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DIGITAL TRANSFORMATION FOR UK PUBLIC LIBRARIES:

FIVE APPROACHES TO A 'SINGLE DIGITAL PRESENCE'

A report by the British Library for Arts Council England and Carnegie UK Trust

June 2019

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Foreword

In my role at the British Library, I am often asked about the relevance of libraries in our increasingly connected and globalised society. My answer is that the professional skills of library and information professionals, coupled with institutional values of trust, authenticity and inclusion are needed more than ever before.

As commercial technology products put content and services at our fingertips, issues of provenance and authority have become absolutely fundamental, especially as more and more of our professional and personal lives are now conducted online. Whether these are financial transactions, social updates, cultural experiences or millions of variations upon these, digital technologies and social media have enabled us to engage with a depth and breadth of content and experiences that were simply unimaginable a generation ago.

And yet we all still crave physical experiences and the opportunity to be in proximity with others. We know that desk space in libraries is at a premium as students, researchers, entrepreneurs and writers sit in public libraries alongside readers, teachers, professionals, parents and children and indeed anyone else who wants to be there. This is itself part of the wonder of public libraries: where else in society offers a place just to be and to think, with ideas and inspiration, quiet study, family activities or conversation? It seems to us that public libraries have always offered access to things that are in short supply: whereas this used to be about access to books and newspapers, nowadays libraries offer welcoming non-commercial spaces, reliable Wi-Fi, 3D printing, quiet study space, activities for all ages and interests; all things that are still out of reach for many.

Although the British Library does not have statutory responsibility for public library policy, in our national library role we care passionately about other actors within the knowledge ecosystem. We have a proud tradition of joint working with public libraries, including a growing network of Business and Intellectual Property Centres across the UK, as well as more recent innovations such as the Living Knowledge Network, a UK-wide partnership of national and public libraries. Since 2013 we have administered the Public Lending Right in the UK and Ireland, an important connection between the creators and readers of the books borrowed within public libraries. Without these partnerships, the British Library's impact would be severely diminished and so we were pleased to accept the invitation from Arts Council England and Carnegie UK Trust to consider the sorts of digital transformation or "single digital presence" that might ensure that public libraries become (as envisioned by William Sieghart in his 2014 review) "*society's most exciting physical spaces, with unprecedented levels of digital content, engagement and opportunity.*"

Technologies and indeed user expectations are evolving constantly, even during the creation of this report. Our contribution to the debate does not pretend to offer definitive answers to what is inevitably a highly complex set of interconnected issues. Rather, our aim has been to advance and re-frame the discussion by identifying five distinct varieties of possible intervention, each one of which, by itself or in combination, could provide a step towards the sought-after goal of a unified presence for libraries in the digital space. We have also offered some tentative and pragmatic judgements about those which we consider most likely, in current circumstances, to help the UK move towards the sustained future for public libraries that we all wish to see.

This report is an independent study by a small team within the British Library and reflects our provisional evaluation of these options for transformation, which vary in degrees of cost, complexity and feasibility. We are very grateful to all those who have offered their advice and expertise.

Roly Keating
Chief Executive, British Library

Introduction

This report considers the rationale for how digital transformation could support for public libraries in the United Kingdom. It forms the next phase in a sequence of reports and roundtable conversations about how the idea of a "single digital presence" (a term coined by William Sieghart) proposition could support the public library sector.

This report was commissioned by **Arts Council England** and the **Carnegie UK Trust** in 2017, building on previous work conducted by the Libraries Taskforce and Bibliocommons.[1] The scope of this project was to consider options for what a UK-wide online platform for public libraries could look like, what it could be used for, and how such an offer might fit in to the current ecosystem for public libraries across the UK.[2]

Whilst there is broad consensus within the sector that user-facing digital services could be significantly improved, there is no one vision for what this may look like. This is compounded by the complexity of the current system, with more than 200 public library authorities operating across England, Wales, Scotland and Northern Ireland. In approaching this scoping study, the British Library took a first principles approach to review how digital services could enhance the offer libraries provide to the public, while reinforcing their overarching public value.

We placed an emphasis on the experience of users during this research, an approach in line with the British Library's own mission and values set out within our *Living Knowledge* vision, with its emphasis on openness, creativity and innovation.[3] In preparing *Living Knowledge*, we reflected on what it means to be a national library in a digital age. Our belief in the enduring and mutually supportive symbiosis between physical space and digital offers has driven our approach to this project, and lies at the heart of our recommendations, which have been informed by our consultation and research.

While the role of public libraries is changing, central to our belief as one of the world's leading research libraries is that all libraries continue to be of the utmost importance to a flourishing society, one that is healthy, educated, engaged and informed.

Furthermore, at a moment of increasing social tension, mutual distrust, fake news and information overload,

we believe that the core skills and values of library professionals are needed more than ever and that any digital interventions should augment and enhance professional capability rather than detract from it.

In 2016, the American Association of Research Libraries forecast that:

> "…*libraries may well become the centre of learning in a world of ubiquitous information because they complement and scaffold all the brand new ways we are learning with and from one another.*"[4]

In testing the rationale and feasibility of a "single digital presence", we have analysed international examples of "digital libraries" or platforms such as the Digital Public Library of America, Finna and Trove, all of which aggregate digital content at national level through a single interface.[5]

We have also considered forms of digital systems management (including underpinning interventions such as a shared Library Management System) to explore potential benefits for service delivery and user experience in terms of transactional engagement and factual information. We have held a number of workshops around the UK with public library professionals, volunteers and users to explore user journeys and how individuals use systems to navigate their way through the services and opportunities on offer, both online and in person. We have also consulted with representatives of related industries, such as publishers and booksellers, as well as with the Society of Authors.

We approached this study without a fixed view of what the final recommendations and next steps would be, but with a clear statement of intent that we wanted our approach to reflect the values of public libraries themselves: trusted, open, inclusive, non-commercial and representative of the diversity of the users we serve. Additionally, we agreed:

any technological intervention should augment the skills and experience of professional librarians rather than offer any replacement for them, and also have the clear goal of increasing public library use both digitally and physically.

1 Bibliocommons, 'Essential Digital Infrastructure for Public Libraries in England' (2015), No longer available online.
2 British Library, 'British Library to Investigate possibility of a "single digital presence" for UK Public Libraries', online at: **www.bl.uk/press-releases/2017/august/single-digital-presence-announcement** [accessed January 2019].
3 British Library, 'Living Knowledge: The British Library 2015-2023 (London, 2015), available online at: **www.bl.uk/britishlibrary/~/media/bl/global/projects/living-knowledge/documents/living-knowledge-the-british-library-2015-2023.pdf** [Accessed January 2019].

4 American Association of Research Libraries, 'Strategic Thinking and Design Initiative: Extended and Updated Report' (Washington DC, 2016), p21, available online at: *Strategic Thinking and Design Initiative*, p.8 **www.arl.org/storage/documents/publications/arl-strategic-thinking-and-design-initiative-extended-and-updated-report-june2016.pdf** [**accessed January 2019**].
5 In defining a digital platform, we follow the work of Annabelle Gawer, "… platforms fundamentally create value by acting as *conduits* between two (or more) categories of consumers who would not have been able to connect or transact without the platform", Annebelle Gawer, 'Bridging Differing Perspectives on Technological Platforms: Toward an integrative framework', *Research Policy*, Vol. 43, No. 7 (September 2014), p. 1241.

The section below on our methodology describes how we developed a framework for the first phase of this research that enabled us to speak to a diverse range of users and non-users. The thread that ran through all of our work was exploring how a digital platform (or platforms) might reinvigorate, refresh and rearticulate the values and purposes of the public library in an information-rich society.

The initial phase incorporated three main work-streams:

- **Research** – Scoping comparable models and best practice to understand the international context.
- **Discovery** – Consulting with public library service providers and some top level engagement with users to understand which services are currently provided, and how they are used and valued.
- **Stakeholder engagement** – Engaging with the wider library eco-system to gauge opinions from those across the sector and in adjacent sectors, such as publishing and bookselling.

At the British Library, we see our role as convening a conversation across the public library sector and beyond, in line with our own mission as a national library to make our intellectual heritage available to everyone for research, inspiration and enjoyment.

Section 1:
Rationale and Guiding Frameworks

The vision of creating a unifying online service for the public library sector has been a topic of aspirational discussion since the earliest phases of the digital revolution.

The current debate, however, owes its origin to the 2014 Independent Review of Public Libraries in England by William Sieghart, who coined the phrase "single digital presence" as a way of exploring:

> "*how in a digital age, the public library space can be the most exciting place for readers, and give the public access to an unprecedented range of digital content.*"[6]

Since then, the idea has been tested and explored in a number of debates, seminars and reports under the aegis of the Libraries Taskforce and other stakeholders, including the *Essential Digital Infrastructure for Public Libraries in England* by BiblioCommons, which analysed the fragmentation of current web offerings in the sector and began the process of formulating options for improvement.[7] The debate was also shaped by the Single Library Digital Presence Steering Group, convened by the Libraries Taskforce in 2016.[8]

This 2019 paper is the outcome of an approach made jointly by Arts Council England and Carnegie UK in 2017, in which they invited the British Library to lead a piece of fresh thinking on this debate, with a view to making recommendations.[9] By taking this work on, the British Library proposed and agreed with ACE and Carnegie a number of broad themes at the outset, which have continued to inform our work in this report:

- The focus of policy should be at pan-UK level, involving our fellow National Libraries in Scotland and Wales where appropriate and respecting their jurisdictions, strategic priorities and statutory responsibilities;
- The perspective of analysis should be both global – in terms of international experience and benchmarks – and long-term (although 'quick wins' will be noted where they may exist);
- The importance of realism and the avoidance of 'optimism bias' should be recognised, with a readiness to acknowledge that some outcomes may be desirable but not implementable in current circumstances.

Our working hypothesis in this report was to test the rationale and appetite for a digital platform acting as a catalyst to increase public library use, support efficiencies and amplify the impact and importance of libraries at local, national and international level.

The public library sector sits at the intersection of a number of separate UK Government policy priorities and departmental interests – as well as being differently structured within the devolved nations of the UK. A strength of this position is that the sector has the potential, through its broad social reach and localised structure, to offer contributions and solutions across a range of UK-wide social and economic priorities. A weakness, of course, is that funding, operations and strategy have historically been fragmented: the current financial challenges faced by some library authorities – not a focus of this paper – may be at least partially a symptom of this.
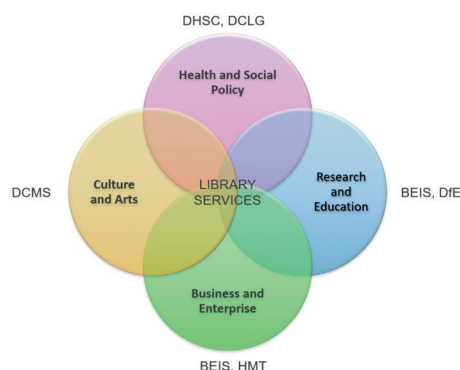
In the analogue age, this separation between differing departmental interests has been to a high degree inevitable. The digital age, however, is different: Governments, organisations and institutions have become more comfortable in thinking, and acting, across historic boundaries – disrupting established categories and forging new, beneficial connections, with a focus on customer-focussed design in the shaping of digital services.

The diagram below illustrates one conceptual framework we have used to consider how library services in the digital age can be designed to occupy a position at the heart, not the margin, of UK policy priorities.

Libraries have the potential to offer a single, welcoming front door for a very diverse range of citizen needs, interests and aspirations – from culture, business and research to health, wellbeing and personal growth.

This is not to insist that all potential "single digital presence" concepts have to support all these departmental interests – but we have found it a useful guide in assessing the aggregate public value different versions of such an initiative may be able to deliver. There is, of course, very significant value at local government level too, with public library services having a sustained and tangible impact on outcomes for communities and individuals.

[6] Department for Culture, Media & Sport, 'Independent Library Report for England' (London, 2014), available online at: **https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/388989/Independent_Library_Report-_18_December.pdf** [accessed January 2019].

[7] Bibliocommons, 'Essential Digital Infrastructure'.

[8] **www.gov.uk/government/collections/single-library-digital-presence-steering-group** [accessed March 2019].

[9] Carnegie Trust UK, 'Building a "single digital presence" for Public Libraries: Forging the Digital Future (Dunfermline, 2017), available online at: **https://d1ssu070pg2v9i.cloudfront.net/pex/carnegie_uk_trust/2017/08/Building-a-SDP.pdf** [accessed January 2019].

Figure 1: Libraries within the Central Government landscape in England

A second framework concerns the fundamental components of a library service. It is a frequent tendency of public debates on public libraries to focus on just one element – the provision of books for lending, for instance, or the opening hours of a service. These are of course vital, but we have been keen to stress the interconnectedness of three essential, irreducible and enduring elements of libraries: (a) the content and collections on offer; (b) the spaces libraries occupy; and (c) that the users and professionals bring both to life. Whether in the physical or digital realms, *all three* of these pillars, we believe, need to remain strong for the fundamental architecture of the idea of the library to endure:

Figure 2: The three 'pillars' of library services:

We have made use of these three broad 'zones' of library service to create a top-level map (Figure 3 below) of the current landscape of digital provision, both within the public library sector itself and in the adjacent sectors of knowledge discovery and book provision, where some of the global digital giants have successfully built international empires over the past two decades; commercial services are marked in red. We have found it helpful to divide the landscape further into two broad 'types' of service: those based on content and input from professional sources, whether publishers, content providers or formal organisations; and those where the content is fundamentally user-generated or crowd-sourced.

We will argue that both types of service may be relevant in considering where opportunities may exist to strengthen the digital presence of libraries, noting – for example – the lack of any distinctive 'UK' service in section 1, and the absence of any kind of social or community presence for libraries at all in section 6, where activity is wholly reliant on the major commercial social platforms.

Figure 3: Types of digital service in the library and information services space
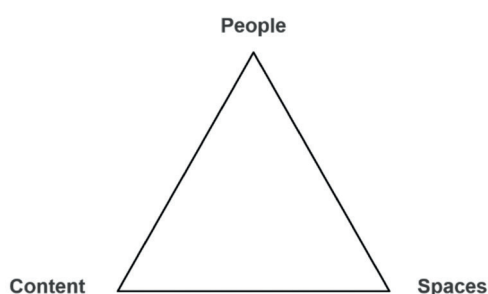
Alongside these frameworks, and the other multiple sources of research and feedback detailed in the Appendix, we have also attempted to take account of the role – current and potential – of the British Library itself, alongside the National Libraries of Scotland and Wales and their respective priorities. Therefore, our thinking has also taken account of the British Library's own strategic plans under its *Living Knowledge* vision, launched in 2015, of which two strands are particularly relevant to the topic. First, the 'Everything Available' programme, which is seeking to reinvent the Library's approach to content access, especially to reflect the revolution in Open Access publishing; and second, the parallel 'Everyone Engaged' portfolio, which includes the work of the UK's three national libraries in creating and shaping the Living Knowledge Network of major public and national libraries across the UK.

Throughout the course of this project, we attended several roundtable events with the National Libraries of Scotland and Wales and bilateral meetings with Northern Ireland Public Library Authority (Libraries NI). These meetings were crucial in maintaining our pan-UK approach, and provided substantial and valued perspectives on library services in Scotland and Wales, directly contributing to and informing the specific themes and options outlined below, and reinforcing that

any UK-wide digital initiative will need to reflect the diversity of and devolved administrations of all nations within the UK.

England, Scotland, Wales and Northern Ireland already have longstanding policies and strategies in place, which will need further consideration with regard to the potential implementation of any future "single digital presence" , noting also that some areas of public library governance and joint working are already more cohesive and advanced in Scotland, Wales and Northern Ireland than they are in England.

Finally, we have also been guided by the British Library's own values and vision about the enduring importance of the library sector. In a global and digitised world, public libraries are still a core service for a wide cross-section of society, not least those living in poverty or in remote areas who do not have access to the internet at home or, related to this, who do not have the level of digital literacy required to engage online, something increasingly demanded by government, banks and other commercial services.[10] 46% of English local library authorities surveyed

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[10] The 2017 Carnegie Trust UK Report #Notwithoutme drew upon data from Tech Partnerships to estimate that that up to 300,000 young people lack these skills, Carnegie UK Trust, '#Notwithoutme: A digital world for all? Findings from a programme of digital inclusion for vulnerable young people across the UK', (Dunfermline, 2017) accessible online at: **https://d1ssu070pg2v9i.cloudfront.net/pex/carnegie_uk_ trust/2017/10/NotWithoutMe-2.pdf** [accessed January 2019].

by **Lorensbergs** reported an increase in the number of requests from public library members to staff for help with digital skills and online resources during the roll out of a solely digital application for Universal Credit.[11] A further 40% of these authorities have planned, or are planning, initiatives for better digital services.

The national strategy for public libraries in *England Libraries Deliver* published by the Public Libraries Taskforce in England, has pointed to the many ways in which public libraries can provide social, economic and cultural benefits for individuals.[12]

Our research has found significant opportunities to promote and advocate for these opportunities through a digital platform, including a basic need for clearer information about the inspiring activities already happening.

> Public libraries worldwide are a civic reminder of the importance of personal connection and community within one's own neighbourhood.

As a publicly funded asset, they are institutions that facilitate the universal civic right to access knowledge of all kinds, whoever you happen to be and wherever you come from. Like the NHS, public libraries offer universal services from cradle to grave, and the very fact that they are part of so many people's own intellectual journey strengthens the affection we have for them. We see an opportunity through digital interaction to offer integration with UK-wide services, whilst also maintaining the familiarity and context of local spaces (and places), collections and individuals.

> *"The [research] library of the future will be a mega library at different scales; it will aggregate vast amounts of data, text and media-rich content"*, [but at the same time] *"local collections and expertise will become increasingly valuable."* [13]

[11] Lorensbergs, 'Netloan Public Library Customer Survey Results', available online at: **www.lorensbergs.co.uk/netloan-customer-survey-results-published-feb-2018**, [accessed January 2019].

[12] Libraries Taskforce, 'Libraries Deliver: Ambition for Public Libraries in England 2016 to 2021' (London, 2016), available online at: **https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/573911/Libraries_Deliver_-_Ambition_for_Public_Libraries_in_England_2016_to_2021.pdf**, [accessed January 2019].

[13] American Association of Research Libraries, 'Strategic Thinking and Design Initiative: Extended and Updated Report', p. 21

Section 2:
Libraries in a Changing World

UK library users belong to a large global library community, and it is clear that a revitalised and co-ordinated digital offer could forge stronger and more recognisable ties between public libraries across the United Kingdom - as well as providing the potential to create, build and reinforce relationships with higher education, National, and Legal Deposit Libraries

Carnegie UK Trust's 2016 *Shining a Light* reports found that while the frequency of public library use had fallen slightly between 2011-2016, around 50% of people in Britain still use libraries, with 40% of users doing so at least once a month.[14] Likewise, while physical borrowing from public libraries has declined over the last 6 years, over 250 million people still visited a public library in 2016-17.[15]

> The continued popularity of the library as a physical space is evidence of an enduring appetite for a flexible civic space and meaningful cultural engagement.

For example, during this period the number of library users taking part in organised activities has significantly risen, as library space becomes more flexible and activity orientated.

The International Federation of Library Associations (IFLA) estimates that there are roughly 3.7 billion visits to public libraries globally per year, with public libraries issuing 6.6 billion physical loans and 873 million digital loans.[16] This material was lent to a global community of active borrowers of approximately 553 million people. With many countries not supplying active borrowing figures – the UK being one such country – this figure is most likely considerably higher than the IFLA's estimate.

In the past 30 years, the internet and other digital technologies have streamlined and enhanced user access to trusted and authoritative knowledge, content and ideas. The library sector has played a fundamental role in developing a range of organizing systems and public offers, such as shared catalogues like those seen in Ireland to intelligent discovery tools (such as those used by *Trove* in Australia), centralised e-lending platforms (like those in Denmark and the Netherlands) to digital libraries (such as DPLA and Europeana).

The evolving role of physical library spaces

Many library spaces have been rapidly evolving to facilitate different and wide-ranging types of activities and knowledge exchange. Libraries are increasingly used – and valued – as a safe, trusted and flexible civic space for work, study, debate, and creation that some traditional performance metrics (book issues, active memberships) do not capture.

Indeed, as Niergaard notes, very recent investment in new public libraries internationally (such as in Aarhus, Helsinki or Edmonton) has led to highly attractive architectural propositions, incorporating both digital offers and world-class public spaces:

> *The library of the future, or "the new library," is a holistic library where printed, physical, and traditional materials are presented side by side with digitized, virtual services. It is characterized by a wealth of space, teeming with users who don't only come to borrow materials but also to meet, read, listen, work, and "settle down" in a common meeting place, a pulsating communal cultural and knowledge center.* [17]

One of the key themes of *Living Knowledge* was that physical and digital spaces were complementary rather than being a zero-sum game. Both elements are still highly relevant to libraries of all kinds, and it is interesting to note that the basic model of a library or research "service" is evolving. Digital content, social media, maker-spaces, coding and an increasing need for digital skills mean that ways of engaging with content and the media professional librarians use to share it are both changing significantly. Therefore, a key issue to explore is no longer just what public libraries have, but how they make it available and to whom, and how this unique content or expertise connects to other platforms.

> Libraries are increasingly seen as places of innovation and inspiration, where people can create new content, products or even businesses.

They are spaces to meet people and ideas they may not otherwise have encountered. Libraries of all kinds are increasingly understanding and articulating their value as enablers and conveners for their users, neighbours and virtual communities.

This theme is one that forms a core part of the national strategy for public libraries in *England Libraries Deliver* published in 2016 by the Leadership for Libraries Taskforce. Many of the strongest performing public library services are those who can articulate their social and economic value, thereby creating a virtuous circle where they can attract (or at least uphold) funding and attract political

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[14] Jenny Peachey & Carnegie UK Trust, 'Shining a Light: The future of Public Libraries across the UK and Ireland' (Dunfermline, 2017), available online at: **www.carnegieuktrust. org.uk/shining-a-light/**, [accessed January 2019]

[15] Department of Culture Media & Sport DCMS, *Taking Part Survey: 2017* (London, 2017). Available online at: **www.gov.uk/ guidance/taking-part-survey**, [accessed January 2019).

[16] IFLA calculate this figure by collating national data published between 2012-2016, it is a rough estimate that combines a diverse and multiple year data-set so should be treated with caution, but it nonetheless gives a tentative glimpse into library use on a global scale; IFLA, 'Library Map of the World', available online at: **https://librarymap.ifla.org/** [accessed July 2018].

[17] Hellen Niegaard '*Library Space and Digital Challenges*', Library Trends 60, 1 (2011), pp.174-189.

capital for innovation and improvement. In late 2014, the Knight Foundation, a US philanthropic body with a mission to "foster informed and engaged communities", launched an opportunities fund to help libraries become community platforms, highlighting that:

> "Public libraries can leverage the physical assets in their communities in combination with people and virtual services and collections to serve as a platform that can be a vital part of the solution to addressing local challenges."[18]

Likewise, there is a growing body of thought from Erik Boekesteijn and others pointing to the role of public libraries as fundamental public spaces or "third places" within civic society, playing a crucial role in supporting cultural cohesion and mutual understanding. As Robin Mazumder argues:

> "As a physical space, libraries embody what we should aspire towards when we are talking about healthy places. They are inviting public spaces where people from all backgrounds come together in the spirit of learning – perhaps about topics of interest to them, but also, maybe more importantly, learning about each other. In a sense, libraries are the living rooms of our communities."[19]

Alongside these evolving roles, the position of libraries within the wider UK ecosystem of books and reading remains of great significance, even in a context of reducing physical loans. According to the Chartered Institute of Public Finance and Accountability, public libraries in England, Scotland and Wales loaned over 182 million books in 2017-18 to over 7.9 million active borrowers. Considering that the Publisher's Association estimates that over 360 million books were sold in the UK market, it is clear that libraries remain a vital pillar in sustaining and growing a vibrant culture of reading and learning throughout the United Kingdom.[20]

Digital Transformations

Since the early 1990s, digital technology has irreversibly transformed the consumption of print and audio-visual media, radically overhauled shopping and consumer habits,

and reshaped the terrain of inter-personal communication. How people use the internet to consume is constantly changing, and

a forward-thinking digital platform for libraries should be able to respond to the latest trends in digital consumption, offering a service that not only reflects but anticipates the needs of our digital-first users.

As a number of trend reports have outlined, the success of on-demand streaming services has changed what users expect from their media consumption. As Deloitte have highlighted in their 2018 digital insight report, consumers increasingly expect content to be available on demand and accessible across all internet-enabled devices.[21] It is widely acknowledged that users are now guided by flexibility and convenience, valuing services that allow them to consume content whenever and wherever they want. However, the quality, and originality, of content available on subscription services is also a key component in user consumption habits. These services aren't successful just because they offer a convenient service, but because they provide access to content that delights their users on convenient terms.[22] BBC iPlayer, for example, has consistently attracted new audiences since the service was introduced. In 2017, viewers streamed 272 million programmes per month on average, with total requests growing to 3.3 billion - an 11% increase on the previous year.[23] Other TV streaming channels, such as Netflix, Hulu and Amazon's Prime Video, have revolutionised the ways in which content is broadcast and digested. Likewise, Spotify's music streaming service offers instant access to music, podcasts, video content and radio stations, using machine-learning and data sifting technology to analyse listening habits and make personalised recommendations.

18 The Knight Foundation, 'Library Leaders', available online at: **www.knightfoundation.org/articles/libraries-leaders-opportunity-our-communities**, [accessed January 2019].
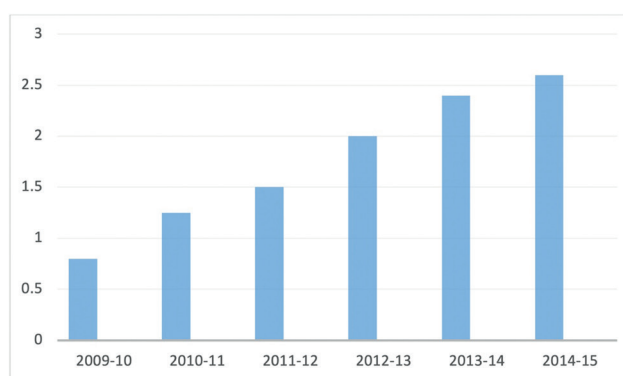
19 Robin Mazumder, 'More Than Books: Libraries as catalysts for healthy urban transformation' (2017), available online at: **https://robinmazumder.com/2017/03/02/more-than-books-libraries-as-catalysts-for-healthy-urban-transformation/** [accessed Janaury 2019]; Erik Boekesteijn, 'From Idea to Initiative: Empowering library innovation on demand', *Libraries Taskforce Blog* (September, 2017), available online at: **https://librariestaskforce.blog.gov.uk/2017/09/04/from-idea-to-initiative-empowering-library-innovation-on-demand/** [accessed January 2019].

20 The Publishers Association, 'The UK Book Industry in Statistics: 2016', Available online at: **www.publishers.org.uk/resources/market-research/uk-market/** [accessed March: 2019].

21 Deloitte Insights, *Digital Media Trends Survey: A New World of Choice for Digital Consumers* (USA, 2018).

22 Ibid.

23 BBC, *BBC iPlayer grows 11% as 2017 becomes best year ever* (2018) **www.bbc.co.uk/mediacentre/latestnews/2018/iplayer-2017-stats** [accessed 18 February 2019].

24 Dan Taylor-Watt, 'Putting BBC iPlayer performance in context', BBC (2015), **www.bbc.co.uk/blogs/aboutthebbc/entries/6be54086-c2e4-4e85-a777-0fc72be30010** [accessed 15 April 2019].

Businesses, public organisations and governments are all invested in reaching and engaging the young 'digital first' consumer. This is no less the case with libraries, and an easy-to-use digital space attentive to the needs of young users could be a significant catalyst in increasing usage of public libraries among younger people.

However, as Deloitte show, the difference in digital behaviours by age group has narrowed considerably, with those aged 35-51 (otherwise known as Generation X) matching, and in some areas surpassing, the digital consumption levels of millennials (21-34) and generation Z (14-20). Digital consumption is also increasing dramatically amongst older generations, with just under 30% of those 40-65, and 20% of 65+ subscribing to a video streaming service, for instance.[25] Older citizens becoming digitally adept further strengthens the argument for libraries to further invest in digital, offering a service that appeals to young people without alienating existing older users.

The increase of online consumption and digital communication has coincided in recent years with growing concern over the use of personal data. Awareness of the misuse of personal information by organisations, businesses, and political groups dramatically increased in 2018 in the wake of the Cambridge Analytica debate, and the roll-out of the European Union's General Data Protection Regulation. PWC's 2018 Consumer Insights survey detected significant unease at businesses collecting usage and personal data.[26] This was also echoed by Deloitte's findings, which suggest that consumers are demanding more transparency from online services when it comes to data use. However, both reports also show that this isn't a deal-breaker, with users still willing to provide access to their data in exchange for value-added services, personalisation, and improved user-experience. These studies suggest that there is a significant gap in the market for ethical, transparent and trusted services that use personal data to add value, creating intuitive and personalised services while giving users full autonomy over the use of this data. Libraries are well placed to respond to this demand, setting a new standard for ethical data use.

The rapid evolution of artificial intelligence, robotics and machine learning has put us on the edge of an exponential growth in intelligent automation. It is estimated that by the end of 2019, 30% of large enterprises will start generating data as a service revenue because of AI. In addition to this, over 40% of digital transformative initiatives will use AI services. Within the next two years,

personal digital assistants and bots will influence 10% of all sales, and 75% of commercial enterprise apps will have AI built in, with over 50% of consumers interacting with AI.[27] Digital advancements such as the aforementioned allow both industries and individuals to work more efficiently as communication and decision-making become more streamlined.

Voice interfaces for news and books are becoming more intelligent and synchronous. These systems use semantic and natural language processing, along with user data, in order to anticipate what a user wants or needs to do next.[28] Contemporary researchers are currently investigating whether voice interfaces could help professionals understand different sides of an argument, allowing the user to ask questions and receive spoken analysis.[29] These developments raise pertinent questions for the Library and Information Sector, especially concerning provenance and authenticity of information. It is the public library's duty as information professionals to reflect critically on the role libraries could or should play in equipping researchers and learners of all ages with the tools and critical skills they may need to navigate this new information landscape. Likewise,

it is important to examine how these potentially disruptive innovations may work within the library of the future alongside, but not in place of, professionals.

Adaption by libraries to the world of AI is similar to the way in which RFID technology led to an increase in self-service machines and longer-opening hours, where the healthiest form of balance may be to combine the automation of transactional services with the provision of professional skills and experiential offers from library professionals.

These trends may indicate an emerging role for public libraries as custodians of trusted and authoritative civic data. One role for a "single digital presence" that we think requires further consideration could be to offer UK citizens a data hub, or at least an easy access point to data repositories held by the British Library, the National Library of Scotland, the National Library of Wales, Libraries NI and other institutions.

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[25] Deloitte Insights, *Digital Media Trends Survey: A New World of Choice for Digital Consumers* (USA, 2018).

[26] PWC, *Consumer Insights Survey 2018:* Available online at: **www.strategy-business.com/feature/Competing-for-Shoppers-Habits?gko=e65db&utm_source=itw&utm_medium=20190108&utm_campaign=resp**

[27] 'Digital transformation trends to watch in 2019 and beyond', *Information Age*, (January, 2019). Available: **www.information-age.com/digital-transformation-trends-to-watch-123477837/**; Appian & International Data Group, 'The Future of Work' (2018).

[28] Future Today Institute, *2018 Tech Trends Report* (2018), pp. 8-11.).

[29] Ibid.

Section 3:
Industry Feedback and Perspectives

In conjunction with our research and analytical work, we have sought to ensure that our thinking is informed by the views and experiences of others in the system, particularly within the library and information service community, but also from important adjacent industries including publishing and bookselling.

The British Library's role in this project allowed us to convene conversations about the impact, benefits and risks of a "single digital presence" with public libraries, adjacent sectors and professional organisations in a frank and trusted manner. Our consultation included library professionals, library members, publishers, the Bookseller's Association and library management system providers via the Book Industry Communications group (BIC), granting us a wide reaching and insightful scope into the public library ecosystem.

Library sector

Between June and October 2018, the "single digital presence" team hosted eight workshops across the United Kingdom, speaking to professionals and users representing more than 50 library authorities. We were supported in the public-facing workshops by Giles Lane of Proboscis who developed a user-centric and creative model to explore people's affinity to and usage of public libraries throughout their lives. [30] These sessions were designed in conversation with public libraries to ascertain key issues to be addressed and to identify and attract key participants for the work. The workshop materials allowed participants to respond creatively to facilitate a high level of engagement; these findings were then codified by the "single digital presence" team to analyse trends across the numerous user groups.

> The purpose of the workshops was to understand the current digital landscape and to gain a deeper knowledge of the existing challenges, current innovations and future areas for development regarding digital, technological and service design in public libraries.

We framed the sessions around the following research questions in relation to how a "single digital presence" could benefit diverse users and non-users:

1 How are digital/non digital services currently accessed by users?
2 What new services could augment a users' experience?
3 What do users use their library for?
4 How aware are users, and how highly do they value various library services?

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30 For a more detailed overview of their previous work please see: **http://proboscis.org.uk/** [accessed January 2019].

In general, the areas discussed were clustered around three main areas: improving access to collections (including in liaison with other sectors), partnership working and joining up services (including with the British Library), and skills development (for users and professionals).

The majority of library professionals advised us that their online services already offered some form of online search, online account management and access to e-materials. However, online registration was identified as a key gap for some authorities, as the vast majority of library authorities still require users to physically visit the library before their account becomes fully active, even for access to e-content. Only 14 library authorities surveyed currently provide complete online registration where no physical visit is required.

Online events booking and improved promotion of events across the whole public library system was another opportunity identified as being desirable. Over half stated that event booking is available online, but usually via a third-party site such as Eventbrite. 20 library authorities provide access to local digital collections and 14 provide room booking via an online form; both services require users to log into existing systems at local authority level. The ability to provide event booking without being directed to a third-party site was something very frequently brought forward by public library staff.

The most popular potential digital service identified by library professionals by quite some margin in these workshops was a centralised payment platform. Frontline library staff expressed that this service could be predominantly used by users to pay fines with the opportunity for a single platform to support financial transactions (possibly enabling the library service to take greater control), streamline user journeys and improve payment and booking efficiency.

Another widely-supported suggestion was the creation of online reading groups: supporting and augmenting physical reading groups instead of simply replacing them with a digital format. This concept was also identified during our conversations with representatives from the publishing industry and author community, with considerable interest in the relatively achievable goal of such an offer incorporating author interviews and personalised recommendations. Doing this would enable a conversation between authors, the public and libraries that is not currently possible on a UK-wide scale. Some groups we spoke to also debated the possibility of a self-publishing platform, mediated by local libraries to share work by local authors and to increase the diversity of voices and experiences represented.

We also discussed in these workshops how a "single digital presence" might work at scale. Having a centralised online service which captured library data and statistics at a UK-wide level was very popular, with benefits not only clearly

identifiable at local and regional level but also at UK-wide level to inform advocacy and strategic decision-making, with secondary benefits also identified for the Public Lending Right. Several groups also discussed the possibility of a UK-wide 24/7 public library enquiry service, similar to the "Ask a Librarian" services used in higher education.

There was a clear view among those spoken to that a "single digital presence" could improve search, discovery and reservations, with the ability to offer improved access to rights-free content on a UK-wide scale. This was seen to offer significant potential for digital humanities and for data analytics. There was, however, less consensus about how licensed content (particularly e-books) would fit into this system. One possible comparison would be the developments led by Jisc, who are currently piloting a single sign-on for reference materials using geolocation to target licensed content according to local agreements and purchasing.

Whilst representatives from a number of authorities expressed interest in UK-wide and publicly owned library management services, including centralised licensing for digital content similar to **DPLA Exchange** in the US, the majority felt this posed very significant difficulties and high costs, without the demonstrable user-facing benefits of other options.

All of the professionals we spoke to highlighted the opportunity for a "single digital presence" to improve inter-library loans and potentially to reduce cost through economies of scale, as well as to increase the efficacy and impact of existing networks and examples of joint working.

All saw value in a digital platform to increase the reach of live streamed events, with the potential for some form of privileged access to digitised items and enriched content

through (for example) the **Living Knowledge Network**, including that related to touring exhibitions. [31] Just over half of respondents thought that the "single digital presence" could provide a digital space for the **Business & IP Centre Network**. This would provide users with access to licensed content, advice and skills-sharing, as well as events listing and booking features.

In all of these cases, it is clear that public libraries enormously valued the existing partnerships already forged between them through the Living Knowledge Network, the British Library and the National Libraries of Scotland and Wales, as well as through partnerships fostered through the Business & IP Centre Network.

Public libraries saw digital, and any potential "single digital presence" service, as a means of amplifying and strengthening the reach of existing offers.

While the suggestions mentioned above were predominantly focused on B2C services for library users, hosted on a digital platform, many of the other recommendations focussed on how public library infrastructure could be supported, and the skills of library staff improved. Around 40% of respondents expressed an appetite for greater support for digitisation, cataloguing and metadata skills. In both instances, the idea of a "single digital presence" was positioned at the level of infrastructure, and B2B support, such as a central metadata platform. A cataloguing bank for popular public library titles, for example, was thought to be an attractive benefit given that the quality of metadata can be variable, impacting upon both records and web-searches, even where APIs exist to facilitate this.

Publishing and bookselling

The "single digital presence" team led a roundtable discussion with several major publishing houses hosted by the Publishers' Association (PA) and met with the Booksellers' Association (BA) to discuss the impact and benefit of a "single digital presence" as well as associated risks to rights. [32] The conversations focused on two main aspects of a single digital presence's potential impact on the respective industries:

- What benefit could a UK-wide library service provide to the publishing sector?
- What would the impact be on local lending and, consequentially, licensing and copyright?

To the first question, representatives from the publishing houses saw value in a "single digital presence" as a signposting mechanism for public libraries that has a brand, consistent user experience and design standards (similar to GOV.UK). In addition, the BA was supportive of any initiative that supports the promotion and access to physical spaces and content – that is, a "single digital presence" should not be an entirely digital entity.

Publishers saw the potential of a "single digital presence" to support libraries by using it to facilitate co-hosting events in libraries, sharing marketing assets with libraries and sharing educational resources to coincide with book launches, events and festivals.

Both the Publishers' Association and the Booksellers' Association suggested a "single digital presence" could be used to facilitate cross-over events between libraries and local bookstores

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[31] LKN partners were overrepresented in the responding sample as they are highly-engaged with the British Library and made up around half of the library professionals who offered to attend a workshop. Nonetheless, 11 non Living Knowledge Network partners supportive of live-streaming is indicative of a wider appetite for library based event streaming on the one hand, and the LKN itself on the other.

[32] Bloomsbury; Scholastic; Hachette UK; Egmont Publishing; Harper Collins, invites were extended to further organisations.

as well as (potentially) promoting the locations of local bookshops as an additional offer.[33]

A "single digital presence" would benefit the publishing sector by giving sellers access to reader data, providing valuable market and trend insight, and allowing publishers to better understand their consumer demographic and behaviours. In addition, a "single digital presence" could benefit authors by simplifying the Public Lending Right (PLR) process and improving PLR data in general, giving authors access to live user data and be used to help manage promotional events, perhaps even giving libraries a direct communication line to authors.

Considering the potential impact on licensing, discussion suggested that if a "single digital presence" directed e-book readers from a homepage to an existing portal, this would not negatively impact the e-lending market as the license would still be held (and funded) at a local level. The BA provided a further perspective on e-book lending and book sales, making the argument that public library e-lending without sufficient frictions would have the potential to harm book sales.[34]

There are a wide variety of perspectives worldwide regarding e-lending, especially with respect to access to content, usability and rights. Research by the Society of Chief Librarians as well as the Booksellers' Association have both examined the various implications and considerations for e-lending on the market.[35] Throughout our research we have been mindful of the position of rights holders, academic writers and authors and the risks they have raised with respect to frictionless e books.

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[33] The BA currently offers *Find Your Local Bookshop* which could be embedded onto consumer facing sites.

[34] Referring to research commissioned by Bookseller's Association conducted by Nielsen UK and their *Books and Consumer Survey*.

[35] Society of Chief Librarians & Publisher's Association, 'The Society of Chief Librarians and the Publisher's Association Report on the remote e-lending pilots' (2015), online at: **www.swrls.org.uk/assets/files/Misc/E-lending_pilot_report.pdf** (accessed April 2019).

Section 4:
Options for a "Single Digital Presence"

As the feedback from stakeholders indicates, the term "single digital presence" within a libraries context is open to multiple interpretations, and a key objective of this project has been to arrive at a coherent definitional language within which policy decisions can be made.

While we have considered the current and emerging shape of the digital market and surveyed in some detail the international landscape of digital library provision, our thinking has also been shaped by the views and experiences of the library community, as well as the adjacent book-related industries shared through meetings and workshops and we are grateful to those who have been generous with their time and expertise. We believe that there are – in broad terms – five different concepts of a potential publicly-supported "single digital presence" which may be relevant to this debate.

These options are separate at this stage – they are very different in scale, business model and application – but are not mutually exclusive and could potentially co-exist, be combined, or evolve from one to another. None currently exists in the UK. For the purposes of this report, we have characterised them as follows:

1 *Deep Shared Infrastructure* – a common, centralised Library Management System, procured at a UK-wide level and run as a single piece of technology serving all libraries. There are important instances [of a single LMS] from the Republic of Ireland and Northern Ireland (as a single Library Authority).
2 *UK-wide Content Discovery* – an aggregator at UK national level of free-to-view digital content from libraries, archives and other public collections. Examples include Gallica in France, Trove in Australia, Finna in Finland and the Digital Public Library of America in the USA.
3 *Unified Digital Lending* – a single, publicly-run service devoted to the digital 'lending' of books and other copyright content purchased through central licensing that would otherwise only be available on a commercial subscription agreed within a particular jurisdiction. An example is eReolen in Denmark.
4 *Safe Social Space* – a user-led digital platform for the people who love, visit and work in libraries, replicating the 'safe space' of libraries as a complementary alternative to the commercial social media services. No exact international equivalent currently exists, though emergent services such as Library Planet and Lit Hub offer analogies.
5 *One Library Brand* – an intervention to create and promote a single 'library brand' at cross-UK scale: potentially applicable in both the digital and physical realms and consistent with any of the above propositions.

The following sections review each of these concepts in turn, in the context of provision and other markets and in terms of potential value both to the sector and audiences within the UK. More detailed information on the global benchmarks is available in the Appendix.

A note on Business Models and Governance

In the sections that follow, we have not attempted to pre-judge the question of costing estimates, funding or a business model for each scenario, but will do so in subsequent phases of the project. These will need to consider ongoing development and improvement to enable these offers to continually iterate, develop and improve in order to remain relevant, technologically advanced and in line with user expectations. Furthermore, any business model will need to include provision for skills development and training for library staff so that they are fully equipped and supported to utilise and promote new ways of working and we are mindful of not wanting to add to the challenges the sector already faces.

We are conscious that the most impactful innovation in the tech landscape in the past quarter-century has been largely financed and driven by the private sector, albeit often based on a foundation of publicly-funded research and development. State-supported or non-profit interventions to create lasting digital services have a mixed record of success: many have failed, and those that have endured to achieve real impact in a UK context have generally emerged out of major institutions with deep corporate infrastructure and long-term funding models, such as the BBC (*BBC iPlayer*), the NHS (*NHS Direct*) and HM Government itself (*GOV.UK*). We are aware that

> a singular characteristic of the library sector globally is its independence from commercial and political interests, and this would need to be reflected in any venture to create a new digital platform of scale.

The highly simplified grid below attempts to map a matrix of potential combinations of ownership/governance on the one hand and income streams on the other (with a few existing services included for illustration):

Figure 5: Ownership and Income models

Ownership / Income source	Private / commercial	Trust / non-profit	ALB / NDPB	Government
Advertising	Facebook		Channel 4	
Subscription		Guardian		
Sales	Amazon		BL On Demand	
Data trading				
Individual giving		Wikipedia		
Grants		DPLA		
Public funding			BBC iPlayer	NHS Direct
Mixed				

The shaded area indicates the most likely zone within which, on the basis of our consultation within the sector and elsewhere, a "single digital presence" for libraries is commonly expected to locate itself. However, questions of sustainability are unavoidable, especially at times of pressure on public funding, and in any second phase of this work, we would expect there to be a close analysis of the viability of other funding streams for a service of this kind. It should be noted, for instance, that new forms of voluntary giving are becoming more prevalent for services such as Wikipedia; and that some models of web advertising may allow for sufficient levels of transparency to deliver libraries the required level of demonstrable freedom from commercial influence. This will, however, require a separate and thorough programme of research and analysis.

Option A:
## Deep Shared Infrastructure

At the heart of any library service is its Library Management System (LMS) – the software that underpins all key functions that control the flow of stock, usage, and information across the service. Typically, this infrastructure is licensed to public libraries by specialist companies, usually on an authority-by-authority or, at most, region-by-region basis.

Interventions to procure a single LMS at the national level are costly, complex and rare – such as the Republic of Ireland. The ROI have recently become one of the first countries in the world to administer public library services using one single Library Management system (Sierra) provided by Innovative Interfaces Global Ltd. This shared LMS has been accompanied by a single membership card that can be used in any public library (see Appendix IV.4). It is worth noting that countries with a single LMS tend to involve fewer local authority areas than the number in England.

A similar initiative has been undertaken at state level by the Australian state of South Australia. The 'One Card' project has brought together local councils to purchase a single LMS, operated by Sirsi Dynix. 70% of libraries report that cataloguing is now more efficient with the single system, with the total operational cost at least $0.7m per annum less than the cost of libraries continuing to run their own systems.[36]

In the United Kingdom, three companies held a 67.8% share of the LMS public library market, according to a review conducted by independent consultant Ken Chad in 2015. At the time of writing, this review showed Axiell and Capita each providing LMS solutions for 24.5% of UK public libraries, with Sirsi Dynix the third largest supplier, providing solutions to 18.8% of public library authorities. However Sirsi Dynix have since increased their market share since 2015, following their successful bid for the London Libraries Consortium's new framework agreement, which brings together a growing number of library authorities within Greater London. Additionally, the framework agreement in place with Sirsi Dynix in Wales already integrates six library authorities, with the remaining authorities scheduled to move over to this shared platform in 2019.[37] Likewise, the procurement of a single LMS system through the Welsh Higher Education Libraries Forum (WHELF) for nine universities, the National Library of Wales and NHS libraries in Wales has led to more effective and efficient ways of working, and the benefits of collaboration have been substantial.

Figure 6 – LMS Market share of UK public library authorities, by company
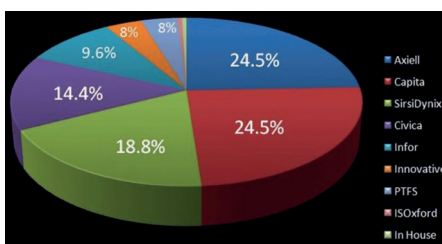
Source Taken from LGLIB Tech, compiled by Ken Chad Consulting, online at: **https:// lglibtech.com/market_ overview#value_of_ the_market_in_2013** [Accessed: November 2018].

As the Republic of Ireland model shows, it would undoubtedly facilitate several long-desired aspirations for the sector, including a single smartcard for library users across the UK and a more integrated approach to inter-library loans.

A UK-scale intervention at LMS level would represent a fundamental change to the digital infrastructure of library services provision in the UK.

The execution challenges would be formidable, however, at both logistical and political levels. From a technology perspective, our assessment is that the design, transition, procurement and integration challenges of a wholesale transformation of this kind would be very high indeed. No less significant are the cultural and behavioural factors involved in intervening in the IT choices of local and regional authorities across England, Wales, Scotland and Northern Ireland, as well as achieving the prior political consensus across local, national and devolved governments to fund and implement a change of this scale.

Issues would also be raised over the scale of monopoly power that a single selected provider would provide, albeit subject to the usual mitigations that a public procurement process would provide. This is to some extent a common risk-type with any kind of a "single digital presence" intervention – single centralised offer brings with it dangers of over-concentrated influence and lack of competition – but our judgement is that the risk is especially acute in this instance because of the sheer scale and complexity of any service that was put in place, with its need to interface with some 200+ adjacent IT systems.

For all these complexities, however, we would not argue that an initiative of this scale should be ruled out as a long term policy goal for the UK. Like other parts of the UK's knowledge and culture infrastructure, public libraries should take a long view and be prepared to make incremental changes in pursuit of a coherent end-state. There are already several successful domestic collaborations which exist across the UK where councils have gradually shared aspects of their library provision. Libraries West – a consortium of Bath and NE Somerset, Bristol, North Somerset, Somerset and South Gloucestershire – share a joint library card and provide services through a single library management system. Similarly, SPINE (Shared Partnership in the East), is a partnership between eastern library authorities which enables back office services to be shared via a joint library management system. While further research is clearly required regarding wider UK-wide amalgamation, this option cannot be entirely ruled out given the success of current regional interoperability.

Other interventions in this space, including those recommended for further development in this report – in terms of brand, discovery layer and growing cross-sector collaboration – may have the potential, over time, to grow the conditions for a unified or National Library Management System where a 'deep' digital re-engineering of this kind and increased inter-operability could become a viable possibility. Given that those conditions are not currently in place, however, it is not yet within the scope of this project to actively pursue option A at this time.

We recommend that the sector keeps this option under review and monitors benefits for users and professionals realised by consortia models.

[36] Department of the Premier and Cabinet, South Australia, One Card Library Network (2015), Online at: **www.dpc.sa.gov. au/__data/assets/pdf_file/0015/20067/One-card-library-network.pdf** (accessed: June: 2018).
[37] Consultation with National Library of Wales.

Option B:
UK-wide Content Discovery

While 'single presence' interventions at LMS level are a relative global rarity, our research has identified many more instances of countries which have created unified discovery platforms which aggregate or facilitate access to digital content from libraries, archives and other public collections. Notable and relatively mature examples include *Gallica* in France, *Trove* in Australia and *Digital Public Library of America (DPLA)* in the USA. These products vary significantly, both in the detail of their characteristics and the scale of their public impact to date, but there are several broadly common features:

- In their branding and promotion of content, they project some form of 'national cultural identity' on the global stage;
- Their content focus is on material that is free to read or view – typically, heritage or out-of-copyright content, but there is also an increasing stock of contemporary Open Access material;
- They connect or juxtapose material from national collections with items from smaller or regional institutions, including (in some but not all instances) public libraries.
- Their primary focus is people engaged in some form of research, though this is often framed very broadly.

Figure 7: Gallica home page (English language version)
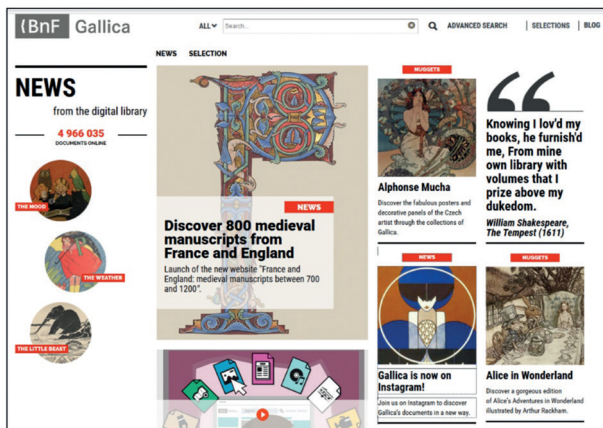
Online at: **https://gallica.bnf.fr/accueil/en/content/accueil-en?mode=desktop** [Accessed: May 2019].
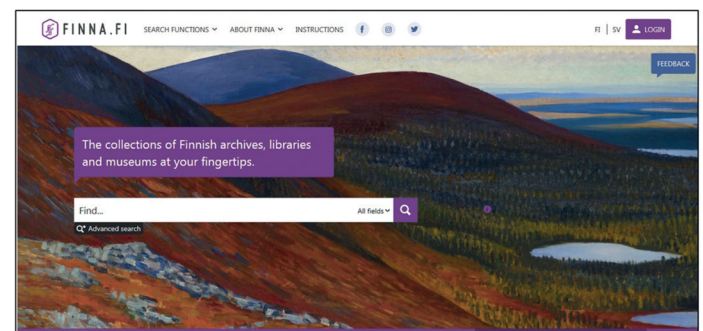
In the context of this report, a key test of such propositions is their ability to connect this outward-facing agenda with the localised audiences and services of the public library sector. Here, the story of existing national products is varied. Some, such as *Gallica*, have highly visible roots in an originating national library collection (in this case, the Bibliotheque Nationale de France) and are only now rolling out a 'white label' version to benefit smaller institutions. The *DPLA*, by contrast, was formed independently from the USA's equivalent of a national library, the Library of Congress, and with a commitment to the idea of 'public library' in its name; even so, it has had challenges in building a broad popular association with the public library service as a whole.

One especially interesting instance that presents potentially valuable lessons – albeit in a much smaller country than the UK – is the *Finna* product developed by the National Library of Finland. This is an innovative search and digital collection portal that contains the holdings of all material held in Finland's libraries, museums and archives. Finna does not replace the existing Library Management Systems but harvests their metadata through the open-source finna, fi API and plugs in to existing payment and reservation systems. The result is a common user-interface that retains the functional back-end systems of local libraries. Finna has been constructed using VuFind and other open-source software, and its source code is freely available to all. It was developed as part of the of the National Digital Library project (2008-2017) of the Ministry of Education and Culture, which earmarked €16 million for its development over four years.

In developing a highly functional user-interface without majorly disrupting existing systems, the approach Finna has taken closely resembles the modular recommendations outlined in the 2015 Bibliocommons report.

This approach, if properly resourced, creates a single UK pathway to library materials, while keeping the library offer undeniably local, as well as building on the expertise of professional librarians in resource discovery and cataloguing.

Figure 8: Landing page and partner list of Finna

Online at: **https://finna.fi/** [Accessed: May 2019].

Online at: **https://finna.fi/Content/organisations** [Accessed: May 2019].

Distinctive in a different way is the Australian national content discovery platform Trove, which – while sharing many characteristics with other such products – has successfully built an extremely active community of users committed to crowdsourced improvement of the optical character recognition transcriptions of its digitised newspaper collections. Trove's homepage gives constant updates on the level of user interaction – typically, some 13,000 corrections to their newspaper collection in any 24-hour period.[38] This indicates that with the right product design a service of this kind can attract an unusually engaged and active community of users.

From an international perspective, the UK is arguably better placed than almost any other country to develop a unified digital service in this space. The English language has some 1.5 billion speakers around the world, as either a first or second language, and interest in English literature and creativity is widespread.[39] The stock of digitised collections is already very large – some 140 000 000 pages in the British Library holdings alone, as well as those across the collections of the three national libraries and Libraries NI, and growing all the time thanks to new digitisation projects and partnerships.[40] The highly international nature of the UK's history – including centuries of mercantile and imperial activity – has resulted in a combined set of collections which contain material of direct interest to multiple languages and cultures (as well as, arguably, a moral obligation to make those collections as discoverable as possible). And the timing – at a moment when concepts of 'global Britain' and soft power are gaining increased saliency – is resonant.

From a British Library perspective, a "single digital presence" initiative of this kind has the potential to combine with and build upon several strategic initiatives already in development under the *Living Knowledge* vision. In particular, early concept work is under way to scope a potential "Open Library UK" (working title) product that would bring together and make easily discoverable the widest possible range of open, i.e. free to read or view, digital content from the Library's own collections and those of other heritage and knowledge organisations.

The momentum of this thinking has been increased by recent developments in the landscape of Open Access publishing, an area in which the UK has taken a global lead, and is likely to accelerate further following an ongoing review by UK Research and Innovation (UKRI).[41]

Public libraries have always been expected to play a role in Open Access provision, with many already hosting bespoke on-site *Access to Research* terminals.

A "single digital presence" initiative for libraries focussed on the promotion and discovery of open content (including data) – linking UK-wide, regional and local materials, and heritage content with contemporary research outputs – has the potential to deepen this role significantly, embedding public libraries fully and visibly in the infrastructure of the UK's knowledge economy.

This view was supported by representatives from various library authorities, who agreed that a platform of this nature could improve access to collections and rights-free content.

In this context, the 'crossroads' position of libraries illustrated in Figure 1, at the intersection of four overlapping areas of Government policy, takes on a renewed significance. By harnessing the UK's unique strengths in collections, research, science, culture and business, and by learning from the experiences of such interventions in other countries, we believe that a "single digital presence" of this type has the potential to deliver high and long-lasting public and economic value at local, national and international levels. There is an exciting opportunity to combine the expertise and reach of public libraries with open content and new technologies that promise to translate scholarly material for a broader audience. The British Library is exploring this approach as part of the Get the Research project that could potentially be integrated into a Single Digital Presence.

Conclusion: further development is recommended.

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[38] Trove Homepage, **https://trove.nla.gov.au/** [Accessed January 2019].

[39] 1.5 billion is the standard estimate of global English speakers. For a more critical reflection on this number see: David Crystal, *Evolving English: One Language, Many Voices ; an Illustrated History of the English Language ; [on the Occasion of the Exhibition at the British Library ... 12 November 2010 - 03 April 2011]* (London, 2010).

[40] British Library, 'Annual Report 2017-2018', available online at: **www.bl.uk/aboutus/annrep/2017to2018/bl-annual-report-2017-18.pdf.pdf** p. 79 [accessed January 2019]

[41] The University of Cambridge, 'A Brief History of OA', available online at: **https://osc.cam.ac.uk/open-access/brief-history-oa** [accessed January 2019]

Option C:
Unified Digital Lending

The question of e-lending and the appropriate model for the UK – balancing the needs of readers, authors, publishers and booksellers – has been a focus of renewed debate since the first Sieghart report (2013). Therefore, we have made it a central point of enquiry to determine to what a centralised 'single digital presence' intervention is required in this sometimes contentious space.

Our research for international comparisons has found that there is no agreed model or international example of best practice for e-book provision through the library sector. While commercial aggregators dominate the English-language market, European countries with small markets have developed central licensing agreements and national e-lending platforms, although attempts to centralise even on this scale have produced rifts both with publishers and local library partners.

Overdrive is the largest e-book distributor on the global market, serving 38,000 libraries in more than 40 markets, administering over 1 billion loans to date. Bolinda digital e-book lending service Borrowbox is developing an increasing share in the UK Market and, like Overdrive, provides interfaces, including discovery systems and mobile apps that require an additional sign-on for users. In some countries, there has been disquiet from within the public library community about the cost and potential unsustainability of an e-lending model that is wholly dependent on commercial intermediaries. This, in part, has been where DPLA's 'Exchange' service grew from, as an attempt to establish a non-profit driven model for the storage and use of publicly owned e-book licenses. More recently, the New York Public Library has designed *Simply E*, an e-book reader that they run themselves (see Appendix 1.7.A).

Denmark provides an instructive model for centralised e-lending provision. Here, public libraries provide centralised e-book provision through the service Eroelen, a partnership between a consortium of the largest public libraries and the three largest publishers in Denmark. It operates on a pay-per-download license, with fewer 'frictions' in place than on material in most other e-lending models worldwide, and provides users with a large selection of popular material, including new releases and best-sellers.

Figure 9: eReolen home page
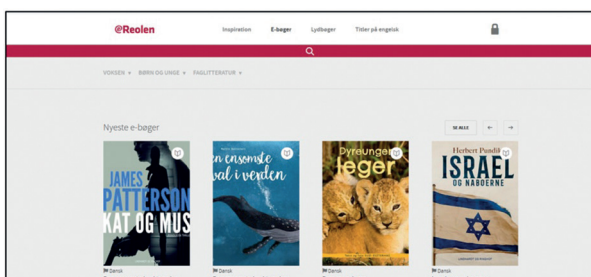
Online at: https://ereolen.dk/ [Accessed: May 2019].

The Eroelen platform has been controversial, with almost all Danish publishers revoking their licenses in 2013 claiming that the service had "cannibalised the entire e-book market". During what was dubbed the 'e-book war' between the consortium and publishers, it took the high-profile intervention of central government to encourage publishers back to the negotiating table.[42] The Danish government negotiated with the publishers to collaborate, and Eroelen was re-launched with continued publisher involvement in 2013. More recently, Eroelen has struggled to compete with the commercial product 'Mofibo', modelled on Kindle and Spotify, providing unlimited access for a monthly subscription fee.

A case can undoubtedly be made that an intervention at UK-wide level to create a "single digital presence" that includes e-lending could address several positive policy goals, although we do not recommend suspending agreed frictions due to the negative impact this would have on rights-holders. The multiplicity of e-lending providers means that library users in different parts of the country currently have very different experiences of digital borrowing – not just in the quality and design of user interface but also in the range of titles available.

> The fragmentation of activity means that consistent standards in terms of agreed frictions, access to front-list titles, etc. will be hard to achieve on a UK-wide level.

Experience from Denmark and elsewhere suggests that even in markets much smaller than the UK's, and less intertwined with the global English-language publishing ecosystem, a centralised intervention may carry more risks than benefits. The publishing and bookselling industries continue to express serious concerns – echoed to some degree by the author community – that a centralised monopoly on service procurement could have the effect of influencing frictions to the point that commercial book sales are actively damaged. The incumbent service providers have mature systems which would not be easy to replicate, even if the relevant licensing agreements were achieved. And as with this report's earlier discussion on the landscape of LMS systems, the political and cultural challenge of imposing change on multiple library authorities would be significant.[43]

We note also that a central recommendation of the Sieghart review – that data from e-lending should be counted towards author payments from the Public Lending Right – has now been successfully enacted through the Digital Economy Act 2018. More generally, this particular digital question is perhaps less 'existential' for public libraries than it may be have seemed even five years ago: between 2013 and 2016, growth of digital sales stood at 1.6%, with a marked 9% decrease since 2015. This is in comparison to a total growth rate of 5.8% for physical books since 2013. Consumption of e-books generally has stabilised at approximately 16%–20% of total sales, with physical book sales showing growth of 9.5% in absolute terms in the past year. E-lending is undoubtedly part of the future of public libraries, but by no means the whole of it.[44]

> Conclusion: further development not recommended in this study, but to be kept under review.

42 Lisbeth Worsøe-Schmidt, 'The E-Book War in Denmark', *Journal of Librarianship and Information Science* (2017), pp. 1-11.

43 For further discussion on library eBook licensing and purchasing models, see IFLA, *eLending background paper* (2014), p. 8.

44 The Publishers Association, *PA Publishing Yearbook 2017* (London, 2017), p. 14.

Option D:
Safe Social Space

Of all the digital product types that have gained global traction in the first part of this century, it is arguably the social media platforms that have had the deepest and most widespread impact on the lives of their users. Between them, Facebook (plus its subsidiary products such as WhatsApp, Twitter, WeChat, Reddit, Tumblr and others) engage an audience of some 3 billion active monthly users.[45] As observed above, they have moved far beyond their original focus of personal interchange to become a major (and sometimes controversial) presence in the flow of news and information, and the addictive character of their product design is engineered to ensure continued growth.

If Google and Amazon have taken positions in one important part of the historic 'library' mission – the discovery and delivery of published content and information – the social platforms have occupied another one: the role of providing a distinctive space outside the home or workplace in which people can meet and exchange ideas.

Most discussions of library digital services focus on platforms where some form of access to content (whether books, catalogue or information) is central to the proposition – the top-left section 1 of the grid at Figure 3. However, we believe that the library sector should also be focussing on the opposite corner of that graph: section 6, the nexus of 'people' and 'crowdsourced' or user-led content, in which the social media giants have established their strongholds. There are several factors which suggest that this type of 'single digital presence' for libraries is worth further investigation.

First, the sheer aggregate volume of library users around the world represents a virtual community on a scale comparable to the reach of a social digital platform: some 3.7 billion annually according to IFLA figures quoted earlier. There has been little effort so far, in any country, to create a 'library-shaped' digital space to bring together and galvanise this community. To be meaningful, the audience would need to be a global one, rather than 'just' the UK, but there is no reason why the initiative should not be a British one.

Secondly, the 'people factor'. If physical libraries were merely buildings and bookshelves they would have disappeared long ago: rather, they are really libraries of people, and what maintains their vitality is the daily, diverse human interaction of users, visitors and trained staff, predicated on the ethics and ethos of professional librarianship. A digital product that can harness even a part of this dialogue and energy will have a limitless renewable resource to draw on, and can bring library professionals into direct contact with the users.

Thirdly, and closely related: the opportunity for organic growth. Where content-led propositions can only be as large and effective as the material they present or give access to, and frequently depend even at launch on complex licensing and intellectual property arrangements, people-led platforms are driven by their own users, and grow by natural network effects according to those users' interests and interactions. Typically, they begin small, but their capacity for growth is open-ended.

Fourthly: trust. The commercial social platforms, popular as they are, are well understood by their users to primarily be vehicles for advertising, data trading or even state observation. They are not considered to be 'safe spaces'. Libraries, by contrast, score highly in all parts of the world on measures of trust, safety and freedom from influence by commercial, political or religious interests.

> If a digital presence could be created that replicated even some of those values in the online realm and was built upon an ethos of professional librarianship, it could answer a genuine and demonstrable market failure.

As with the 'UK-wide Content Discovery' section above, it is not the role of this report to define exactly what such a proposition would be, but there are two points distinctive to this "single digital presence" type that we would emphasise.

The first is the potential role and contribution of the professional community of librarians, both in the UK and (because services of this type are global by their nature) across the world. While the growth potential comes from the international community of library users and 'library lovers', the distinctiveness of a digital presence of this kind would derive from its special relationship with the expert community of librarians and information professionals whose mission is to connect users – wherever they are and whatever their background – with the authoritative sources and information they need. Not only would such interventions lead to trusted knowledge, but a network of both users and librarians would help users develop their research skills and lead their own discovery journeys. The notion of virtual discussion space and online reading groups was also identified during our conversations with representatives from the publishing industry and the author community, who particularly supported interactive content such as personalised recommendations and author interviews.

There have been some instructive instances of innovation in this space in the UK higher education sector, such as the initiative by the Northern Collaboration institutions, working with the American-based co-operative OCLC, to create an out-of-hours 'virtual enquiry service' for students, using webchat software to connect them with librarians in other countries (see Appendix).

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[45] We Are Social, 'Digital Report: 2018', online at: **https://wearesocial.com/blog/2018/01/global-digital-report-2018**, [Accessed: January 2019].

The second point is to note that for this type of initiative, even more than for other potential incarnations of a single digital presence, questions of governance, ownership, a business model and behavioural rules will be fundamental to its chances of success – more so than questions of technology, which in this instance is likely to be based on fairly established models. The ethical and institutional issues are resonant and challenging. What norms and constraints should be put in place to replicate the freedom of enquiry that libraries stand for while avoiding absolutely the trolling, extremism and personal abuse which have afflicted some of the commercial social platforms? How is such a community regulated? What funding model should be chosen that can protect the service's vital independence from both commercial influence, on the one hand, and government control (real or perceived) on the other?

These are highly challenging questions. But success in addressing them could open the door to the creation, by the UK, of a new kind of digital space in which the global community of library lovers can find an online equivalent – at least partially – of the trust, support and safety they find in libraries in the real world.

Conclusion: further development is recommended

Option E:
One Library Brand

Sometimes overlooked in debates around the idea of a "single digital presence" is the difficulty of promoting a "single presence" for libraries of any kind, digital or otherwise. Unlike other notable public services with UK-wide presence – such as the NHS for health and the BBC for broadcasting – there is not, and never has been in the UK, a common brand associated with the public provision of libraries. This has arguably been part of its distinctive character as a public service: libraries are proudly local in their identity and understanding of their users, and this has played a role in the strength of feeling and support that the best public libraries attract.

It is also an area of vulnerability in a world where brand presence and familiarity are an increasing necessity for any service – public, commercial or third sector – that wishes to attract and retain a wide user base. This effect is reflected and compounded in the digital realm, where a relatively small number of brands have achieved disproportionate prominence in the limited real estate of applications on mobile screens.

Figure 10: Iconic mobile brands

Across the UK, public library services are commissioned by local authorities, which has led to a proliferation of brands and identities that are often conflated with a local authority's overarching civic offer, without a discrete or identifiable identity for the public library. Compounding this struggle to articulate a clear identity are negative brand associations that consumers perceive for the library in comparison with rivals in the commercial sector who are unconstrained by issues of budget and wider governance allegiances. Furthermore, the breadth and depth of collection items and formats in the 21st century means that it is hard to encapsulate the range of complex, individual experiences on offer.

In their important 2011 study of branding in UK public libraries, Harriff & Rowley highlight key factors that are conducive to branding including clear positioning and identity, co-ordinated communications and campaigns, and evaluation.[46]

As such, there is a need for a unifying brand identity, building on the unique proposition of public libraries and encapsulating the love and iconic status that the idea of the library holds in the 21st century.

Such a brand identity would help to focus and reinforce awareness of the breadth and depth of services and offers, the essential and vital professional skills of library and information professionals, and the ongoing resonance and value of spaces.

The importance of libraries in a wider reading culture could encourage publishers to support a UK library platform and provide enriched content, such as author Q&As or interviews. We found in our consultation that library staff were supportive of shared branding with three caveats: 1) clear remit with identified aims; 2) local libraries have to be ready and resourced to deliver UK national messages locally; and 3) branding initiatives have to be very carefully handled and will need to reflect the diversity of all nations of the UK, including, for example, the statutory duty for all public services in Wales to deliver fully bilingual services.

Any intervention around the branding of a pre-existing service – especially one as diverse and fragmented in its organisation as the UK library sector – will generally confront a number of highly sensitive executional and stakeholder challenges. Questions of hierarchy, ownership, status and control can loom large, with concerns reflecting wider anxieties around unequal power relationships. Extreme sensitivity would be required. Indeed, the term 'brand' itself may not be the right one: 'badge', 'icon', 'name' may be closer to the actual intervention required, and less emotive to explain and implement.

Figure 11: Iconic public service and utility brands and symbols

However, our contention is that in an extremely brand-focussed culture, in which public services of all kinds have to fight hard to retain the visibility, affection and public reach which is the only ultimate guarantor of the political support required to ensure continued public funding, public libraries are lacking a vital piece of communicative shorthand. Although the presence of such a brand, if successful, would undoubtedly flow into the physical realm, it is in the digital space where an iconic common identity has the maximum potential to disseminate itself and acquire widespread familiarity.

In that context, we leave it as an open question – to be addressed in a further stage of work, if commissioned – whether a 'brand' of the kind discussed here should be: (a) wholly combined with the brand of one or other of a single digital presence's products envisaged elsewhere in this report; (b) part of a linked 'family' of brands which together reflect different parts of the UK library sector; or (c) a deliberately stand-alone brand or badge designed to have long-term durability regardless of the success or failure of any individual digital service.

Conclusion: further development is recommended

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[46] Subnum Harriff & Jennifer Rowley, 'Branding of UK Public Libraries', Library Management, Vol. 32, Issue. 4/5 (2011), pp. 346-360.

Section 5:
Conclusions and Next Steps

Throughout this process, we have sought to balance the aspirational vision of a unified library digital service with the complex and sometimes challenging realities both of the digital marketplace and the UK library sector. We have also attempted to disaggregate the original, generic 'single digital presence' idea into a number of more discrete – though still broad – conceptual categories. The previous section sets out an indicative judgement of how these different strands might sit alongside each other, and which ones might, in our view, merit further initial investment and development. With that in mind, we are committed to maintaining relevant links with any work taken forward by others with respect to shared Library Management Systems and e-lending.

There is also an implicit option of no further action at present, but due to the pace of change, we do not consider this to be desirable or even cost neutral. As has been explored, personalised digital platforms are now available through multiple channels and are fast becoming the norm. Without further intervention libraries may struggle to engage new digital audiences. This is compounded by the fact that public, private and voluntary organisations across the UK are also going through a period of rapid and significant transformation in how they deliver services to citizens and we believe there is a clear case for public libraries to be part of that.

The table below sets out in summary form a top-level options appraisal of the five types of potential intervention we have identified:

Figure 13: Summary options appraisal

	Deep Shared Infrastructure	UK-wide Content Discovery	Unified Digital Lending	Safe Social Space	One Library Brand
Set-up costs	H	M	H	L	L
Running costs	M	L	M	M	L
Execution challenge (technology)	H	M	M	M	L
Execution challenge	H	M	H	M	M
Public value potential (long-term)	H	H	M	H	H
Public value potential (near-term)	L	M	L	M	H
Develop further?	No	Yes	No	Yes	Yes

This indicates three potential paths for future strategic development:

- *UK-wide Content Discovery* – a UK-wide aggregator of free-to-view digital content from libraries, archives and other public collections.
- *Single Social Space* – a user-led digital platform for the people who love, visit and work in libraries, replicating the 'safe space' of libraries as an alternative to the commercial social media services.
- *One Library Brand* – an intervention to create and promote a single 'library brand' at a UK scale.

It should be stressed that these are not mutually exclusive, nor necessarily destined to remain separate: scope may exist, for instance, to combine a distinctive UK content discovery platform with an active social layer, and/or to unify both under a single brand. We recommend that in any second stage of development, these three concepts are maintained as closely linked but separate and parallel strands of work: each is conceptually very different, and likely to benefit from different approaches to business models, governance and design.

Moreover, each addresses a somewhat different part of the library product landscape set out earlier in this paper:

National Content Discovery takes its place in section 1, a sector already rich in competing public and commercial offers, but lacking a distinctive product that foregrounds and promotes a distinctive "UK" contribution to knowledge discovery; Safe Social Space, by contrast, aims to open up an overtly global "library-shaped" space for dialogue and exchange in an arena where the only options are generic commercial 'social media' services. Finally, our recommendation for One Library Brand is less about a 'pure digital' intervention and more about reinforcing the visibility of libraries as they exist in real spaces and localities – but with the potential to be disseminated widely across the digital realm.

Figure 14: Types of digital service in the library and information services space
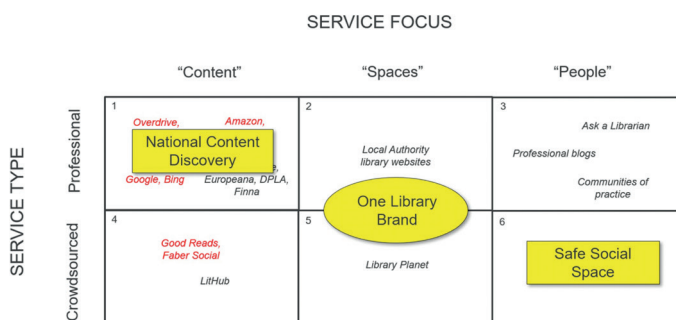
The British Library has welcomed the opportunity to work with Arts Council England and Carnegie UK Trust on this timely and important commission. We believe that the themes explored here have the potential to align with strategic and policy priorities both within the public library sector (including for CILIP and Libraries Connected), the UK Government and within those parts of the independent trusts and foundation sector that take an interest in the work of libraries and information services.

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APPENDIX: SUPPORTING DATA AND RESEARCH

I International Digital Offers

International research was conducted through an extensive analysis of relevant secondary material, as well as published statistics, impact studies and trend reports.

In cases where clear evidence was not readily available, the team engaged directly with international organisations and library services, both formally and informally, to gain a deeper and comprehensive knowledge of the governance and funding models of digital and library best practice.

I.1 Australia
I.1.A One Card
The One Card launched in 2012, bringing together local councils to purchase a single LMS which would enable residents to access the catalogue and collections of any public library in South Australia. Libraries SA worked closely with local councils and public library branches to demonstrate its benefits, resulting in all 68 local councils signing up to the initiative. In turn, One Card supported an MOU signed by the Minister and President of the Local Government Association to provide equitable access to public library collections across council boundaries. One Card users can use any library on the scheme, this improved connectivity has also led to an increase in inter-library loans by more than 40%.

70% of librarians reported that cataloguing is more efficient with the single system, which has also provided library staff with more time on the floor engaging with users. As such, libraries are gaining new users (rural members, studying adults, high school students) and have reported overwhelmingly positive feedback from users.The purchase, project management and operational cost of the system over four years was initially estimated at $8.4M with costs shared between the Libraries Board and local councils. The total cost was $0.7M per annum cheaper than libraries running their own systems and, as the new system also provides more insight on borrowing habits, it facilitates more efficient spend on title and license purchasing.[1]

I.1.B LUCI
Project LUCI (Library Universal Content Integrator), will serve as a single digital presence for over 60% of Australia's population, running in public libraries in South Australia, Victoria and Queensland.

LUCI emerged from a period of consultation with public library users, library staff, publishers, and tech companies to conceptualise what a cutting-edge digital library could look like. Project LUCI's key finding was that digital services should be about people, place and connections. LUCI aims to deliver a highly personalised digital space, while seamlessly providing access to digital content and signposting relevant physical content.[2]

LUCI provides seamless and secure integration with existing LMS' and other e-content providers, using APIs and plugins to provide access to resources all in one place and in turn a digital library card providing instant access to e-resources/e-book/audio. Once logged in, a personalised discovery feature facilitates more efficient and meaningful recommendations and discovery. In addition to the traditional public library offers, LUCI fosters an online community through a self-publishing platform, social media plugins, virtual book clubs and an online events platform.

In 2016, Solus was awarded the contract to develop LUCI. Solus is a UK library technology company who are developing their work on LUCI for UK public libraries, in collaboration with the London Libraries Consortium. At the time of writing, development work is currently under NDA, with a launch date by 2020.[3]

1.1.C Trove
The digital platform 'Trove', developed, funded and administered by the National Library of Australia (NLA) has established itself as one of the world's most usable and innovative digital library services since its initial development in 2009.[4] Trove is first and foremost a powerful search engine, bringing together both the metadata and online collections of Australia's libraries, museums, archives and other research organisations. Trove holds the entire digitised collections of the NLA, as well as an increasing share of the state libraries' digital holdings. Currently, Trove holds three types of content: digitised items, born digital content and links to items in other collections.

One of the most notable – and highly used – features of Trove is its newspaper collection, providing public access to almost the entire holdings of national and local Australian newspapers. The NLA worked directly with local libraries to identify gaps in their collections, and then led on digitising these newspapers for them. This gave local libraries access to digitisation technologies previously out of their reach, and enabled user-access (free at the point of use) to local newspapers on a national scale. With relationships established with local libraries, Trove developed a service to convert local libraries' metadata into Trove readable formats. Following this, most Australian public libraries' physical holdings are now reachable through Trove. Trove is now both a national aggregator for public libraries and a digital library in its own right.

[1] Government of South Australia, 'One Card Library Network' (2015), available online at: **https://dpc.sa.gov.au/__data/assets/pdf_file/0015/20067/One-card-library-network.pdf** [accessed **January 2019**].

[2] The SDP team thanks Jane Cowell, Chief Executive of Yarra Public Libraries in Victoria Australia, and strategic lead on the LUCI project, for her generosity in providing us illuminating insights into the LUCI project. A brief introduction into LUCI can be found online at: State Library of Queensland, 'Project LUCI takes flight', **http://blogs.slq.qld.gov.au/plconnect/2017/11/26/project-luci-takes-flight/** [accessed January 2019].

[3] With thanks to Neil Wishart, Chief Executive of Solus, for his time in providing an overview of their work on LUCI.

[4] Marie-Louis Ayres, "Singing for their supper': Trove, Australian newspapers, and the Crowd', paper presented at: IFLA WLIC 2013 - Singapore - Future Libraries: Infinite Possibilities in Session 153 - Newspapers.

Trove also prides itself on being an active, malleable and crowd-sourced platform, rather than a gateway for passive consumption. This is encapsulated in its tagline, "Trove is yours", that also hints at how digital technology democratises access to public collections. In addition to encouraging crowd-sourced content, Trove has developed several social features including user reviews, a tagging function and user-generated lists. It also has an active blogging community, mostly concerned with more technical features, but also used as a place for genealogy and local history tips for example.

Many of Trove's design aspects, such as clear and coherent user journeys as well as its integrated social features, provide a good benchmark for any intelligent catalogue. However, it is important to note, Trove has developed primarily as the digital arm of the National Library, and is not conceptualised, or viewed by its users, as a platform for public libraries. Public library services have continued to adapt to the digital world independently of Trove, marginally benefiting from the catalogue overlaps Trove's national aggregator function offers.

Figure 1: Trove screenshot
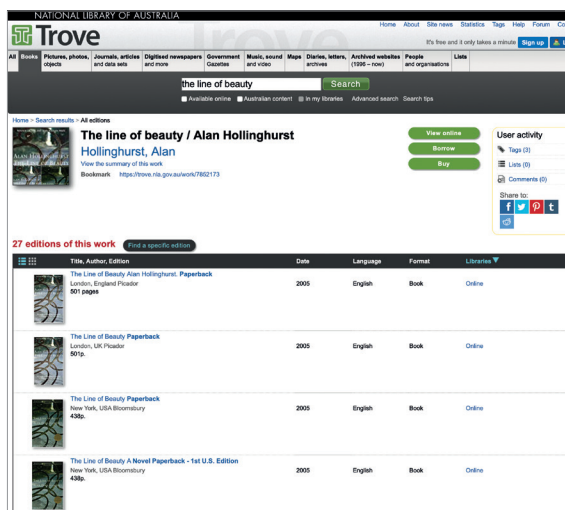
I.2 Denmark

The Danish website **bibliotek.dk** (library.dk) offers a similar web service to the Finnish Finna, with users able to search across the collections of Denmark's public, research and national libraries. Bibliotek.dk does not link out to existing local library catalogues but has the ability to process and administer loans within its own site, being seamlessly integrated into local library management systems. Library accounts in Denmark are linked to national ID cards, which facilitates functional interoperability between multiple public services. Unlike Finna, bibliotek.dk is a stand-alone national aggregator separate from public library websites. Bibliotek.dk has struggled to articulate its relevance within this landscape, with users continuing to prefer local websites to access public library content. Between September 2017 and January 2018, there were on average 606 unique visits to public library websites per 1000 of the population, compared to only 76 unique visits per 1,000 to bibliotek.dk.[5]

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[5] Danmarks Statistik, 'Biblioteker', available online (in Danish) at: **www.dst.dk/da/Statistik/emner/kultur-og-kirke/biblioteker** (accessed: July 2018); With thanks to Mikkel Christoffersen for his insights into the Danish public library landscape.

Figure 2: Bibliotek.dk screenshot
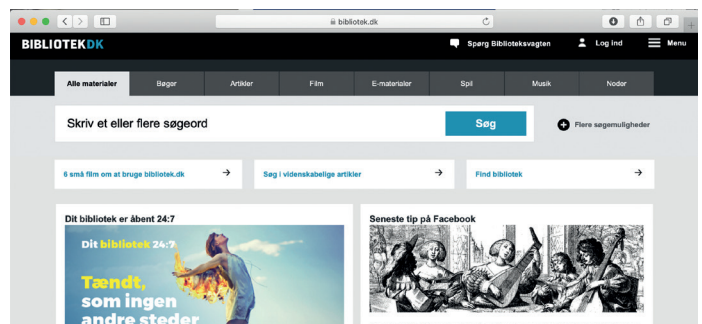
I.3 Finland

The National Library of Finland has developed an innovative search tool and digital collection portal that contains the holdings of all material held in Finland's libraries, museums and archives. The Finna.fi search tool and user interface will also gradually replace local library web systems. Once libraries have fully converted to the Finna interface, users can reserve, renew and pay fines both in the national Finna portal and in the Finna powered local website. Finna does not replace the existing Library Management systems but harvests their metadata through the open-source finna.fi API, and plugs in to existing payment and reservation systems. The result is a common user interface that retains the functional back-end systems of local libraries. Finna has been constructed using VuFind and other open-source software, and its source code is freely available. It was developed as part of the National Digital Library project (2008-2017) of the Ministry of Education and Culture, which earmarked €16 million for its development over four years.

Finna creates a single national pathway to library materials, while keeping the library offer undeniably local. The development of Finna was overseen by the National Library of Finland and developed in direct partnership with public libraries and other stakeholders, using open-source software funded directly by government grants.

Figure 3: Finna screenshot
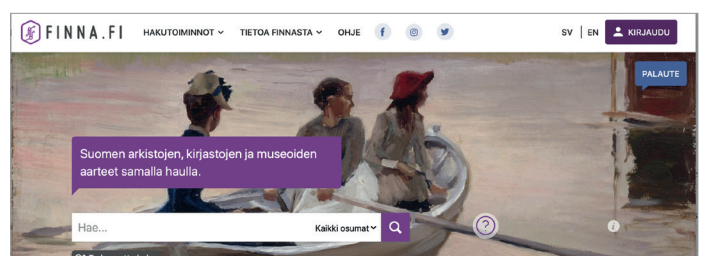
I.4 France

The National Library of France (Bibliotheque National de France) has led the way for many years in developing a pioneering digital offer that compliments their existing role and have built a national digital library, 'Gallica'. Gallica is one of the world's largest digital libraries providing access to collections that illustrate French written and visual heritage, with a particular focus on rare documents of international significance. Gallica is a digital project ran solely by the BnF and collections are managed and selected by BnF curators. In 2013 the BnF were awarded a global innovation prize from Stanford University for their contribution to digital librarianship.

The 'Gallica collection' forms the backbone of material available on the platform, however this is now supplemented by collections from partner organisations across France. This collection consists of digitised copies of BnF holdings, providing free access to selected titles from BnF's 'mass digitisation' project.

Most of the content is rights-free, however some items have required specially-negotiated licenses with rights holders. Partner collections are indexed in Gallica, but users are provided with an external link, rather than direct access. The BnF were a founding partner of Europeana and make their content available on the European-wide platform.

In 2012, BnF launched 'Gallica intra muros', a version of the Gallica platform only available on BnF premises. Intra muros provides access to in-copyright digitised works as well as their non-print legal deposit collections.

In contrast to other digital libraries, Gallica's user-interface is predominantly focused on curated content and selected collections. It does still provide a search function, however it promotes a more guided journey across its cultural collections. This approach forms part of BnF's digital strategy to attract a more diverse set of users of its collections. In addition to this, Gallica is driven by a very active social media strategy. Gallica has developed a considerable web following, self-titled the 'Gallicanautes', who write blog-posts, produce A/V content and digital exhibitions (all promoted by Gallica's social channels) that combine scholarly research with digital creativity.

Gallica is a well-used platform, with over 15.8 million unique visits in 2015 corresponding to 330 million pages viewed in the same period. Gallica boasts 170,000 followers on Twitter (an independent feed to that of the BnF's main count), and 110,000 likes on its dedicated Facebook page.

In 2014, the BnF launched a commercial reproduction service, selling prints in a variety of sizes of any non-copyright document in the Gallica collection. The BnF received 13,000 orders for reproductions across 2015.

Figure 4: Gallica screenshot
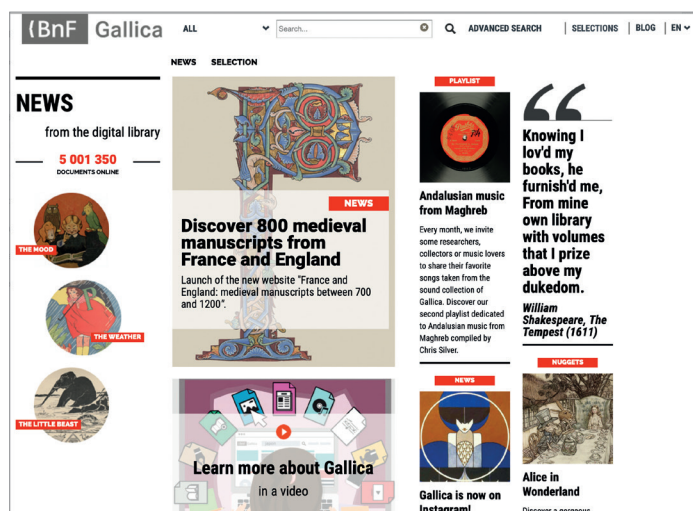
I.5 Republic of Ireland

In May 2017, all public libraries in the Republic of Ireland began operating with one nation-wide library management system, under the shared brand of 'Libraries Ireland'. With public libraries merging into one management system, library-users can now borrow, reserve, use Wi-Fi, PCs and printers in any public library in Ireland, and can discover material through one online catalogue. It is the first library service in the world to provide such centralisation on a national level.

Libraries Ireland also provides a single library membership card and can request material from any library, supported by an efficient inter-library loan service that transports material throughout Ireland up to twice a week.

Libraries Ireland does not provide a central platform for e-lending or web-resource access. Rather the Libraries Ireland user-interface provides links to the various e-lending platforms of local libraries. In regard to e-reading, all local libraries use the distributor Borrowbox.

The task of developing Libraries Ireland fell to Libraries Development (LD), the development agency for public libraries that sits within the Local Government Management Agency (LGMA). LGMA provides services and support for local government funded and accountable to the Department of Housing, Planning, Community and Local Government. Operational costs are supported by a small grant from LGMA and the LMS subscription costs are covered by tiered contributions from Library Authorities.

Libraries Ireland opted to continue working solely with the private sector for their needed digital software solutions, issuing an invitation for tender for a national library management system. The tender process was won by the US company, Innovative Interfaces, with their 'Sierra' product, a proprietary cloud-based LMS. Sierra provides back-end catalogue and user management services for library staff, and an intelligent and usable online catalogue for users. Prior to this, there were four private companies providing LMS solutions in Ireland, including Axiell and Sirsi Dynix.

The catalogue is accessible to users through the 'Libraries Ireland' web-platform. This hosts a variety of content promoting library events, campaigns and resources. It provides clear pathways towards information on business support, children's education and learning, and health and well-being. As well as being a resource directly for users, library staff can download a variety of resources to support local events and initiatives. Local libraries continue to have their own local websites, however their catalogue redirects to Libraries Ireland's Sierra catalogue.[6]

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[6] Thanks to Eva McEneaney and the Local Government Management Agency in the Republic of Ireland for their helpful comments about Irish Public libraries.
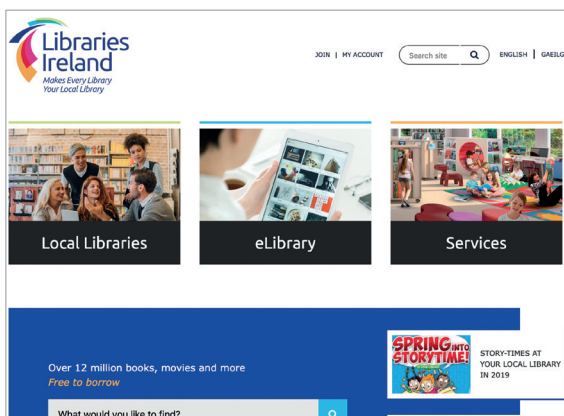
I.6 Netherlands

In 2015 the Dutch parliament passed legislation that granted the National Library of the Netherlands (Koninklijke Bibliotheek, KB) sole responsibility for the purchasing and licensing of all digital content for Dutch public libraries. Public libraries can place requests for new material (generated through their own acquisition systems) with the e-content team at KB. This KB team then assesses these requests against a national acquisition strategy with budget considerations built in, and subsequently purchases the license and makes this material available on the KB run platform 'yourlibraryonline'. This material is then available nationally for anyone with a library membership.

Dutch library membership requires an annual subscription fee. Membership for under-18s, over-65s and the unemployed is free, and there is a significant reduction for those with low incomes. The exact fee varies according to the municipality. However, the KB centrally sets a digital membership fee at €42.00 per annum. Local libraries can charge more than this if they want, however they can't undercut the digital membership fee. This money goes directly to the local libraries to be reinvested into this service; the KB does not receive any of the revenue from digital subscription fees.

The KB receives a direct grant from the Ministry of Culture for the purchasing of e-content and the administration of the e-lending platform. This grant is generated by redistributing a certain percentage of local library funding away from municipal budgets to create a 'digital library budget' that goes directly to the KB.

Local libraries have no jurisdiction over what percentage of their total budget goes into the digital budget, and there is considerable disquiet from staff that this feels like a real-terms budget cut. From the general tone of discussion with representatives from the KB, it was clear that relations between the KB and local libraries are often strained. This is further complicated by the fact the largest city libraries, with large budgets, feel that the quality of e-lending they can offer has declined. They tried to establish their own e-lending platforms on top of national provision, and this required central government to restrict their library provision until they ceased providing this service.

KB enjoys fairly positive relationships with Dutch publishers, in part because they use a pay-per-use/pay-per-

download lending model on a multiple use license that somewhat replicates the type of revenue publishers receive on commercial platforms.

To get publishers on board, KB started with 5,000 titles that were at least 5 years old, this has risen to a collection of 20,000 with an increasing selection of bestsellers, however there is usually a 6-month buffer period from publication to allow for commercial sales. The e-lending platform has currently processed over 3.2 million loans and has steadily increasing user stats.

The KB also runs and administers a national public library catalogue that has its own interface for users, but also works as a backend system for local libraries' own catalogues. In general the digital infrastructure underpinning the local library service is on the whole far more centralised than it is in the UK.
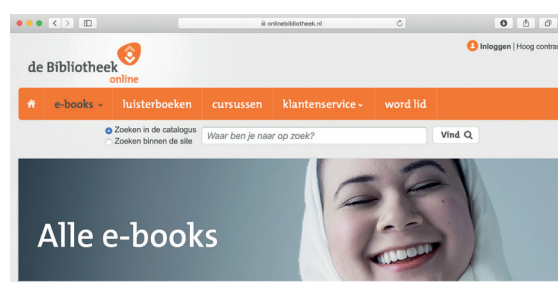
I.7 USA
I.7.A Digital innovation

Some of the most innovative digital services for public libraries can be found in the USA. However this is almost always at the local level with digital provision fluctuating widely depending on the provider. Public libraries tend to have their own website, independent of government sites, many of which are well-designed, highly functional and offer innovative journeys to content through curated lists, blog posts and genre sections. It is perhaps unsurprising that the largest public libraries offer the most comprehensive of online services.

The New York Public Library has recently pioneered a number of digital services. In June 2017, NYPL, in partnership with the New York borough libraries and the Metropolitan Transport Authority, launched 'Subway Library', providing subway users access to hundreds of e-books as soon as they logged in to the free Wi-Fi subway service. Importantly passengers do not need to be a member of NYPL to use the service.[8] This has brought part of the library offer directly to a relatively captive audience.

However, it is not only large libraries with sizeable budgets who are leading digital innovation in the US. Smaller, rural libraries are also focusing on users' online experience and offer a similar number of features to that of NYPL, including events programmes, room bookings, and online courses.

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[8] 'Announcing #SubwayLibrary: Free E-Books for Your Commute', online at: **www.nypl.org/blog/2017/06/08/subwaylibrary** (accessed: March 2018).

In addition, many public libraries have continually improved the functionality of their discovery tools, with almost all tendering out to third-parties to power their online catalogues. These systems are some of the most advanced in the world, with companies such as SirsiDynix, Bibliocommons and Ebsco providing intelligent search catalogues with built-in reservation and payment tools, alongside a host of well-used social features such as smart searching, a review and comment sections and recommended lists. With that in mind, it is important to note that digital innovation in public libraries is still mostly happening on a local and fragmented scale.

I.7.B Digital Public Library of America (DPLA)

In contrast, the recent emergence of the Digital Public Library of America has advertised itself as a fundamentally national service. As with Trove, DPLA was conceived as an adjacent service to the public library offer, rather than a fundamental component of it. DPLA is, first and foremost, an aggregator for material held in libraries, archives and museums throughout the United States. As it has developed it has increasingly held enriched data, rather than just meta-data, so users can view resources on the DPLA site, without having to be redirected to partner websites. The DPLA is a research and educational tool with an impressive collection of newspaper content, diaries, special correspondence and much more. However, its cross-over with the day-to-day work of public libraries is minimal.

Since 2015 they have sought to increase their collaboration with public libraries through scoping out the potential of a centralised e-book platform. This began with the construction of 'open book-shelf', a desktop and mobile app reader for e-books already in the public domain. In 2016 they launched 'DPLA Exchange', a marketplace for public libraries to buy licenses for EPub material - as well as download open-access books - that can be hosted directly through their own catalogues, rather than having to go through companies such as Overdrive.[9]

The DPLA has followed Trove and Europeana in using the Dublin Core protocols when standardising metadata to improve interoperability between global digital libraries.[10] This open-source approach continues to underpin all technical aspects of DPLA. They make all products, services and codes developed, freely available through APIs and code script so that Libraries can access DPLA's data or build similar catalogue infrastructures. It is estimated that the service now provides information to over 22 million records.

The DPLA is registered as a non-profit company and is funded by philanthropists, charitable foundations, individual donors and small grants from federal government. In 2014 the Institute of Museum and Library Services (IMLS), a federal government agency, provided $999,485 in grant

funding to DPLA to improve its basic infrastructure.[11] This grant funded the development of their service and content hubs and built on a $250,000 grant issued by IMLS in 2012 to support their creation. This revenue stream enables DPLA to expand its collection of metadata and digital content across the US.

The DPLA provides several useful models going forward, specifically in relation to governance structures and funding models. The service is not viewed, however, as a core part of the public library offer in the USA and fails to adequately articulate how it fits with existing services. Innovation in digital services for public library users is ultimately led by individual local libraries and often is driven by technological developments from third-party providers.
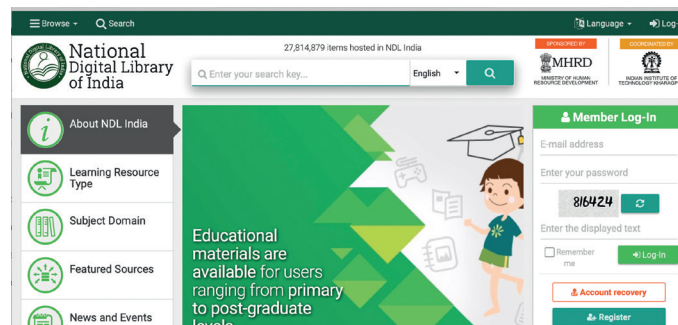
Figure 7: DPLA screenshot
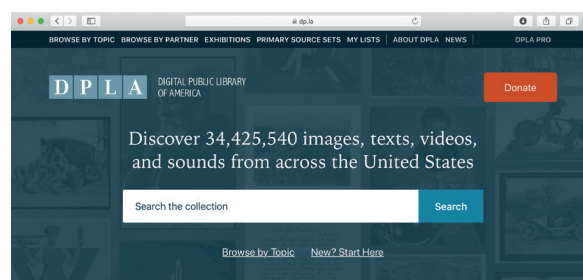
I.8 The National Digital Library of India Online Learning Service

The National Digital Library of India provides access to over 17 million digital resources from a range of partner organisations including HE, public, state and national libraries. It is designed as a learning resource for those at every educational level, with a focus on adult and lifelong learning. NDLI work closely with SWAYAM, the Ministry of Human Development administered online learning service, which offers over 400 university-certified Massive Open Online Courses (MOOCs).[12] As NDLI develops, reading lists for SWAYAM courses will be discoverable through the digital library.

Figure 8: The National Digital Library of India Online Learning Service screenshot

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[9] See Option C: Unified Digital Lending in the main section of this report for more information on Overdrive, pp. 26-28.

[10] For more information on the Dublin Core metadata standards see: **http://dublincore.org/** [accessed January 2019].

[11] Institute for Museum and Library Services, 'New IMLS Funding to Support the Digital Public Library of America', online at: / **www.imls.gov/news-events/news-releases/new-imls-funding-support-digital-public-library-america** [accessed January 2019].

[12] ISWAYAM can be accessed online at: **https://swayam.gov.in/** (accessed: June 2018). For a broader introduction to MOOCs and their value in developing countries, see: Shamprasad Pujar, 'MOOCs – an opportunity for international collaboration in LIS education: A developing country's perspective', *New Library World*, Vol. 117, No.5/6 (2016), pp. 360-373.

# II Other Platforms and Services

II.1 Google Books

The Google Books project emerged from Google founders Larry Page and Sergey Brin's early vision for Google to operate as a single, integrated and universal digital library. Working in partnership, in what became known as 'Partner-scan', with Harvard, Oxford, Stanford and the New York Public Library among others, Google Books were able to scan and store 25 million books by 2008.

More recently, Google have partnered with some of the world's largest galleries and museums to digitise art, manuscripts and other collections of considerable importance, hosted on their now separate platform 'Google Arts & Culture (GAC)'. In December 2017, Google used the power of artificial intelligence as a mass-marketing tool for their arts and culture platform, launching a 'find my art selfie' tool in the GAC app, that instantly compared users' uploaded selfies with the forty thousand artworks already in their collections to find a plausible doppelganger. This product tapped into earlier, less technologically driven 'selfie comparison' tools that have gone viral on social media over the last few years. Within weeks of the tool launching, the GAC app briefly became the most downloaded app in both the Apple and Android stores.

In March 2018 Google launched its new 'Talk to Books' search tool, an experimental search tool powered by artificial intelligence. 'Talk to Books' stands at the cutting edge of online discovery technology, with AI trained to respond to human conversation rather than more traditional keywords. The tool responds to questions such as "How do I stop falling asleep at work", with snippets of related works in their digitised collections.

Figure 9: Google Books screenshots
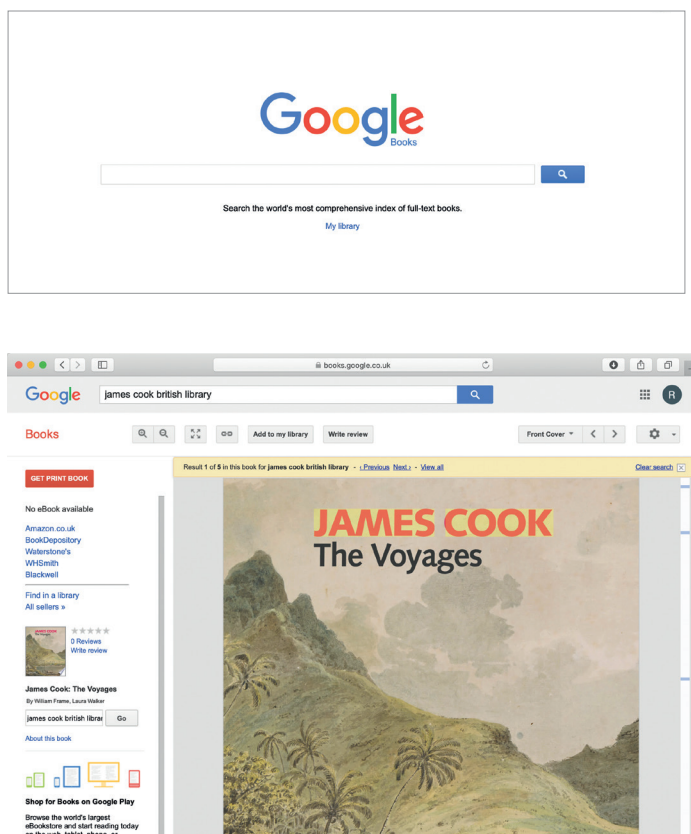
II.2 Google Scholar

The launch of Google Scholar (2005) specifically indexes the full text or metadata of scholarly literature across an array of publishing formats and disciplines; importantly it is also free and as easy to use as the main Google search engine. Scholar also provides access to the first page of paywall journal archives (including JSTOR) for free. The key inventor of Scholar, Anurag Acharya, stated that the first page allows users to get a sense whether they need full access. Scholar then provides information that will help users get the complete text, whether online for free, downloaded for a fee, or in a nearby library.[13]

A study which looked at more than 100 papers concludes that Scholar finds similar numbers of citations to its commercial rivals.[14] Shortly after Scholar's launch two established library scientists, Shirl Kennedy and Gary Price also wrote in support of Scholar, arguing that it should have been around for years.[15] Librarians at Virginia Tech later integrated the service into the library ecosystem by creating a free software extension called LibX, which allows users to retrieve papers using Scholar. LibX takes the user directly to their library's resources if the paper can be found there.[16]

When considering the relationship between libraries, digital search platforms and the hyper-connected world in which we live, users are increasingly thinking of libraries as community spaces that allow access to innovative search technology and as a source of digital literacy for various demographics.[17] With an eye to the future, libraries should continue to embrace the ephemeral nature of the digital age, and keep integrating the latest technological search services within their own digital remit.

Figure 10: Google Scholar screenshot
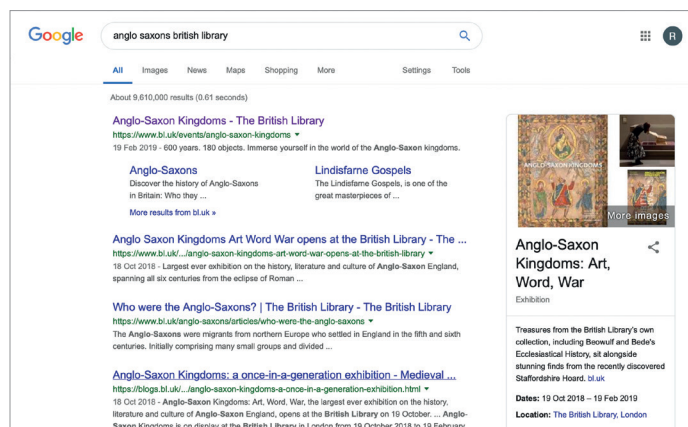
[13] Steven Levy, 'Making the world's problem solvers 10% more efficient', (2014). Available online at: **https://medium.com/backchannel/the-gentleman-who-made-scholar-d71289d9a82d** [accessed January 2019].

[14] Bauer, K. & Bakkalbasi, *N. D-Lib Magazine* 11:9 ISSN 1082-9873 (2005).

[15] **https://medium.com/backchannel/** the-gentleman-who-made-scholar-d71289d9a82d

[16] Jim Giles, 'Start your engines', *Nature 438*, pp. 554–555 (2005). Available online at: **www.nature.com/articles/438554a#ref1** [accessed January 2019].

[17] 'Younger Americans and Public Libraries', *Pew Research Centre* (2014). Available online at: **www.pewinternet.org/2014/09/10/younger-americans-and-public-libraries/** [accessed January 2019].

II.3 Faber Social

Founded by Faber & Faber, the UK's largest independent publishing house, Faber Social puts books and music at the heart of independent publishing. The music-focussed arm publishes some of the greatest icons of pop music and culture; from Booker Prize winner DBC Pierre to punk and post-punk icons Viv Albertine and Brix Smith. Visitors to the website can also read the Faber Social blog, which considers a wide variety of books, articles and poems.[18]

On 8 March 2017 Faber Social released a new website which reasserted their editorial commitment to provide the finest writing about the world of popular music. The new site has consistently grown since its inception and has proved to be a great discovery resource for fans of adventurous long-form music writing. The website has also improved access to the blog page, with new filter and search options available that allows users to limit results depending on their interests.

Figure 11: Faber Social screenshot
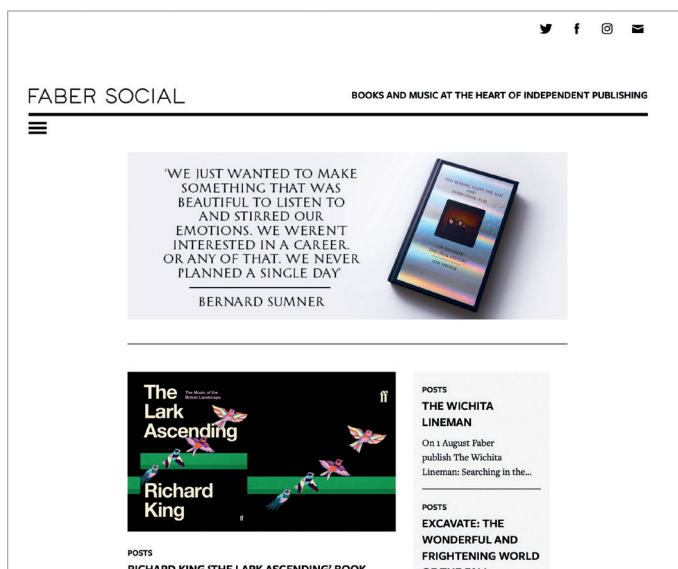
II.4 Hathi Trust

The Hathi Trust's mission is to preserve and provide access to the published scholarly record.[19] It is a collaborative repository of research libraries' collections, containing digitised copies of 13.7 million books, 5.3 million of which are in the public domain. It began in 2008 as a network of research libraries in the US, led by the libraries at the University of Michigan and the University of Indiana, who continue to store the physical servers that hold the digital material. Its founding vision was to build a co-operative library founded on principles of deep resource sharing and trust, with a large-scale goal of becoming so broad in its reach and scope that it could be called a 'universal library'. The Hathi Trust is independent and non-profit and sees itself as a digital initiative to continue the advancement of progress, science and the arts.

While the Hathi Trust has an international network of university libraries contributing content, it overwhelmingly remains a US focussed project. Most of its content was provided directly from the Google digitisation project and supplemented by local initiatives. Much of the initial drive in the establishment of the Hathi Trust came from universities wanting a depository for their digitised content that was independent of Google's servers.

The Hathi Trust user interface provides full access to digitised books and manuscripts in the public domain, while enabling non-consumptive research on in-copyright works. This means that material is not displayed but full-text search results can be performed, helpful for citation search and computational analysis. US member institutions can in some cases have access to in-copyright material when their physical copies are damaged or brittle for example.

Guided by its mission to provide an independent and non-profit store of information, much of the technical infrastructure of Hathi Trust was developed with open-source software. Hathi makes its digital designs freely available, its most pioneering software being a streamlined and efficient 'ingest' apparatus when receiving digitised collections from partner universities (previously Google Books).

The Hathi Trust is governed by a board of governors made up of senior academic librarians who are voted in by members of contributing universities. Day-to-day administration of the project is overseen by a steering committee that delegates tasks to small working groups situated at the University of Michigan and the University of Indiana. Funding for the project is provided by partner-universities and is a separate budget that sits within the overall budget of the University of Michigan. The University of Michigan provides base funding for the maintenance of server infrastructure.

Figure 12: Hathi Trust screenshot

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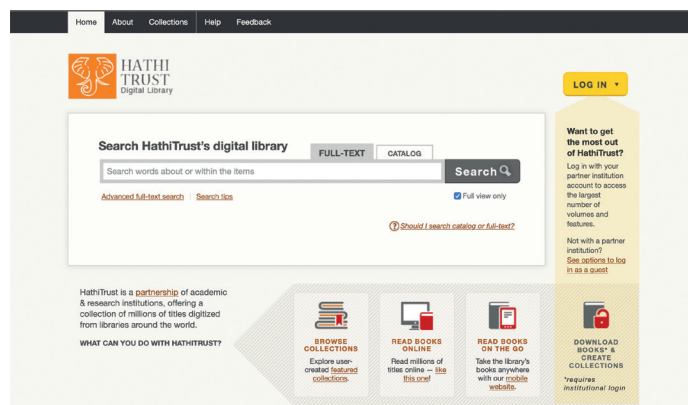
[18] *Faber Social* (2019), **https://fabersocial.co.uk/** [accessed January 2019].**the-gentleman-who-made-scholar-d71289d9a82d** [accessed January 2019].

[19] Hathi Trust (2019), **https://www.hathitrust.org/** [accessed January 2019].

II.5 Lib Crowds, British Library

LibCrowds is a crowdsourcing platform built to create searchable catalogue records for some of the hundreds of thousands of items that can currently only be found in printed and card catalogues. The aim is to help researchers everywhere more easily access and improve the discoverability of the diverse collections held at the British Library.[20]

An example of LibCrowds in action is *In the Spotlight*. The British Library holds a significant collection of playbills dating from the 1730s to the 1950s, and *In the Spotlight* aims to make the digitised playbills more readily available by improving discoverability, allowing users to see past entertainment. Independent researchers and general visitors are invited to help transcribe titles, names and locations to make the playbills easier to find for the broader library community.

Figure 13: Lib Crowds screenshot
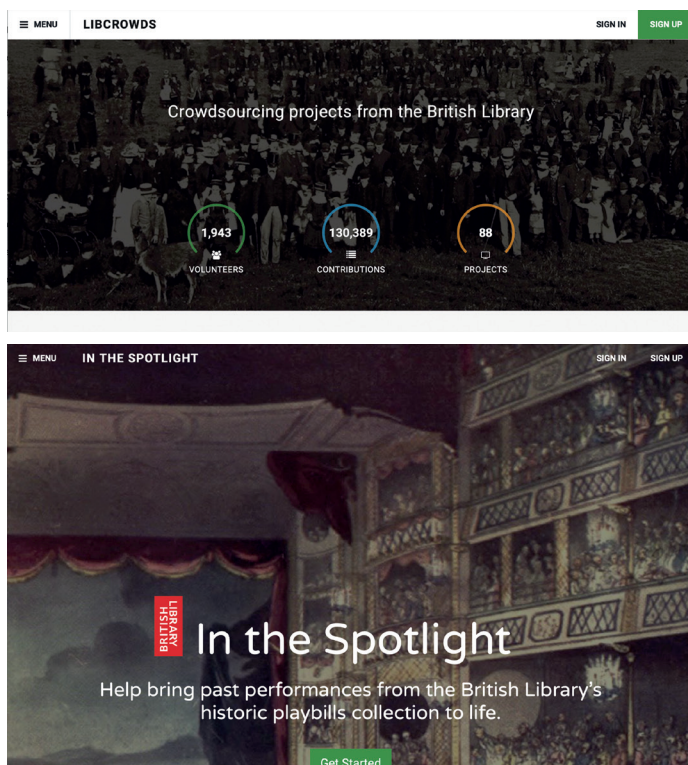
II.6 Library Planet

Founded in December 2018 by Christian Lauersen of Roskilde Libraries and Marie Engberg Eiriksson of Gladsaxe Libraries, Denmark, Library Planet is a crowdsourced travel guide/blog for libraries around the world. Travellers are encouraged to write about their library experiences and include information on what makes a particular library special or enjoyable to visit. Emphasis is placed on the individual's first impressions of the place, and whether the library has any special collections or unique services. There is also a Google Maps extension embedded in the website, which allows users to pinpoint libraries around the world which they may like to visit.[21]

Figure 14: Library planet screenshots
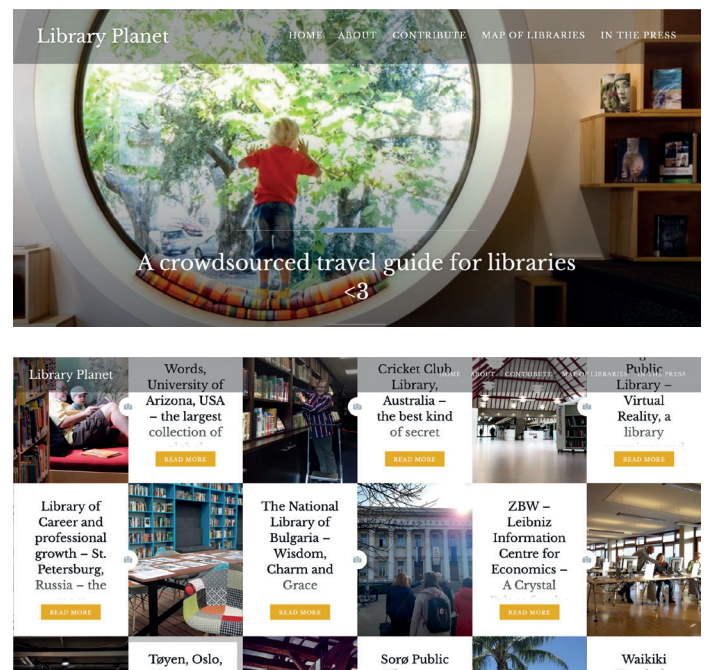
II.7 Literature Hub

Created by Grove Atlantic and Electric Literature in 2015, Literary Hub (or Lit Hub) provides a single, trusted, daily source for all the news, ideas and richness of contemporary literary life.[22] The organisation boasts over 100 editorial partners who help to ensure that site readers can rely on smart, engaged and entertaining writing about all things books. Alongside daily original content, Lit Hub also showcases editorial features from its partners from across the literary spectrum. The website has been featured in *The Guardian*[23] and *The Washington Post*.[24]

In June 2016 Lit Hub launched a book review aggregation service called Bookmarks. The service aggregates reviews from numerous sources from professional critics, including newspapers, magazines and websites, before averaging them into a letter grade.[25]

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[20] *LibCrowds* (2019), **https://www.libcrowds.com/** [accessed December 2018].**the-gentleman-who-made-scholar-d71289d9a82d** [accessed January 2019].

[21] *Library Planet*, **https://libraryplanet.net/** [accessed December 2018].

[22] *Literary Hub*. Available online at: **https://lithub.com/** [accessed January 2019].

[23] Martha Bausells (April 5, 2015). "Literary Hub aims to be 'go-to website for literary culture". *The Guardian*. Retrieved January X 2019. Available online at: **www.theguardian.com/books/booksblog/2015/apr/08/literary-hub-launches-with-aim-to-become-go-to-website-for-literary-culture** [accessed December 2018].

[24] Ron Charles (March 17, 2015). "Literary Hub wants to bring together everything literary on the internet". *The Washington Post*. Retrieved January X 2019. Available online at: **www.washingtonpost.com/news/arts-and-entertainment/wp/2015/03/17/literary-hub-wants-to-bring-together-everything-literary-on-the-internet/?noredirect=on&utm_term=.60a30d98635a** [accessed December 2018].

[25] 'Bookmarks', *Literature Hub*. Available online at: **https://bookmarks.reviews/** (accessed January 2019).
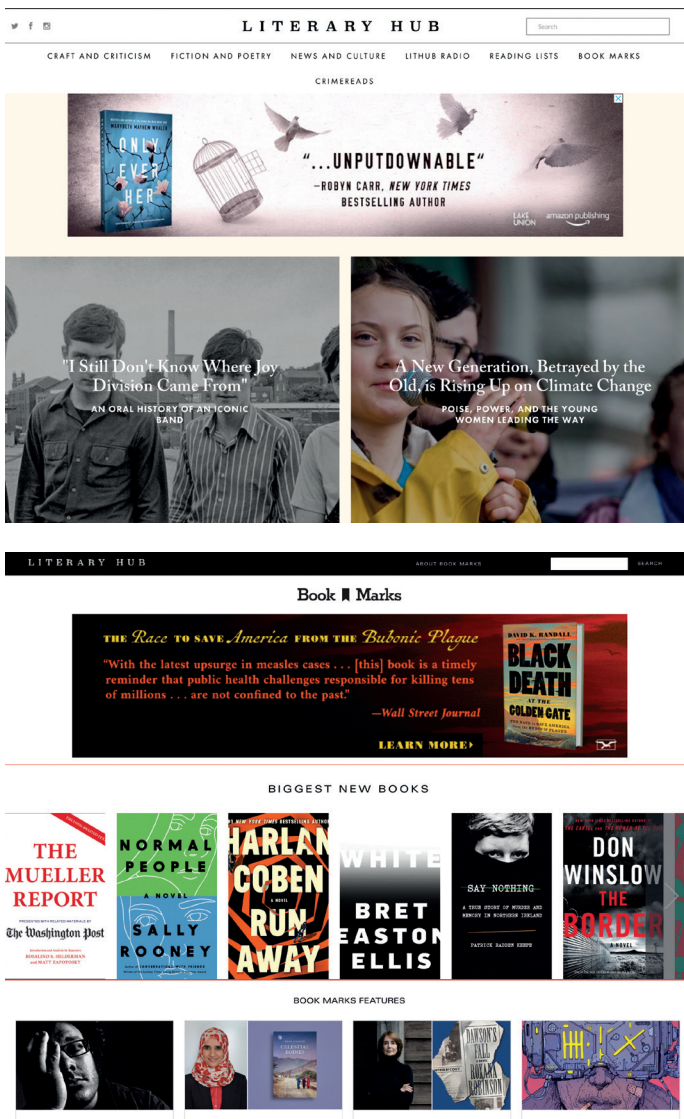
II.8 Virtual Enquiry Service

Following a successful pilot between May 2013 to July 2014, SCONUL negotiated an agreement with OCLC which enabled libraries to access a Virtual Enquiry Service. The service covers periods when local library staff are not available to answer queries and allows members to offer their users access to support 24 hours a day, 365 days a year, with librarians in other time zones helping students with questions. Participating libraries also have access to both local and global knowledge, as each member contributes to the reference knowledge base that is cooperatively built. If users have a web browser, they have access. There are no client-side downloads or additional applications required.

III Resources and Usage

III.1 Resources in UK Public Libraries

According to the annual CIPFA statistics on public library use, net expenditure in public libraries has fallen by 20.2% since 2012, representing a cut of almost £160 million to the overall sector over the last six years. In addition, the sector has seen a 32% reduction in professional staff over the same period. This has coincided with a 42% increase of volunteers working in public libraries.
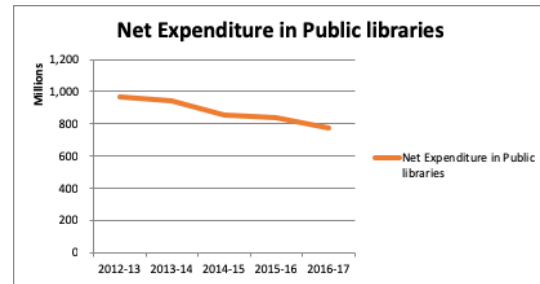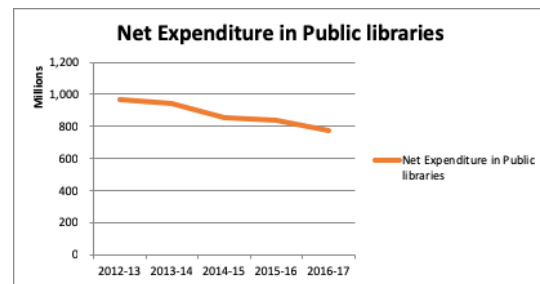
Figure 16: Net Expenditure in Public Libraries

Figure 17: Human Resources in Public Libraries

III.2 United Kingdom Public Library Use

Usage of public libraries has declined over the last 6 years, these figures are part of a more complex set of causative factors than the resource reductions triggered by austerity measures. Since 2012 there has been a 26.7% decrease in physical borrowing with a 16.6% reduction in audio visual material (including digital loans). Visits to library premises have also reduced by 18.2%, with libraries seeing 55 million fewer visits in 2017 compared to 2012. As DCMS' *Taking Part Survey* confirms, the majority of the UK population are now non-library users. It is important to stress here however that while numbers are decreasing quite dramatically, visits to public libraries still stood at over 250 million in 2016–17. By comparison, this is almost eight times the total number of spectators at professional football matches in England and Scotland over the same period.[26]

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26 This figure has been calculated by comparing the 'total visits' data in the CIPFA actuals for 2016-17 with the cumulative totals of football attendance across the English Premier league, the English championship, Football League 1 and League 2, which totals approximately 26.6 million people. We then added the same data from the Scottish leagues equalling 4.2 million people. This provides a rough total estimate of 31.8 million as compared to the CIPFA figure which records total visits at over 250 million. To explore this data in more detail please see: The Chartered Institute of Public Finance and Accountancy, 'CIPFAStats Public Library Statistics, 2017-18 Estimates and 2016-17 Actuals', (2017).; European Leagues, 'European Leagues Fan Attendance Report' (2018), available online at: **https://europeanleagues.com/wp-content/uploads/FINAL-EPFL_FA_18-VERSION-2018.01.12.pdf** [accessed January 2019].

The most striking trend in the *Taking Part* figures is that taken by age group, the largest decrease in attendance has come from those aged 16-25. Since 2005/6, the number of young people who have attended the library at least once a year has halved, with only 29% of respondents visiting in 2016, compared to 51% in 05-6.

Taking Part has also included more specific research on the use of remote library web resources. In 2016-17, only 17.9 per cent of adults used a computer outside the library to view a library website, catalogue or database, or to loan e-books. Only 9.7% of adults accessed or received a library service by email, telephone, fax or letter, and 0.9% received an outreach service (such as home delivery) or attended library events. Perhaps predictably, a significantly greater proportion of adults aged 16 to 24 used a computer outside the library to view a library website than adults in older age groups (24.4% of adults aged 16 to 24, compared with 12.2% of 65 to 74 year olds and 9.3% for adults above the age of 75).

III.3 UK Library use: A more positive picture

Public libraries are still an incredibly important cultural institution of immense public value. Public libraries also continue to be valued incredibly highly as a community resource. Carnegie's *Shining a Light Survey* of 2016 showed that three-quarters of the population across the United Kingdom say public libraries are important for the wider community. Interestingly however, only 2 out of 5 people say libraries are important to them personally.

In addition, public libraries already reach a much more culturally and economically diverse audience than any other arts/heritage organisation in the United Kingdom. According to *Taking Part*, public libraries are the only sector where BAME respondents were more likely to visit/participant than those from white ethnic backgrounds. BAME respondents are 11% more likely to attend libraries, in a landscape where the same group is less likely to attend all other cultural and arts activities. In regard to gender, women are considerably more likely to visit public libraries than men, with 37.6% of female respondents having visited a library at least once in the past year, compared to only 29.2% of male respondents. Libraries were also the only sector not to have any significant difference in participation depending on the level of deprivation in the area they live. Those living in the most deprived area were only 4% less likely to visit the library than those from least deprived districts, whereas the figure stands at 17% and 24% in favour of those from least deprived areas in the arts and heritage sector respectively

III.4 Library-use in a global context

The International Federation of Library Associations (IFLA) monitors national library statistics as part of their vision to provide reliable global statistics on library use. Currently the data is basic, patchy and solely reliant on the efficacy of national statistical collection, however it does enable a top-level overview of library use in a global context.

Taking figures collected between 2014-2016, IFLA estimates that there were 3.7 billion visits to public libraries globally, with public libraries issuing 6.6 billion physical loans and

873 million digital loans. This material was lent to a global community of active borrowers of approximately 553 million people. With many countries not supplying active borrowing figures – the UK one such country – this figure is most likely considerably higher than IFLA's estimate.

The USA continues to boast the largest and most active public library community in the world, with over 1.4 billion visits in 2014, issuing over 2.1 billion physical loans and 281 million digital loans.

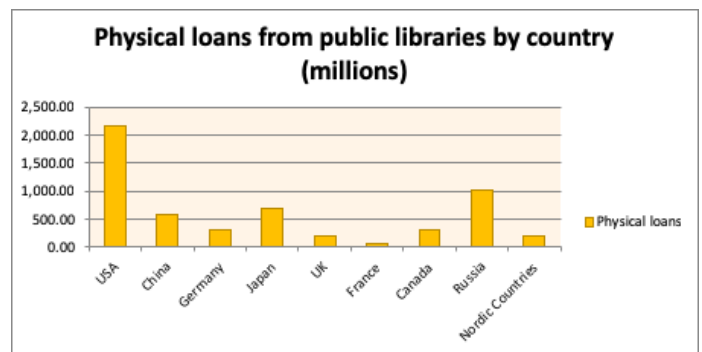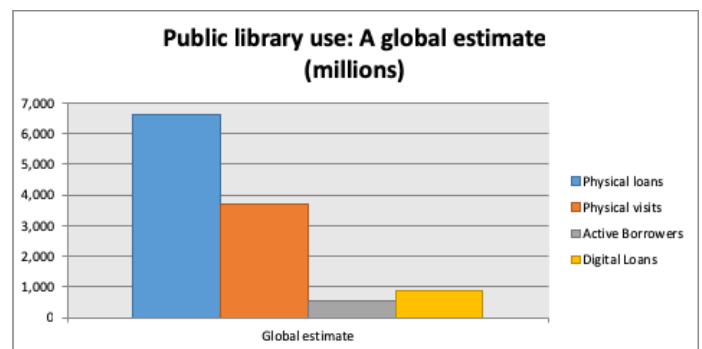Figure 18: Comparative data of physical loans from public libraries by country

Figure 19: Comparative data of public library use: A global estimate

Chinese public libraries however issue more digital loans, with a world-leading 355 million digital loans in 2016. Digital loans in public libraries constitute a significant proportion of total loans in the People's Republic of China (taking physical and digital loans together), with 37% of loans being issued in digital form.

Figure 20: Comparative data of digital loans from public libraries by country
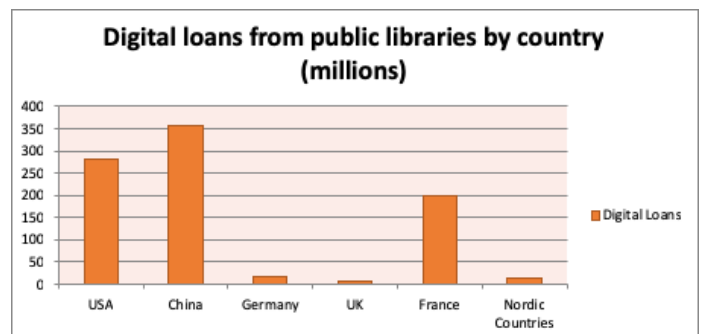
French public libraries issue the highest number of digital loans as a percentage of total loans, with a staggering 75% of total loans issued in digital form in 2014. Chinese library use is also the least connected to the traditional role of libraries as a place to borrow reading material. The People's

Republic of China is the only country surveyed here to have lower book issues (all formats) than physical visits.

Russia and Japan also contribute considerably to the global community of public library users. Russian public libraries issued over 1 billion physical loans in 2016 and welcomed over 417 million visitors. While the data on Japanese library use is more limited Japanese libraries issued over 694 million loans in 2015.

Comparing UK public libraries to those closest in total population size (Germany and France), the UK boasts considerably larger visitor numbers, while lagging behind Germany in regards to physical loans, while France's huge digital loan market dwarfs that of the UK.

III.5 Bodies Consulted

Key stakeholders
- CILIP
- Libraries Connected
- Libraries NI
- Libraries Taskforce
- Living Knowledge Network
- National Library of Scotland
- National Library of Wales
- Publishers' Association

LMS Providers (via BIC)[27]
- Bibliotheca
- Capita
- Infor
- Insight Media Internet
- OCLC
- SirsiDynix
- Solus

Scotland
- Association of Public Libraries in Scotland
- BBC Scotland
- Culture NL
- Edinburgh Libraries
- Glasgow Life
- Inverclyde Libraries
- National Library of Scotland
- Scottish Government
- Scottish Library and Information Council
- Scottish Poetry Library
- University of Edinburgh

Wales
- National Library of Wales
- Newtown Library

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[27] www.bic.org.uk

IV Public Library Legislation & Policy in the UK

IV.1 England

Public libraries in England are the responsibility of local authorities. Local authorities have a statutory responsibility to provide a "comprehensive and efficient library service for all persons desiring to make use thereof" under the Public Libraries and Museums Act (1964). The act stipulates that the library authority should place particular regard to ensuring:

> "that (a) facilities are available for the borrowing of, or reference to, books and other printed matter, and pictures, gramophone records, films and other materials, sufficient in number, range and quality to meet the general requirements and any special requirements both of adults and children; and (b) of encouraging both adults and children to make full use of the library service, and of providing advice as to its use and of making available such bibliographical and other information as may be required by persons using it."[28]

The Secretary of State for Digital, Culture, Media and Sport holds responsibility for superintending Public Libraries to ensure they meet the requirements of the 1964 act. In undertaking this duty the Secretary of State may:

> "Inspect library premises or require public library authorities to provide information in regard to his duty of superintendence and promotion of the public library service (section 1.2). Use default powers to order an investigation into public library service, issue an order of improvement or an order transferring the public library service concerned to the Secretary of State (section 10)"[29]

Unlike Wales (see below), there are no set standards for supervisory provision.

Public library budgets are allocated by local authorities. Local government revenue is generated through a mix of local taxation and block funding from the UK government. Public libraries can apply for additional, project specific funding from Arts Council England, who are the development agency for public libraries in England.

Strategic leadership for public libraries in England is split between the 'Libraries Taskforce', which reports to DCMS and the Local Government Association and 'Libraries Connected', previously the Society of Chief Librarians, which is the sector support organisation for libraries, funded by Arts Council England. The future of the taskforce is currently unknown, but it is likely it will be incorporated into ACE.

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[28] UK Government, 'Public Libraries and Museums Act: 1964', available online at: **www.legislation.gov.uk/ukpga/1964/75** [accessed January 2019].
[29] Ibid.

IV.2 Scotland

Public libraries in Scotland are entirely the responsibility of local authorities. They have a statutory duty to "secure the provision of adequate library facilities for all persons resident in their area", under the Local Government (Scotland) Act 1994.[30] In addition to this, public libraries are supported by the independent advisory body: The Scottish Library & Information Council (SLIC). SLIC supports public libraries through leadership, support & advocacy, while also having overall responsibility for the implementation and review of the Public Library Strategy for Scotland (2015-2020). Unlike the Libraries and Museums Act (1964), the 1994 Scottish Act does not directly set out a formal superintending role for the Cabinet Secretary for Culture (Scottish Government). In practice, SLIC performs a monitoring role through its implementation of the public library strategy. SLIC is funded by a core grant from the Scottish Government.

Public library budgets are allocated by local authorities. Local government revenue is generated by a mix of block grant funding from the Scottish government and local taxation. The Scottish government's block grants make up approximately 85% of local government's net revenue expenditure. This funding settlement is secured under the 2007 concordant agreement and updated as part of the 2010 and 2011 Scottish spending reviews.

The Scottish Government also invest directly in public libraries through the Public Library Improvement Fund (PLIF), which is administered by SLIC. Public library authorities apply to SLIC for PLIF grants to support specific projects. SLIC's review of applications are guided by the Public Library Strategy for Scotland, and Scottish Government's wish for public libraries to develop "new and innovative ways for people to use libraries". In the 2016-17 financial year, the Scottish Government invested £450,000 in the PLIF.

IV.3 Wales

Public libraries in Wales are funded and accountable to local authorities, as legislated by the Public Libraries and Museums Act (1964). The Deputy Minister for Culture, Sport and Tourism (Welsh Government) superintends Public Libraries as stipulated by the 1964 act. This supervisory role is executed through the provision of Welsh Public Library Standards. Since 2005, the Welsh Government has also delivered a national Libraries Development Strategy in partnership with local authorities. 'Libraries Inspire' was the last strategy, running from 2012-17. Standards and strategy for public libraries is delegated to the Museums, Archives and Libraries division of the Welsh government, overseen by the deputy minister for culture.

As with Scotland, local government revenue is generated through block grant funding from the Welsh Government and local taxation. Unlike Scotland, the Museums Archives and Library division of the Welsh Government does not provide additional investment directly to libraries. It does, however, provide block grant funding the National Library of Wales, who work closely with Public Libraries, notably on the single digital portal 'Libraries Wales'.

IV.4 Northern Ireland

Public libraries in Northern Ireland are administered by a single library authority established by the Libraries Act (Northern Ireland) in 2008. Libraries NI is a non-departmental public body, sponsored by the Department of Communities. As such, public library provision is overseen by the Minister for Communities and accountable to the Northern Ireland Assembly.

The 2008 act stipulates that the Authority must "provide a comprehensive and efficient public library service for persons living, working or studying in Northern Ireland." The Act further stipulates that in so doing it must, "secure that facilities are available for the borrowing of, or reference to, library materials sufficient in number, range and quality to meet the general requirements of adults and children (whether by keeping adequate stocks, by arrangements with other bodies concerned with library services or by any other means)."

Libraries NI receives its core resource and capital funding from the Department of Communities. In 2017/18 the annual budget allocation from the DoC was £26.6 million, which represented a £1.1 million reduction in overall funds from 2016/17. After the implementation of the 2008 Libraries Act, local authorities ceased having responsibility for public library provision and funding. The DoC administers block grants to local government as part of the Northern Ireland local government funding settlement, and therefore transferred funds earmarked for libraries directly to Libraries NI.

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[30] UK Government, 'Local Government (Scotland) Act: 1994', available online at: **www.legislation.gov.uk/ukpga/1994/39/contents** [Accessed: January 2019].

V Further Reading

House of Commons Library, 'Briefing Paper: Public Libraries' (2016)

CILIP, 'Public Library Legislation in the UK' (2014) Online at: **https://archive.cilip.org.uk/sites/default/files/ documents/PL%20legislation%20in%20the%20UK%20 -%20Table.pdf**

SLIC, 'The National Strategy for Public Libraries in Scotland' (2015) online at: **https://scottishlibraries.org/ advice-guidance/the-national-strategy-for-public-libraries/**

Welsh Government, 'Guidance on Community Managed Libraries and the Statutory Provision of Public Library Services in Wales' (2015)

Libraries NI, 'Annual Reports and Accounts' (2017/18) available online at: **www.librariesni.org.uk/AboutUs/ OurOrg/Annual%20Reports/Annual-Report-and- Accounts-2017-18.pdf**

Legislation

Public Library and museums act (1964)

Local Government (Scotland) Act (1994)

Libraries Act (Northern Ireland) 2008