

IFLA TREND REPORT 2016 UPDATE

**“It is far better to foresee even without certainty
than not to foresee at all”**

Jules Henri Poincaré, The Foundations of Science, 1913

INSIGHTS FROM THE



TREND
REPORT

IFLA is the global voice of the library and information profession.

The International Federation of Library Associations and Institutions (IFLA) is the leading international body representing the interests of library and information services and their users. IFLA is an independent, non-governmental, not-for-profit organization with over 1300 members in nearly 140 countries.

We work to improve access to information and cultural heritage resources for the global community in this rapidly changing digital and print environment. Our key initiatives include access to digital content, international leadership, outreach, cultural heritage, and multilingualism.

In our professional programmes we build the capacity of our members, and set the professional agenda through development of guidelines, standards, publications and events around the world.

IFLA's status as the global organisation for library and information services ensures that our voice is represented through formal relations with the UN and other organisations.

Contributors to the Original IFLA Trend Report:

Olivier Crepin-Leblond, Chairman Internet Corporation for Assigned Names and Numbers (ICANN) At-large Advisory Committee (ALAC)

Anriette Esterhuysen, CEO, Association for Progressive Communications (APC)

Divina Frau-Meigs, Professor, Université du Paris III: Sorbonne Nouvelle

Melissa Gregg, Principal Investigator, Intel Center for Social Computing

John Houghton, Professorial Fellow, Centre for Strategic Economic Studies, Victoria University

Deborah Jacobs, Director, Global Libraries, Bill & Melinda Gates Foundation

Marième Jamme, CEO, Spot One Global Solutions

Janis Karklins, Assistant Director General for Communication and Information, UNESCO

Alejandro Pisanty, Professor, National Autonomous University of Mexico

Lee Rainie, Director, Internet & American Life Project, Pew Research Center*

Kate Russell, Presenter, BBC Click Online

Andreas Schleicher, Deputy Director, Directorate for Education, OECD

Suneet Singh Tuli, Founder and CEO, DataWind Ltd

Fred Stielow, VP/Dean of Libraries, American Public University System

Fred von Lohmann, Legal Director, Copyright, Google Inc.*

Louis Zacharilla, Co-founder, Global Intelligent Community Forum

The IFLA Trend Report 2016 Update was prepared by Dan Mount. With thanks to **Gerald Leitner**, **Rauha Maarno**, **Christine Mackenzie**, **Hellen Niegaard**, **Veronika Raudsepp Linnupuu**, **Donna Scheeder**



Attribution-NonCommercial 4.0 International License

For press enquiries and further information please contact: stuart.hamilton@ifla.org

*Commenting in a personal capacity

1 EXECUTIVE SUMMARY



This 2016 update report has been commissioned by IFLA to analyse and share the results of three years of intensive debate and discussion across the international library community. These wide-ranging conversations were triggered by the launch of the original IFLA Trend Report in August 2013 at the World Library & Information Congress in Singapore. In 2013, the IFLA Trend Report identified five high level trends which are in the process of transforming our global information environment. These evolving developments spanned access to information, education, privacy, new forms of digital engagement and technological transformation. Deliberately conceived to embody more than a stationary snapshot of detected trends, the IFLA Trend Report was designed to serve as a catalyst for wider discussion, analysis and action across the international library community. Since August 2013 the IFLA Trend Report has been translated in to 14 languages and has triggered over 60 discussion events in 30 countries in Africa, Asia & Oceania, Europe, Latin America & Caribbean and North America. A regional summary of key themes and questions covered in section 3 of the report can be found below:

AFRICA

Key themes and questions

- Do libraries risk forfeiting their natural role in a digital environment?
- Challenges around infrastructure, connectivity and digital skills
- MOOCs and OERs are a massive learning opportunity
- Privacy, data protection and the value of national data policies
- Is 3D printing a threat and an opportunity?

ASIA & OCEANIA

Key themes and questions

- Making the case for libraries as essential community infrastructure
- Mobile technologies are redefining communities
- Transforming library services while safeguarding privacy
- Enhancing LIS skills around big data, community publishing and privacy

- New partnerships with online education providers and content creators
- Anticipating unimaginable technologies

EUROPE

Key themes and questions

- New challenges around copyright, access to content and e-lending
- Is the erosion of privacy a means of control or a source of empowerment?
- How do we close the skills gap for librarians?
- Strengthening strategic collaboration between libraries
- Library principles, digital opportunities and listening to patrons

LATIN AMERICA & CARIBBEAN

Key themes and questions

- Overcoming connectivity challenges to address social exclusion and inequality
- Will MOOCs renew the business case for physical library premises?
- Do new technologies strengthen or undermine communities?
- How can librarians metabolise and embrace digital and cultural change?
- Developing coordinated and collaborative approaches to new challenges

NORTH AMERICA

Key themes and questions

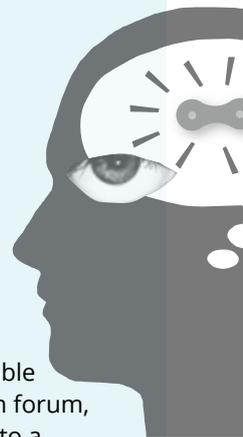
- Re-envisioning library services and the future role of libraries
- Does the digital disruption of education present new opportunities?
- Libraries need to play a physical and digital role in their communities
- How can libraries communicate their achievements more effectively?
- Learners still need a blend of digital and face-to-face environments
- How can librarians embrace innovation without replacing themselves?

Section 4 of this report provides an overview of the main events and activities which have taken place across the world since August 2013, alongside case studies from Australia, Austria, Denmark, Estonia, Finland and Italy.

Section 5 of this update report conducts a brief review of the five IFLA Trends based on regional, national and international discussions, alongside recent developments since 2013. This review concludes that although the specific composition and emphasis of these trends has shifted and evolved over the last three years they remain accurate and enduring overarching themes within our changing information environment.

Section 6 of this report concludes with some key messages around the future of libraries which emerged from the Trend Report discussions. These include the role of libraries as engines of development and essential infrastructure for communities; the importance of librarians to embrace continuous learning; and the need for librarians to work together at all levels in support of the IFLA Change Agenda to become the collaborative architects of their future information environment.

2 INTRODUCTION



This 2016 update report has been commissioned by IFLA to identify, highlight and share key themes which have emerged from national and regional discussions triggered by the original Trend Report. This report summarises those discussions and presents specific case studies underlining examples of Trend Report-related actions taken by libraries. It also reviews the relevance of the five IFLA Trends based on these discussions, alongside recent developments in our information environment since 2013. The report concludes by exploring further key messages around the future of libraries and their implications for driving strategic collaboration, engagement and advocacy across the global library ecosystem.

Launched in August 2013, the original IFLA Trend Report identified five major trends which are in the process of transforming our global information environment. It is important to note that the IFLA Trend Report was purposely conceived to be far more than just a static publication. Indeed, the Trend Report can be more accurately described as a process designed to enable wider discussion, analysis and action across the international library community. During its inception in 2012, the working group responsible for devising the Trend Report kept two key objectives firmly in their sights. Firstly, the Trend Report process would purposefully reach outside the traditional field of vision of the library sector to identify evolving developments affecting the global information environment. Secondly, the Trend Report would not merely embody a stationary readout of detected trends. Instead, it would present a dynamic and evolving set of online resources to foster on-going discussion and debate within the global library community. In support of these ambitious objectives, IFLA initiated a carefully sequenced process:

- In November 2012, IFLA commissioned a comprehensive [literature review](#) surveying contemporary studies and reports covering emerging trends, supported by a bibliography of over 170 documents uploaded to the Trend Report [online platform](#) in January 2013
- In February 2013, IFLA appointed a select group of ten leading social scientists, economists, education specialists, lawyers and technologists, to prepare [expert submissions](#) based on these resources
- In March 2013, IFLA convened a high level [roundtable meeting in Mexico City](#) for this expert panel to debate and discuss the identified trends

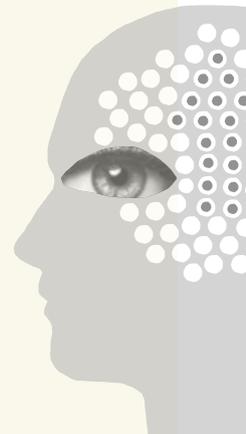
- In May 2013, the expert panel continued to drive an interactive discussion around key questions and issues pinpointed by the roundtable in Mexico via the Trend Report online discussion forum, and in June this digital dialogue was opened up to a wider ecosystem of invited thought leaders and specialists

In July 2013, the outputs of these multiple streams of engagement and debate were all drawn together to produce an [Insights Document](#) which highlighted five top level trends:

1. New technologies will both expand and limit who has access to information
2. Online education will democratise and disrupt global learning
3. The boundaries of privacy and data protection will be redefined
4. Hyper-connected societies will listen to and empower new voices and groups
5. The global information economy will be transformed by new technologies

The IFLA Trend Report was launched in August 2013, by the then IFLA President, Ingrid Parent at the World Library and Information Congress in Singapore. The Trend Report has been translated into 14 languages including French, Arabic, Italian, Malaysian, Chinese, Serbian, Dutch, Spanish, Norwegian, Swedish, Russian, Estonian, Bulgarian and Finnish. Over the last three years events and discussions were held in 30 countries including Australia, Austria, Bulgaria, Canada, China, Colombia, Croatia, Cuba, Denmark, Estonia, Finland, France, Germany, Greece, Italy, India, Malawi, Mexico, New Zealand, Norway, Portugal, Puerto Rico, the United Kingdom, the United States the Republic of Korea, the Russian Federation, Slovakia, South Africa, Thailand, and Turkey.

3 SUMMARY OF NATIONAL AND REGIONAL LEVEL DISCUSSIONS



This section summarises the key themes which emerged from Trend Report discussions and presentations which took place since August 2013 in Africa, Asia and Oceania, Europe, Latin American and Caribbean and North America.

AFRICA

In August 2014 the Standing Conference of Eastern, Central and Southern African Library and Information Associations (SCECSAL) organised a panel discussion in Malawi to review the IFLA Trend Report. The event included representatives from Kenya, Ghana, Uganda and South Africa. Additional input was also captured from Botswana and Zimbabwe and a summary was published in the 2014 SCECSAL Report. This section summarises the key elements which came out of those discussions.

Without innovation libraries risk forfeiting their natural role in a digital environment

In Botswana, while Internet connectivity and access to mobile devices has greatly improved, libraries are still struggling to deliver educational content or information services online (in comparison with other sectors such as banking or financial services). This is due to a number of related issues, including a deficit of staff digital expertise. As a result, libraries are at risk of increasingly forfeiting their natural role as pace setters in the key debates around information and digital literacy, intellectual property and data management. Nevertheless, it was felt that libraries have the potential to play a pivotal part in delivering access to the technology, connectivity, skills and support that learners need to exploit new digital learning opportunities, particularly for patrons in rural or economically deprived areas.

Challenges around infrastructure

In Uganda, current broadband infrastructure is under

strain in the face of rising consumer connectivity expectations. Indeed, throughout East Africa, there has been a slump in demand for older mobile handsets which lack the capacity to handle new Internet applications and communication tools like Skype, WhatsApp and Viber. It is also notable that, in Kenya, social media is increasingly becoming a popular tool to engage with politics (e.g. during elections) and hold the government to account. A further driver for greater social inclusion in East Africa is mobile finance which has played a substantial role in enabling a broader section of population to conduct online or SMS payments.

Digital skills remain a barrier to accessing services

In Uganda, libraries have taken steps to enhance their digital offering. Some libraries offer online live chat services to answer patron queries, and provide email reference services via the "Ask a Librarian" function on library websites. Each online learning or distance learning class has an embedded librarian assigned to manage their information needs and to answer student and faculty queries. Nevertheless, the access to these services is still restricted unless patrons have the requisite digital skill levels, possess an Internet enabled device, or have sufficiently high quality connectivity. Discussions in South Africa highlighted that librarians needed to ensure that their digital skill levels were aligned to the growing demands of library patrons, particularly in the fields of digital content management, information security and data privacy. This needs library and information science curricula to be regularly reviewed and updated to keep pace with evolving digital trends. Live online chat reference services alongside access to other remote online library services will be crucial in serving patrons who do not physically visit library premises.

MOCs and OERs are a massive learning opportunity

In Ghana, librarians have developed several online

learning courses using the Information Management Resource Kit (IMARK). IMARK also offers a range of free-to-access modules including social media for development, strategic approaches to information, and digital libraries, repositories and documents. As libraries often have limited staff capacity to drive wider professional development initiatives, these online resources are increasingly valuable for enhancing colleagues' digital skills and knowledge. Generally speaking, Massive Open Online Courses (MOOCs) and Open Education Resources (OERs) present a massive learning opportunity for Africans. While thousands of learners are already benefiting from these resources, it is clear that libraries could and should have a substantial role in providing the skills and technical infrastructure to widen access to these life-changing educational services.

Privacy, data protection and information security

In Namibia, librarians are developing a greater understanding of digital tools, the information users submit online, and the extent to which sharing or processing the personal data of library users exposes us to new risks. Parallels were drawn with recent debates in the European Parliament around the Right to be Forgotten, and the unanticipated side effects of our online activities leaving behind a permanently visible digital footprint. Questions have also been raised in South Africa in relation to the role of social media in bringing vast amounts of previously private personal information into the public domain, alongside the data collection functions presently embedded in a most smartphones and applications. In this changing landscape, it is incumbent on librarians to review and maintain robust approaches to information security, along with routines governing the secure management of personal information by different levels of library staff. This has significant implications for the future provision of information literacy skills and the evolving ethics of information management. At the same time, social media and online platforms also bring substantial opportunities for collaborative digital research and learning.

3D printing is both a threat and an opportunity

Across Africa, the advent of 3D printing is seen as both an opportunity and a threat. On the plus side, it has the potential to improve productivity, address shortcomings in skilled labour and diminish the need for outsourcing of production to countries on other continents. This could stimulate the development of new domestic manufacturing capabilities and increase the global competitiveness of African manufacturers

and suppliers. On the other hand, some commentators have voiced concern that the mass adoption of 3D printing could disrupt the livelihoods of a large number of existing manufacturers producing small plastic goods, alongside the fortunes of their employees and the retailers they supply. In this context, the economic ripple effect from mainstream 3D printing could have devastating short term implications.

The value of national data policy frameworks

In Zimbabwe, librarians are playing a critical role in the formation of local institutional data management policies. This is perhaps unsurprising given their pre-existing fluency with information standards, file structures, metadata schemes and related professional skills. However, these resources have yet to be tapped into at a national level, in part because Zimbabwe is still in the formative stages of drafting its national information policy. In this context, it was argued that a key strategic priority for librarians should be to engage with and socialise policy makers with the overarching value of a well-conceived national data policy framework.

Mobile as a delivery mechanism for information services

Librarians in Zimbabwe now see mobile devices (now owned by an estimated 90% of Zimbabweans) and Internet-enabled smartphones as a vital channel for the delivery of valuable library information services in relation to research, economic development, health and agriculture. For example, some libraries have developed mobile friendly websites for remote access to information resources and services. SMS text-based reference service models have long been used by libraries to support their patrons at a distance, but new messaging applications such as WhatsApp are increasingly being used to improve communication and enhance patron access to these resources. These approaches enable near immediate access to real-time support and help patrons save time and money which might have been spent on a physical library visit. The University of Zimbabwe Libraries have also begun a pilot scheme which provides evidence-based health information to doctors at Parirenyatwa hospital. A similar project has provides agricultural information to farmers across Zimbabwe, via an e-Farming mobile information service, which enables farmers to make better decisions based on transparent real-time pricing information.

ASIA AND OCEANIA

In Asia and Oceania, a series of discussion meetings in Canberra (Australia) and Chiang Mai (Thailand) revealed some key challenges around responding to the developments identified in the IFLA Trend Report. It was acknowledged that libraries in the region are highly divergent in terms of scale and resources. This often makes it difficult to use the Trend Report as a catalyst for discussion when those conclusions with have varying levels of relevance and importance to different types and sizes of library.

Libraries need to make the case for why they are essential

It was also suggested that the Trend Report does not automatically offer solutions for the positioning of libraries as essential or necessary community infrastructure in the modern world. Unless libraries can define themselves and their services as being critical to communities, they risk being identified as a “nice to have” but non-essential priority by policy-makers who are considering a broader range of more pressing funding obligations. In a sense this sets up a classic chicken and egg scenario, whereby libraries need more funding in order to transform and evolve their services to meet the rising expectations of patrons – but current political perceptions of their traditional role risk limiting the supply of additional financing.

Mobile technologies are redefining communities

The accelerated adoption of mobile technology is changing the traditional sense of what it means to be a community. Libraries need to do more to anticipate and react to these developments, whilst harnessing the advantages of new technological innovations. It was also noted that new digital devices, platforms and tools offer new opportunities to patrons, but simultaneously risk deepening and entrenching existing digital divides within society. Every new advantage and benefit conferred upon those with the requisite access to connectivity and technology, alongside the skills and knowledge to exploit digital services and channels, potentially has the effect of expanding the gap between the digital haves and the digital have nots. In this context, libraries can play a unique role in promoting information literacy, access to technology, as well as the new digital skills and capabilities communities need in a rapidly evolving world.

Transforming the library whilst safeguarding privacy

In Australia, new technologies are triggering changes to how physical space is used, both through the rising availability of 3D printers and the development of creative maker spaces and the provision of basic coding classes for children. These evolving uses are increasingly displacing physical book collections to make way for equipment, meeting spaces and collaborative learning areas. In addition, with a significant number of government and commercial services moving online, patrons are increasingly coming to libraries to get assistance with applying for passports, accessing digital banking services and making online payments. It was commented that while this demonstrates the high level of trust the public place on library staff, the migration of services online is exposing vulnerable sections of society to greater risk as they are increasingly disposed to disclose personal information to strangers.

Leveraging new technologies and identifying new partnerships

In response to these challenges, libraries in Asia and Oceania are increasingly leveraging new technologies and data analytics. These approaches are deployed to more effectively track and understand evolving patron needs, in order to adapt and improve their services to focus on addressing those needs. Libraries across the Asia and Oceania region are also engaging in debates and constructive dialogue around privacy and data protection issues, alongside further discussion of the implications of new technologies for future library services – in particular e-lending. In recognition of the growing importance of OERs and MOOCs, libraries are also entering into a range of partnership with online education providers. For example, in Australia, public libraries have engaged with Open University Australia to investigate collaboration opportunities to improve the experience of online students by connecting local students and supporting the formation of dedicated study groups. Australian public libraries have also demonstrated interest in promoting the use of MOOCs and other online learning products via their premises. For example, increasing numbers of Australian public libraries offer access to thousands of online courses from providers like Lynda.com.

EUROPE

European Trend Report discussions were particularly extensive with over 40 events and meetings held across 15 countries since August 2013. These debates revealed a range of common themes which are relevant to all library networks.

New challenges around copyright, access to digital content and e-lending

Italian discussions highlighted that existing legal constraints and the current business model for digital publishing are threatening the traditional role of libraries to provide public access to information. In particular, present interpretations of EU legislation including the 2001 Information Society Directive and the 2006 Rental and Lending Rights Directive mean that there is no firm legal basis for libraries to lend e-books or to undertake digital preservation activities. Discussions in Sweden and Austria also considered that libraries are increasingly competing with other private sector providers of information, and voiced concerns around the existing challenges for libraries seeking to develop e-lending services. Debates in Finland, Estonia and Sweden also emphasised the importance for librarians of gaining a better understanding of copyright and the legal frameworks which govern the acquisition, storage and transmission of digital content.

Is the erosion of privacy a means of control or a source of empowerment?

Privacy and data protection is one of the key themes which resonated across nearly all Trend Report related discussions in Europe. In Denmark, the Trend Report catalysed a wide ranging debate between library stakeholders over the evolving risks and opportunities linked to privacy and data security. The ethical and moral challenges posed by espionage, surveillance, the monitoring of citizens and whistleblowing are historically well known phenomena. And yet, in our new digital environment, governments and companies have now acquired advanced opportunities to monitor and profile individuals and groups of special interest. In the public sector, such activities are frequently justified using arguments based on national security or combatting terrorism. In the private sector, much data collection is based on new online business models which employ targeted data-driven advertising to fund platforms and services which are supplied to users free of charge.

At the same time, new digital developments have also enabled citizens to gain equivalent opportunities to

monitor and control politicians and business leaders. It was noted that from a historical perspective, the power of political and economic elites has frequently been based on secrets, discretion and silence. In contrast, in the modern information society, citizens increasingly require these elites to meet higher standards of openness and transparency. As a result it was concluded that the same technologies which threaten to undermine privacy have a simultaneous capacity to empower citizens and strengthen democracy.

Discussion in several countries also focused on the role of librarians in raising patron awareness of information security and data protection issues. Estonian librarians felt that there was a deficit of guidance at national level, and that librarians would benefit significantly from the development of a common strategy on handling data privacy issues. In Sweden, it was contended that librarians need to have a stronger understanding of the implications of data privacy in their day to day work, and build greater capacity to advise library users on how to securely manage their own data online. In Denmark librarians are investigating whether existing data protection laws should be changed to enable patrons to actively specify how librarians should process, share or restrict access to personal information captured by library systems.

Closing the librarian skills and competencies gap

A common theme across all national discussions was that librarians will need to invest in developing new skills and competencies to better serve patrons in a digital age. Discussions in Finland highlighted the importance of in-house training for librarians on the use of smartphones and tablets. These debates also revealed that many librarians have a knowledge deficit around the challenges of new technologies, including the management of digital content and e-books, and related copyright and privacy legislation.

Swedish librarians advocated for priority action to help close the competency gaps between local and regional librarians, whilst addressing the reality that many librarians are not yet sufficiently ready to embrace the role of digital technologies in delivering better services to their patrons. It was also suggested that librarians need a better and more wide-ranging understanding of the implications of copyright, data protection and privacy.

Similarly, Estonian discussions placed a high degree of emphasis on the importance of developing enhanced training programmes for librarians to harmonize competency gaps and raise awareness of new technological opportunities. In particular, Estonian

librarians recommended the creation of new courses for library professionals which connect key themes from the Trend Report with their specific implications for Estonian society. They also suggested that a common information technology advisory platform for libraries would help disseminate the knowledge and skills that librarians increasingly need to operate in a digital context. Italian discussions also underlined the need for librarians to invest in developing greater levels of digital fluency and competency with new technologies.

Strengthening strategic collaboration

A further call to action from European discussions in Germany, Switzerland and the UK concentrated on the need for greater strategic vision and collaboration between library stakeholders at regional, national and international level. Austrian discussions emphasised the value in facilitating stronger connections between librarians across Europe. They also triggered the development of a series of strategic initiatives, including the work to develop a new 2016 mission statement for Austrian libraries (forthcoming) and proposals for a new 2016 curriculum for Austrian librarianship. A further recommendation was the development of a Strength Weakness Opportunity Threat (SWOT) analysis matrix which unpacks the implications of the Trend Report to be used as a common resource across all Austrian libraries.

Discussions in Denmark also identified the potential for libraries to strengthen their international relationships so they can act effectively and collectively as transnational institutions. In working to ensure free and equal access to information in printed and digital format, cross-border cooperation between libraries needs to take place at a national, regional and international level. Conversations in Estonia also pinpointed the importance of greater strategic coordination across the library sector. Alongside better coordination with municipal authorities to drive improvements to ICT in libraries, it was suggested that libraries across Estonia should build better strategic linkages to promote collaboration. A specific recommendation was that Estonian library representatives should meet once a month to ensure regular information exchanges and iterative strategy development.

Similarly, discussions in Sweden and Finland also emphasised the need for libraries to construct an overarching strategy to address the challenges and opportunities of an increasingly digital society. This involves creating more opportunities for librarians to network and cooperate at a national level, alongside collaborating more closely with municipal authorities on a broader range of issues, including policy,

information technology services and infrastructure.

Libraries should focus on principles, digital opportunities and the voices of their patrons

A significant issue arising throughout European Trend Report debates was the need to identify and define the future role of libraries in a rapidly evolving global information environment. These discussions focused on the need for libraries to reinvent and reinvigorate themselves as innovative, transversal mediators between the public and information resources, capitalising on the innately social and participative nature of library services. A common theme was the need for libraries to be ready to listen to the voices of their users, and adapt library services to meet their emerging needs.

Many discussions highlighted that instead of just identifying new technological opportunities and functions, new library strategies should start by diagnosing what patrons need in an evolving digital society. This could potentially include collaborating directly with users in relation to self-publishing, crowd sourcing and digital content creation. Other conversations concentrated on how to update traditional library roles and functions. It was broadly acknowledged that libraries will always have a specific and on-going responsibility for promoting information literacy from cradle to grave. At the same time librarians will need to be prepared to abandon or reimagine some traditional services and activities – including redefining how physical library spaces are used to optimum effect and maximum user benefit.

In Sweden, discussion focused on the challenge for libraries to connect with specific target groups including economically deprived, culturally marginalised or uneducated sections of society. It was felt that libraries needed to find new and innovative ways to promote their services, and ensure their offering is sufficiently attractive to all parts of society. Estonian discussions suggested that libraries should be rebranded as development and learning centres, including a strong emphasis on the role of libraries as a gateway for access to valid, neutral and reliable information.

In Denmark, librarians felt that a rapidly changing information environment did not absolve librarians of the responsibility to firmly link future decisions with long established moral, ethical and philosophical principles of librarianship. Despite the pace of digital change, and the need for librarians to remain ahead of the curve, increasingly digital societies can still benefit from longstanding core values and principles. It was suggested that modern digital societies present an opportunity to strengthen the role of the public library

as the primary institution for the promotion of democracy, dialogue and enlightenment. Whether this dialogue and communication takes place in virtual or analogue spaces, libraries still have a critical role in informing those discussions with data, facts, information and knowledge. However, in a context where the role of public libraries is to guarantee free access to information and freedom of expression, they should always remain neutral and agenda agnostic in relation to what patrons should or shouldn't know or see.

LATIN AMERICA AND CARIBBEAN

Trend Report themed meeting and events bringing together library representatives from Latin America and the Caribbean region took place in Colombia, Cuba, Mexico and Puerto Rico. Those presentations and conversations revealed a number of emerging issues of pronounced relevance to libraries.

Overcoming connectivity challenges to address social exclusion and inequality

Discussions in Mexico noted that the development of a hyper-connected digital society presented a powerful tool for libraries to reduce social vulnerability through services targeting women, the disabled and migrant populations. At the same time, limited regional connectivity poses a significant challenge to the inclusive delivery of digital information services. Of the 616 million people living in 33 Latin American countries, 24 of those countries only have home Internet access available to around 50% of premises. In Cuba, only 43% of families have an Internet connection.

Will MOOCs renew the business case for physical library premises?

Evolving aspects of the global information environment also mean that the roles of libraries as physical premises providing of public access to information and the preservation of digital materials need to be reviewed and reinvented in new and innovative ways. Online education resources and MOOCs need to be incorporated in to the teaching of library and information science, as well as integrated within the on-going professional training programmes offered to librarians. Such efforts are already being implemented by libraries in Costa Rica, Colombia and Mexico. There

are also challenges around the proper certification of both formal and informal online learning pathways. A number of research projects were proposed to investigate this area in Mexico, Colombia and Costa Rica, alongside further consideration of the implications of OER for educational curricular, as well as the ethical, cultural and political values associated with Library and Information Science studies.

Do new technologies strengthen or undermine communities?

Interesting points were also raised around the capacity of technologies to de-humanise our everyday experiences by enchanting us with inanimate digital devices promoted by the incantations of corporate marketing. Fears were voiced that the individualistic and isolating behaviours enabled by digital connectivity and devices have the capacity to undermine community cohesion, fragment traditional social bonds, and depersonalise our relationships at the expense of worshipping smart objects! It was suggested that librarians should continue to embrace human-focused approaches which support and enhance the value of people empowered by critical thinking and evidence – instead of just blindly advocating the benefits of technology in any context.

How can librarians successfully metabolize and embrace digital and cultural change?

It was also clear that digital developments identified in the Trend Report could support both positive and negative outcomes. New digital opportunities offer libraries scope to boost citizen engagement whilst designing and delivering more inclusive services (e.g. accessible to remote or rural populations via digital channels). They also enable libraries to promote digital discussions around Open Government and the meaning of citizenship in a digital age at national and regional level. At the same time, concern was also voiced that there remained an enduring shortage of libraries across the Latin American region. Others also reported potential barriers to successful library reinvention and development, including rising apathy among some library communities, and decreased levels of fellowship in regional level library associations.

Developing a coordinated response to new challenges

In response to these challenges, there are on-going strategic efforts from Research Institutes, Library and Information Science Schools, library networks and

National Library Associations to develop a coordinated approach. This collaborative network of stakeholders needs to work together to improve the operating conditions and technological capabilities of libraries so they can serve as simultaneously physical and virtual spaces for the strengthening of citizenship and democracy across the region. This coalition of library actors has the capacity to develop innovative solutions which can reduce social inequalities within communities, whilst empowering individuals to access essential information which can promote economic development and combat social injustice.

NORTH AMERICA

This section summarises common themes emerging from related discussions in North America, and explores the implications of the IFLA Trend Report from the academic library perspective.

Centre for the Future of Libraries

Following the publication of the IFLA Trend Report in August 2013, the American Library Association (ALA) announced its plans to establish a Centre for Future Libraries in October 2013. Launched in May 2014, its central objective was to provide information resources and tools to enable librarians to better understand the trends reshaping their libraries and communities. The Centre for Future Libraries developed an online portal which analyses and categorises an array of relevant trends, many of which reference or directly link to related resources on the IFLA Trend Report online platform. Prior to the development of these online resources, ALA held a summit on the future of libraries in May 2014 which explored a number of themes echoed in the IFLA Trend Report.

Re-envisioning library services and the future role of libraries

In a rapidly evolving information environment, libraries need to “do more than just prevail”. Instead they need to reimagine and reinvent themselves taking advantage of the new opportunities that this environment has created. It was noted that this would not be possible without an element of experimentation and risk taking in order to identify and serve new and existing audiences. Much discussion initially focused on what the concept of the library would look like if it were invented and proposed today as opposed to two hundred years ago.

A key question is how best to develop the library as a simultaneously physical and virtual space? As certain functions become more convenient to access digitally, how should physical library spaces and infrastructure be exploited to deliver maximum community value? It was also noted that, as increasing numbers of services, activities and functions being moved into the digital realm, it is likely that people will start placing rising value on things that can't be digitalised (e.g. face-to-face engagement and direct human interaction). It was questioned whether this might ultimately represent an enduring unique selling point for certain types of library services and functions.

Does digital disruption in the education market present new opportunities?

There was substantial interest in discussing disruptive trends in the education market and the rising popularity of OERs and MOOCs. In a rapidly changing world, does the declining value of monolithic assembly line learning, combined with trends towards the decoupling of educational content, learning, delivery and credentialing present a growth opportunity for libraries? Can library spaces and infrastructure be redeveloped to meet a growing demand for flexible, commoditised access to formal and informal learning opportunities facilitated by new technologies? The example was given of digital maker spaces in public libraries where the library serves as the gateway (and the librarian as the facilitator and guide) to these new experiences. It was also considered that libraries could play a role in expanding access to new creative and interactive learning pathways, alongside a role in supporting, tracking and certifying the development of skills and capabilities which might otherwise go unrecognised.

Libraries need to play both a physical and digital role in the communities they serve

What is the current and future mission of libraries within communities? It was acknowledged that libraries should continue to play a key role in physically and virtually connecting different cultural and demographic components of the communities they serve. The library needs to be rebranded as “essential” to the community, which will require enhanced outreach to and collaboration with a diverse range of stakeholders and voices. It was commented that libraries have the capacity to integrate information services, technology and physical spaces in innovative ways which can help to reduce inequality and exclusion among key disadvantaged community groups.

How can libraries communicate their achievements more effectively?

It was commented that libraries developed as a “happy accident with intrinsic value, but this is not an underlying truth we can rely upon any longer”. Accordingly, it was suggested that libraries need to communicate and promote their successes and social contributions more effectively. Librarians should become more adept at developing a compelling narrative around their achievements (storytelling), underpinned by supporting data and evidence. It was noted that libraries were early pioneers of the principles which now underpin the sharing economy which has recently caught the interest of both the media and policy-makers. Others contended that “trust” remains (and should remain) an integral part of the library brand and offering (online or offline). An interesting point was the suggestion that libraries may need to shift away from the current environment of unpredictable relationships underpinned by stable processes, towards a new template which embraced more stable relationships built upon continually evolving processes.

Key challenges faced by libraries

One speaker highlighted that the future will happen whether or not librarians participate or engage with it. In this context, keeping ahead of the curve when it comes to new technological developments and evolving education practices will present an on-going challenge. It will require librarians to develop a broader range of skills, and recruit and train new librarians from a more diverse set of backgrounds. Libraries will also need to transition to deliver new services and experiences to attract wider audiences, whilst maintaining relevance and appeal to existing library users. Another key concern was whether libraries can adapt swiftly enough to accommodate changing public expectations, and moreover, if such a transformation was achieved, whether it would merely stimulate unsustainable levels of public demand for those new services. Others felt that libraries could become overstretched trying to be “everything to everyone” and that efforts needed to be prioritised on key areas with the most community value and impact.

Academic library perspective:

The themes set out in this section are primarily sourced from an article¹ published in the Journal of Library Administration in February 2015, entitled The IFLA Trend Report: Looking Beyond the Walls in Library Planning.

¹ IFLA Trend Report: [Looking Beyond the Walls in Library Planning](#), Lynne Marie Rudasill, *The Journal of Library Administration*, 00:1-12, 23rd February 2015

Learners still need a blend of digital and face-to-face learning environments

Information literacy for students – specifically the use of databases, catalogues and archives for academic research - remains a critical area of library guidance. When it comes to MOOCs, students prefer blended learning environments which combine online and face-to-face methods, and different learners have different requirements (one size does not fit all). Students also increasingly expect to access information services through mobile devices (smartphones and tablets) which has implications for the design and implementation of future library services. Students also value their privacy and are inclined to draw clear boundaries between their social and academic digital profiles. Students also expect the teaching of technology skills to be embedded within other subject classes rather than taught as a standalone discipline, which reflects the growing convergence and integration of digital skills within all subject areas.

Technology will remain a double-edged sword

New users and new technologies both simultaneously enhance and threaten society. The same digital opportunities which empower individuals to connect, communicate and collaborate also allow governments and companies increased scope construct detailed and intrusive profiles of the citizens and groups they monitor. A key challenge for libraries moving forward will be effectively managing user data to maximise user experience whilst minimising data protection and privacy risks.

Open education resources also represent a challenge to libraries to provide the research tools to enable students to succeed. Open access to scientific publishing will require librarians and publishers to work together to determine new models of information provision. Libraries will be challenged to rethink traditionally held models for providing reference, instruction and collection development.

How can librarians embrace innovation without replacing themselves?

There is also significant debate around whether Artificial Intelligence (AI) technologies will be an enabling or disruptive force in the future of library services. At the present time AI has the capacity to both enhance or replace existing library functions. Libraries need to deploy innovative thinking to develop innovative tools such as the Scientific Animations Without Borders (SAWBO) initiative. This illustrates the potential value of developing sustainable and attractive information tutorials which can be used by students and researchers from anywhere in the world.

4 SUMMARY OF KEY ACTIVITIES AND CASE STUDIES



Region	Events and discussions	Actions and publications
--------	------------------------	--------------------------

AFRICA & THE MIDDLE EAST

Malawi	August 2014 – Trend Report presentation and panel discussion with representatives from Kenya, Ghana, Uganda and South Africa	Summary of discussion and contributions published in the 2014 SCECSAL Report
South Africa	August 2015 – IFLA President Donna Scheeder delivered a speech at the 81st IFLA Congress in Cape Town highlighting the importance of drawing upon the local, regional and national discussions triggered by the Trend Report to build the IFLA Change Agenda	

ASIA & OCEANIA

Australia	<p>September 2013 – Presentation from President of the Australian Library and Information Association (ALIA) – at the annual Public Libraries South Australia conference</p> <p>October 2013 – ALIA convened a future of the Library & Information Science Profession which included a focus on conclusions from the IFLA Trend Report</p> <p>September 2014 – Presentation from President Julie Rae at the ALIA National Conference focused on future trends</p> <p>February 2014 – Trend Report discussion at Conference of National Library Directors in Asia and Oceania, Canberra</p>	<p>May 2014 – ALIA published its report on the Future of the Library and Information Science Profession, alongside six further reports focusing on Professionals, Collecting Institutions, Public Libraries, Special Libraries, School Libraries and Tertiary Libraries. These reports were also accompanied by an action list.</p>
China	<p>July 2014 – Trend Report presentation at 7th Shanghai International Library Forum</p> <p>September 2014 – Trend Report presentation at the Department for Information Management, School of Computer Science and Information Technology, Changchun</p> <p>October 2014 – Trend Report presentation at China annual library conference</p>	
India	March 2016 – Trend Report presentation from IFLA Secretary General	

Region	Events and discussions	Actions and publications
New Zealand	October 2013 – Trend Report presentation and workshops at the New Zealand Library & Information Association annual conference, Hamilton	
Republic of Korea	May 2014 – Trend Report presentation at World e-Parliament Conference, Seoul	
Thailand	May 2014 – Trend Report presentation at the Congress of Southeast Asian Librarians, Chiang Mai	

EUROPE

Austria	May 2014 – Vienna Congress on the future of libraries Further discussion events held across Austria's 9 federal states	<ul style="list-style-type: none"> • IFLA Trend Report SWOT Analysis Matrix • 2016 Mission Statement (forthcoming) • 2016 Curriculum for Austrian Librarianship (to be agreed with the Austrian Ministry for Culture by the end of 2016)
Bulgaria	June 2014 – Trend Report workshop at annual Bulgarian Library & Information Association	
Croatia	October 2014 – Trend Report presentation in Dubrovnik	
Denmark	<p>October 2013 – Trend Report discussed by the Danish Library Association's Executive Committee</p> <p>November 2013 – Trend Report conference organised by Aalborg Public Libraries with participation open to all Danish Central Libraries</p> <p>March 2014 – Annual meeting of the Danish Library Association which focused on current trends, citizens' expectations and the cultural institutions of the future</p> <p>April 2015 – Libraries' roles in the digital world: reflections on the IFLA Trend Report</p>	
Estonia	2013-2016 - Following the creation of the Estonian Working Group on a "fresh approach for libraries", Estonian Librarians have organised a diverse and on-going programme of seminars, events and international presentations on the implications of the Trend Report. See Estonian case study section for a full list of events and activities.	<ul style="list-style-type: none"> • January 2015 - Estonian Conclusions on the IFLA Trend Report • May 2016 – Vision Statement endorsed by ELA members • Forthcoming – Strategic Development Plan for Estonian Libraries, and a Librarian's Good Practice Guidebook • 2015 -enhanced focus on

Region	Events and discussions	Actions and publications
Finland	<p>2014-2015 – The Finnish Library Association organised three high profile national meetings to discuss the implications of the Trend Report. Five major city libraries also initiated a programme of targeted workshops for library staff to analyse current practices and approaches</p> <p>May 2014 – IFLA Presidents meeting: Strong Libraries, Strong Societies</p> <p>February 2015 – Trend Report presentation at European Central Bank workshop on managing electronic information in a mobile world</p> <p>February 2015 – International seminar – Ahead of the curve: recognising and reacting to growing trends, Helsinki</p>	<p>developing e-lending services and the expansion of HELMET's pilot e-lending scheme and licensing model to all Finnish public libraries</p> <ul style="list-style-type: none"> • Vaasa City Library forms new regional development group to take into account the relevance of new technologies • Porvoo City Library references Trend Report in its City Strategy
France	<p>June 2014 – Trend Report presentation during the annual congress of the French Library Association in Paris</p> <p>August 2014 – Trend report presentations and workshops at the World Library & Information Congress in Lyon</p> <p>January 2016 – Trend Report presentation during the annual BOBCATSSS conference - an annual library and information science symposium supported by the European Association for Library and Information Education and Research (EUCLID) in Lyon</p>	
Germany	<p>June 2014 – Trend report presentation and discussion, Bibliothekartag, Bremen</p> <p>June 2014 – Trend Report workshop at European Dialogue on Internet Governance (EURODIG), Berlin</p> <p>November 2014 – Trend Report presentation at the Hessischen Fachstelle für Öffentliche Bibliotheken</p> <p>October 2014 – Trend report presentation at the Berliner Bibliothekswissenschaftlichen Kolloquium</p>	
Greece	<p>May 2014 – Panel session on IFLA Trend Report at European Bureau of Library Information and Documentation Associations (EBLIDA) and National Authorities on Public Libraries in Europe (NAPLE) Conference in Athens</p>	
Italy	<p>November 2013 – Trend Report presented at annual ILA Conference in Rome</p> <p>October 2014 – Libraries Roadmap meeting in Florence</p> <p>October 2014 – Library Trends meeting in Milan</p> <p>March 2015 – Trend Review meeting in Milan</p> <p>March 2015 – Live chat with IFLA President-elect</p>	<p>Italian Library Association launched a dedicated Trend Report online discussion forum with an English language section to facilitate engagement with librarians internationally</p>
Norway	<p>March 2014 – Trend Report presentation at Norwegian Library Association National Congress, Trondheim</p>	

Region	Events and discussions	Actions and publications
Portugal	September 2014 – Trend Report presentation at Advocacy for Libraries conference in Lisbon	
Russian Federation	September 2013 – September 2013 – IFLA President (then Sinikka Sipilä) gave a presentation on the Trend Report at the international conference “Internet and Socio-Cultural Transformations in Information Society” in Yuzhno-Sakhalinsk	
Slovakia	September 2014 - Trend Report presentation at CASLIN 2014 conference	
Turkey	May 2014 - Trend Report presentation at Quantitative and Qualitative Measurement in Libraries conference, Istanbul	
UK	September 2013 – Trend Report discussion hosted by Chartered Institute of Library and Information Professionals (CILIP)	

LATIN AMERICA & CARIBBEAN

Colombia	November 2014 – Trend Report presentation at Javeriana University	
Cuba	April 2014 – Trend Report presentation at the 13th annual International Information Congress, Havana	
Mexico	<p>November 2014 - Trend Report webinar for Latin America and the Caribbean</p> <p>March 2014 – two day conference to discuss implications of the Trend Report for National Library Associations and LIS schools across Latin America, Mexico City</p> <p>June 2014 - two day follow-up conference on Trend Report in Latin America</p>	<p>2015 – Autonomous University of Mexico publishes over 500 pages of expert commentary and academic submissions (split into two documents) on the developments highlighted in the Trend Report</p>
Puerto Rico	December 2014 – Annual conference of the Society of Librarians	

NORTH AMERICA

Canada	<p>November 2013 – Trend Report presentation at the 5th Congrès des milieux documentaires du Québec, Montreal</p> <p>April 2016 – IFLA President’s meeting in Toronto, focussed on building the change agenda for the library profession, drawing upon the outputs of local, regional and national Trend Report discussions and themes</p>	
United States	<p>October 2013 – Trend Report presentation and discussion at the Association of Research Libraries Membership Meeting, Virginia</p> <p>May 2014 – American Library Association on the Future of Libraries which discussed numerous themes echoed in the Trend Report</p>	

CASE STUDY – AUSTRALIA

The IFLA Trend Report was very positively received in Australia, and has served to underline a range of key challenges and opportunities currently faced by libraries. In September 2013, President of the Australian Library & Information Association (ALIA), Julie Rae, presented material from the IFLA Trend Report to the annual conference of Public Libraries South Australia. The President noted that in a rapidly changing information environment, libraries had to be vigilant to avoid falling victim to three key “traps”. Firstly, the physical trap – where existing investment in legacy systems and equipment prevent the pursuit of fresher more relevant investments. Secondly, the psychological trap, whereby library leaders fixate on what has made their institutions successful in the past and fail to notice when something new is displacing those tried and tested methods. Thirdly, the strategic trap, in which libraries maintain a singular focus on today’s user needs, without anticipating the needs they are likely to have in the future.

In October 2013, ALIA convened a Future of the Library & Information Science (LIS) Profession Summit which brought together over 50 library leaders from across Australia and New Zealand. The event was part of an on-going consultation process initiated by ALIA earlier in 2013. Its objective was to capture wide ranging input from futurists, new media experts, authors and publishers (and ALIA members) on the key future trends. The themes identified within the IFLA Trend Report were used to frame the latter stages of this consultation process.

In May 2014, ALIA published its report on the Future of the LIS Profession, which highlighted the importance of the five IFLA Trends, whilst drawing upon the previous consultation process to identify 10 key themes which are of particular relevance for Australian libraries. These included the impact of currently unimaginable technologies, the arrival of a truly global market for education, and the radical transformation of the corporate world. The main report was also accompanied by six additional reports which focused on the specific opportunities and challenges for LIS Professionals, Collecting Institutions, Public Libraries, Special Libraries and Tertiary Libraries. The reports collectively explored a range of potential innovations for Australian library services. These included the ability to access national treasures (historical manuscripts, maps, diaries and photographs) directly from any

digital device, the possibilities for enabling seamless digital experiences driven by linked data, and the role of libraries in supporting the development of community-created content.

ALIA also published a comprehensive summary of the key actions which emerged from these reports. These included a commitment from ALIA to work with educators to ensure that LIS courses continue to evolve their technology units, alongside the introduction of on-going learning as an essential part of professional membership by 2020. ALIA also resolved to ensure that its own professional development training is updated to reflect the trends identified in the reports, including enhancing skills relating to community publishing and managing big data. In relation to digital content and e-books, ALIA confirmed that it would continue to advocate for copyright reform and the introduction of a digital lending right, whilst investigating new partnerships between libraries, content creators and publishers. Additional areas for future advocacy included ensuring that library and information professionals occupy a significant role in the big data space, potentially acting as privacy legislation watchdogs for their organisations. ALIA also confirmed its aspiration to construct attractive brand values around the role of the “information professional” whilst promoting more diversity in the library and information sector workforce. Finally, ALIA highlighted its on-going commitment to continued research into evolving trends, and to ensure its members remain connected to the latest national or international innovations in the sector.

CASE STUDY – AUSTRIA

In May 2014, the Austrian Library Association devoted its bi-annual Congress to an in-depth discussion and review of the themes emerging from the Trend Report. The result was a two day conference held in Vienna attended by over 450 librarians from across Austria. The event featured a targeted programme of keynote speakers who were deliberately selected to represent the latest thinking of the library community, whilst capturing new insights and thought leadership principles from other media and industry sectors.

A further objective of this two day event was to crowd source expertise and input from all 450 attendees to identify and distil the key elements and implications of the Trend Report which have the most resonance for Austrian libraries. As a result the Austrian Library Association organised a series of Strength Weakness

Opportunity Threat (SWOT) analysis sessions to map all five IFLA trends against different capabilities, capacities, priorities and challenges currently faced by Austrian Librarians.

Following the Vienna Congress, the Austrian Library Association then implemented a programme of regional discussion meetings and seminars in all of Austria's nine federal states. The objective of this event programme was to raise national awareness of the need for Austrian libraries to adapt to new developments in their information environment, and acknowledge that just continuing business as usual would not be sufficient in the long-term.

Based on the outputs of the Vienna Congress SWOT analysis and the subsequent programme of regional library discussions, the Austrian Library Association has devised a new curriculum for Austrian librarianship (for public libraries). This new curriculum has been revised to reflect some of the key developments identified in the Trend Report including new modules relating to privacy, data protection and the management of data. The proposed curriculum has been discussed with the Austrian Ministry of Culture and the current expectation is that it will be implemented by the end of 2016.

Alongside this significant and influential outcome, the Austrian Library Association has also been distilling the conclusions of the regional Trend Report discussions into a new Vision Statement for Austrian Libraries.

CASE STUDY – DENMARK

In Denmark, the IFLA Trend Report was seen as a valuable opportunity to stimulate discussions around how libraries should work in the future. According to the Danish Library Association (DLA), the five identified trends served both as a catalyst for debate and an incentive to focus the attention of librarians, politicians, other decision-makers and members of the DLA on emerging challenges and areas which had not received sufficient consideration in the past.

Soon after its publication, the IFLA Trend Report was discussed by the DLA's Executive Committee in October 2013. In November Aalborg Public Libraries organised a conference on the Trend Report which was open representatives from all Central Libraries in Denmark. That same month, the Danish Agency for Culture and the Danish Broadcasting Corporation organised a "Masterclass on key digital challenges for the cultural

sector" which included a discussion of the Trend Report.

After translating the Trend Report into Danish in January 2014, it was discussed at the DLA's annual meeting in March 2014 under the banner "*current trends, citizens' expectations and the cultural institutions of the future*". This discussions triggered a range of follow up meetings and events, including Trend Report themed debates at the annual Danish Book Fair (Bogforum) in 2014 and 2015, and discussions on "*Freedom of speech in a digital era*" in November 2014 and "Digital footprints and privacy" in November 2015.

According to the DLA a key theme in these discussions was the role of public libraries in a complex digital environment. Key elements of the Trend Report which generated the most interest among librarians were opportunities for digital enablement and empowerment, alongside the evolving boundaries around privacy and data protection. Debates around the latter were particularly topical for libraries as they took place against a landscape of unfolding current events including Wikileaks publications, and revelations about US state-sponsored surveillance programmes triggered by Edward Snowden.

In May 2014, privacy and data protection became the focus of even greater public and national debate as the result of a scandal involving Danish card-payment company Nets and Copenhagen-based weekly tabloid *Se og Hør*. Nets was alleged to have intentionally leaked confidential credit card transaction data to the newspaper in order to monitor and track a series of well-known national figures, including a former Prime Minister, members of the Danish Royal family and other celebrities. The extent of the scandal even prompted Edward Snowden himself to write a [letter to Danish newspaper Berlingske](#) in which he argued that "*anybody who writes and email in Aarhus, uses a credit card in Odense, or calls their mother in Copenhagen will have their private records analysed, and stored not just by unaccountable State Security Bureaus, but even private companies and newspapers.*"

These debates highlighted that while surveillance and monitoring were not necessarily new concepts which were unique to the Internet era – new technologies have certainly redefined the abilities of governments and companies to construct detailed profiles of specific individuals and sections of society. Discussion noted that such data collection could often be justified on the grounds of safeguarding national security or enabling new online business models which benefit citizens. At the same time, the newfound ability to aggregate data from different sources to compile an intrusively accurate picture of individual preferences, behaviours

and attitudes represents a severe threat to traditional notions of privacy. It also offers public and private institutions opportunities to misuse and exploit data in ways which were previously impossible in the pre-digital age.

However, the DLA also agreed that this trend was not universally negative in its characteristics. The expanding availability of digital information also hands citizens a powerful mechanism to observe political and commercial elites and hold them to account. It was concluded that such developments have the capacity to draw back the curtains of secrecy and silence which have traditionally protected the highest echelons of society, and usher in a new era of transparency, openness and democratic accountability. A key potential work stream that emerged from these discussions is the need for public libraries and library organisations to investigate in the future whether

Danish data protection laws should be updated to take account of new expectations and behaviours displayed by library users.

CASE STUDY – ESTONIA

Soon after the Trend Report's initial publication in August 2013, Estonian librarians were among the early adopters who sought to rapidly analyse and unpack what these five trends might mean in practice for their libraries and their profession going forward. In order to disseminate and socialise the library community with the implications of the IFLA Trend Report, in November 2013, the Estonian Library Association (ELA) established an Estonian Working Group (EWG) on a "Fresh Approach" for libraries. This EWG brought together a cross-section of representatives from public libraries, school

Date	Activity
November 2013	Estonian Library Association (ELA) issued a call of interested library stakeholders to join a new Working Group on a "Fresh Approach"
January – April 2014	Newly established ELA Working Group continues to work with IFLA Trend Report and publish preliminary thoughts in the Estonian Library Journal
May 2014	ELA organises discussion seminar with a consultative World Café structure
June – September 2014	ELA continues to run a programme of further seminars – the outputs of which are presented by Ülle Taliärm (Estonian Ministry of Culture Library Adviser) at the 2014 IFLA President's meeting in Helsinki.
October – December 2014	As the outputs from previous discussions are drawn together in a single document, the ELA continues to run a programme of discussion events in different Estonian regions focusing on copyright and privacy and specific library cooperation projects
January 2015	Building upon prior discussions and phases of consultation, ELA publishes its report: "Estonian Conclusions on the IFLA Trend Report"
February 2015	Veronika Raudsepp Linnupuu delivers a presentation "Estonian Libraries and the IFLA Trend Report: The refreshing breeze to help us forward" at the Helsinki Trend Report Seminar "Ahead of the Curve: recognising and reacting to growing trends"
April 2015	ELA "Fresh Approach" Working Group organises another seminar/World Café event specifically focused on privacy and copyright
June 2015	Veronika Raudsepp Linnupuu delivers a presentation in Žilute (Lithuania) focusing on Estonian take-aways from the IFLA Trend Report
Autumn-Winter 2015	ELA "Fresh Approach" Working Group work with wider Estonian library stakeholders to finalise a Vision Document for Estonian Libraries which draws on many of the themes identified in the IFLA Trend Report.
October 2015	Veronika Raudsepp Linnupuu introduces the Estonian discussion of the Trend Report at the 10th Congress of Baltic Librarians in Riga
March 2016	Estonian Libraries Vision Document approved by ELA members
May 2016	ELA "Fresh Approach" Working Group holds another seminar/World Café event focusing on the development of new library services

libraries, academic libraries and information science teachers in order to promote wide ranging discussion and debate around the role of librarianship in a changing world. According to the EWG's team leader, "the Trend Report brought out the need to unite, discuss and understand these changes" whilst investigating potential solutions.

Since May 2014 the EWG has organised a diverse programme of seminars, events, on-going discussions and international presentations. Some of the key elements of this programme are represented in the table on page 20.

The outputs of these activities have been captured in a series of documents, including the Estonian Conclusions on the IFLA Trend Report completed in January 2015 and a subsequent Vision Statement which was endorsed by ELA Members in May 2016. In parallel, ELA and the EWG have been working on a more detailed strategic development plan for Estonian libraries, alongside a Librarian's Good Practice Guidebook, which all draw upon the continuing discussions which have been kick-started by the Trend Report. These materials are due to be published later in 2016.

During this process the ELA has arrived at a number of key conclusions on the way forward for Estonian libraries which will be made available when its forthcoming strategy documents and guidance resources are published. One key recommendation is that libraries would benefit significantly through the establishment of an Estonian Libraries Development Centre. The primary objective of this Centre would be to identify long-term solutions and resources that the libraries of the future will need to meet the expectations and needs of patrons. The existing library network lacks the time or resources to undertake this kind of valuable and comprehensive strategic activity. Accordingly, the ELA is engaging closely with the Estonian Ministry of Culture to advocate and build support for this proposal.

CASE STUDY – FINLAND

In 2014-2015 the Finnish Library Association (FLA) organised three high profile national meetings for librarians to discuss the implications of the IFLA Trend Report, which included a focus on privacy and data protection. These events helped catalyse national debate around the role of libraries in supporting wider consumer awareness of online privacy and data protection issues. Libraries in five major cities also initiated a programme of targeted workshops in which library staff were asked to analyse their current working practices and

approaches in response to the trends identified in the report. The Trend Report also received significant interest and attention from the Finnish scientific library sector.

In addition a number of regional library systems explicitly referenced the Trend Report in their forward planning documents around future budgets and strategy. Vaasa City Library formed a new regional development group to specifically take into account the effect of new technologies on the information environment (Trend 5 from the Trend Report) in its budget planning. Porvoo City Library convened a seminar to review the implications of the Trend Report for its forthcoming city strategy. The Council for Public Libraries also referenced the Trend Report in its latest strategy document: The Way Forward for Public Libraries 2016-2020.

According to the Executive Director of the FLA the Trend Report has served as a key tool "for understanding forthcoming changes in society and our information environment". It has helped to drive forward significant change around how libraries should be seen and conceptualised – as platforms for access to knowledge, ideas and people, as opposed to just repositories of books. A specific example of the impact of the Trend Report can be found in Finnish librarians' enhanced focus on the provision of e-lending services. According to the FLA, the Trend Report's emphasis on the on-going expansion of choice and range of available digital content added substantial weight to the strategic importance of e-lending in the future development of mainstream library services. Putting e-lending at the top of the national agenda for libraries is largely credited for the successful extension of Helsinki Metropolitan Area Libraries' (HELMET) pilot e-lending scheme and licensing model to all public libraries in Finland in 2015.

Furthermore, the Trend Report's emphasis on the capacity of digital technologies to enable remote access to digital information and content from any location also highlighted the importance for libraries to revitalise and strengthen their business case for operating physical premises alongside online services. It became clear that while delivering value to patrons by developing innovative digital services is essential, it is simultaneously critical to explain the evolving value proposition of physical spaces in libraries – namely their unique role as community venues for interaction, collaboration and shared learning experiences. In addition to library-organised seminars, training sessions, talks and workshops, this also involves developing new collaborative partnerships with third party organisations (such as the Finnish Senior Citizens Association) to deliver a wide programme of content rich and relevant activities which are attractive to different demographic groups.

In recognition of this, in May 2016 a working group of specialists from library associations and universities completed and submitted its proposal for a new Library Act to the Ministry of Culture and Education (which replace the previous Library Act of 1928). The new Act will be reviewed by the Finnish Parliament during the course of 2016 and is likely to come into force in 2017. The proposed Act will highlight the importance of providing equal access to the products of civilisation and culture, opportunities for lifelong learning, active citizenship and democracy. It also expected to underline the essential value of libraries as accessible local physical spaces, as opposed to just online digital platforms.

CASE STUDY – ITALY

The Italian Library Association (ILA) swiftly identified the IFLA Trend Report as an opportunity to revitalise and energise the library profession in Italy. Following the launch of the Report in August 2013, the then IFLA President elect, Donna Scheeder, presented a translated version of the insights document to the annual Italian Library Association conference in Rome in November 2013. Subsequently the ILA organised a series of follow up events to discuss the Trend Report, including a Libraries Roadmap meeting in Florence in October 2014, a Library Trends meeting in Milan in October 2014, and a review meeting in Milan in March 2015.

All these events adopted a world café style format, following a series of presentations from Italian experts from different disciplines relating to the five IFLA trends. Summaries and key questions and concepts emerging from these discussions were captured and uploaded to dedicated online wiki-space to promote further input and debate amongst Italian library professionals. The online discussion wiki also included an English language section to facilitate dialogue and collaboration with other librarians across the globe.

This programme of Trend Report themed discussions alongside further online contributions via the wiki-space incrementally highlighted a number of challenges and priority areas for the ILA to focus on going forward. The ILA realised that in a progressively digital landscape, libraries were increasingly operating in competition with other information providers. As a result the ILA launched a campaign to advocate for e-reading in libraries, linking in with EBLIDA's efforts at EU level. The ILA also established new e-lending consortia and has worked with e-book aggregators

including [MediaLibraryOnLine \(MLOL\)](#) to increase the availability of Italian e-books in libraries. The ILA is also working to develop a comprehensive strategy which can support libraries to explore new innovative areas including self-publishing, open access publishing and linking open data.

Since 2014, the ILA has also been concentrating on opportunities to extend existing library services with a view to offering greater support to lifelong learning through libraries. This approach has met with a degree of initial resistance among some librarians who do not naturally see themselves as educators and often lack the necessary skills. Currently the lifelong learning strategy is being spearheaded by university libraries and a select group of advanced public libraries.

Based on the Trend Report sponsored discussion programme, the ILA is also investigating further options for revitalising libraries and library services. Many of these opportunities focus on the concept of the "participative library". This is guided by the longstanding Italian dictum that libraries should serve as "*piazza del sapere*" (squares of knowledge). Libraries need to serve as unique and welcoming community forums which can facilitate conversation, interaction and knowledge exchange. Building upon this premise, the ILA is supporting libraries to deliver new innovative opportunities and experiences, including new types of formal and informal training courses, and the creation of collaborative maker-spaces. Public and school libraries are particularly invested in developing schemes and education programmes which help boost community digital competences and skills.

According to the ILA, the IFLA Trend Report has served as "*an action plan*" for the development of a long term strategic vision for Italian library services. It has revealed that libraries need to approach the future with a flexible, creative and innovative mind set, exploring what can be done differently, and what can be done which was previously imagined to be impossible. Alongside regenerating and reimagining the library profession and embracing new digital opportunities, the ILA has also recognised that national and regional policy-makers need to be socialised with the new potential role of libraries. Accordingly, the ILA has stepped up engagement and dialogue with decision-makers with a view to raising the profile of libraries within forthcoming government priorities, policies and programmes

5 ARE THE FIVE IFLA TRENDS STILL RELEVANT?



This section draws upon some of the key themes highlighted during national and regional Trend Report discussions to briefly assess the on-going relevance of the five IFLA Trends. The section on each trend will also reference examples of recent developments since the Trend Report was launched in August 2013. As the five IFLA Trends were each deliberately designed to be broad in scope, this section intended to represent an illustrative as opposed to exhaustive review of their current implications, which are understandably too numerous to identify in this document.

1. NEW TECHNOLOGIES WILL BOTH EXPAND AND LIMIT WHO HAS ACCESS TO INFORMATION

Copyright, access to digital content and e-lending

Trend Report discussions in many countries focussed on copyright, access to digital content and e-lending. In particular, discussions in Estonia underlined the challenges of its restrictive national copyright laws and their impact on e-lending initiatives and efforts to promote public access to digital films. For example, Section 13 of the Estonian Copyright Act requires that home loans of audio-visual works can only be granted with the permission of the rights holder. As a result, when American films do not have a licensed Estonian distributor, unless libraries have the time and resources to negotiate access directly with individual American film studios, lending of these works is usually not viable.

Discussions in Italy emphasised that while libraries are increasingly competing with other information providers, the legal realities of digital publishing are threatening the traditional role of libraries as providers

of public access to information and content.

A unifying theme across these conversations is that while the Internet era has undeniably democratised access to information, opportunities for the frictionless distribution of digital content have simultaneously triggered efforts by publishers and rights holders to restrict digital access in many instances.

A fundamental feature of the modern information environment is that physical ownership of content is progressively being replaced by licensed digital access to that content. Consumers purchasing e-books are generally less aware or worried that their rights in engaging with this licensed content are drastically different from those which apply to a physical book purchase. However, these developments have undermined the principles upon which traditional library lending models depend.

For example libraries lend physical books under the “first sale doctrine” or “exhaustion” principle, which enables them to exercise an unrestricted right to lend or re-sell those books (often underpinned by Public Lending Right legislation). In contrast, for e-books there is no equivalent “digital exhaustion” principle, which means that libraries cannot just purchase and lend digital content. Instead, libraries are compelled to negotiate licensing terms with publishers and rights holders which explicitly permit e-lending, subject to a range of contractual restrictions. This situation has raised a number library concerns around the availability of e-book titles for e-lending, rising licensing complexity and cost, alongside questions around the reliability of e-lending services and the legal options for digital preservation.

Interestingly, in Europe recent developments have raised potential questions around previous assumptions that e-lending arrangements have no basis in existing copyright law and must instead depend exclusively on licensing contracts. In 2012, the European Court of Justice (ECJ) ruled¹ that the exhaustion principle could be applied to software distribution via Internet downloads. In April 2015, the ECJ was asked to clarify² its position on e-lending by the Hague District Court in the Netherlands. The Dutch court requested that the ECJ issue a ruling as to

1 [ECJ Decision, UsedSoft vs. Oracle, 3rd July 2012](#)

2 [ECJ Referral C-174/15, 17th April 2015](#)

whether current EU laws³ should enable libraries to allow their patrons to download digital copies of copyrighted works for temporary personal use.

In July 2015, the European Parliament adopted a motion⁴ which called for the European Commission to consider adopting copyright exception which would allow libraries to *“legally lend works to the public in digital formats for personal use, for limited duration, through the Internet or the libraries’ networks”*. In June 2016 the ECJ’s Advocate General Szpunar, published a non-binding legal opinion⁵ which suggested that *“the lending of electronic books is comparable to the lending of traditional books”* and that certain types of e-lending services offered by public libraries could be legal under existing EU legislation. The ECJ’s final decision on this matter is still outstanding, but these developments suggest that there may be scope in the future to apply Public Lending Right frameworks and principles of digital exhaustion to e-books.

2. ONLINE EDUCATION WILL DEMOCRATISE AND DISRUPT GLOBAL LEARNING

Online Education Resources and MOOCs were also key growth areas that emerged from the Trend Report discussions. Conversations in Africa acknowledged that OERs and MOOCs present a massive learning opportunity for their citizens, alongside a role for libraries in providing the skills and technical facilities to widen public access to these important resources. In Ghana, there have been efforts to design new online learning tools which can be used by librarians themselves to develop their professional skills in new areas. In the LAC region, Library & Information Science schools⁶ in Mexico, Colombia and Costa Rica are developing implementing MOOCs targeting librarians.

3 The 2001 Information Society Directive and the 2006 Rental and Lending Rights Directive

4 European Parliament Resolution on the harmonisation of certain aspects of copyright and related rights, 9th July 2015

5 ECJ Press Release, Advocate General’s Opinion in Case C-174/15, 16th June 2016

6 Costa Rican University LIS School, the UdeA – EIB (Colombian LIS School), The LIS School of Chiapas, San Luis Potosí, the Mexican Government LIS School, and the LIS School of the UNAM

Discussions in North America highlighted that students enrolling on MOOCs often preferred blended learning environments which combine digital and face-to-face methods. This arguably positions libraries to play a key role in supporting online learning pathways through both virtual and in-person guidance, alongside the provision of opportunities for peer-to-peer support and collaborative learning between students. In Europe, Australia and North America, Trend Report discussions also focused on whether the current digital disruption of education might present an opportunity for libraries to play a more significant role in this new and evolving landscape. As new market trends diminish the value of monolithic assembly line styles of learning, whilst disrupting traditional structures for teaching, curriculum development, the delivery of learning content and certification - libraries need to consider what value they can add to this shifting environment.

In this context education may become less focused on linear industrial processes concentrated on learners in the early stages of their lives – and more of an iterative, modular and on-demand experience which takes across the entire lifecycle of individuals. This raised questions as to whether library spaces and infrastructure should be redeveloped to meet a growing demand for flexible, commoditised access to formal and informal learning opportunities, facilitated by digital technologies. In this environment, libraries could play a significant role in expanding access to new creative and interactive learning pathways, whilst supporting, tracking and certifying the development of skills and capabilities which might otherwise go unrecognised.

Linked to this broader discussion around the role and purpose of education, there have been further developments around how new technologies will impact the types of skills required by successive generations of learners. In March 2015, the UK National Endowment for Science, Technology and the Arts (NESTA) release a report, *Young Digital Makers*,⁷ which highlighted a critical gap in the current UK market for education and skills provision – namely the imbalance between the scarce supply and high demand for digital making opportunities. NESTA suggested that while today’s young people are clearly more familiar and comfortable with digital platforms and devices than any previous generation – there is justifiable concern that these digital natives have become increasingly isolated from the underlying challenges and complexities of technology within a padded cell of user-friendly systems and interfaces.

In an environment where new business models, services and products associated with Big Data, the Internet of Things, 3D printing and the Sharing

7 *Young Digital Makers, Surveying attitudes and opportunities for digital creativity across the UK*, NESTA, March 2015

Economy will become increasingly crucial to every nation's future prospects for economic competitiveness, growth and job creation – the absence of mainstream digital making skills may become a serious global challenge. In April 2016, Sue Considine, Executive Director of Fayetteville Free Library delivered a presentation⁸ at the IFLA President's Meeting in Toronto which highlighted the importance of libraries recognising the growing interdependence between technical and creative skillsets. In adopting approaches which blend formal and informal learning across Science, Technology, Engineering, Art & Design and Mathematics (STEAM), libraries may have a unique opportunity to develop their mandate around the delivery of 21st century literacies.

A year previously, NESTA published a further report⁹ entitled "Creativity versus Robots". This reported cited previous research from Oxford University which suggested that 47% of jobs in the United States, and 35% of jobs in the UK may be susceptible to automation by new technologies over the next two decades. In this environment the future global labour market will increasingly reward those with creative and technical skills whilst eroding earnings from jobs with more routine or superficial skills levels. In this context, NESTA argued that it is essential for educators and governments to encourage and empower young people with a culture of adventurous digital exploration and creative experimentation – rather than being merely passive consumers of digital content.¹⁰

3. THE BOUNDARIES OF PRIVACY AND DATA PROTECTION WILL BE REDEFINED

International context

The launch of the IFLA Trend Report in August 2013 took place against an on-going backdrop of high profile leaks of digital information relating to international government surveillance activities and commercially circumspect activities. Throughout the remainder of

2013 and much of 2014, global audiences were able to assemble a detailed picture of the US National Security Agency's (NSA) PRISM surveillance programme which gathered personal data from a range of sources including emails, video and voice communications, photos, file transfers and social network profile information.¹¹ From 2014-2016, Wikileaks also continued to release further stores of secret information.¹² These releases included 500,000 classified communications from the Saudi Arabian Foreign Ministry, evidence that the NSA was monitoring French, German and Japanese government, and over 1,000 emails¹³ from then-US Secretary of State, Hillary Clinton.

In April 2016, the International Consortium of Investigative Journalists published 11.5 million documents (originally supplied to German Newspaper the Sueddeutsche Zeitung) which subsequently became known as the Panama Papers.¹⁴ These documents, which belonged to Panamanian law firm, Mossack Fonseca, demonstrated how an array of companies, business leaders and politicians circumvent international regulations designed to prevent money laundering and tax evasion. These revelations spurred a series of international police investigations, alongside the resignation of Iceland's Prime Minister.

Regional perspectives

Perhaps unsurprisingly, issues around privacy and data protection emerged as key areas of debate triggered by the IFLA Trend Report. Discussions in Africa queried whether social media is primarily responsible for enticing users to share unprecedented quantities of previously private personal information online. It was also suggested that African librarians could play a role in contributing to the design and creation of national data protection and privacy regulations in their respective countries. In Australia, librarians commented that with more and more government and commercial services being moved online, patrons are increasingly asking librarians for help to apply for passports and access digital banking services. This underlines the high level of trust placed on library staff, but it also suggests that the digitalisation of services is exposing some parts of society to greater risk as they are incentivised to disclose sensitive personal information to strangers.

In contrast, debates in Europe tended to focus on the simultaneous capacity of digital technologies to drive higher standards of democratic transparency and

8 [Making & STEAM in Public Libraries, Our Developing Mandate](#), Sue Considine, Executive Director, Fayetteville Free Library, IFLA President's Meeting 2016, Toronto, Canada, 7th April 2016

9 [Creativity vs. Robots, the creative economy and the future of employment](#), NESTA, April 2015, page 10

10 [Young Digital Makers, Surveying attitudes and opportunities for digital creativity across the UK](#), NESTA, March 2015, page 4

11 [Prism – latest news and comment on Prism the national security electronic surveillance program operated by the United States National Security agency](#), The Guardian, accessed 11th July 2016

12 [Leaks](#), Wikileaks.org, accessed 11th July 2016

13 [Hillary Clinton Email Archive](#), Wikileaks, 16th March 2016

14 [The Panama Papers – a torrential leak](#), The Economist Newspaper, 9th April 2016

accountability, whilst also enabling governments and companies to engage in intrusive monitoring and tracking. Across all regions, there was significant interest in defining what role librarians should play in relation to evolving concerns around privacy and data protection. Potential areas for development included investigating new competencies and skills librarians may need in the future to manage expanding amounts of data generated by patrons, as well as questions around whether libraries should take an active role in spearheading greater public awareness about managing personal data and online information.

In August 2015, IFLA's Committee on Freedom of Access to Information and Freedom of Expression (FAIFE) published a Statement on Privacy in the Library Environment,¹⁵ endorsed by the IFLA Governing Board. The Statement was designed to provide guidance to libraries and information services on emerging developments in government surveillance and commercial data collection. It also described current challenges to library user privacy, and references to relevant aspects of international law and existing IFLA policies. In addition, the Statement also offered a series of recommendations for libraries in relation to potential advocacy for the protection of privacy, and practical measures to maximise the privacy of library users.

Privacy, data protection and the notion of informed consent

Many of the world's most successful and fastest growing online businesses (such as Google and Facebook) are critically dependent on consumers surrendering large quantities of personal data. In return, consumers enjoy free access to highly user friendly digital services and applications funded by highly sophisticated and personalised targeted advertising. The value of harnessing consumer data is increasingly spreading to other commercial sectors with an interest in developing more personalised services and products. While those services often present additional value to consumers and users, these developments also have the capacity to expose individuals to new risks. These include discriminatory treatment from service online service providers and companies, and greater possibilities for personal data to be exploited in unauthorised or illegal ways due to plentiful data gathering and inconsistent approaches to data security and protection.

Indeed, it can be argued that there is a growing dislocation between commercial data practices and individual expectations of privacy which could pose a future threat to the global information economy.

¹⁵ [IFLA Statement on Privacy in the Library Environment](#), IFLA, 20th August 2015

In a situation where the most effective and efficient future operating models being explored by both governments and companies rely upon sustained public trust in digital engagement mechanisms, this could present cause for concern. In November 2016 the UK Financial Conduct Authority, the organisation responsible for regulating the UK insurance sector, published a consultation¹⁶ which expressed concerns about the capacity for insurance firms to use big data analytics to discriminate against different categories of customer. In May 2016, the National Telecommunications & Information Administration (NTIA), a US Executive Branch Agency which advises the President, released the results of a survey¹⁷ which suggests that on-going privacy and security concerns could have a "chilling effect" on the online economy.

In addition, the on-going spread of networked data gathering sensors in devices, appliances and infrastructure which will power the Internet of Things (and related developments like Smart Cities) is likely to amplify these existing challenges. There are also concerns that this environment has the potential to deliver unbalanced levels of market power to a small number of large companies with highly developed abilities to acquire and process data.

There is also evidence to suggest that there is often a lack of informed individual consent, control or transparency around how data is used, exploited and shared for commercial purposes. Many websites, online platforms and applications require users to consent to privacy policies (which are often very substantive documents full of specific legal terms and conditions) – by checking an "I agree to these terms and conditions" check box or button. However, on closer inspection it is questionable whether this necessarily constitutes informed consent.

A wide ranging literature review¹⁸ of recent studies on personal data and privacy published in May 2015 revealed that only 0.05% of these agreements are actually accessed by consumers before they consent to them. Furthermore consumer surveys suggest that even when people do access these agreements the average time they spent reviewing them was less than 60 seconds. The same report¹⁹ calculated that if consumers were to read the terms and conditions for all the websites they visited in a year, they would need to allocate 80 hours of dedicated reading time.

¹⁶ [Call for Inputs: Big Data in retail general insurance](#), Financial Conduct Authority, November 2015, pages 10-12

¹⁷ [Lack of Trust in Internet Privacy and Security May Deter Economic and Other Online Activities](#), United States Department of Commerce, National Telecommunications & Information Administration, 13th May 2016

¹⁸ [Personal Data and Privacy – Final Report](#), WIK-Consult, 26th May 2015, page 2

¹⁹ *Ibid*; page 2

Immature digital footprints

Another on-going area of concern identified in Trend Report discussions, which has also been flagged by youth campaigners, academics and journalists, are the challenges young people face as a result of being permanently associated with an indelible digital footprint. This permanent record of digital activity has the capacity to document previous errors of judgement, unhappy experiences and immature attitudes for the entire world to see.²⁰ Indeed these sorts of issues led Eric Schmidt (then Chief Operating Officer at Google) to remark that young people should be entitled to change their names upon reaching adulthood in order to protect themselves from prejudicial judgement.²¹

An example of this trend in the UK occurred in 2013, when 17 year old Paris Brown resigned from her role as Youth Advisor to Kent's Police Commissioner after the media highlighted her old Twitter posts referencing alcohol, sex, drugs and derogatory social stereotyping.²² Another recent high profile example is 20 year old Mahairi Black (the youngest MP since 1667 elected in May 2015) who was highly criticised in the media based on tweets she posted as a child which featured expletive ridden comments about alcohol and her hatred of mathematics.²³

This raises questions as to whether the traditional fields of information literacy and privacy now need to be linked and extended to encompass new concepts. These might include guidance and good practice examples for sustainably managing multiple online identities/personas and how to safely project and control different personal and professional elements of your individual digital brand.

4. HYPER-CONNECTED SOCIETIES WILL LISTEN TO AND EMPOWER NEW VOICES AND GROUPS

Trend Report discussions in Latin America identified the potential for libraries to leverage hyper-connectivity as a powerful tool for reducing social vulnerability and inequalities. This could be achieved by using digital and mobile platforms to deliver services which targeted the specific needs of disadvantaged groups including women, those with disabilities and migrant communities. At the same time, it was also recognised that limitations and variances in regional connectivity are likely to act as barriers to inclusion.

Since the Trend Report was published in 2013, a number of studies have focused on "the online disinhibition effect".²⁴ This concept is used to describe how many individuals choose to behave in cyberspace as a result of online anonymity, physical detachment, perceived remoteness and the limited scope for exercising authority over behaviours which take place online. These combined factors act as an enabler for behaviours that many people would be less likely undertake in a real world face-to-face context. Such behaviours include online criminality²⁵ and fraud, copyright infringement, content piracy and trading in illicit items or goods.²⁶ Building upon similar arguments, other studies²⁷ suggest that online anonymity plays a role in enabling and incentivising aggressive or abusive behaviours including trolling and bullying as well as racial or gender-specific harassment. According to a UK study carried out by the London Grid for Learning last year, 22% of children in Years 3-9 reported that they had been bullied online, most frequently via games consoles or mobile devices.²⁸

The online disinhibition effect can also potentially affect subsequent offline actions for some individuals. Figures published earlier this year by the UK's National Crime Agency (NCA) revealed that the number of people reporting being sexually assaulted on their first date by someone they met via an online dating app has risen by 600% in the last five years.²⁹ The NCA's report

20 [Ministers back campaign to give under-18s right to delete social media posts](#), The Guardian, Tuesday 28th July 2015

21 [Young will have to change names to escape 'cyber past' warns Google's Eric Schmidt](#), The Telegraph, 18th August 2010

22 [Kent Youth PCC resigns after Twitter row](#), BBC News, 9th April 2013

23 [We enjoyed reading Mhairi Black's NSFW tweets as a teenager](#), The Independent website, accessed 6th January 2016

24 [The Online Disinhibition Effect](#), John Suler, Cyber Psychology & Behaviour, June 2004

25 [National Strategic Assessment of Serious and Organised Crime 2015](#), National Crime Agency, June 2015

26 [The Rise and Challenge of Dark Net Drug Markets](#), Julia Buxton & Jim Bingham, Swansea University and the Global Drugs Policy Observatory, Policy Brief 7, January 2015

27 [Cyberbullying: Review of an Old Problem Gone Viral](#), Journal of Adolescent Health, July 2015; [Embodied Harms: Gender, Shame and Technology Facilitated Sexual Violence in Cyberspace](#), Violence Against Women, March 2015; [Cyberbullying, Internet trolls and their psychopathic profile](#), Dorian Furtuna, Social Ethology, Human Instincts in a Modern Society, November 19th 2014; [Trolling in asynchronous computer-mediated communication: from user discussions to academic definitions](#), Journal of Politeness Research, Language, Behaviour, Culture Volume 6, July 2010

28 [London Grid for Learning E-Safety Survey 2015](#), Final Report, page 15

29 [Emerging new threat in online dating – Initial trends in online dating-initiated serious sexual assaults](#); National Crime Agency, 7th February 2016, page 5

partially attributes this substantial increase to the specific behaviours and expectations created by “two individuals initially meeting and interacting in an online environment”.³⁰ Initial interactions online (which feel safe and secure) rapidly build trust and feelings of intimacy, which can lead to individuals taking risks they might normally avoid (e.g. agreeing to a face-to-face meeting with a stranger in a non-public setting).³¹ Furthermore, initial online anonymity can encourage more emotionally honest and explicitly sexual communications, which can then lead to mismatched or inflated expectations of sexual activity when two people meet for the first time.

A key question around the online disinhibition effect is whether this trend is merely a temporary symptom of our on-going social adaptation to an increasingly digital environment. On that basis, we might reasonably expect new generations of Internet users to progressively apply more traditionally acceptable cultural norms and behaviours to online communications. In other words, as a society we will naturally evolve higher standards of online behaviour which we will come to expect of ourselves and others as we become more accustomed to digital communications. Time will tell.

5. THE GLOBAL INFORMATION ECONOMY WILL BE TRANSFORMED BY NEW TECHNOLOGIES

3D printing

Trend Report discussions in Africa identified 3D printing as both an opportunity and a threat. It was seen as a development which could stimulate the creation of new domestic manufacturing abilities and increase the global competitiveness of African commercial supply chains. At the same time, there were concerns that it could disrupt the livelihoods of a large number of existing small manufacturers, alongside the fortunes of their employees and the retailers they supply. In Australia, the rising availability of 3D printers in libraries is playing a part in the redevelopment of physical library spaces, alongside the provision of creative

maker spaces, collaborative learning areas and meeting spaces. Discussions in North America identified 3D printing facilities as a key part of a potential new raft of library offerings focused on support for local entrepreneurship, community publishing and digital maker spaces. Other discussants questioned whether “libraries have problems with shiny objects....we need to consider what the purpose of the 3D printer is.”

This last point accurately captures an on-going tension between expectation and reality around 3D printing. Since the launch of the Trend Report, 3D printing has been repeatedly highlighted as a transformative technology for both commercial and consumer use. However, according to some commentators, in the more developed economies, consumer 3D printing has potentially been over-hyped. In January 2016, Forbes reported that 2015³² may have marked the end of a 3D printing consumer bubble, with a number of providers having to write-off previously expected revenues and shut down existing consumer product units. In contrast, Forbes also suggested that the industrial market for 3D printing is about to enter a sustained period of growth with far reaching implications.

In support of these predictions, in April 2016, PWC forecast³³ that global spending on 3D printing would rise from \$11 billion in 2015 to over \$27 billion in 2019. The report suggests that industrial 3D printing is about to cross the threshold from being considered advanced technology to being viewed as conventional technology. It confirms that around two thirds of US manufacturers have adopted 3D printing techniques, and that 52% expect them to be used in high-volume production over the next 3-5 years (in comparison to 38% surveyed in 2014). However, there remain concerns around its potentially disruptive effects, with 22% believing that 3D printing will force them to restructure supply chains, and another 22% worried about threats to intellectual property.³⁴

Sharing economy

Since the launch of the IFLA Trend Report, the rise of so-called “sharing economy” business models and services has attracted significant attention from global business leaders, policy-makers and the media. Much of this interest is focused on its capacity to enable an increasingly hyper-connected digital market place to generate innovative solutions which disrupt outdated and monopolistic business models and services. A 2014 report³⁵ from PWC suggests that the global sharing

30 Ibid; page 7

31 Ibid; page 7

32 [8 Hot 3D Printing Trends to watch in 2016](#), Forbes, 12th January 2016

33 [3D Printing comes of age in US industrial manufacturing](#), PWC, April 2016, page 2

34 Ibid; page 2

35 [The Sharing Economy – sizing the revenue opportunity](#), PWC, 2014

economy is likely to increase from \$9 billion to an estimated \$355 billion by 2025.

Looking beyond the hyperbole, the sharing economy essentially represents opportunities to exploit unused or under-used skills, time, assets and resources³⁶ Sharing economy platforms enable their users to borrow or share car trips, vehicles, power tools, parking spaces, homes and spare rooms. In all instances, these platforms leverage digital technologies to quickly and effectively connect supply with demand across areas which traditionally would not be served by mainstream commercial business models.

A prominent example is Airbnb which connects people looking to rent their homes or rooms with people seeking short-term accommodation. Last year the Wall Street Journal reported³⁷ that Airbnb is projecting revenues in excess of \$900 million in 2015, rising to an estimated \$10 billion by 2020. Other notable examples of the sharing economy include Freegle, which enables the local reuse or recycling of unwanted household items, and Zopa, a peer-to-peer lending platform which enables people to lend money directly to others seeking to borrow funds. Lenders receive higher rates of interest, and borrowers benefit from low rates of interest than offered through regular bank loans.

It is interesting to note that Trend Report discussions in North America highlighted that libraries could be considered as *"the original sharing economy"*. Indeed other commentators have also emphasised that the activities and ideas within the sharing or collaborative economy are not new – and that throughout history people have already built successful businesses around renting, exchanging and leasing items to others. What has most recently changed in this equation is the capacity of technology to enable people to easily connect and collaborate with each other. In the UK, NESTA has recently argued that this³⁸ new collaborative economy is part of a broader global transformation which will unlock wealth by enabling access instead of ownership and decentralised networks instead of centralised institutions. If these predicted changes materialise, it is likely to incrementally evolve our traditional notions of business, value, exchange and community.

Blockchain

Since the launch of the Trend Report we have also witnessed an intensifying debate around the future potential of blockchain technology. In her closing

36 [Unlocking the Sharing Economy – an independent review](#), Debbie Wosskow, November 2014, page 14

37 [The Secret Math of Airbnb's \\$24 billion valuation](#), The Wall Street Journal, 17th June 2015

38 [Making sense of the collaborative economy](#), NESTA, September 2014, page 7

address to the IFLA President's meeting in April 2016, IFLA President Donna Scheeder noted that one of the most important insights to emerge from the discussions in Toronto was the scope for blockchain technologies to trigger an even more accelerated pace of change in our information environment.³⁹ Earlier that day, leading author and innovation specialist Don Tapscott delivered a keynote presentation which suggested that existing innovations such as big data, the Internet of Things, machine learning, artificial intelligence and robotics are poised to be transformed by the *"blockchain revolution"*, yielding a paradigm shift in our global society and economy.⁴⁰

Blockchain is currently most widely known as the underlying technology behind digital currency Bitcoin,⁴¹ which was developed in 2008 by Satoshi Nakamoto. More recently, the potential for applying blockchain to new kinds of transactions and interactions has led to speculation that it could trigger wider innovation and transformation on a global scale.

The central focus and defining asset of the blockchain is trust. At a basic level, the blockchain is an enormous global database or *"distributed ledger"* which runs simultaneously on millions of devices and machines. This database is open-source and accessible to anyone, but it is protected by powerful digital cryptography which ensures that this permanent record can only be updated with genuine transactions and cannot be manipulated or altered by third parties.⁴² This innovative system allows complete strangers to transact with each other with assured integrity and mutual trust, without depending on powerful intermediaries such as governments, financial institutions or technology companies.⁴³

Based on the blockchain's capacity to verifiably underwrite all forms of information and transactions, some commentators are predicting it will have a seismic effect on our social, political and economic landscape. These advocates imagine a world where our identities, intellectual property rights, land ownership registers, commercial contracts, loans, purchases, capital markets, and marriage and birth certificates can all be independently certified, maintained and universally trusted using blockchain technology.⁴⁴

39 [Building the agenda and making it happen, closing address to IFLA President's meeting](#), Toronto, Canada, 7th April 2016, page 1

40 [Blockchain Revolution, Prosperity in the Second Era of the Digital Age](#), Don Tapscott, IFLA President's Meeting, Toronto, Canada, 8th April 2016

41 [Frequently Asked Questions](#), Bitcoin.com

42 [Blockchains – the great chain of being sure about things](#), The Economist Newspaper, 31st October 2015

43 [The impact of the Blockchain goes beyond financial services](#), Harvard Business Review, 10th May 2016

44 [How blockchains could change the world, interview with Don Tapscott](#), McKinsey & Company, May 2016

Others suggest that this kind of decentralised trust engine will be an essential asset in effectively managing the increasingly sophisticated interactions between sensor-equipped devices fuelled by the Internet of Things.⁴⁵ In May 2016, IBM also released a report⁴⁶ which argued that blockchain technology will be a key enabler behind authenticating and securing transactions across sharing economy platforms.

The likely speed of blockchain adoption across these diverse spheres remain unclear, but its capacity to deliver a trusted record of information which is mathematically invulnerable to external manipulation has the potential to transform our relationships with governments, companies and individuals on an unprecedented scale. As the Economist Newspaper suggested in October last year, *“the blockchain is an apparently mundane process which has the potential to transform how businesses and people cooperate.”*⁴⁷ At the same time *“by offering a way of setting the past and present in cryptographic stone, they could make the future a very different place”*.⁴⁸

45 [IBM looks to Bitcoin blockchains for internet of things platform](#), Computer Weekly, 22nd January 2015

46 [Blockchain and the Sharing Economy 2.0](#), IBM, 12th May 2016

47 [The promise of the blockchain – The trust machine](#), The Economist Newspaper, 31st October 2015

48 [Blockchains – the great chain of being sure about things](#), The Economist Newspaper, 31st October 2015

6 FURTHER CONCLUSIONS AND KEY POINTS FOR FUTURE CONSIDERATION FOR LIBRARIES



KEY THEMES FROM NATIONAL AND REGIONAL TREND REPORT DISCUSSIONS

This section summarises some of the additional overarching themes which emerged from the national and regional Trend Report discussions and case studies. In particular, specific focus has been devoted to themes not already reviewed in the previous section assessing the five IFLA Trends.

Role of libraries

Trend report-related discussions in 30 countries triggered vibrant and passionate debate around the future role of libraries. There was general consensus on the need for libraries to adapt and evolve to deliver new services to wider audiences. Concerns were expressed that libraries could be at risk of forfeiting their natural role as pace setters in key areas including information literacy, intellectual property and data management. At the same time, it was also recognised that there is an on-going tension between embracing new technological opportunities whilst maintaining current functions to serve existing audiences.

A common conclusion was that libraries should carefully diagnose and track the evolving needs of patrons, and be prepared to abandon, reinvent or update library functions and services accordingly. Another theme was the importance for librarians to reimagine the application of traditional library principles in a rapidly changing world. Trust, neutrality, free and equal access to information, and freedom of expression were all identified as key features of the library brand which need to be successfully implemented in a changing environment. These

elements need to be drawn together to deliver services which maximise social inclusion and equality of opportunity throughout the digital and physical communities that libraries now serve. The IFLA President's meeting in April 2016 highlighted that more work needs to be done to ensure that libraries are recognised as engines of development and essential infrastructure for communities.⁴⁹

It was noted that most libraries are becoming simultaneously physical and virtual spaces, which has created challenges around maintaining both physical and digital infrastructure and services at the same time. A further consideration is that as library services are progressively digitalised and remotely accessible, there is an increased emphasis on renewing the business case for preserving the library as a physical location and space. This provoked discussion about how the uniquely social and participative dimensions of libraries might be effectively exploited. In parallel, it was highlighted that as services and functions are increasingly shifted to the digital realm, society is likely to place heightened value on experiences which cannot be digitalised, including face-to-face collaboration and direct human interaction. This arguably presents a unique selling point for physical library services which should be taken into account when planning future services.

Skills, infrastructure and funding

Trend Report discussions contained a pronounced focus on skills. This included both the skills required by patrons to access new digital services and opportunities, alongside the skills needed by librarians in order to fulfil their mission in a changing information environment. It is interesting to note that linked to the discussions triggered by the Trend Report, library associations in Austria, Australia and Estonia have already taken direct steps to update their national curricula for library professionals to incorporate new digital competencies including big data management, privacy and data security. These conclusions were also

⁴⁹ [Building the agenda and making it happen, closing address to IFLA President's meeting, Toronto, Canada, 7th April 2016, page 5](#)

echoed during the recent IFLA President's meeting in April 2016, where IFLA President Donna Scheeder emphasised the crucial role of *"continuous individual learning for librarians"* and the importance of embracing the new whilst *"letting go of old ways of doing things, no matter how comfortable we find them."*⁵⁰

Discussions in all regions also emphasised shortcomings in digital connectivity and infrastructure as on-going barriers to the inclusive delivery of virtual library services. It was also identified that while rising patron expectations is putting increased pressure on libraries to transform and evolve their services, prevailing political perceptions of the traditional role of libraries risks constricting the availability of new funding to achieve that objective. A key conclusion was that libraries need to advocate more effectively by developing accessible and compelling policy narratives around their achievements, backed up by supporting data and evidence.

Strategic coordination and collaboration

Building upon the previous point above, another common theme was the importance of fostering greater strategic coordination and collaboration between librarians. At regional and national level, there was agreement that libraries should engage with each other, municipal authorities and community stakeholders on a broader range of issues including skills, policy, information technology services and infrastructure. The focus for international collaboration tended to concentrate on bigger picture advocacy themes including privacy, copyright, freedom of expression and free and equal access to information. It was also concluded that the development of overarching strategies enabling libraries to engage with the challenges and opportunities of increasingly digital societies would be powerful assets at all levels of potential cooperation. As IFLA President, Donna Scheeder noted in her closing address to the IFLA President's meeting in April 2016: *"by working together we will create that vision of the future . . . where every librarian takes joy in knowing that every day they contribute to changing people's lives for the better."*⁵¹

Weaving these threads into the fabric of future library strategy

The content and conclusions of these discussions have been essential in building the IFLA Change Agenda⁵² which was announced at the President-Elect's meeting in Cape Town in August 2015. Building and drawing upon the IFLA Trend Report-sponsored discussions, the IFLA Change Agenda calls for a segmented and strategic approach to the information profession across four key levels:

- 1. Individual level:** to be successful in the 21st century librarians must embrace continuous individual learning, supported by a revitalised agenda for library education which enables them to adapt, renew and transform their profession
- 2. Organisational level:** librarians must embed institutional change within their organisations, capitalising on new techniques for communication and mobilisation to engage communities and develop a clear vision for the future
- 3. National level:** identify, analyse and address the political and legislative barriers which prevent libraries from meeting the needs of their communities using targeted, collaborative and evidence-based advocacy
- 4. Global level:** articulating a global vision for libraries with one voice, backed by strong national associations and a strong IFLA, to build the international policy frameworks which can deliver a long-term and sustainable information environment

The IFLA Change Agenda is specifically designed to support the aspirations voiced by librarians during Trend Report discussions for the development of an enabling framework which allows emerging intelligence, expertise, skills and best practice to be shared at multiple levels across the global library ecosystem. It also presents a framework for action based on an enduring and universal set of values which champion freedom of access and information for all. It is based upon the premise that for libraries past, present and future, these values have earned, and will continue to earn the trust of individuals all over the world.

50 Ibid; page 2

51 [Building the agenda and making it happen, closing address to IFLA President's meeting](#), Toronto, Canada, 7th April 2016, page 5

52 [Building the IFLA Change Agenda](#), IFLA, 20th August 2015



TREND REPORT

IFLA Headquarters
P.O. Box 95312
2509CH The Hague
Netherlands
TEL + 31-70-3140884
FAX + 31-70-3834827
E-MAIL ifla@ifla.org
www.ifla.org