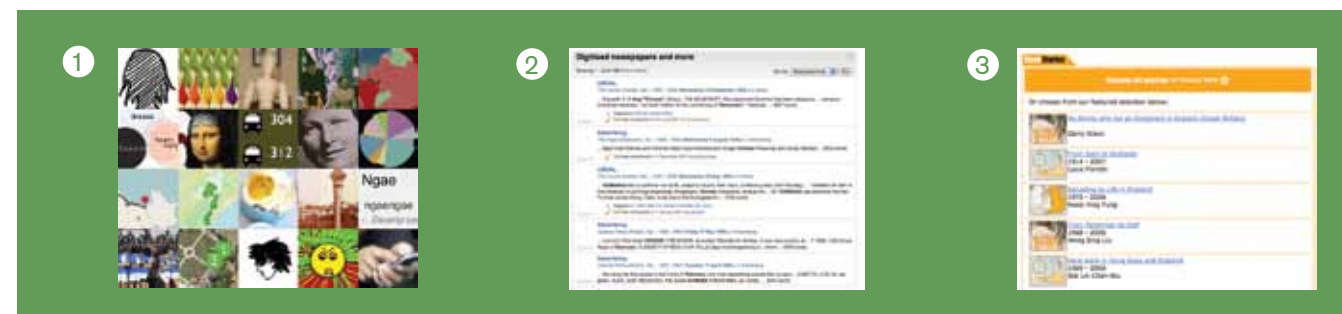
Some successful examples:

① *DigitalNZ* is a service run by the National Library of New Zealand aimed at making New Zealand digital content easier to find, share and use. DigitalNZ nurtures community with open-source software called Kete (the Maori word for "basket") that organizations and communities can use to create areas for collaboration, including images, audio, video, documents and discussions. Kete allows users to bundle all types of digital artifacts around a topic and to easily pull data from other sources using OpenSearch standards. Since 2010, it has been holding "Mix and Mash" competitions, and provides guides and links to content and data sources that people can use and repurpose for their mashups.

② *The National Library of Australia's Historic Australian Newspapers, 1803 to 1954* represents one of the most successful examples of crowd sourcing. Since its beta release to the public in July 2008, enthusiasts have edited 50 million lines of scanned text, helping to improve the accuracy and readability of materials.

③ *Moving Here—200 years of migration in England*, a partnership led by the National Archives in the United Kingdom and cultural heritage institutions throughout the U.K., explores why people came to England over the last 200 years. It invites visitors to share their own migration experiences through essays, videos and interviews (with transcripts). People may link to objects within the collection as annotations to their stories.

④ *Historypin* is a recent development, managed by the British nonprofit project, "We Are What We Do," in partnership with Google. Historypin collaborates with more than 100 libraries, archives and museums around the world to help them share their content with a global community. The site is designed to be an online, user-generated archive. LAMs are among the community of users who are creating tours and collections and contributing historic materials. Users can create thematic tours and collections and open them to public contributions of images and personal narrative. User-contributed photos of yesteryear are superimposed upon a current Google map, placing historic photos in context geographically and allowing visual comparisons between "then and now."

Many groups have members with a great deal of enthusiasm who want to contribute to the success of their communities. We recommend that cultural heritage organizations leverage this enthusiasm through social metadata. A good first step? Look at other sites to get ideas before starting. Also, consider the benefits and trade-offs in using third-party social media sites rather than creating your own. ∎

"The notion of, 'If you build it, they will come,' did not prove true."

Learn more:
www.oclc.org/research/activities/aggregating/

If you would like to share your own experiences with social media, "like" the **Social Metadata for LAMs** Facebook page: **www.facebook.com/Social.Metadata.for.LAMs**
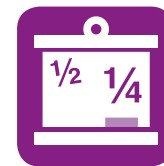
3 key challenges facing higher education and policymakers

By Ellen Hazelkorn

Vice President of Research and Enterprise, and Dean of the Graduate Research School, Dublin Institute of Technology

Our preoccupation with the relative standing of universities and national education systems—illustrated by the growing popularity and obsession with university rankings—reflects the consensus that higher education is essential for economic growth, global competitiveness and a civil society. Universities and nations are being measured according to indicators of global capacity and potential in which comparative and competitive advantages come into play. The more globalization drives a single market in education, as it does in most goods and services, the more higher education is a beacon for investment and talent—the more this kind of barometer is inevitable.

Common factors influencing higher education

While each country and university faces particular and often unique challenges, there are common factors that affect most countries around the world today—issues that have become more acute since the global financial crisis in 2008. Let me focus on the three big challenges of the moment:

- Ensuring sustainable higher education systems at the same time that public funding is decreasing and competitiveness is increasing
- Improving the quality of the total student experience even as the demand for participation is growing
- Strengthening knowledge and innovation as drivers of growth while ensuring that multi- and cross-disciplinary critical inquiry is maintained.

''The more globalization drives a single market in education, the more higher education is a beacon for investment and talent.''

Ensuring sustainable education systems

The application of knowledge is now widely acknowledged as being the source of social, economic and political power. Studies repeatedly show the strong correlation between educational attainment and social and economic advantages for individuals and society. Over the last decades, access to higher education has expanded from being a privilege of birth or talent or both (elite phase), to a right for those with certain qualifications (mass phase), to being an obligation for the vast majority of society and occupations (universal). However, the financial crisis has exposed fundamental weaknesses in the funding model that underpins higher education.

The impact of the financial troubles in California on its public university system is symptomatic of problems around the world. Whether funded from public or private sources, escalating costs and tuition fees have prompted *The Economist* to suggest that higher education could be the next bubble (Schumpeter, 13 April 2011). At the same time, higher education faces increasing competition from China and India. What is the best way to sustain mass higher education at a time of decreasing public funding and escalating global competitiveness? Can tuition fees continue to rise—and what are the implications for widening access to a more diverse student cohort? Are there new business models or financial instruments more appropriate to the new environment? What regulatory and governance frameworks would work best?

Improving the quality of student experience

The quality of higher education is coming under increasing scrutiny. If higher education is the engine of the economy, governments are looking for verifiable and measurable evidence of benefit and impact. Students, as consumers, are questioning the value-for-money of their study programme relative to the tuition fee that they pay, or to the institution's status and reputation. Evidence of quality and the pursuit of excellence have become the key mantra dominating higher education, inside and outside the academy. Rankings have emerged as a simple shorthand for students and the public to gauge quality—but do rankings really measure what's meaningful? What level of accountability is required? As participation widens beyond the traditional student cohort, how should pedagogical methods and modes of learning adapt? To enhance the quality of the total student experience, what barriers should be eliminated?

Elevating innovation

The rising prominence and obsession with global rankings have highlighted the investment attractiveness of nations based upon the capacity of their universities to produce new knowledge and lead innovation. In response, many countries have spearheaded a review of their higher education systems. The world-class research university has become the panacea for ensuring success in the global economy and world science. Kansas and Texas want to improve the performance of their universities because they are a magnet for investment; Sri Lanka has announced a strategy to upgrade six universities. Malaysia has a similar aim, and so do Nigeria, Denmark, France and Germany, to name just a few. However, many of these developments are leading to the prioritization of scientific and technological research over investment in the arts, humanities and social sciences. Our societies face serious problems; unemployment is a major issue. But, at the time when scientific and social challenges require collaborative interventions from a multidisciplinary perspective, there is growing evidence that simplistic economic indicators are being used to measure research quality. These changes are impacting on and changing universities, often in perverse ways. As the emphasis shifts to translating knowledge more quickly into new products and services, how can we ensure that the breadth of intellectual inquiry required to underpin civil society is preserved?

Local change reflects global shifts

We often look upon changes within our universities as peculiar to them, a phantom of the management or the culture. But the changes being experienced are worldwide. It is no cliché to say that higher education and policymakers are facing major challenges. ■

This article is reprinted from *Libraries at Webscale*, a discussion document for the library community about the impact of the Web on our rapidly changing information landscape, with opinions and ideas from industry analysts, thought leaders and educators.

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OCLC blog listings

The OCLC Cooperative Blog
community.oclc.org/cooperative/

Lorcan Dempsey's Weblog
orweblog.oclc.org

Hectic Pace
community.oclc.org/hecticpace

Hanging Together
hangingtogether.org

025.431: The Dewey Blog
ddc.typepad.com

Outgoing
outgoing.typepad.com/outgoing

BlogJunction
blog.webjunctionworks.org

A View of South America
community.oclc.org/
aviewofsouthamerica/

**QuestionPoint:
24/7 reference services**
Questionpoint.blogs.com

OCLC Developer Network
www.oclc.org/developer/news

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on Facebook**
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WorldCatorg/81565002545

OCLC Events

Canadian Library Association
Ottawa, Ontario, Canada
May 30–June 2, 2012

ACURIL XLII – HAITI
Pétion-Ville, Haiti
June 4–8, 2012

Bibliotic 2012
Bogotá, Colombia
June 11–16, 2012

Journées ABES
Montpellier, France
June 19–20, 2012

**American Library Association
Annual Conference**
Anaheim, California, USA
June 21–26, 2012

LIBER General Conference
Tartu, Estonia
June 27–30, 2012

Special Libraries Association
Chicago, Illinois, USA
July 15–18, 2012

Check the OCLC website for
upcoming conferences and
events:
www.oclc.org/news/events/