

FACING THE FUTURE

A Vision Document for British Columbia's Public Libraries

Prepared by Ken Roberts, B.A., M.A., M.L.S

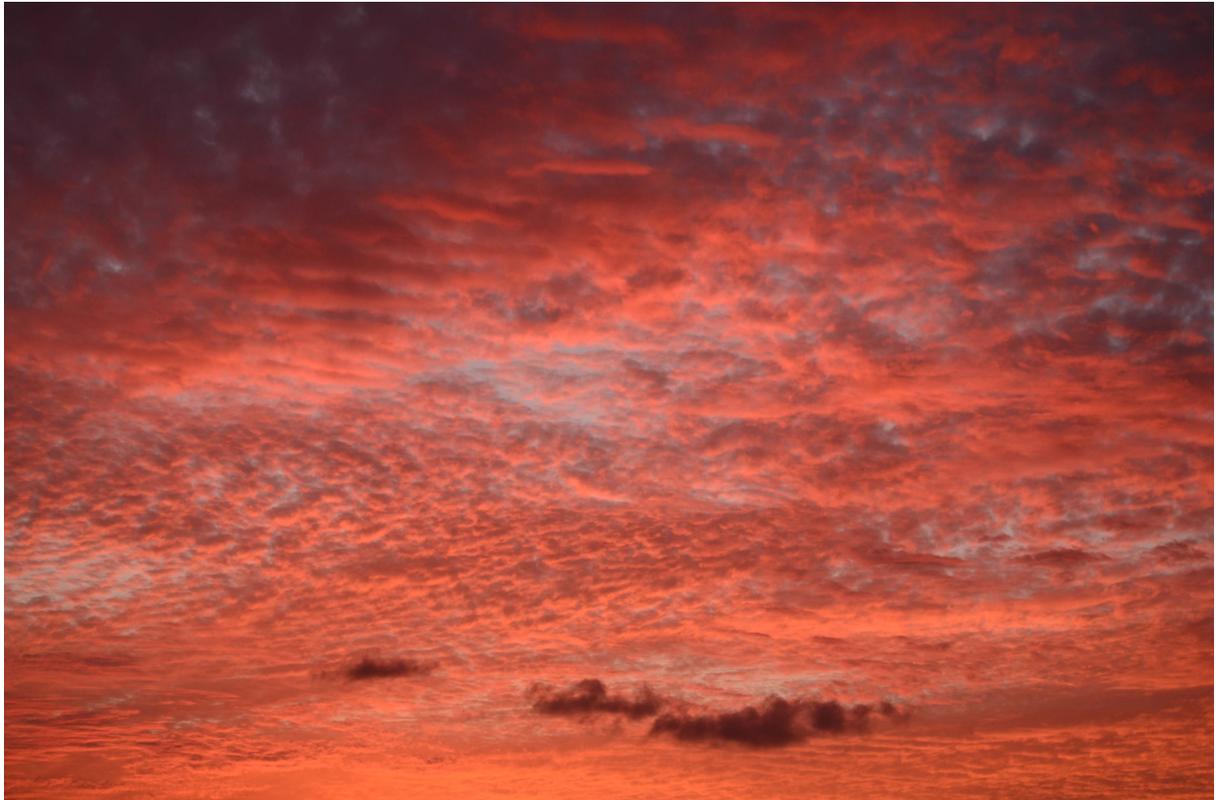


Table of Contents

1.0 Executive Summary	3
2.0 Prologue	4
3.0 Some Major Trends	6
3.1 ebooks and their successors	6
3.1.1 <i>ebook Users</i>	6
3.1.2 <i>What comes after ebooks?</i>	7
3.1.3 <i>Private Publishing</i>	8
3.2 Technology and Telecommunications	9
3.3 From Consumption to Creation	10
3.4 Shifting to Collections that emphasize Creative Content	11
3.5 Computers and Individualization	12
3.6 Open Data, Internet Resources, Websites and Literacy	13
3.6.1 <i>Open Data</i>	13
3.6.2 <i>Internet Resources</i>	15
3.6.3 <i>Websites</i>	15
3.6.4 <i>Literacy</i>	15
3.7 The Reduction of Repetitive Tasks	16
3.8 New Staff Roles	17
3.9 The Growing Importance of Consortia	18
3.10 Alternatives for Delivering Books	19
3.11 A Provincial Library Card	20
4.0 What Will Libraries Look Like in 2017?	22
5.0 What Will Libraries Look Like in 2022?	24
6.0 What Will Libraries Look Like In 2030?	24
7.0 Success Measurements	27
8.0 Closing Thoughts	27

1. Executive Summary

It is safe to predict that libraries will soon face radical change.

Despite uncertainties about exactly what services we will provide, the core mission of libraries will remain vital.

Still, libraries must work together in ways that are unprecedented to ensure that ideas and knowledge are available to everyone who seeks to learn. This role will be threatened by the emergence of electronic publishing.

Electronic publishing also promises enormous opportunities. In theory, school students and members of the public will soon be able to access far more information and creative material than at any time in history. This is particularly true for students and residents living in rural communities, where printed books have been difficult to obtain. This unique opportunity will be lost unless library systems work together more effectively than at any time in their past.

There is a growing realization that physical libraries are becoming even more important community spaces, places where people gather, share and learn from each other. Print collections will occupy less physical space but, if anything, libraries will find that the competing demands for both quiet study space and for noisy public space will mean that, if anything, library buildings may need to become larger and more flexible.

Given wide variations in the level of local financial support for libraries, combined with a high degree of local autonomy, it will prove difficult for all library system to change at the same speed.

As current users age, libraries need to ensure that their services are aligned with the needs of a younger, more demanding and more technologically oriented clientele.

2. Prologue

Some years ago I participated in an Atlantic Provinces symposium as one of four speakers asked to speculate on what public libraries might look like five years into the future.

Five years later I was invited to make more predictions and, at my suggestion, to pass judgment on our original thoughts. After reviewing notes, I told the audience that every one of our predictions had come true but that we had failed.

We had not predicted the rise of social networks nor had we suggested that people might want to participate in the creation of web content. We had missed this important trend because virtually no clues existed. It is easy to predict what can be seen, and it is just as easy to miss the inevitable surprises that nobody can anticipate.

One of the few international thinkers who came close to predicting today's rapid and dramatic changes in the world of publishing is Canadian icon Margaret Atwood. Ms Atwood has more recently predicted that the prices people pay for electronic material will become so inexpensive that published books will no longer be able to support creators and agents and editors and designers and illustrators and printers and distributors and salespeople and booksellers.¹ Some middle links in this chain will, she says, simply vanish. But Margaret Atwood sees, in this coming turmoil, a continued need for school and public libraries. In fact, she fought hard for her local public library system during recent budget problems.

Atwood's thoughts echo my own and they form a belief that is central to this report. School and public Libraries are more necessary now than they have been at any time in the past hundred years. And they will soon become even more critical.

The reason is simple.

Most people who produce factual or creative material deserve and will expect to be paid for their work, and most members of society will never be able to purchase every information or creative item they might wish to consume at some time in their lives, often as students. Unless society is willing to accept the existence of intellectual-gated-communities, it has to ensure the continued existence of school and public libraries.

This statement is not intended to apply only to the economically disadvantaged. I have been blessed with a good income but cannot afford my own reading habits. And, when I was a boy, my parents never would have purchased the numerous books I consumed. Minds in any income bracket that thrive on creativity and on ideas will continue to need libraries.

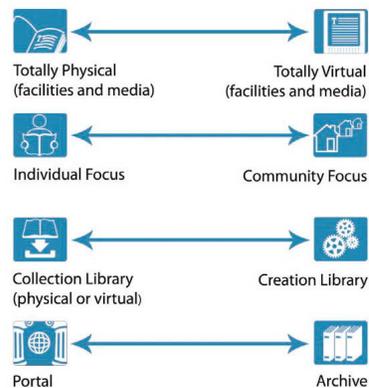
¹<http://marg09.wordpress.com/2011/02/20/tools-of-change-the-publishing-pie-february-15-2011/>

We now realize that knowledge and creativity add economic value. We understand that future jobs will place less value on a strong back and more value on a strong mind. Libraries give us the chance to maintain a literate, creative society.

It is also clear that the emerging role of libraries is not restricted to the provision of information or creative works, no matter what the format.

In a briefing paper released in June, 2011, the American Library Association identified four primary future roles for public libraries, with a continuum between each extreme.² On one extreme, for example, would be a library that exists only in physical space and only circulates physical objects. The other extreme would be a library that exists only in virtual space but can make any item available to those it serves. A chart that outlines these roles is displayed to the right.

I have relied on the American Library Association's report as a guide. Throughout this report I will try to suggest where, in that continuum, libraries might aim if they hope to remain vital.



While I have read many books and articles, most of the footnotes in this report refer to material on the web. I made the decision to footnote web material so that anyone can follow a thought with more detailed content. As an example, John Kotter wrote a great book about urgency and its importance when implementing change. When Kotter is mentioned, I do not footnote his book but link to a video interview.

The report is divided into several main sections. The first section deals with trends that are likely to have an impact on libraries. The second section tries to paint predictions about how these trends will affect services. The final section speaks to success measures.

I need to stress that the thoughts and opinions in this paper, while formed by a great deal of reading and consultation with library leaders, are mine and mine alone.

²http://www.ala.org/offices/sites/ala.org.offices/files/content/oitp/publications/policybriefs/confronting_the_futu.pdf

3. Some Major Trends

3.1 ebooks and their successors

I am a member of a Canadian public library task force which is working with publishers to develop models for electronic ebook rights for public libraries. I will not spend time discussing current problems that the publishing industry and public libraries face. I am convinced that negotiations and time will resolve many of the current tensions. If negotiations are not successful, however, there may be a need for government regulation.

Publishing is going through several huge, related changes. Bestselling books are critical to the success of local bookstores but many bestselling novels are more popular as ebooks than they are as printed books. This trend, combined with the fact that so many people buy their books on-line, means that some bookstores have disappeared and more will follow. Publishers are losing physical places where printed books can be sold.

A Canadian reality makes this situation even more critical. Since most on-line bookstores are not housed in Canada, Canadian publishers receive even less revenue from the titles they distribute.

If we want a strong Canadian publishing industry, libraries and publishers need to work more closely together. This may include finding ways to allow customers to buy printed books through library websites and for local bookstores, where they exist, to fill these orders. We need to become more active partners with the industry which is critical to our existence.

3.1.1 eBooks Users

Many people who currently express distain for electronic books will soon be reading them. Amongst those who migrate toward some use of electronic books will be:

1. *Avid readers who love works of fiction and have wide ranging tastes in books and authors.* This is an easy prediction. Backlist titles, literary fiction and books by new authors often lose money for publishing houses. The president of one large publishing house has said on many occasions that publishing such material only in ebook formats might allow publishers to develop new writers and re-print books that ordinarily would be unavailable to readers. Serious readers will have to move to ebooks or accept that they may lose access to writers they love. Readers who discover a good author and want to read past titles may discover that these books are only available in ebook formats. The good news for writers and for readers is that books will remain more accessible than at any time in the history of publishing. The bad news for writers is that their books will face even more competition for reader attention.

2. *Readers of large print material and those who use spoken books.* ebooks offer the opportunity for any book to become a large print book. Technically, any electronic book can also become a spoken book, although some publishers are currently blocking this capability. Rights management should and will address this issue. The arrival of accessibility capabilities in ebooks is happening at the same time as record numbers of tech savvy seniors are beginning to retire. ebook readers are the first digital technology where an older demographic is proving to be early adopters.³

A December 2011 US report on the future of academic libraries states that the world of ebooks has reached a *tipping point* and that ebooks will become more dominant than print in an academic setting.⁴ If we accept this fact, then it is critical for schools to provide access to ebooks, preparing students for college and university. It will also become important for public libraries to provide material in formats that students will be learning to use.

3.1.2 What Comes After ebooks?

It is possible that ebooks have the same relationship to books that horseless carriages once had with horse-drawn buggies; ebooks are the first form of a new product that takes its name identification from the immediate past. This product will soon begin to morph into something far different from the printed book, just as the horseless carriage developed into something far different from the horse-drawn buggy.

To glimpse the next stages of this new product and the opportunities that electronic learning and creative media represent, we should look more closely at graphic novels and at "apps" and at the rise of visual forms of information portrayal.

Graphic novels and apps are well known. Visualization of information is not. Visualization attempts to convey complex ideas and thoughts through interactive graphics. Visualizations may help to teach complex ideas to students that think more visually than previous generations. In fact, one of top tech trends for 2012 is listed as "The Visual Web⁵."

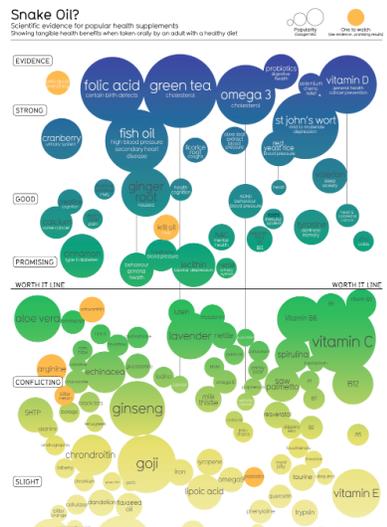
The fact that the younger generation both thinks visually and learns through play is well documented by American scholar John Seely Brown⁶ and others.

³www.infodocket.com/2012/03/27/bowker-releases-results-of-global-ebook-research-ebook-adoption-rates-in-10-countries

⁴<http://www.educationadvisoryboard.com/pdf/23634-EAB-Redefining-the-Academic-Library.pdf>

⁵ <http://www.readwriteweb.com/archives/top-trends-of-2012-the-visual-web.php>

⁶ <http://www.johnseelybrown.com/learning2.pdf>



The image to the left is an example of information presented through Visualization. The bubbles are arranged to convey, with few words, a visual image of the scientific evidence that supports or criticizes various natural remedies and cures. The higher the bubble on the chart, the more evidence exists to support claims that the holistic medicine inside the bubble can at least ease problems with the targeted ailment. The interactive version of this chart allows readers to explore the research behind each bubble and to set personal parameters about gender or unique circumstances.⁷ Bubbles sink or climb with each unique qualifier. To an extent, this image is one prototype of a new Table of Contents, one that can be customized to fit the reader.

3.1.3 Private Publishing

We will also see a rise in the acceptance and the popularity of personally produced and published books. The qualitative difference between books produced by private sector publishing houses and by individuals will begin to blur. Book equivalents of YouTube videos will challenge traditional publishing for reader attention, just as YouTube is challenging traditional television. School and public libraries will face an opportunity to “publish” outstanding creative material to the web and to help these works find an audience.

Although library print circulation remains strong, books will soon constitute less than half of the circulation figures for many library branches. This is already happening in some cities, particularly in more economically challenged, urban neighborhoods. It is important that libraries embrace the fact that their mission is not connected to a type of container (print) but to the ability of residents and students to access the best of the world’s intellectual property, no matter the format in which it is presented.

There are plenty of cautionary tales around us. For example, when downloaded music became popular, music industry did not establish its own digital network; they were too focused on trying to sell physical material through stores. The music industry forgot to focus on the customer instead of their own infrastructure and allowed a computer company, Apple, to create iTunes Clayton Christensen’s 1997 book *The Innovator’s Dilemma*,⁸ written before the music industry’s

⁷ informationisbeautiful.net

⁸ Christensen, Clayton, *The Innovator’s Dilemma*, Harvard Business Review Press, Cambridge, 1997.

radical changes, provides a cautionary tale for libraries and librarians who assume our business is immune to change or that the public will always protect us.

3.2 Technology and Telecommunications

Less than two years ago industry projections suggested that there would be 150,000,000 tablets, smart phones and ereader devices sold in North America by the year 2015. The North American market passed the 150,000,000 milestone last fall. It took less than half the time that industry experts had predicted. Estimates suggest that there are now more than 200,000,000 devices in the hands of North American consumers and that by the end of 2016, there may be 8 billion cellphones worldwide⁹. This trend will affect public libraries..

Data plans for these smartphones and other devices are more frequently bought by wealthier Canadians. There are also more free wifi zones in wealthier neighborhoods. There is an implication for libraries. It is possible that libraries might provide more users with information access by supplying wifi outside their walls than by offering some current services inside their walls.

Public libraries have a unique opportunity. Canarie (the Canadian Advanced Research and Innovation Network) has partners in every province. The British Columbia partner is BCNet.

Canarie recently changed its definition of research organizations (those allowed to use their service) to include both public libraries and school boards. In some provinces, Canarie, along with a provincial partner, now helps to provide inexpensive, high-speed Internet access to K-12 school boards and to public library systems, provided they can reach a Canarie hub. A Canarie program called the Infrastructure Extension Program has a statement of purpose which says they are to . . . *enable national and international collaboration, improve access to knowledge, and contribute to the development of cyberinfrastructure and e-research in Canada. Specifically, connections to government laboratories, educational institutions and other facilities are to be supported.*¹⁰

Very few K-12 school boards or public libraries currently take advantage of this amazing opportunity. Canarie/BCNet may be able to provide British Columbia K-12 school boards and public library systems with improved bandwidth at a reduced cost. In Ontario, one public library system is planning to use Canarie access (through the Ontario partner, Orion) to provide recreation centers with free wifi zones. Recreation centers are open more hours than public libraries.

⁹ <http://mobithinking.com/mobile-marketing-tools/latest-mobile-stats>

¹⁰ <http://canarie.ca/en/extension-program/contractor>

Technology and technologically-based solutions to problems will be peppered throughout this report. The most important message is that school boards and public library boards need more knowledge about how people use technology when they seek information, and libraries need to ensure that their mandate fits that world. As an example, the Cleveland Public Library has just started to offer library card holders free cloud storage space that is protected from commercial invasion and that ensures privacy is preserved.¹¹ Wow.

3.3 From Consumption to Creation

An emerging trend, with a youth focus, is shifting the role of public libraries from a place focused only on information that is consumed (usually by taking it home to read or view) toward places where people gather, learn from each other and then use new skills. This trend is reflected in the American Library Association report mentioned in the Introduction.

The shift toward library as community creativity hub is more developed in northern Europe but some initiatives are taking place in North America. The Fayetteville Free Library in New York is receiving deserved attention for its Fab Lab, featuring a 3D printer that people can use to *print* plastic objects.¹² The 3D printer is not expensive (less than \$2,000)¹³ but is having a huge affect on how youth and older customers view their library system. The District of Columbia Public Library has a recording studio in its Central Library teen area.¹⁴ The Chicago Public Library has a YouMedia Center where young adults can:

- *Hang out* (talk to each other in informal sessions with no adults telling them to be quiet or to take their feet off the tables),
- *Mess around* (Experiment with new technologies),
- *Geek Out*¹⁵ (Teach each other about ways they have learned to use music and video editing equipment, etc.)

These three “goals” come from research conducted by the MacArthur Foundation.¹⁶ The research identifies ways that teens and youth can learn from each other. YouMedia labs are now being established in other U.S. cities.

¹¹<http://cpl.org/Mobile/LibraryNews/tabid/1251/ArticleId/269/MyCloud-to-Provide-Patrons-Their-Own-Personalized-Computing-Experience.aspx>

¹² <http://wrvo.fm/post/fayettevilles-high-tech-fab-lab>

¹³ www.makerbot.com

¹⁴ dclibrary.org/node/29258

¹⁵ <http://newlearninginstitute.org/digital-media-programs/community-based-programs/YOUmedia>

¹⁶ http://www.macfound.org/site/c.1kLXJ8MQKrH/b.5852863/k.2D95/ReImagining_Learning__YouMedia.htm

The provision of creation spaces in public libraries is pervasive in northern Europe. I visited a Swedish library where people bring projects to the library, learn how to use relevant software tools and then reserve large blocks of computer time for weeks into the future.

In contrast, the North American model for public computer use is based on shorter blocks of daily time and an assumption that people are using the computers to search for information.

The Helsinki Library system and other Scandinavian libraries provide video and music editing rooms as well as staff expertise. The Finnish creation movement started with a national initiative to reconnect alienated youth. The public library portion of this initiative has proven remarkably successful.

I took the photo at right in the Copenhagen's central library. The library took advantage of an area that is little more than a wide spot in a corridor to create an interactive area for people to play music silently. No staff interaction is required.



3.4 Shift to Collections that emphasize Creative Content

Several decades ago, the majority of a school or public library's business centered on the provision of information. While libraries are places where people can still find information to enrich their lives, libraries are one of many places where people now seek information.

We need to accept that most of the physical material that customers take home from libraries is no longer related to information needs. The shift to collections that stress creative works and places where people seek works of creativity is already taking place; we should embrace this shift. People are increasingly aware that creative works feed creative minds and creative minds are highly valued. We learn by story and imagination. We retain images, not words in our minds. As Yan Martel writes in his latest novel, *Beatrice and Virgil*, "*Fiction, being closer to the full experience of life, should take precedence over non-fiction. Stories – individual stories, family stories, national stories – are what stitch together the disparate elements of human existence into a coherent whole. We are story animals.*"¹⁷

Young people whose parents have immigrated to Canada often consume fiction to learn about their new surroundings. We learn by reading. More people learned about modern Afghanistan

¹⁷ Martel, Yann, *Beatrice and Virgil*, Vintage Canada, 2011, page 7.

from reading *The Kite Runner* than from reading any non-fiction book. We place too little importance on the need to ensure that people have access to creativity and to ideas.

3.5 Computers and Individualization

Library computer areas are often designed to resemble quiet reading rooms, but:

1. School boards and teachers stress group projects and collaborative work. To complete their work, young people want to cluster and want to talk as they work.
2. Some computer applications have noisy, interactive elements.
3. People do not always want to use computers while sitting in chairs and at the same kind of desks as the people next to them. They want options.
4. The presence of wifi in libraries means that one area cannot be set aside for computer use. Instead, all areas of the library now house technology and all staff need to provide assistance.

The photos to the right and below tell the story. The first photo is from the Amsterdam Central Library and shows one of their many seating options available to people using library computers. The Amsterdam photo shows an option designed for teens and the way they sit.



The second photo is from Mohawk College in Ontario and it shows one of many types of collaboration spaces where teams can work together on projects.



Today, the computer is a phone, a gaming device, a movie screen, a radio and a video-conferencing tool. These are not quiet uses.

3.6 Open Data, Internet Resources Websites and Literacy

The public, graphic Internet is a young technology. It is so young that it has only endured one significant change. It has morphed from being a passive information tool where large companies and organizations posted documents and has become, as well, a place where anyone can and does contribute opinions about events and thoughts or their personal lives.

We are beginning to see a third major change in the web. This change is characterized by people being sent information that their profile suggests they might like to receive. I will use a simple example. Singles Around Me (SAM)¹⁸ is a dating app for smartphones. It links to social media profiles and lets users know when single people who match their interests are physically close, in any city. This is a huge shift from a web that provided passive web pages waiting to be viewed.

I want to discuss the impact that such shifts may mean for libraries.

3.6.1 Open Data

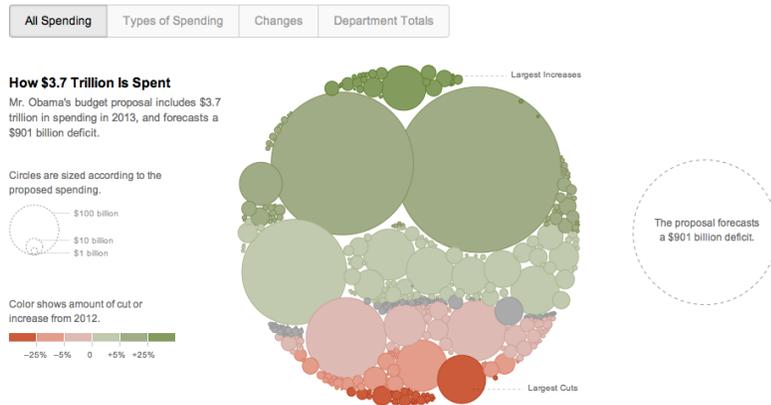
Open data initiatives currently receive much attention. They are also greeted with fear by some companies and government agencies. After all, open data initiatives allow the public to interpret information and to re-present it. It also allows people to receive bits of information divorced from the original context.

I first became aware of the open data movement about five years ago when a group of citizens in Chicago took daily crime logs from the Chicago police department and graphed them onto a Google map of the city. The crime logs, previously available only as text, had conveyed no focus or message. The maps, however, produced clear patterns and resulted in changes to police priorities.

There have been many similar and even more remarkable stories. In one city, open data maps highlighted the fact that neighborhood life expectancy differentials could be measured in decades. The revelation made its way into the city's strategic planning priorities.¹⁹

¹⁸ singlesaroundme.com

¹⁹ http://media.metroland.com/thespec.com/statistics_flash/



My current favorite example is from *The New York Times*, which has embraced both visualization and open data. *The NY Times* created a bubble diagram (to the left) which looks very similar to the Snake Oil chart shown earlier. *The NY Times* visualization takes U.S. government information and presents it graphically, showing where budget increases

and budget decreases are being proposed. Again, clicking on each bubble leads a reader to detailed information.²⁰

Linked open data is the next iteration of open data. Linked open data assumes that information from a variety of sources can be pulled together to create new information targeted at a user.

For internal library needs, the implications are enormous. After ensuring that appropriate privacy issues are addressed, libraries could map user profiles to collections and easily supply people with new articles on subjects of interest or let them know when relevant books arrive. Libraries could manage a person's Holds so that people never have too few or too many books. Libraries could provide Tweets or program notices that match a person's interests.

At the very least, libraries should be prepared to support initiatives where people within the community can work to reconfigure data (Hacker Spaces). It is entirely possible, for example, that community groups may take responsibility for translating library, school or community website information into other languages. Many cities are seeing the rise of volunteer groups who create mobile transit maps and school curriculum links and other valuable tools. We lament, as a society, the decline of volunteerism yet there seems to be enormous public enthusiasm for contributing to the web. I think part of the reason is that accomplishments feel and look so significant. I have heard of many libraries that decided to create Wikipedia articles about themselves only to discover that a citizen-produced article already existed. The Maker and open source cultures suggest a generation of (usually) younger Canadians have adopted a new way to volunteer their time. We need their energy.

Libraries are a natural host for community-based open data activity and the implications for both school libraries and archives could be huge.

²⁰ <http://www.nytimes.com/2012/02/13/us/politics/2012-budget-proposal-graphic-html>

3.6.2 Internet Resources

I love the web. Still, it is not a love that is blind. I know the web's faults.

For example, a Google search for information on almost any disease will lead a user to first page results that encourages donations to American associations or that provide information about homeopathic cures, often leaving Canadian associations and validated medical advice further down the search results.

School and public librarians have said, for many years, that web-users need to be more sophisticated in their understanding about sources of the information they find. There is indeed a strong need for media education, but librarians may also have a responsibility to work with partners to create trusted search mechanisms for selected topics, with an emphasis on local services. There are important subject areas where for-profit search engines carry a different mandate from those of libraries or government. Libraries are impartial and do not alter results if payment is made. There are many topics where search engines work very well and quickly take users to the exact information they seek. There are other subject areas where libraries, working with partners, need to reassert their position as guardians of impartial information delivery.

3.6.3 Websites

School and public libraries have an opportunity to strengthen their on-line presence. Library websites often place too much emphasis on words. They need to reduce their emphasis on text. One 2005 report made it clear that library workers are generally better educated than those they serve and can, as a result, focus too much attention on the written word as a communication tool.²¹ Library websites tend to be built the same way as the print collections in some libraries; they err on the side of too much information (just in case somebody wants it) instead of focusing on what people use.

3.6.4 Literacy

I have, throughout this paper, placed an emphasis on the use of words combined with images to convey ideas. This simple concept is at the core of the transliteracy movement. My favorite report on transliteracy is *Technologies of Cooperation*, and it available as a free pdf download.²² One quote from that report, under the heading of *Extended Tools: Societies of Technology*: states that: "What we are witnessing today is . . . the acceleration of a trend that has been building for thousands of

²¹ <http://www.oclc.org/reports/2005perceptions.htm>

²² http://www.rheingold.com/cooperation/Technology_of_cooperation.pdf

*years. When technologies like alphabets and Internets amplify the right cognitive or social capabilities, old trends take new twists **and people build things that never could be built before.***"²³ (I added the Bold font.)

How many people who love books and who love literacy (as traditionally defined) struggle with the fact that definitions of literacy are changing? The concepts embedded in transliteracy relate to my prediction about the ebook as a transitional format. I firmly believe that we are witnessing the birth of new communication formats. The twentieth century saw the impact of movies and radio and television on literacy, moving us away from print. The new formats of the early twenty-first century will emphasize print as an important component - but only one component, of their design.

The impact of these new formats will be as dramatic as the impact of radio, movies and television. If all people are to enjoy the educational and creative benefits that these new formats will provide, library staff will have to be tech-savvy and library systems will have to work together more closely. The reason is simple. Unlike every other collection we have used, these new formats will have no physical substance and no limitations set by municipal boundaries or school board jurisdictions. This is huge.

3.7 The Reduction of Repetitive Tasks

Predictions for all industries affected by technology are that many repetitive chores and tasks will be eliminated or at least drastically reduced - and libraries are organizations that are filled with repetitive chores and tasks. This trend has already begun.

For many libraries, RFID and self-serve technologies have eliminated circulation desks and streamlined the re-shelving of material. RFID will soon enable vendors to ship new material directly to branch locations, uniting invoices as each library unloads boxes and checks material into the system. This will get material on the shelves faster and will eliminate more back room tasks. And, downloaded music, video and books do not have to be shelved or handled by staff in any way.

Some libraries are managing the staff implications of this shift. The Hamilton Public Library, for example, began working with its CUPE local more than five years ago, alerting them to the impact of RFID but promising that any related job loss would only take place through attrition and that fewer, more highly paying positions would be created. Staff could take advantage of free tuition to make themselves eligible for these higher paid positions. The result is that almost forty positions that required only a high school education have disappeared while twenty-five

²³ Ibid, page 4

new positions requiring a higher educational qualification have been created. A 25,000 square foot branch has also been opened with no new staff. During those five years more efficient circulation practices led to an increase in circulation activity from just over 4,000,000 items per year to 6,900,000 items per year. Staff size decreased from 324 FTEs to 314 FTEs.

Even reference services have become more repetitive. The number and complexity of reference questions are both declining. The first study I know that captured this trend was conducted in San Jose, California more than five years ago. Each repeated study validates the trend. Reference books are no longer kept behind a desk for staff to consult but are available on-line for anyone to search from home or office. Many reference books are not in print or are prohibitively expensive in print.

3.8 New Staff Roles

The responsibilities for professional staff should match their training and educational qualifications. In too many library systems, professional responsibilities have not changed as swiftly as library use. While there may be less demand for traditional reference services, there are still library systems where underutilized professional staff are tied to desks.

There seem to be two emerging roles for library professionals who are not managers.

In larger municipalities, community-based librarianship has moved professional staff from Central libraries to branches but it also sends them out into their communities. Their role is to help determine the needs of various niche markets, to help build business databases or to create customized services for organizations and individuals. Professionals need to ensure that library *proactively* meet community, educational and individual needs instead of assuming the traditional *reactive* role where they wait behind desks for people to appear. Professional staff train others to handle reference services, conduct story times, develop programs and work with partners. They stay current with new technologies.

The second new role for library professionals is the management of large projects. Rapidly changing expectations mean that libraries will need to work on a number of projects at once, continuously. Libraries will need to modify, eliminate and add material formats and re-design back-end systems on a constant basis. The techniques of project management will need to be used by professional staff, who will work with other staff, partners and the public to improve service.

The December 2011 report on American academic libraries²⁴ recommends a move toward tiered and crowd-sourced reference services, allowing professionals to use their skills more effectively. Many public libraries are moving to a "Book a Librarian" model that allows customers with complex issues to receive dedicated time from an information professional.

Libraries will exist in a dual space for at least another decade. There will be demand for print material and for traditional services and there will be a rising demand for material in e-formats.

In smaller communities, many of these roles may be assumed by a para-professional.

3.9 The Growing Importance of Consortia

As the world of libraries begins to rely even more heavily on technology, smaller library systems simply will not have the infrastructure or the staff to provide relevant services. They will definitely not have the capacity to negotiate contracts for ebooks or downloadable videos or music without the assistance of consortia or cooperatives.

Perhaps the most successful North American jurisdiction, in terms of its ability to provide technologically advanced and appropriate services, is the State of Ohio. It is no coincidence that Ohio also has one of the strongest statewide consortia in North America, OhioLink. OhioLink relies on some State funding but has managed to link several public libraries to college and academic libraries. OhioLink libraries use a single ILS system to bring almost fifty-millions items into a single catalogue. They also negotiate database licenses and ebook contracts for their members. OhioLink has been in existence for several decades. Stable funding and proven success have helped to keep it successful.

If British Columbia's school and public libraries hope to use BCNet and Canarie for their connectivity and if they hope to provide community wifi services, they may need to move away from strong IT connections to their municipalities since municipalities are not permitted to use Canarie. A logical new partner would be a strong cooperative whose attention and services are focused solely on the needs of libraries and their customers. An added advantage would be the relatively easy creation of seamless electronic library services for students who are graduating into life. If schools hope to teach their courses by using electronic textbooks and by using downloadable videos, students should expect these services to be available to them after they graduate and wherever they live. This can only occur if there is a provincial commitment to seamless access. Consortia are the tool that make such access possible.

²⁴ <http://www.educationadvisoryboard.com/pdf/23634-EAB-Redefining-the-Academic-Library.pdf>

One additional advantage to provincial involvement in helping to link libraries is that license fees for ebooks and on-line resources can be significantly reduced when an entire province is covered by a license. There are several reasons.

1. Vendors are more aggressive when they know that losing a bid may mean that they receive little or no business in the entire province, and
2. Vendors can reduce their costs if they know that there is only one contract to be negotiated, and
3. Vendors can reduce their costs if they know that they do not have to block access to some areas of a province or to some types of users.

Consortia may be helpful to libraries in other ways. Privacy laws, human rights legislation and accessibility obligations are all far more complex than was once the case. Smaller organizations will have a hard time meeting their legal responsibilities without the professional assistance necessary to recognize and address those responsibilities.

The British Columbia Libraries Cooperative seems to be doing everything right to encourage libraries to build strength by acting together.

3.10 Alternatives for Delivering Books

Library vending machines have been available for a long time. RFID has enabled a new generation of vending machines that are far more sophisticated. The most sophisticated machine I have seen is the LibDispenser from MK Sorting. Others will soon have similar capabilities. Depending on the number of expansions used, the LibDispenser can hold more than a thousand items. It allows collections to be housed at third-party locations such as recreation centers or schools and for customers to search and select material either in the entire library system's collection on or inside the machine itself. Any returned items is checked in by the machine, becoming available to other users. People can also pick up holds, stretching a libraries *open* hours and reducing materials handling.²⁵

²⁵http://www.mk-sorting-systems.com/fileadmin/media/Produktblaetter_neu/DIN_A4_en/mkSortingSystems-LibDispenser_EN_1.1.pdf



Sending books to users through Interlibrary loan is expensive, and all it does is move a physical item from one place to another and then back again, at a cost that can exceed the purchase price of this same item. This is particularly true now that people sell used books on the web.

Although Interlibrary loan is expensive, there has been little effort to study the service and to determine if alternatives might exist. For example, many of the requested items are from people conducting genealogical research and who seek cemetery records and newspaper birth announcements. People might gain better, and more immediate access if there were a focused effort to digitize such material. While initially more expensive, digitization may save ongoing Interlibrary loan costs. We don't know because, to my knowledge, no studies exist.

3.11 A Provincial Library Card

I have saved this trend for last because it is an old trend that many States and Provinces are re-considering, trying to determine if new technologies alter the equation.

Many States and Provinces have recently considered implementing a State/Provincial library card. The pressure to eliminate non-residence fees is especially compelling in jurisdictions where the boundaries of school boards do not match the boundaries of local public library systems. It is tragic to hear of class visits to the local library where every student cannot receive a free library card because they live across municipal boundaries. Even when library systems let all students have a library card, parents are less likely to drive their children to a library that they themselves cannot use.

After States and Provinces consider the problems associated with a single library card, many do nothing or make some small gesture. The key stumbling block is mentioned in the current strategic plan for B.C. libraries, *Libraries Without Walls*²⁶. Public libraries receive most of their fund-

²⁶ www.bclibraries.ca/home/site-files/Final_Report.pdf

ing from local municipalities and the level of funding can be vastly different. Legislating open access can lead to multiple problems, including:

1. If there is provincial funding to compensate for non-resident use, municipalities that have never properly supported their libraries may reduce their limited funding.
2. Local libraries often doubt that State/Provincial funding will sufficiently compensate them for increased use. Libraries also know that if State/Provincial funding is reduced or eliminated then they are the ones who will receive complaints and be held responsible for a lost service.
3. Users hate that they have to return material to the home library system, but, unless there is a single or linked ILS, material returned close to the due date may be logged as overdue by the time it makes it way home. This concept is rarely understood by users.

The Greater Vancouver area uses a time-honored, subsidized system that allows for free access across a number of well-funded library systems. Many users love the current system since it allows them to use libraries free of charge, no matter where they live or work. It would be difficult to change the lower mainland's reciprocal borrowing system. It has a proven track record.

The current British Columbia One Card system, which extends the Greater Vancouver model, has an admirable goal. It tries to allow British Columbians to access any public library in the Province, without barriers. The current system allows libraries to set the level of service that they are willing to provide, recognizing that neighboring libraries often have huge differences in funding and in service.

If a One Card system is desired, there are probably several options for improvement.

1. The Provincial government could commit to sustainable multi-year funding, with the entire program heavily branded as a provincial initiative. Local libraries would be assured of continued funding and the province would receive both credit and responsibility for its continued existence. I do not know of a single state or province where any such commitment has been made or, if made in the past, has continued to be honored.
2. The province could take responsibility for another area, such as ebook collections, where provincial support may make it cheaper and easier for a provincial license to be negotiated. In return, there might be an expectation of a minimal level of local reciprocal use.
3. The third model requires a user fee. It is based on Indiana's Public Library Access Card (PLAC). In this model, a resident is entitled to use the local library free of charge. A resident may also purchase a PLAC card that can be used anywhere in the state, except for a person's

home municipality. The PLAC card is sold at all state library locations.²⁷ A PLAC card cost \$50 per year. All collected funds are distributed to state libraries according to use. Indiana's PLAC card system has been active for about twenty years. It also has a proven track record of success and maintains pressure on local municipalities to continue funding libraries. The main disadvantage is that it introduces a user fee where none existed.

4. What will libraries look like in 2017?

Libraries, in 2017, will look much the same. There will be physical shelves. There will be public computers. There will be staff to assist.

Upon closer inspection, many things will seem different. More people will be using wifi on their own devices than are using library computers. The library system may even be providing wifi access at other municipal locations - arenas and parks and community centers.

Fewer people will be using public computers quietly and alone. Instead, more customers will be clustered in groups, working collaboratively. Occasionally, a library staff member will wander past to make sure they know how to use the software required for their projects.

More customers will use headsets and will speak to their computers, using Skype or Facetime to connect to family, work and friends. Excellent broadband connections will make it easier for video conferencing to be used. Conference rooms in some libraries will allow students to study together or let local business groups use video-conferencing capabilities to connect with clients and colleagues. Larger libraries will provide space that encourages noisy computer uses.

At libraries you will notice far more teens and young adults who are thrilled to be there. They will be attracted by creation tools such as 3D printers and other "Maker" tools as well as access to software and expertise that help them to develop music and video editing skills.

Library hours may be extended during exam periods so students can study together.

In smaller communities libraries may co-locate with local schools, recreation centers or other appropriate partners. The resulting partnerships will save operating funds and ensure that expensive technology is better used. In order for these school/public library partnerships to work, several problems will have to be recognized and resolved.

1. Some parents tolerate (barely) the existence of public library material that they don't want their children to read because they can go to public libraries with their children and monitor

²⁷ <http://www.in.gov/library/placrules.htm>

what is taken; these parents are less tolerant and far more vocal when such material is on the shelves of school libraries.

2. Students from other schools often feel unwelcome.
3. Senior citizens often have little tolerance for the noise created by young children or teens.

Combined school/public libraries may not be practical at all in cities or towns where a single public library branch is intended to serve areas that contain multiple schools.

Some very small, mostly rural public libraries may have closed. Residents will still have access to wifi and to downloadable material. They may also have access to sophisticated vending machines that use RFID technology, allowing all returned items to be instantly checked-in and made available to other customers. The machines will also allow people to place holds on material held in collections across the province and to have this material placed in the machines for pick-up. These sophisticated machines will be located in places such as arenas and will be open many hours each week.²⁸

Just as the public library world of 2012 struggled to obtain and distribute material in ebook format, the library of 2017 will struggle to ensure material developed as apps or other new formats are available to everyone.

The web presence for libraries will be much more powerful than was the case in 2012. Websites will feature more ways that users can add content and will allow users to both download material and to buy material, strengthening the Canadian publishing industry and providing income to the library.

There will be a growing awareness that the library *brand* name colours people's expectations when they enter any public library. The library community will begin to talk about ways to strengthen the brand with the use of standards. Some standards may even be set.

Public library support for learning will be even more electronic but will be far more visually oriented than was the case in 2012. Databases, apps and etextbook access will support blended learning, within its combination of classroom contact and on-line group learning experiences.

More library material, both print and electronic, will be acquired through a provincial consortium/cooperative. The library consortia will also begin to manage local and provincial library IT and systems infrastructure.

²⁸http://www.mk-sorting-systems.com/fileadmin/media/Produktblaetter_neu/DIN_A4_en/mkSortingSystems-LibDispenser_EN_1.1.pdf

5. What will libraries look like in 2022?

By 2022 most library buildings will contain fewer books and more group study/community meeting space. They will have larger wifi zones and a wider variety of seating options for customers. They will have quiet zones and noisy areas. Most of the book-oriented services will be automated. Creation or Discovery zones will be commonplace. Library systems will have far more young adult customers than they did in 2012. Staff will have the expertise to support students who use technology as part of their educational experience.

Sophisticated book vending machines will be available in places such as Skytrain stations, bus terminals, ferries, city halls, etc. In addition to free local library services, BC residents will be able to obtain a provincial library card that can access any of these vending machines or any library's collection. If the One Card is user-funded, money will be distributed to the libraries that are heavily used by non-residents. This will encourage library systems to provide service in non-traditional locations where clusters of people may come from different communities. It will also encourage libraries in tourist destinations to welcome visitors.

Library staff will understand that their business is one that is constantly changing. Most libraries – and all successful libraries – will have adopted a culture of experimentation and of using pilot projects as a way of proving concepts before they are fully implemented.

Libraries will use sophisticated measurement tools that help them determine the impact of decisions on the behavior of customers. Libraries will make decisions based on use and satisfaction.

There will be recognition that the brand “library” is one whose local strength or weakness affects overall confidence in what the brand represents. As a result, libraries will feel a more compelling need to ensure that any organization which carries their brand name adheres to a minimal standard of service. The standards will be clearly articulated and will have been developed by the library community itself.

6. What will libraries look like in 2030?

The New York Times has a remarkable interactive website called *Predicting the Future*.²⁹ The site does not rely on the pronouncements of experts. It relies on votes. Anyone can suggest predictions that might be added and then, through votes, people alter when they believe these predictions might come true. Thousands of votes have been cast, moving various predictions.

²⁹ <http://www.nytimes.com/interactive/2011/12/06/science/20111206-technology-timeline.html>

Some of the predictions for 2025 – 2035 include:

- 2025: *Dr. Computer* (People will receive better medical diagnosis, including psychiatry, from computers than from human medical doctors).
- 2026: *Self-driving cars*
- 2027: *Predictive self-purchasing* (Companies will know what and when you tend to purchase certain items and will, with your permission, automatically send them to you).
- 2030: *Programmable organisms* (Scientists will be able to design simple life forms and print DNA code).
- 2031: *Cancer is cured*
- 2034: *Voting by cellphone*
- 2034: *Everyone telecommutes* (The explanation listed on the site for this prediction makes it sound far less inviting. The explanation also anticipates potential social upheaval caused by a disruption of taxing models and social cohesion).
- 2035: *Automated restaurants* (Fast food restaurants will employ very few people. The work will primarily be done by robots).

I cannot say that I believe that any or all of these predictions will take place within the predicted timeframe. Some of them may not occur at all. What is interesting is that most of the predictions listed on the site for the next ten years sound plausible while the predictions for the years after 2022 begin to sound a little more *iffy*.

I am probably playing the same game when I make predictions for 2030. There are so many unknown factors.

So, what can we safely predict?

We know that cheap computing power will make 2012 home computers look like they have the intelligence of a doorbell. We know that information storage will be incredibly cheap. We know that bandwidth will enable the development of software that is almost impossible to fathom. We know that companies will be exploring even more ways to link into the habits of individuals so that they can act as agents for people who have cash and who value their time.

We also know that Google just released interactive glasses.³⁰ The glasses allow people to wear an android smart phone and to use their glasses as a screen. The glasses will respond to voice commands, meaning even more people will appear to be talking to themselves on the streets.

³⁰ <https://plus.google.com/111626127367496192147/posts>

One of the origins for this concept came from an MIT experiment to see if such glasses might help Alzheimer patients to recognize people they regularly see. Facial recognition software would seek matches and then display names on the glasses. Since this is an anticipated 2012 technology, it seems impossible to predict what might come eighteen years into the future.

It is probable that, by 2030, fewer library buildings will exist. We are already seeing a North American trend toward the closure of two or three small libraries in a region and the subsequent opening of fewer but larger buildings that can handle collaboration spaces and meeting areas and quiet computer spaces and wifi zones and noisy computer spaces and creation spaces and gaming areas.

It is probable that by 2030 many public libraries will become true community meeting places.

We are seeing a slight glimpse of this model. The largest single public construction project taking place in Europe right now is the Aarhus, Denmark Urban MediaSpace project. This *library* carries a price tag of almost \$200M Euros. The reports that led to its design and approval read like they are planning documents for what we might expect of a library in 2030.

I was able to spend time with the Aarhus Library Director in January/February 2012. He gave me copies of much of their documentation.

The Aarhus concept believes people can program public space with staff help but minimal involvement, that new media is critical to any definition of literary, that creation and imagination will become the driving forces behind the next economy and that public space will become even more critical as people begin to spend even more time facing computer screens or dealing with digital interactions.

We can also get a glimpse of future libraries from the Helsinki 10 and Meeting Point libraries.³¹ There are no books at Meeting Point. One of its key features is the availability of tele-work cubicles that people can use all day. The cubicles recognize that many Helsinki apartments do not have room for a tele-worker to stay at home.

The third glimpse comes from American academic libraries. We are beginning to see fairly large university library buildings that contain no books or have moved them to locked areas. Books can be requested and brought from storage, freeing library space to be open longer hours for collaboration and meeting purposes. Staff are available to help people find relevant material amongst the enormous number of choices they now face.

In Canada, Mohawk College opened a bookless library almost ten years ago, and McGill University has a LibDispenser containing high demand print material.

³¹ http://www.splq.info/issues/vol38_4/08.htm

Books will exist in 2030 and books will be circulated by public libraries but the process of handling book circulations will be so automated that library buildings can be treated as open, community spaces. In Denmark, there are already more than 50 library buildings where the public can enter after hours (with no staff present). People can use computers and even check out material. The technology that enables this remarkable service is that each library card is a smart card that also acts as driving license, health card and other forms of identification. Privacy can be protected by in-card electronic envelopes, with each envelope securely locked.

More staff will be needed to assist with technology and with service design. Fewer staff will be needed to maintain traditional library services. In the ALA continuum, more libraries will edge closer to the provision of virtual services and farther from the provision of physical spaces.

7. Success Measurements

Jack Welsh liked to say that "If you can't measure it, it's a hobby." I agree, although the past forty years have been littered with failed attempts to measure the performance of public libraries using only count measures (e.g. number of items circulated, number of web pages viewed or number of children attending programs). In Ontario, the provincial government uses a form of public library measurement that adds the total number of a library system's circulations, program attendances, in-house visits and web views and then divides this total figure by the population served. The result is a single number that is supposed to represent the annual number of transactions-per-resident-served. A high number is good.

The problem with such a number is that it does not represent value or satisfaction. For example, reducing the number of web views necessary to download a book would reduce the transaction count but increase customer satisfaction.

Last December, a U.S. advisory panel on the future of U.S. academic libraries reached much the same conclusion. Painting a picture of current issues faced by academic libraries, they state that "*Traditional library metrics fail to capture value to academic mission.*"³²

The most exciting library measurement tool I had seen comes from Scotland and was created as a remedy to the failures of number count measurements. *The Public Library Quality Improvement Matrix*³³ combines number counts with satisfaction surveys that must be completed on an annual basis. Since a library can, as the American Library Association brief makes clear, choose from several key roles, the survey allows each library system to identify the role its community

³² <http://currentcites.org/2011/cc11.22.12.html>

³³ <http://www.slainte.org.uk/files/pdf/slic/PLQIM/plqim.pdf>

most needs and then to measure if the system is seen as making progress toward meeting that need.

Individual library survey tools will need to be supplemented by longitudinal research, carried out over time, that help to offset long-held impressions and opinions about what libraries are and what they do. Nostalgia frequently stops libraries from changing and growing more quickly. Library users, library non-users and even library staff sometimes have an image of what constitutes a successful public library. Research is needed to validate or to change those impressions so that, where necessary, change can occur. As an example, one Canadian library system recently conducted a reference study which so changed staff impressions of what was happening at reference points that the study allowed significant job changes to take place with little resistance.

There are other standards that can and should be implemented. For example, the UK Society of Chief Librarians recently produced its National Digital Promise for Libraries³⁴. The Digital Promise sets out a list of digital services that customers should expect their local libraries to provide and then sets out services that libraries should strive to provide. The Digital Promise echoes the types of library measurement tools that American academic Charles McClure advocated and helped to develop.

The same principles - measuring both numbers and value - apply to school libraries, although I know far less about the best ways to measure success in individual school libraries.

8. Closing Thoughts

A symposium on the future of public libraries was held in the Province of Ontario about three years ago. 400 CEOs and Board Chairs attended the one-day event. An electronic vote was held. The question was simple. Did participants believe that public libraries would look much the same in the year 2020? Half the people attending the session felt that libraries would face little change. The other half felt that huge changes were coming.

The same question was asked of a room full of librarians and trustees at the 2012 OLA conference. This time there was an almost unanimous recognition that libraries will be quite different.

³⁴ 4000 Chief Librarians agreed to the promise. The text can be accessed through www.infodocket.com/2012/01/17/uk-digital-standards-agreed-for-public-libraries/

A recent report on the attitudes of librarians toward the future³⁵ suggests that over 60% of all librarians expect that their services will change either significantly or modestly over the next five years, with the rise of ebook formats leading that change.

This shift in thinking is extremely important. John Kotter, Professor Emeritus at the Harvard Business School and a leading academic on the topic of change, argues that positive change can only be made when those affected feel a sense of urgency.³⁶

Luckily, many library workers are at the point where they accept that changes are coming.

For the next few years, the challenge will be to maintain traditional library services while rapidly transitioning services and staff to new roles and new services models. A 2010 Harvard Business Review article³⁷ speaks to a methodology for implementing necessary changes without creating organizational burn out. It points to the need for pilot projects and experimentation before full implementation.

The reasoning is simple. Some staff have a hard time imagining something that does not yet exist. Pilots enable an organization to introduce their changes in one or two departments or locations so that staff begin to feel more comfortable. Pilots also allow staff to participate and to make suggestions before full implementation. As an example, I know of a library system that is moving to the use of startlingly different reference desks. The library system did not buy them for all reference points at once. It started with one.

I want to end by stating that I have been a librarian for almost forty years. I believe that public libraries provide better services now than at any time in our past.

The days are gone when the first three students working on a project were able to take home the only books about a given topic. Instead, on-line library databases and even free Internet resources are available to all, if they have the proper technology and bandwidth.

We could soon witness changes that open library doors to a higher percentage of the public.

I took the photo on the cover of this report last March. I like it because it evokes much of the message. Three minutes after I took the photo, the view of those clouds was entirely different in appearance. Like the photo, this report is a snapshot of a rapidly changing environment.

I believe in the predictions and the opportunities that are outlined but I also believe that the opportunities are available to libraries only for a limited time.

³⁵ <http://www.oclc.org/reports/us-public-libraries/214758usb-A-Snapshot-of-Priorities-and-Perspectives.pdf>

³⁶ http://www.youtube.com/watch?v=zD8xKv2ur_s

³⁷ Bruch, Heike and Menges, Jochen I, *The Acceleration Trap*, Harvard Business Review, April 2010, pages 80 – 86.

About the Author

Ken Roberts was Chief Librarian of the Hamilton Public Library from 1994 – 2012. Ken is the recipient of the 2012 Canadian Library Association Outstanding Service to Librarianship Award. He has been awarded the 2012 Ontario Public Library Association's Lifetime Achievement Award and the Canadian Public Library Association's Outstanding Service Award. Ken was inducted into McMaster University's Alumnae Galley in 2011 in recognition of his outstanding contributions to society. He is a former President of the Canadian Library Association and the Ontario Library Association

As a writer, Ken Roberts has been nominated for the Governor General's Award for Children's Literature. His children's novels, most set in British Columbia, have been Junior Literary Guild and Silver Birch selections and received starred reviews in such prestigious publications as *Kirkus Reviews*, *School Library Journal* and *The Horn Book*.

Ken has just been appointed to the Board of the National Reading Campaign.