

IFLA Toolkit on Public Access to the Internet in Libraries

This toolkit is designed to cover all policy questions relevant to public access to the Internet in libraries. It is designed to be as exhaustive as possible in terms of themes, and so of course not all issues will be relevant to all libraries in all countries.

Its goal is to offer a starting point for library associations and libraries in thinking about how – and where – to engage in advocacy and lobbying activities around public access to the internet. It may also help in identifying potential partners and alliances with which libraries could work.

While the toolkit aims to be broad, it does not aim to be deep. Rather it:

- Offers a short introduction to different policy issues relevant to public access in libraries
- Sets out some key advocacy points which library associations and libraries could make
- Offers links to more information

As with any toolkit, readers should feel free to select only the sections that are of interest. A first step could be to assess which of the different factors is providing the greatest immediate barrier to public access – poor overall connectivity, unhelpful laws and regulations, lack of finance. Once this has been identified, the more detailed information should make it possible to reflect on where to focus efforts.

The goal of this toolkit, for IFLA, is to enable librarians, libraries and library associations to develop their confidence and capability to engage in advocacy in relevant policy areas. The ideal is that the voice of libraries can be heard in policy discussions, either as part of ongoing reforms, or proactively, in cooperation with other relevant organizations.

Happy reading!

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1. Introduction: Why Is Public Internet Access in Libraries Important?

In the context of libraries, public access refers to the possibility for users to connect to the Internet through a shared connection (and potentially computer terminal). It stands in contrast to 'private' access – access that is limited to an individual subscriber, household, a commercial service or potentially employer.

There are several arguments in favor of focusing on providing public access in libraries, both as a first step towards connecting unconnected communities, and as a complement to private access in situations where a large share of the population is already online.

In its [Principles on Public Access](#), [IFLA/DC-PAL] defines its perspective on empowering people's access to information through public libraries. It underlines that public access in libraries is important because libraries are trusted, safe institutions that welcome and serve everybody.

From a cost-effectiveness point of view, the fact that libraries already exist, have a mission to provide access to knowledge and information resources, are funded by the taxpayer and embedded in government infrastructure make them a logical choice. They can partner with other public sector actors (schools, social services etc.), civil society, as well as the private sector making them an ideal platform, but crucially remain a non-commercial space for 'social' use of the Internet, and realization of its potential¹.

Lastly, they have skilled and qualified library staff who offer the public support with technology and training on information and media literacy, as well as on how to use the Internet safely. Where there already are strong connections, they have been involved in the development and use of innovative learning services. This can include wiki-collaborations, cloud computing, job-training, e-learning, online government services, and access to subscription-based databases to name a few.

At the level of the individual, public access in libraries therefore represent an important means of accessing digital information and making other uses of digital technology, in many cases the only one. By reducing costs to individuals – especially those who would otherwise be excluded from the digital environment, public access in libraries promotes equality and removes barriers – and disincentives – to taking advantage of the potential of the Internet. It empowers people to learn, find and apply for work, start a new business, communicate with family and friends, and start to create and share their own content. It allows everyone – not just those with money – to obtain the information they need to take better decisions.

Moreover, public access can support the effectiveness of government action. As all levels of government look to move citizen services on line, it becomes more and more important to ensure all citizens have both access to the Internet, and the skills to navigate and do business with government online. Often those that most need the government services/or need to interact with them have the least ability to do so – investing in public access through libraries helps rectify this.

Achieving universal public access to the Internet through libraries requires a dual approach: investment in technology infrastructure to create or improve physical connectivity and a policy environment that supports access and use. This guarantees that individuals can access, find and use information provided via the Internet in public libraries, and that communities have the capacity and incentives to create and publish local content online.

¹ See the eSmart initiatives in Australia: <https://www.esmart.org.au/esmart-libraries/>

2. Physical Infrastructure

For library users to benefit from high-quality Internet access – and the information and content it offers – they need a good physical connection to the Internet. This physical infrastructure is made up of three parts – ‘backbone’, middle and ‘last-mile’ networks. In many places, there are problems at both levels, meaning that libraries either remain unconnected, or cannot benefit from a strong enough connection to offer the services their users need.

Connecting libraries and other anchor institutions can be a focused middle mile strategy. In this case, libraries may play the role of *priority end points & interconnect points*. In this way, infrastructures closer to homes and offices are also extended while serving a large portion of population who access those services.

Cost of middle mile networks is a fraction of last mile deployments, but it will reduce the overall cost and risk to reach everyone (how??). Open middle mile infrastructures are the very places to invest Universal Service Funds (USF) for greatest public and market return on investment (ROI).

This chapter explores some of the critical physical infrastructure issues where libraries may wish to advocate.⁴

The Global Net

A solid Internet infrastructure is critical to connect traffic from the local networks to regional and larger global networks. For example, when a library user accesses a research article (for example via a database of health research such as PubMed, data from the World Bank’s Open Knowledge Repository, or an international news website such as Reuters, Al Jazeera or France24, the content may well be stored in another country.

If the connections between countries or between regions within a country are poor, then it will be slower to download the relevant document. Libraries therefore have an interest in supporting projects that strengthen this global network.

This is important for poorer and more remote countries – those that are landlocked, or those that are isolated – where building such connections may be expensive or depend on the goodwill of others. Similarly, developing more connections is important, in case one route is blocked or shut down by a government.

Where these are lacking, or there is too much reliance on one option, governments and others should support projects to build or improve connections between individual countries and the global Internet
[Find out more](#)

Connecting the Global to the National

A parallel concern is around Internet Exchange Points (IXPs). These are where Internet traffic over local networks meets the global network. Currently, many regions do not have enough affordable IXPs. For example, Internet Service Providers (ISPs) in Southern Africa connect local traffic in Africa via the London Internet Exchange (LINX) or the Amsterdam Internet Exchange (AMS-IX) because it is cheaper to pass through Europe than to connect directly through an exchange point on the African continent.

This means not only that Internet access is slower (the distance travelled does make some difference), but also that it may be faster to access content from those countries which host IXPs than from other parts of Africa. In terms of impacts on libraries, this means not only slower access to resources in general, but especially slow access to local or regional content.

Governments should support efforts to develop affordable Internet Exchange Points, in particular in developing countries, in order to provide better access to content.

[Find out more](#)

Infrastructure within Countries

Infrastructure within countries clearly also plays a role. Often, the capital or other major centers may benefit from a relatively good Internet connection, but smaller towns and villages – and in particular the countryside – will not. Libraries in such regions will also be affected by this situation.

Poor connectivity in rural areas can be linked to a combination of high installation costs (because of distance or obstacles such as mountains), low population (i.e. not many consumers), and low purchasing power (companies less likely to be able to make a profit). Even where there is a connection, it may not be of high quality (using old-fashioned cable for example).

High quality Internet connections linking all parts of a country, including rural areas, are essential if all libraries and communities are to benefit from good connectivity. Fibreoptic cables offer the best performance, although other options for connecting remote regions, such as satellite, also exist.

Building this infrastructure requires funding. The role of Universal Service and Access Funds is discussed later in this toolkit. However, there are means of reducing costs, and so enabling more people to be connected for less. One option is a ‘dig once’ approach, where when new roads are built, new cables are laid at the same time.

Finally, in choosing where to connect first, libraries are a logical choice, for reasons set out later in this toolkit. In short, as trusted community hubs, with a mission to offer access to information to all and potential as a space for developing skills and confidence, they add strong value compared to various other options. Additionally, libraries are important in time of personal, communal and national crisis.

Government strategies for Internet access should explicitly aim to bring this to all parts of the country, and focus resources on those areas where private-sector initiatives are least likely.

[Find out more](#)

Policies and programs focused on infrastructure should include Internet infrastructure, for example through ‘dig once’ approaches.

[Find out more](#)

When connecting a new area for the first time, governments should consider connecting the library and other community anchor institutions first, given their role in providing access to information regardless of income.

[Find out more](#)

Local Networks

The final link in the chain is that to libraries and library users. The goal is to ensure that every institution and its users benefit from a sufficiently strong connection to be able to get the most out of the internet.

There are several ways of achieving this. Setting aside dial-up Internet (itself not a possibility in areas without phone lines), means of accessing broadband internet have different strengths and weaknesses in terms of cost (both installation and operating), speed and coverage. In most developed countries, cable is available in big cities. Fibre, while expanding, still has the most limited coverage network, even if it provides higher speeds.

Mobile broadband is also increasingly common and is often seen as the future of the Internet, especially in areas where there is little 'hard' infrastructure. Mobile coverage is increasing, with 80% of the world's population now within reach of a 3G network. In conjunction with apps, it has opened the way to the creation of new tools and services to help people make specific uses of the Internet.

At the same time, mobile data costs money, which remains a significant barrier for many, and is not feasible for more intense uses of the Internet, for example for research, or other technology-intensive activities.

Another way to connect to the Internet is through Wi-Fi connections, which work using radio waves. Traditionally, these operate over shorter distances (such as those provided by WiFi in and around libraries). However, different techniques allow for communication over longer distances – and even through obstacles – for example through unused parts of the radio spectrum (i.e. TV White Space).

Finally, a number of countries have National Research and Education Networks (NRENs – or regional equivalents) which connect research and education institutions. Where these exist, there is also a strong case for connecting libraries, which in turn can offer internet access to their users.

In line with the WSIS Action Line, governments should prioritise bringing libraries, alongside schools and other community hubs, online, as a first step to connecting communities.

[Find out more](#)

Governments should ensure that libraries can benefit from funding available for developing publicly accessible WiFi services.

[Find out more](#)

Governments should not set too low a standard for Internet connections. The 2Mbps standard advanced by A4AI is a good start, but this should be higher still in the case of libraries, given their use by the community.

[Find out more](#)

Governments should be ready to consider the full range of options for bringing more people online, including newer techniques such as TV White Space.

[Find out more](#)

Governments should ensure that libraries can benefit from connections to National and Regional Education and Research Networks as a means of promoting connectivity.

[Find out more](#)

Building Networks

A further key question is how networks to libraries and homes are built and run. In many cases, it is companies. This is not inevitable however. Some cities in the US are working to provide city-wide internet, notably through fibre (and often in the face of opposition from ISPs).

There are also community networks, which are formed by citizens and organizations working together to create the necessary infrastructure at the community level. They can also provide a means of developing skills and a spirit of collaboration within a region, as well as stimulating the production of local content by participants. Another significant provider in the US are non-profit state level research and education networks who in aggregate provide broadband to over 100,000 anchor institutions.

While the question of financing is dealt with later in this toolkit, this is a powerful example of communities – either through grassroots action or civic initiatives – finding the resources necessary to expand Internet access. Crucially, it underlines that local networks do not always need to be provided by the private sector.

In communities with no or low connectivity (linked to inadequate private sector offer), governments should facilitate municipal fibre (run by local government) and community networks as valuable alternatives.

[Find out more](#)

Governments should ensure that libraries can play an active role in community networks, not only as hubs, but also in providing a physical space to deliver training or even just to meet.

[Find out more](#)

3. Regulating Networks and Markets

The topic of telecommunications regulation is not necessarily one that raises high levels of interest or excitement. However, it can play a crucial role as regards whether libraries are connected at all, the price of this connectivity, and what content can be viewed.

Regulation and Connectivity

The rules around who can build Internet connections and where can have a major impact on whether communities – and libraries – have access. It is already well established that a lack of competition will tend to mean that companies make little effort to build connections, for example to low density or low income communities which will not offer a return on investment in the short term.

There are further constraints, for example around who has access rights to ducts or telegraph poles which already carry wires and cables, or even who can perform maintenance on these. Where a new provider of access (public or private) faces barriers to using the same infrastructure, then this reduces possibilities to connect libraries effectively.

Regulation is also important in the case of newer technologies for raising connectivity rates. TV White Space, for example, relies on being able to openly share parts of the radio spectrum. Spectrum originates as public airwaves, a common property regulated by National governments or under global treaty as for use by satellites. In many countries, this is something ‘owned’ by the government, which then auctions off segments to companies. If the cost of ‘buying’ spectrum, especially the ‘white space’ between TV signals for example, is too high, or it is not possible to buy spectrum only for one area or a short period of time, there will be fewer options for boosting connectivity.

Government regulation of telecommunications markets should promote competition as a means of promoting efforts to connect more users.

[Find out more](#)

Government regulation should not restrict use of existing infrastructure (ducts, telegraph poles) by new players.
[Find out more](#)

Governments should ensure the process of allocating spectrum leaves space for new or experimental connectivity initiatives.
[Find out more²](#)

Regulation and Price

As is the case with connectivity, competition can also help reduce prices for users, including libraries. Where a library can choose between two or more providers, there is an incentive for the providers to provide a better offer than the other(s), in order to make the deal. Even when there is more than one company active, there is always a threat of cooperation between them, in order to agree to set higher prices than necessary.

While not necessarily a pure regulatory issue, the level of tax imposed on key equipment for Internet access – computers, routers, Internet access itself – can also have an impact on affordability. In some places, these are classed as luxury goods, and so subject to higher levels of tax.

Governments should promote competition between telecommunications companies, in order to ensure that libraries (paid for with public money) get the best possible deal.
[Find out more](#)

Governments should not impose high taxation (or import duties) on communications equipment as bought and used by libraries.
[Find out more](#)

Regulation and Content

While questions of copyright and privacy will be tackled below, a final area where regulation can play a role is in the way Internet traffic itself is managed.

The most extreme form of regulation is simply to shut down the Internet, or part of it (for example sites from certain sources, or types of service). Governments justify these actions (where they provide justification) by anything from preventing cheating in school exams to calming unrest.

At a general level, Internet shutdowns and censorship have a clear impact on the possibility for library users – and everyone else – to access information. This can take place at the level of Internet Service Providers (who can be forced to block access to particular sites), hosting services, or simply by closing down websites individually.

Shutdowns are, in almost all cases, disproportionate, and carry huge costs both in the short term (in terms of difficulty in communication, difficulty in learning and carrying out research) and in the longer term (in terms of loss of confidence by companies).

A subtler, but also highly damaging restriction comes from violations of net neutrality. This occurs when an Internet Service Provider allows particular sites and services to benefit from higher speeds than others. This will tend to favor larger, richer actors, and hurt those who cannot afford to buy into

1. Ibid.

the 'fast lane'. Library users will tend to be channeled towards certain sources of information rather than others, and library websites may be left in the 'slow lane'.

There has also been controversy around the use of 'zero rating' schemes, which allow people accessing the Internet through mobile phones to use certain services without this counting towards data-caps. They have a similar effect to violations of net neutrality by making some services or sites free for users (so they do not count against data caps). This will favour those actors who can do the necessary deals with mobile companies to participate, leaving others out.

Governments should ensure that any restrictions on Internet access are necessary, proportionate, and transparent. In all but the most extreme circumstances, Internet shutdowns are not justified.

[Find out more](#)

Governments should regulate to protect net neutrality against violations, including through zero rating.

[Find out more](#)

4. Legal and Privacy Issues

A final concern for public access comes from the laws around what information can be accessed online, and under what conditions. This is independent of any policy applied within libraries to restrict access to dangerous or illegal content and limit users' privacy in a library.

Secondary Liability

When an individual infringes copyright – for example by placing a copyrighted work online without permission – they are described as being primarily liable for any damages or costs. However, many countries also provide for secondary liability. This affects actors like Internet Service Providers or libraries, who may have 'helped' the infringement by giving the individual access to the Internet in the first place.

While clearly the main responsibility for the infringement lies with the user, it is often easier (or financially more interesting) for someone looking to enforce their rights to attack an institution or company than an individual.

Such provisions can be harmful for libraries, which are not equipped either to buy relevant technology to block particular types of content or activity (much of which is arguably invasive of privacy, restrictive of freedom of expression, and not necessarily particularly effective). At the same time, they are also not able to face liability. Faced with this, many libraries may, understandably, decide that the level of risk is too high, and not offer access.

Libraries providing public access to the Internet should not be held liable for the actions of their users, in particular where they have made it clear that illegal or copyright-infringing activities are not in line with acceptable use policies.

[Find out more](#)

Libraries should not be obliged to apply filtering technologies that violate users' privacy or treat user-uploaded content as infringing unless proven otherwise.

[Find out more](#)

Libraries should not be obliged to collect names or other identifying information about users in order to facilitate future prosecutions for copyright infringement.

[Find out more](#)

Copyright

The possibilities open to library users to access and make use of materials on the internet depend to a large extent on the copyright laws they face, and in particular on whether they benefit from updated and meaningful exceptions and limitations.

Without these, copyright rules oblige libraries and their users to seek permission – and pay – to do things like use materials in teaching (for example, showing videos about finding work), research (academic articles that are not open access), and simply for pleasure. Exceptions and limitations in place should, also, be protected from contract terms or technological protection measures (or digital rights management tools) that weaken or undermine them.

In summary, a lack of meaningful exceptions and limitations to copyright means that the value of public internet access in libraries – and so the incentive to use it – is reduced.

While this is already a question where libraries are active in general, there is therefore a close link between public access and copyright reforms affecting books and articles available digitally. A good copyright law therefore represents an important part of the policy mix for public access.

Libraries should benefit from a modern and comprehensive set of exceptions and limitations to copyright allowing them to make maximum use of the materials to which they have access.

[Find out more](#)

Surveillance

A further concern for library users is the degree to which they enjoy privacy when they are online. In the case of government surveillance, libraries are obliged to respect the law, although there are various tools which offer users a much greater degree of anonymity (and which fall outside of the scope of a toolkit focused on policy).

Some have taken the step of deleting Internet search records as soon as possible in order to ensure that they have no data to hand over if subsequently requested. Crucially, it is important for people to understand, as far as possible, what surveillance is taking place, given that uncertainty is likely to have a chilling effect.

Library users also risk being subject to data collection by websites or other service providers. The way this data is collected, and subsequently used, is subject to data protection laws, which can oblige transparency, the seeking of consent, or give users 'ownership' of their data.

Governments should be transparent about surveillance policies as far as possible, and refrain from any indiscriminate data collection.

[Find out more](#)

Governments should introduce effective data protection rules that give people the power to choose what data is collected about them, how it is used, and meaningful redress in case of abuse.

[Find out more](#)

Library Legislation

Much of what libraries themselves do is governed by library laws. These can be less or more prescriptive from one country to the next, and there is no ideal way of doing things. Decisions can also be taken both at the national and the local levels and reflect cultural preferences.

However, rules which place unjustified restrictions on library membership and on the services and internet access that they can offer will limit the reach and impact of public access. Withholding access to the internet where it is technically possible, or excessive use of filters and other tools will place a firm block on the potential of public access, and risk libraries being seen as outdated.

Governments should ensure that library legislation is up to date, and favours the provision of public internet access.

[Find out more](#)



5. Finance

A key determinant of public Internet access in libraries is clearly funding. There are both fixed costs, associated with building connections (as discussed above) and buying equipment, and ongoing ones, linked to Internet subscriptions, electricity use, maintenance of hardware, and developing skills among users. The same goes for staff, so that they are able to take new roles, make full use of technology tools and online resources, and assist communities served, be it researchers, professors and students in case of academic library, or farmers, doctors and health workers, teachers, families, preschoolers, students, teenagers, and senior citizens in the case of public libraries.

Clearly not all the costs fall to libraries. Infrastructure costs are often covered by government or private actors. Other costs are strongly affected by market regulation, such as the costs of telecommunications equipment or Internet connections themselves. Many of the points made so far focus on how to make most effective use of public funding, ensure that private funding delivers access, and reduce the costs falling to libraries themselves.

Ensuring adequate funding for libraries to offer meaningful public access

Libraries often struggle to fund all of operations, staffing, collection development and programming, with changing politics at levels creating uncertainty. In many countries, the situation is not necessarily getting better, risking forcing libraries to make tough decisions. It is therefore important, not just to be able to provide meaningful public access, to secure a place in the budget decision making process, as well as use other opportunities to raise the necessary funding.

In this work, it is worth highlighting the social value that this provides, in particular for marginalized groups. In the USA for example, people on lower incomes (including the working poor), people of mixed race and Native Hawaiians or Pacific Islanders, and people who speak languages other than English are disproportionately represented among users. Also, close to 32% of the population aged 14 years or older have accessed the Internet using a library computer or wireless network in the past 12 months.

Moreover, as established above, public Internet access in libraries brings savings or greater effectiveness for government programs in several areas – health, education, employment and innovation. Where they support citizens in accessing eGovernment, libraries can also play a very direct role in realizing the potential of such services to deliver efficiencies. Pooling resources allocated in different government budgets for informal learning, public health, employment, and eGovernment implementation to support public access in libraries would represent a logical step.

Governments should recognize the social value of public internet access, as well as their contribution to the effectiveness of broader government policies when taking decisions about funding.

[Find out more](#)

Governments should take a coordinated approach to supporting public access to online services in different policy areas by strengthening libraries.

[Find out more](#)

Universal Service and Access Funds

Universal Service and Access Funds (USAFs) have existed in many countries much longer than the Internet itself. Governments recognized the social value of connecting people to telephone networks and saw that there was a risk that the market alone would not guarantee this. For example, adding one extra person to a network brings benefits to everyone else, but the benefit to any one individual company may not be great enough for them to invest in building a connection.

USAFs provide a response by collecting fees from telecommunications services money from all telecommunications companies, and then distributing it to help subsidize costs for connections or activities that help bring more people online (i.e. move towards truly universal service and access). They do not necessarily only pay for connectivity, although strengthening connections between regions and cities/towns, or networks to libraries and homes, are a key part of their work. Other ways of supporting access can include supporting training, equipment, or subscriptions.

The prototypical USAFs example is the e-rate program in the USA. Many countries have modelled their programs to the USA and there are notable and successful examples from the Morocco, Colombia and Turkey. Many of the initiatives from a private/public partnership. Unfortunately, inefficiency, lack of transparency or mere underutilization have slowed the adoption of USAFs in many countries. In a 2013 study, [Universal Service Fund Study](#) it was reported that "Most universal service funds (USF) remain inefficient and ineffective. Together, the 64 USFs covered in this report contain more than USD 11 billion waiting to be disbursed. Of those funds studied, many have not disbursed any money.

In fact, of those USFs where levies are currently being applied and collected, it is estimated that only 64% of these same USFs have carried out some level of disbursement or reported that some disbursements have been made. In other words, more than one third of the USFs in this study have yet to disburse any of the levies collected and very few funds, if any, would appear to disburse all that they collect."

Where USAFs exist, they should focus strongly on supporting public Internet access. Individual decisions about funding should respond to need (for example focusing on connections, subscriptions, hardware or skills as appropriate).

[Find out more.](#)

USAFs should be independent of government, and managed efficiently and transparently, allowing libraries and citizens to understand how they are spending money and the impact they are having.

[Find out more.](#)

Where USAFs do not exist, governments could consider establishing these as a means of providing dedicated funding for public access programs.

[Find out more.](#)

6. Resources

Physical Infrastructure

The Global Net

This link provides in-depth information about how libraries could partner with other community organizations using public spectrum WI-FI and TV White Space to better respond to community needs and disasters.

- <http://giglibraries.net/page-1712342>

If you wanted to know how Internet Exchange Points (IXPs) can improve quality and affordability of Internet in local communities, read along.

- <https://www.internetsociety.org/policybriefs/ixps/>

The Internet Society and the importance of TV White Space.

- <https://www.internetsociety.org/blog/2017/01/public-spectrum-for-public-access/>

Connecting the Global to the National

The Alliance for Affordable Internet produces and in-depth yearly research to measure policy progress toward affordable Internet.

- <https://a4ai.org/affordability-report/>

Another useful link to connect the local to the national via the technology of the IXPs.

- https://www.internetsociety.org/wp-content/uploads/2015/10/ISOC-PolicyBrief-IXPs-20151030_nb.pdf

Infrastructure within countries

The role of libraries in time of crises. A collection of stories.

- <https://archive.cilip.org.uk/blog/role-libraries-times-crisis>

A broadband strategy from the government of Sweden to completely connect the country by 2025.

- <https://www.government.se/496173/contentassets/afe9f1cfeaac4e39abccd3b82d9bee5d/sweden-completely-connected-by-2025-eng.pdf>

Digital communication infrastructure strategy for the UK

- <https://www.gov.uk/government/publications/the-digital-communications-infrastructure-strategy/the-digital-communications-infrastructure-strategy>

A white paper by the World Economic Forum on Internet for all: a framework for accelerating internet access and adoption.

- http://www3.weforum.org/docs/WEF_Internet_for_All_Framework_Accelerating_Internet_Access_Adoption_report_2016.pdf

The global connect initiative in the USA aims at accelerating entrepreneurship and economic opportunity by expanding internet access globally

- <https://www.state.gov/e/eb/rls/rpts/othr/266985.htm>

In this link, the Internet Society provides the basic policy guidelines for enabling internet access.

- <https://www.internetsociety.org/resources/doc/2016/a-policy-framework-for-enabling-internet-access/>

A useful tool kit to advance the deployment of broadband through the dig once strategy

- <https://staticshare.america.gov/uploads/2016/04/6.-GCI-Dig-Once.pdf>

A lengthy report on the dig once strategy in the USA with case studies, examples and rationale.

- https://www.mcgeorge.edu/documents/Publications/kanakis_TUOPLR484.pdf

School and libraries need access to technologies. This can be costly. Read below to learn about what the e-rate program is and how it is providing broadband access to libraries and schools across the United States

- <https://www.usnews.com/news/education-news/articles/2017-09-19/federal-e-rate-program-dramatically-expands-high-speed-internet-access-for-schools>
- <https://www.gomindsight.com/blog/2018-e-rate-program/>

Local Networks

The central role of libraries in connecting government and communities is explored in this linked article.

- <http://firstmonday.org/ojs/index.php/fm/article/view/4900/4160>

This Aspen report investigates how libraries by better serving their communities redress inequity and support economic opportunities

- <http://csreports.aspeninstitute.org/Dialogue-on-Public-Libraries/2014/report/details/0090/Libraries>

The library and information agenda for the Australian government

- <https://www.alia.org.au/sites/default/files/The%20Library%20and%20Information%20Agenda%202016.pdf>

Interesting read about who and why libraries are strongly supported in the USA.

- [https://www.oclc.org/content/dam/oclc/reports/awareness-to-funding-2018/2018 From Awareness to Funding Report.pdf](https://www.oclc.org/content/dam/oclc/reports/awareness-to-funding-2018/2018%20From%20Awareness%20to%20Funding%20Report.pdf)

Below several links delving into the definition and use of TV White Spaces as an important alternative to connect to the Internet.

- <https://www.devex.com/news/tv-white-space-the-most-powerful-development-tool-88868>
- <https://www.businessinsider.com/microsoft-tv-white-space-rural-broadband-2017-7?international=true&r=US&IR=T>
- <https://medium.com/sjsuischool/librarians-tap-into-tv-white-space-ed8152292e3c>
- <https://www.techrepublic.com/article/white-space-the-next-internet-disruption-10-things-to-know/>

- <https://www.libraryjournal.com/?detailStory=whitespace-project-could-grow-rural-broadband-access>

Building Networks

Many communities worldwide have built their own internet network. This link tells the stories of a group a community in the USA

- https://motherboard.vice.com/en_us/article/a3np4a/new-municipal-broadband-map

An OECD study on the development of high-speed networks and the role of municipal networks

- <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/ICCP/CISP%282015%291/FINAL&docLanguage=En>

A visual, interactive map of community networks

- <https://muninetworks.org/communitymap>

The Berkman Klein Center for Internet and society at Harvard University has authored the following publications on community-owned fiber networks

- <https://cyber.harvard.edu/publications/2018/01/communityfiber>
- <https://cyber.harvard.edu/research/municipalfiber>

Community networks report from the Internet Society

- <https://www.internetsociety.org/issues/community-networks/>

Regulating Networks and Markets

Regulation and Connectivity

The link explains how the EU Commission paves the way for more and better internet connectivity for all citizens and businesses

- http://europa.eu/rapid/press-release_MEMO-16-3009_en.htm

A study by the Internet Society on how the role of the government will become more pervasive with the expansion of the internet network

- <https://future.internetsociety.org/introduction-drivers-of-change-areas-of-impact/drivers-of-change/the-role-of-government/>

A brief history of government and internet regulation in the USA

- https://progressivepolicy.org/wp-content/uploads/2014/03/2014.03-Ehrlich_A-Brief-History-of-Internet-Regulation.pdf

ICT regulator toolkit is a global resource for policy makers, regulators, the telecom industry and consumers to understand the multifaceted approach to the regulatory framework in ICT

- <http://www.ictregulationtoolkit.org/index>

Important, albeit long, report on cross sector infrastructure sharing. The report specifically deals with broadband strategies

- <http://pubdocs.worldbank.org/en/307251492818674685/Cross-Sector-Infrastructure-Sharing-Toolkit-final-170228.pdf>

Regulation and Price

- N/A

Regulation and Content

IFLA statement on Internet shutdowns

- https://www.ifla.org/files/assets/faife/statements/ifla_internet_shutdowns_statement.pdf

IFLA background note on Internet shutdowns

- https://www.ifla.org/files/assets/hq/topics/infosociety/documents/ifla_internet_resource_pack.pdf

IFLA statement on net neutrality

- <https://www.ifla.org/publications/node/10700>

India net neutrality rules and how the country managed to draft one of the strongest legislations on net neutrality

- <https://money.cnn.com/2018/07/12/technology/india-net-neutrality-rules-telecom/index.html>
- <http://www.dot.gov.in/net-neutrality>

Legal and Privacy Issues

Secondary Liability

The Electronic Frontier Foundation carries our important work free speech, creativity, innovation and privacy. Here is their link.

<https://www.eff.org/work>

IFLA CLM efforts to address the legal role of librarians and libraries within the secondary liability context

- <https://blogs.ifla.org/lpa/2018/04/16/3d-printing-in-the-library-do-be-aware-but-no-reason-to-scare-a-legal-risk-assessment-by-tomas-a-lipinski/>

IFLA exception and limitations for libraries and archives

- https://www.ifla.org/files/assets/clm/position_papers/ifla_position_public_lending_right/limitations_on_liability.pdf

Internet filtering and the role of libraries. What it means and what to do

- <https://www.journals.ala.org/index.php/ltr/article/viewFile/4713/5610>

A position paper of the American Civil Liberty Union on why adults should have a free, unfiltered access to the Internet

- <https://www.aclu-wa.org/news/libraries-internet-and-law-adults-must-have-unfiltered-access>

An in-depth analysis of freedom house on freedom on the net and how social media undermines democracy

<https://freedomhouse.org/report/freedom-net/freedom-net-2017>

Copyright

Complete and useful tool of EIFL to copyright and related issues for libraries and librarians.

- <http://www.eifl.net/resources/eifl-handbook-copyright-and-related-issues-libraries-english>

IFLA toolkit on copyright for libraries

- <https://www.ifla.org/copyright-issues-for-libraries>

A regional perspective of copyrights for libraries

- <https://blogs.ifla.org/lpa/2018/02/15/copyright-for-libraries-in-2018-part-1/>

Surveillance

Privacy international guide to international law and surveillance. A lengthy but important report to be used as a reference.

- <https://privacyinternational.org/sites/default/files/2017-12/Guide%20to%20International%20Law%20and%20Surveillance%20August%202017.pdf>

The issue of mass surveillance

- <https://www.hrw.org/news/2014/07/25/clear-eyed-look-mass-surveillance>

Interesting research paper on keeping users in the know or in the dark and the role of data privacy transparency among Canadian internet carriers.

- <https://www.jstor.org/stable/10.5325/jinfopoli.6.2016.0294>

EFF compiles an interesting form of companies with, and without, safe privacy habits

- <https://www.eff.org/who-has-your-back-2017>

Finance

Ensuring adequate funding for libraries

An issue brief prepared by Beyond Access that reminds us of the meaning of connectivity, the role of libraries and the need to advocate for funding.

- https://www.ifla.org/files/assets/clm/WSIS/libraries_public_access.pdf

You can read for free this JStor article on The Impacts of Free Public Internet Access on Public Library Patrons and Communities

- https://www.jstor.org/stable/10.1086/588445?seq=1#page_scan_tab_contents

The Foundation Center provides an online map, and a series of important information, to see the funding process in the United States with a specific focus on libraries.

- <https://maps.foundationcenter.org/home.php>
- <http://libraries.foundationcenter.org/>

This link reports funding suggestions for libraries in the UK

- <https://www.gov.uk/government/publications/libraries-applying-for-funding/potential-funding-sources-for-libraries>

Universal Service Funds

From the ALA website, important information regarding e-rate and universal service funds

- <http://www.ala.org/advocacy/telecom/erate>

The Web Foundation explores the Universal Service Funds as a viable option for poor and underserved areas

- <https://webfoundation.org/2016/04/moving-beyond-the-market-making-universal-service-funds-work-for-the-poor/>

A dated but comprehensive study of the ITU on Universal Service Funds worldwide

- https://www.itu.int/ITU-D/projects/ITU_EC_ACP/hipssa/docs/118_Policy_Guidelines_Universal_Service.pdf

Michael Trucano on the World Bank technology blog is always a good resource to stay up to date with technology and development

- <https://blogs.worldbank.org/edutech/universal-service-funds-connecting-schools-internet-around-world>

The Alliance for Affordable Internet is looking at Universal Service Funds to close the gender gap

- <https://a4ai.org/are-universal-service-funds-being-used-to-close-the-online-gender-gap/>

7. Checklist

- 1. Where these are lacking, or there is too much reliance on one option, governments and others should support projects to build or improve connections between individual countries and the global Internet*
- 2. Governments should support efforts to develop affordable Internet Exchange Points, in particular in developing countries, in order to provide better access to content.*
- 3. Government strategies for Internet access should explicitly aim to bring this to all parts of the country, and focus resources on those areas where private-sector initiatives are least likely.*
- 4. Policies and programs focused on infrastructure should include Internet infrastructure, for example through 'dig once' approaches.*
- 5. When connecting a new area for the first time, governments should consider connecting the library and other community anchor institutions first, given their role in providing access to information regardless of income.*
- 6. In line with the WSIS Action Line, governments should prioritise bringing libraries, alongside schools and other community hubs, online, as a first step to connecting communities.*
- 7. Governments should ensure that libraries can benefit from funding available for developing publicly accessible WiFi services.*
- 8. Governments should not set too low a standard for Internet connections. The 2Mbps standard advanced by A4AI is a good start, but this should be higher still in the case of libraries, given their use by the community.*
- 9. Governments should be ready to consider the full range of options for bringing more people online, including newer techniques such as TV White Space.*
- 10. In communities with no or low connectivity (linked to inadequate private sector offer), governments should facilitate municipal fibre (run by local government) and community networks as valuable alternatives.*
- 11. Governments should ensure that libraries can play an active role in community networks, not only as hubs, but also in providing a physical space to deliver training or even just to meet.*
- 12. Government regulation of telecommunications markets should promote competition as a means of promoting efforts to connect more users.*
- 13. Government regulation should not restrict use of existing infrastructure (ducts, telegraph poles) by new players.*
- 14. Governments should ensure the process of allocating spectrum leaves space for new or experimental connectivity initiatives.*
- 15. Governments should promote competition between telecommunications companies, in order to ensure that libraries (paid for with public money) get the best possible deal.*
- 16. Governments should not impose high taxation (or import duties) on communications equipment as bought and used by libraries.*
- 17. Governments should ensure that any restrictions on Internet access are necessary, proportionate, and transparent. In all but the most extreme circumstances, Internet shutdowns are not justified.*

- 18. Governments should regulate to protect net neutrality against violations, including through zero rating.**
- 19. Libraries providing public access to the Internet should not be held liable for the actions of their users, in particular where they have made it clear that illegal or copyright-infringing activities are not in line with acceptable use policies.**
- 20. Libraries should not be obliged to apply filtering technologies that violate users' privacy or treat user-uploaded content as infringing unless proven otherwise.**
- 21. Libraries should not be obliged to collect names or other identifying information about users in order to facilitate future prosecutions for copyright infringement.**
- 22. Libraries should benefit from a modern and comprehensive set of exceptions and limitations to copyright allowing them to make maximum use of the materials to which they have access.**
- 23. Governments should be transparent about surveillance policies as far as possible, and refrain from any indiscriminate data collection.**
- 24. Governments should introduce effective data protection rules that give people the power to choose what data is collected about them, how it is used, and meaningful redress in case of abuse.**
- 25. Governments should ensure that library legislation is up to date, and favours the provision of public internet access.**
- 26. Governments should recognize the social value of public internet access, as well as their contribution to the effectiveness of broader government policies when taking decisions about funding.**
- 27. Governments should take a coordinated approach to supporting public access to online services in different policy areas by strengthening libraries.**
- 28. Where USAFs exist, they should focus strongly on supporting public Internet access. Individual decisions about funding should respond to need (for example focusing on connections, subscriptions, hardware or skills as appropriate).**
- 29. USAFs should be independent of government, and managed efficiently and transparently, allowing libraries and citizens to understand how they are spending money and the impact they are having.**
- 30. Where USAFs do not exist, governments could consider establishing these as a means of providing dedicated funding for public access programs.**