

Appendix I

Past library reports

“The Future of Libraries in 2015” was published in 2005, and discussed in a convention of concerned public sector leaders. One of the few places that report can be found today is deep in the stacks of the British Library. The burden is upon those acting today to act on the accumulated knowledge of multiple generations of community members, staff, library leaders, and public leaders.

This report argues that the trends the reports identify are best explained by digital disruption. And the solutions they propose are best advanced by digital change.

	Report	Challenges identified	
2014	 <p data-bbox="506 310 737 464">Independent Library Report for England (DCMS)</p>	<ul style="list-style-type: none"> ● “A library’s great strength--its localism--must not ... become its weakness” ● Fragmented service, brand ● Redundant costs ● Not enough leaders “aware of remarkable and vital value” ● Perception of low relevance 	<ul style="list-style-type: none"> ● National digital platform ● National strategy support, incl. branding and service consistency ● National support for local improvements ● Focus library as digital and physical community hub -- joining cultural services ● Engage ABC1s who do not use services today
	 <p data-bbox="506 829 737 984">Towards a UK Digital Public Space (Sero HE)</p>	<ul style="list-style-type: none"> ● Cultural institutions have siloed IT ● Fragmented service ● Redundant costs 	<ul style="list-style-type: none"> ● Middleware platform to normalize data across cultural institutions, including library ● Enable others to build apps
2013	 <p data-bbox="506 1073 695 1227">Community libraries (ACE and LGA)</p>	<ul style="list-style-type: none"> ● Declining budgets of libraries ● Increasing reliance on volunteers poses governance challenges 	<ul style="list-style-type: none"> ● Careful planning for transition and sustainability thereafter

Report



Envisioning the library of the future (ACE)

Challenges identified

- Many “taking short-term and reactive decisions”, like “re-positioning themselves with users, funders, politicians”
 - Volunteer-led isn’t easy
 - Low awareness
 - Shock from digital shift
 - Shock from aging pop.
 - “Libraries cannot simply ... provide access to learning, information, books ... for those who walk through the door or visit their websites. Library services of the future must reach out proactively, engaging with their communities and discharging their core purpose by enabling, seeking out those who would benefit, helping communities self-organise and
- Create a “stronger national narrative around their purpose” -- of library as community hub for learning and knowledge across life
 - Use co-production not to save money but as an “organising principle” to enhance service, “making it just as easy for local residents to start a new activity in the library as it is for staff members.”
 - use digital technology and creative media well
 - ensure resilience of library strategy and management
 - support staff

Report

Challenges identified

2012



A New Chapter:
Public library
services in the
21st century
(CarnegieUK)



Library
Closures
(House of
Commons:
CMS Special
Committee)

navigate information –
making a difference
through their creativity
and expertise.”

- Perception of irrelevance
- Size of physical network both an asset and potential liability as costs rise
- Become visible: market and provide more information about their services
- Stay focused on literacy and learning
- Support digital participation
- Implement services across authorities, and share best practice
- Engage ABC1s who do not use services today
- Some in rush to cut costs are “in danger of failing in their statutory duty,” while others have “found innovative and cost-effective ways of continuing to supply - and in some cases improve”
- Focus on core mission of access to books and information, activated by programming in the community such as for learning
- Consider ways to link up and form partnership

Report

Challenges identified

2011



Libraries and Digital (The Reading Agency)

- “New digital platforms are transforming the ways in which people discover and read their books, while new websites and services are changing their engagement with fellow readers.”

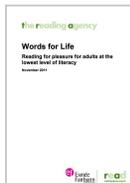
- “The message from public libraries is clear: that the sector must continue to develop its digital services around reading and be prepared to be bold.”
- “Online library catalogues are the gateway to users’ digital engagement”



Game On: Ways of using digital games to engage learners in reading for pleasure (The Reading Agency)

- Literacy and learning methods have not kept pace with digital developments

- Develop social-based and game-based approaches to encouraging literacy and learning



Words for Life: Reading for pleasure for adults at the lowest level of literacy

- Literacy continues to be a major challenge

- Co-production (through peer support) can help
- In-context recommendations that are non-stigmatizing and personal, drawing on

Report

Challenges identified

literacy (The Reading Agency)



Culture, Knowledge and Understanding - Great Museums and Libraries for Everyone (ACE)

personal interests, can help

- “developing new ways for people to access the cultural knowledge and experiences that libraries offer and identifying innovative and effective ways of responding to the challenges”
- Partner more effectively with co-funders and museums and libraries
- Partner more effectively across libraries and museums, sharing strategies
- Develop more visits, and richer ones -- including by tourists

(All of the above, we would argue, require digital components to be successful)

Report

Challenges identified



A Review of Research and Literature on Museums and Libraries (ACE)

- “library membership from birth; and opportunity to be a member of all libraries in England”
- “opportunity for the public to help shape the service; and services that reach out to local people”
- “free access to a range and quality of book stock and online resources and information; 24-hour access through online catalogues and services; and access to the national book collection”
- “connecting a community of readers through reading groups, activities and recommendations”
- “free internet access for all and help to get online”
- “commitment to customer service and expert, helpful staff”
- “a safe local space that is

Report

Challenges identified

2010

Public library activity in the areas of health and well-being (MLA, Reading Agency, LISU)

- Libraries do play a role in health, both formally and informally, but it's not visible
- Difficult to coordinate offers across libraries and with partners

accessible and convenient; and flexible opening hours to suit local need”

- “links to other public services and opportunities”

(We argue that all of the above are driven deeply by digital affordances, as described particularly in the “Strategies” section of the main document)

- Leverage digital networks to help improve health offer
- Create “health and well-being work that builds upon a clearly defined, universally available but locally relevant, public library health and well-being offer that integrates information and referral services with more creative aspects of service delivery, and allows for future innovation.”
- “National

Report

Challenges identified



The modernisation review (DCMS)

- Not seen as relevant and vital
- current trend of decline in library usage
- lack of response to a 24/7 culture and changing expectations of people who want immediate access to information
- How can the library

programme/scheme development requires the support of generic resources, promotional materials and toolkits that deliver high production values and consistent messaging, at the same time as economies of scale.”

- “A set of generic resources should be developed for libraries to use and adapt to local circumstances and needs.”
- Grasp the opportunities presented by digitisation
- Many specific examples presented

Report

Challenges identified



Better Libraries, Better Lives
A review and improvement plan
for
Doncaster Metropolitan Borough Council

Better Libraries, Better Lives (Doncaster Council)

service cope with limited public resource and economic pressures?

- Overextended mission has toll on resources and morale, as “dysfunctional cultures are developing as a result of a lack of understanding of the core purpose of a library service and a lack of clarity of messages and vision for libraries and their role in supporting the needs of people”
- Low staff skill levels: “very few staff across the service having an understanding or expertise in libraries and particularly in working with children”
- Too many buildings relative to budget
- Refocus on clear goal of “reading, learning, and inclusion”: “value of literacy and its link to learning and skills should be embedded in the organisation as the name of a seaside town in a stick of rock.”
- Consider closing buildings to concentrate better services in fewer buildings
- Evaluate better ways to get greatest value from small book stock budget

Report

Challenges identified

2009



Empower,
Inform, Enrich
(DCMS)

Libraries,
Literacy, and
Information
Management:
A Review
(All-Party
Parliamentary
Group)

- Not seen as relevant and vital
- current trend of decline in library usage
- lack of response to a 24/7 culture and changing expectations of people who want immediate access to information
- How can the library service cope with limited public resource and economic pressures?

- Overextension in serving multiple government agendas has brought confusion

- Grasp the opportunities presented by digitisation

- Refocus mission
- Develop one voice and strategy through a new Library Development Agency for England (LDAE)

Report

Challenges identified



Capturing the Impact of Libraries: Final Report (BOP Consulting for DCMS 2009)

- “Diversity of provision ... presents difficulties in demonstrating and communicating the impact of public libraries”
- “Predominance of one-off evaluations”
- “Lack of baselines”
- Performance management improvements
- Establish consistent base data
- “Baselines of activity need to be national”
- Careful balance between privacy and comprehensive data collection
- Suggested “library Census day”!

2008



Taking stock: the future of our public library service (Unison)

- Decline in visits and issues
- Decline in funding
- Decline in popular reputation
- Books to remain as part of a service centered around lifelong learning and community
- Co-production with communities and staff working together
- Collaboration across library authorities
- Reiterates earlier idea of web-based community groups joined by library

Report

Challenges identified

	 <p>Framework for the Future MLA Action Plan for Public Libraries – towards 2013</p>	<p>Framework for the Future MLA Action Plan for Public Libraries – “towards 2013” (MLA)</p>	<ul style="list-style-type: none">● Supplying “books is in part being displaced by low cost retail offers in supermarkets and online”● Inconsistent services and redundant efforts across authorities	<ul style="list-style-type: none">● Plan for “coherent, national digital resources and services”● Put community at center of services● Partner with others to provide learning and cultural opportunities● Advance “best practice” and collaboration across authorities
2007	 <p>A Blueprint for excellence Public Libraries 2008-2011: Connecting People to Knowledge and Inspiration (MLA)</p>	<p>A Blueprint for Excellence: Public Libraries 2008-2011: Connecting People to Knowledge and Inspiration (MLA)</p>		<ul style="list-style-type: none">● Create national understanding of core service offerings around knowledge and inspiration, delivered locally (branches), through co-production (community), and globally (online)● Need national digital presence
2006		<p>Better Stock, Better</p>	<ul style="list-style-type: none">● Fragmentation and duplication of effort	<ul style="list-style-type: none">● Rationalize service nationally● Use library to shape demand,

	Report	Challenges identified	
2005	 <p data-bbox="506 423 716 662">Public Libraries (House of Commons: CMS Special Committee)</p>	<p data-bbox="856 310 1220 391">wasting ~40% of book stock spending</p> <ul data-bbox="821 423 1262 1187" style="list-style-type: none"> ● Overextension hurting core offering, while not adding clear value ● Book borrowing falling, even as buying increases ● “We recognise ... libraries are viewed as safe public environments [with] potential to [serve] a wide range of community needs ... However, it is equally clear to us that libraries must not be over-loaded with objectives or expectations that strain their resources or inhibit the fulfilment of their core functions” 	<p data-bbox="1388 310 1766 350">not merely respond to it</p> <ul data-bbox="1346 423 1829 699" style="list-style-type: none"> ● Refocus on literacy, learning ● Reinvigorate rather than reconceive ● Use digital only if advancing core goals, not if distracting ● Partner with national literacy non-profits to scale services
	Libraries: A	<ul data-bbox="821 1219 1262 1302" style="list-style-type: none"> ● “In a world of rapid social and technological change 	<ul data-bbox="1346 1219 1829 1302" style="list-style-type: none"> ● Must follow retailing in being “customer-led”

Report

Challenges identified

vision: The public library service in 2015 (Laser Foundation)

libraries too must learn both to change and to encourage the careers of those who can manage change”

- Must leverage technology to reallocate staff time to higher-value tasks
- Need coordination between local and national government strategies for libraries
- Emphasized “free access” as still being a key value proposition -- yet this was prior to Amazon’s online rise with e-books

2004



A National Public Library Development Programme for Reading Groups (The Reading Agency)

- Need to distinguish library from mere book sellers
- Need to stimulate issues

- Build on core strength of reading and on core strength of community
- Facilitate reading group development with national programs that are locally tailored

Report

Challenges identified

2003



Framework for the Future (DCMS)

- Risk of overextension: "They should not duplicate the efforts of other public and private sector providers but complement them through partnership working"

- Refocus on literacy (including digital) and informal learning
- Also social inclusion and citizenship



Overdue: How to create a modern public library service (Laser Foundation & Charles Leadbeater)

- "Sleepwalking towards disaster" and loss of vital national network
- Reactive service offerings do not provide enduring mission for libraries
- Lack of consistency across library services
- Localism is a strength, but also a weakness

- Focus a national mission that offers "a distinctive service and experience, which builds upon their historic strengths" of "books, information, and knowledge," blending "learning and leisure", involving "hub libraries" and "guerilla networks" of co-produced, self-directed activities around reading and learning
- Create national offers and national capacity to deliver, especially for children, working adults, and "curiosity

Report

Challenges identified

2000



Reading the Situation (The Reading Partnership / Agency)

- Declines in borrowing from library...
- ...Even as overall reading remains strong

clubs”

- Create National Library Development Agency with a “ten-year life [e.g. ending 2013] to achieve its goal of revitalising libraries”
- Need to better understand the needs of readers and what drives decisions to buy v. borrow books
- Need to understand role of technology in those decisions
- Libraries need data in order to show that they can cooperate with publishers and contribute to overall reading ecosystem

Appendix II

Stakeholders consulted

Alasdair Ball

Head of Collection Management, British Library

Alison Wheeler

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Digital Curator, British Library

Ayub Khan

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Ben Taplin

Project Manager, JISC

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Head of Partnership Development, BBC

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Director, Capita

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Charlotte Lane

EA to Kathy Settle, Government Digital Service

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Random House UK

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Helen Drakard
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Senior Manager, Creative Media, Arts Council England

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Appendix III

Jobs to be done and new divides

The research informing the digital strategy followed empathetic design. Users help propose the problem to be solved (their wants, needs, and frustrations), though not necessarily the solutions (library services or programs). This method was developed by innovators seeking transformational change, rather than incremental improvement.

The main steps:

1. observe behavior, and context of users (Leonard and Rayport 1997)
2. explore in interviews the needs, limits of users (Ulwick 2002)
3. analyse findings for “jobs to be done” by users (Christensen, as described in Nobel 2011)
4. synthesise recommended strategies for service solutions

Starting with users in an open-ended way focuses researchers on the right problem. By contrast, “standard techniques of inquiry rarely lead to truly novel product concepts,” because they start with assumptions about the problem (Leonard and Rayport 1997):

- researchers impose bias on the scope and frame of questions
- users give expected or socially accepted answers, not their real behavior

For example, a misleading library project might begin by assuming “people don’t like print books,” and even readers might respond “That’s right, I don’t read books” -- leading to “solutions” to the wrong problem.

Yet developing solutions with professional insight helps ensure that this correct problem is then solved appropriately. By contrast, users often suggest solutions to related or past problems, such as (Ulwick 2002):

- copycat changes, not new types of change
- incremental improvements rather than innovation (faster horses rather than the automobile)

For example, a misleading library project might end by asking users to define what would increase their use of library books, and users might suggest making libraries “a little more like Amazon” online or “a little more like Costa” offline -- instead of imagining new possibilities libraries might be uniquely able to deliver.

Finally, the work along the way must move between user statement and researcher insight. The “jobs to be done” framework helps clarify the problem from the solution (Christensen, as in Nobel 2011). Users may say their goal is “To get a book on gardening,” and the research must test whether the book is a service used (or “hired”) to accomplish a larger goal of learning to garden (the “job to be done”). We consider people to be “hiring” their public library to do a job, and we try to understand why they choose to hire the library or not.

People do not always do what they say they do. And what they say often explains the world as it is, not as it could be. With that in mind, we observed behaviors and listened to frustrations and aspirations that implied problems or opportunities.

How opportunity divides are changing			How digital-enabled library can help close them		
Old divide for library to close	Challenges created by changing conditions	New divide for library to close	Example Vision potential user journeys	Existing assets library can uniquely leverage	Platform requirements to deliver

Survive

Stay safe

Offline safe space	<p>Online discovery of offline events</p> <ul style="list-style-type: none"> ● “Visits to libraries will continue to decrease if resources / services are not discoverable online” (British Library 2010, 6). <p>More time online</p> <ul style="list-style-type: none"> ● Leisure time online 20 hrs+ per week (Ofcom 2015) <p>New risks online</p> <ul style="list-style-type: none"> ● Child-safe apps require credit card ● High rates of online harassment (Dugan 2014) 	<p>Find safe space offline</p> <ul style="list-style-type: none"> ● No online awareness of library offering offline <p>Online safe space for me and my children</p> <ul style="list-style-type: none"> ● Not all parents can approve apps for kids for lack of credit card ● Non-users of digital technology lack trust and confidence (Go ON UK 2012) 	<p>Child-friendly online site</p> <ul style="list-style-type: none"> ● places to share comments ● places to do learning games ● able to be monitored by library staff and parents <p>Web-novice friendly online site</p> <ul style="list-style-type: none"> ● welcoming messages from staff <p>Discover offline safe space</p>	<ul style="list-style-type: none"> ● Values ● Staff supervision ● Library ID ● Parent-child accounts 	<ul style="list-style-type: none"> ● Community moderation ● Parent-child management
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Get info

Access for “Information Starved”	<p>New access</p> <ul style="list-style-type: none"> ● Google ● Wikipedia <p>More info</p> <ul style="list-style-type: none"> ● Exponential growth in options ● Crowd-sourced info ● Ad-based business models for providing info <p>Other needs relatively greater</p> <ul style="list-style-type: none"> ● British Library believes typical 	<p>Filters for “Information Overwhelmed”</p> <ul style="list-style-type: none"> ● Too many options keeps people from choosing any (Schwartz 2004) ● Desire for reliable domain experts in some areas ● 45% online users cannot differentiate ad-driven and organic results (Wall 2012) 	<p>Curated QuickStart guides</p> <ul style="list-style-type: none"> ● Cut down on options ● Promote community info and reliable partners ● Virtual volunteering that taps into the deep expertise in communities, often beyond the scope of staff knowledge. 	<ul style="list-style-type: none"> ● Public funding model ● Organization Partnerships 	<ul style="list-style-type: none"> ● Collaborative Curation ● Volunteering Service
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How opportunity divides are changing			How digital-enabled library can help close them		
Old divide for library to close	Challenges created by changing conditions	New divide for library to close	Example Vision potential user journeys	Existing assets library can uniquely leverage	Platform requirements to deliver

	trip will shift from "visiting to access information" to "visiting to work, to discuss, to present, to share" (British Library 2010, 4).	Promotions for Partners <ul style="list-style-type: none"> ● Ad-driven info crowds out non-profit info on search and social networks (Taylor 2014) 			
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Get online

Access 1st Order Digital Divide for "Digitally Excluded" <ul style="list-style-type: none"> ● Computers ● Printers 	New access <ul style="list-style-type: none"> ● 3% of UK can't afford internet (UK ONS 2015) ● 80%+ have smart- phones New challenges <ul style="list-style-type: none"> ● Concerns about privacy and sharing (UK ONS 2012) ● High rates of online harassment (Dugan 2014) ● New conventions 	Capacity 2nd Order Digital Divide for "Digitally Disoriented" <ul style="list-style-type: none"> ● Skills, motivation, and trust are overtaking access as limiter (Hargittai and Hinnant 2008; Gov.UK 2012) ● Unstructured, leisure access to computers reduces performance in (Richtel 2014) 	Hobby-driven online visits <ul style="list-style-type: none"> ● Books, learning, community Reinforce web conventions <ul style="list-style-type: none"> ● Build skills through book requests, etc. for higher-risk transactions with gov, bank (Go ON UK 2012) Trust <ul style="list-style-type: none"> ● Reassuring messages of values Support <ul style="list-style-type: none"> ● Staff or community guides mentor new users 	<ul style="list-style-type: none"> ● Values ● Community 	<ul style="list-style-type: none"> ● Skill-appropriate user experience (UX) ● Personal record-keeping ● Volunteer tools ● Social tools
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Get help

Offline help <ul style="list-style-type: none"> ● Staff ● Community volunteers 	More self-service <ul style="list-style-type: none"> ● reduces requests for help Less staff <ul style="list-style-type: none"> ● Fewer qualified (Macdonald) 	Online help Comfort asking for help <ul style="list-style-type: none"> ● Social anxiety will limit use of help unless efforts 	Context-driven suggestions to give and get help <ul style="list-style-type: none"> ● Reduce social anxiety by inviting help ● Promote community 	<ul style="list-style-type: none"> ● Staff ● Partnerships ● Community 	<ul style="list-style-type: none"> ● Locally configured SaaS ● Staff profiles
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How opportunity divides are changing			How digital-enabled library can help close them		
Old divide for library to close	Challenges created by changing conditions	New divide for library to close	Example Vision potential user journeys	Existing assets library can uniquely leverage	Platform requirements to deliver
	2011) ● More kinds of help needed More co-production/crowdsourcing ● Peers can offer best help ● Community partners needed (e.g. Dutch and Muddiman 2001, 183)	taken to reduce it (e.g. Goldfarb et al 2013) Access to peers and partners	partnerships through catalogue searches relevant to help areas Peer-matching to draw on community skill sets ● Match peers and mentors/mentees		● Social tools ● Volunteer tools ● Partnership tools

Succeed

Learn to read

Access ● Collections ● Programs	New access ● Amazon New leisure, distraction ● Online time is now 20 hours (Ofcom 2015) Social norms set online	Curation ● Too many options keeps people from choosing any (Schwartz 2004) ● Social network-based recs tend to promote a few “hits” and ignore long-tail of other choices (Elberse and Oberholzer-Gee 2008) ● People tired or suspicious of commercial recs Motivation from peers online ● Not all have necessary role models (Kelly and Campbell 2012) Meaning-making ● Programs ● Access to discussions	Social presence in catalogue to apply positive peer pressure ● see reading is cool Human- and community-led book recommendations ● more personal and engaging than Amazon Engagement before and after reading ● Suggest connections between library users on basis of similar reads ● Develop quizzes, book-group questions ● Form book groups or online discussion groups	● Collections ● Community (reads ~½ annual reads in the UK, per CIPFA and publishing data)	● Community curation tools ● National book references to tie back to library ● Social tools ● Partner tools ● Volunteer tools ● Group-forming tools
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How opportunity divides are changing			How digital-enabled library can help close them		
Old divide for library to close	Challenges created by changing conditions	New divide for library to close	Example Vision potential user journeys	Existing assets library can uniquely leverage	Platform requirements to deliver

Learn skills

Access <ul style="list-style-type: none"> ● Collections ● Programs 	<p>Online resources: YouTube, Lynda.Com, Kahn Academy, Coursera</p> <p>More online distraction</p> <ul style="list-style-type: none"> ● Online time is now 20 hours (Ofcom 2015) ● Web apps aim to be “addictive enough to make money” (Abel 2014) <p>More independent learning</p> <ul style="list-style-type: none"> ● But low retention and follow-through (Farr 2013) <p>Technology shifts demand lifelong learning (Hyde and Phillipson 2014)</p>	<p>Sustained attention</p> <ul style="list-style-type: none"> ● Computers have added to the non-structured time of low-income students (Richtel 2014) <p>“Enrichment divide” (Gibb 2015)</p> <ul style="list-style-type: none"> ● College readiness depends on access to informal learning <p>Peer divide</p> <ul style="list-style-type: none"> ● Matthew’s Effect and positive spillover from peers (e.g. Burke and Saas 2008) 	<p>Personal commitment tools</p> <ul style="list-style-type: none"> ● Set goals for reading or skill development ● Get encouragement from designated advocates for those skills ● Earn digital badges <p>Multichannel learning pathways</p> <ul style="list-style-type: none"> ● Online discovery ● Offline follow-through <p>Peer groupings based on interest, not income</p> <ul style="list-style-type: none"> ● Suggest groups on basis of book interests 	<ul style="list-style-type: none"> ● Branches ● Collections ● Community 	<ul style="list-style-type: none"> ● Personal growth tools: Wishlists, For Later ● Group-forming tools ● Volunteer tools ● Space/Resource reservation tools ● Badging tools
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Focus to get work done

<p>Offline quiet space</p> <p>Norms of productivity and focus among peers</p> <ul style="list-style-type: none"> ● “I felt ... self-respect at the library. I’d wonder how others perceived me...it 	<p>Offline quiet space discovered online</p> <ul style="list-style-type: none"> ● Coffee shops ● Coworking spaces (WeWork) <p>More working from home or on-the-go, so need for focus</p> <ul style="list-style-type: none"> ● Most librarians believe “using the library for meetings and social gatherings will replace leisure reading [in-branch] and using computers [in-branch]” (OCLC 2012). 	<p>Awareness of offline space</p> <p>Quiet online space -- online! “Time-wasting gap”</p> <ul style="list-style-type: none"> ● Computers have added to the non-structured time of low-income students (Richtel 2014) <p>Online space with a clear norm of productivity</p>	<p>In-branch splash pages to focus activity</p> <ul style="list-style-type: none"> ● Appear on login on WiFi or PC ● Call to action for productive tasks ● Ticker or announcement of what people are “working on at the library” ● Advertise upcoming events 	<ul style="list-style-type: none"> ● Values ● Community 	<ul style="list-style-type: none"> ● Splash page and CMS ● Social tools ● Individual recordkeeping, goal-setting tools ● Reservation tools
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dawned upon me that [...] [t]hey must have thought that I, too, was being productive.” (Reyes-Gavilan 2014)	<p>More single people: small families, living longer</p> <ul style="list-style-type: none"> ● Smaller family ● Living longer 		Reservation tools to hold rooms for conference, etc.		
Get advice / connected					
<p>Access to guidance</p> <ul style="list-style-type: none"> ● Collections ● Partners ● Community 	<p>More co-production and crowd-sourced advice</p> <ul style="list-style-type: none"> ● Peers can be best help of all ● Community partners needed (e.g. Dutch and Muddiman 2001, 183) <p>Ad-based business models for funding online communities, advice networks</p>	<p>Comfort asking for help</p> <ul style="list-style-type: none"> ● Social anxiety will limit use of help unless efforts taken to reduce it (e.g. Goldfarb et al 2013) <p>Access to peers and mentors</p> <ul style="list-style-type: none"> ● Matthew’s Effect means those with strong networks will maintain advantage <p>Promotions for Partners</p> <ul style="list-style-type: none"> ● Ad-driven info crowds out non-profit and community info on search and social networks (Taylor 2014) 	<p>Context-driven suggestions to give and get advice</p> <ul style="list-style-type: none"> ● Reduce social anxiety by inviting advice ● Promote community partnerships through catalogue searches relevant to help areas ● Ticker of what people are “working on at the library”: “see who needs help”, and “see who can help” for common areas <p>Mentor/mentee groupings based on interest not income</p> <ul style="list-style-type: none"> ● Solicit willing volunteers and recipients ● Message both for match btw advanced/beginner on same subject 	<ul style="list-style-type: none"> ● Collections ● Community ● Staff 	<ul style="list-style-type: none"> ● Partner tools ● Volunteer tools ● Social tools

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			Multichannel advice pathways <ul style="list-style-type: none"> ● Online discovery ● Offline follow-through: room booking at library 		
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Belong

Observe / understand others

Offline shared space with people different than me	<ul style="list-style-type: none"> ● Coffee shops ● MeetUp <p>Visits by ABC1s falling faster than other groups</p> <ul style="list-style-type: none"> ● Less social norm sharing ● Less exposure in both directions to other walks of life <p>Offline events discovered online</p> <ul style="list-style-type: none"> ● "Visits to libraries will continue to decrease if resources / services are not discoverable online" (British Library 2010, 6). <p>Online networks reducing not expanding diversity</p> <ul style="list-style-type: none"> ● Social sorting - web algorithms sort into like (Sunstein 2001; Shriky 2003) ● Social isolation - few bridges between us (Putnam 2000) 	<p>Reasons to be in same space</p> <ul style="list-style-type: none"> ● "Services only for the poor become poor services indeed" <p>Awareness of offline events</p> <ul style="list-style-type: none"> ● Nonexistent or fragmented community events calendars online -- or calendars without an audience -- means it's hard to find where to go see others <p>Online shared space with people different than me</p> <ul style="list-style-type: none"> ● Hard to find people who are different online ● Hard to engage them 	<p>Cross-income programming featured online</p> <ul style="list-style-type: none"> ● E.g. Children's storytime <p>Community Events Calendar</p> <ul style="list-style-type: none"> ● Personalize recs to attend, such as: "You have a book due; why not attend ..." <p>Observe others online</p> <ul style="list-style-type: none"> ● Ticker or announcement of what people are "working on at the library" <p>Peer groupings by interests with collections as premise</p> <ul style="list-style-type: none"> ● Suggest groups on basis of shared book interests ● Auto- and staff-led suggestions form groups across demographics aligned by book interest 	<ul style="list-style-type: none"> ● Community (diversity) ● Collections (alternative to social graph) ● Space ● Values 	<ul style="list-style-type: none"> ● Big Data "collections graph" ● Personalization ● Social tools ● Participant sign-up
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			● Opportunities to form groups, reserve space		
Meet / interact with new people					
<p>Offline community hub</p> <ul style="list-style-type: none"> ● Shared space ● Staff supervision ● Self-selecting locals <p>Premise to talk</p> <ul style="list-style-type: none"> ● Collections ● Programs 	<p>The “Internet Paradox”</p> <ul style="list-style-type: none"> ● We are connected more online but still more lonely (Marche 2012) <p>Desire to meet others</p> <ul style="list-style-type: none"> ● Library visit shifts from “to access information” to “to discuss, to present, to share” (British Library 2010, 4) 	<p>Awareness of offline events</p> <ul style="list-style-type: none"> ● Nonexistent or fragmented community events calendars online means it’s hard to find where to go to see others <p>Online shared space</p> <ul style="list-style-type: none"> ● Hard to engage people I don’t know online ● Hard to find local or “glocal” spaces online, where premise of meeting people offline is real 	<p>Community Events Calendar</p> <p>Multichannel pathways to meet others</p> <ul style="list-style-type: none"> ● Online discovery ● Offline follow-through: room booking at library <p>Staff-led or Self-led groups or programs (online/offline)</p> <ul style="list-style-type: none"> ● Announce interests ● Message people who have read a book or participated in the past ● Create sign-up sheet ● Reserve a space 	<ul style="list-style-type: none"> ● Community ● Collections ● Space ● Staff ● Library mission & values 	<ul style="list-style-type: none"> ● Big data and personalization ● Group organizing tools ● Social tools
Connect with others facing similar challenges					
<p>Access to partner organizations offline</p> <p>Interest-based groups offline</p>	<p>Meetup: immigrants said they used for learning English</p> <p>More time online</p> <p>Ad-based models of sharing info and news online</p> <ul style="list-style-type: none"> ● Crowds out partners/small-interest groups (Taylor 2014) <p>Ability to find niche peers online</p>	<p>Find others with condition outside my network</p> <p>Find community partners</p> <p>Shift online meeting safely to offline meeting</p> <ul style="list-style-type: none"> ● Often measures of online credibility do not apply to marginalized groups (large social networks or 	<p>Community Catalogue</p> <ul style="list-style-type: none"> ● Search for a book that suggests need can result in books <i>and</i> community partners and resources <p>Pseudonymous yet Accountable IDs</p> <ul style="list-style-type: none"> ● Allow exploration without revealing identity, yet disincentivize abuse by 	<ul style="list-style-type: none"> ● Values ● Collections ● Staff supervision ● Library ID ● Parent-child accounts 	<ul style="list-style-type: none"> ● Feature in Catalogue ● Social Tools ● Reservation Tools

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	<p>Obstacles to sharing online</p> <ul style="list-style-type: none"> ● Concerns about privacy and sharing (UK ONS 2014) ● High rates of online harassment (Dugan 2014) 	<p>web presence, credit card ID validation, etc.)</p>	<p>tying to real ID</p> <p>National to local</p> <ul style="list-style-type: none"> ● Online community increases pool of people with similar conditions ● Offline community brings it back to personal level ● 		
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Enjoy and grow

Find a good...

<p>Access</p> <ul style="list-style-type: none"> ● Collections 	<p>Consolidation offline and online:</p> <ul style="list-style-type: none"> ● Amazon ● Waterstones <p>Books no longer luxury</p> <ul style="list-style-type: none"> ● One week's wages in 1850s, 20 min wages today <p>Book sales rising</p> <ul style="list-style-type: none"> ● Increased 25% 1991 to 2011 (Macdonald 2011) <p>Online discovery</p> <ul style="list-style-type: none"> ● From 10% in 2000 to ~30% by 2015 bought online (for US numbers, Rigby 2011) <p>Declining but massive library use</p> <ul style="list-style-type: none"> ● #1 use of libraries, for "personal preference" not barrier to access (Macdonald 2011) 	<p>Curation</p> <ul style="list-style-type: none"> ● Too many options keeps people from choosing any (Schwartz 2004) ● Social network-based recs promote a few "hits" and ignore long-tail of other choices (Elberse and Oberholzer-Gee 2008) ● People tired or suspicious of commercial recommendations <p>Motivation from peers online</p> <ul style="list-style-type: none"> ● Not all have necessary role models (Kelly and Campbell 2012) <p>Meaning-making</p> <ul style="list-style-type: none"> ● Programs 	<p>Links across web can auto-direct to your local library</p> <p>Co-production of recs from community</p> <p>Staff profiles to amplify passion for a particular type of book</p> <ul style="list-style-type: none"> ● Staff share expertise nationwide rather than be local generalist <p>Community partner rec lists</p> <ul style="list-style-type: none"> ● Search for one title and see others on their lists <p>Personalized recommendations</p> <ul style="list-style-type: none"> ● "While you wait" ● Based on checkout 	<ul style="list-style-type: none"> ● Collections ● Community ● Staff 	<ul style="list-style-type: none"> ● Collaborative curation ● Social tools ● National links for pointing to books
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	<ul style="list-style-type: none"> ● >50% books read in UK are issued by library <p>Bigger “hits”, smaller “mid-list”</p> <ul style="list-style-type: none"> ● "Faced with a dizzying array of choices and receiving little by way of expert help in making selections, book buyers today are deciding to play it safe" (Robinson 2014) 	<ul style="list-style-type: none"> ● Access to discussions 	<p>history</p> <p>Algorithms with a non-revenue bias and human touch</p> <ul style="list-style-type: none"> ● “Nudge” people towards books that may be challenging or different <p>Personal recordkeeping becomes point of reference</p> <ul style="list-style-type: none"> ● Shelves of items “for later” viewed by others 		
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Share enjoyment and grow with others

<p>Offline meeting space</p> <p>Staff to make connections</p>	<ul style="list-style-type: none"> ● Goodreads ● Twitter’s #FridayReads ● Mark Zuckerberg’s book club ● Oprah’s book club ● Sites like “Islington Books” <p>Conversation has moved online...and scaled online</p> <ul style="list-style-type: none"> ● Amazon draws millions of users, aggregating reviews 	<p>Ability to create reference to book that is standard and yet non-commercial</p> <ul style="list-style-type: none"> ● BBC, newspapers point to Amazon reviews <p>Confidence to participate online</p> <ul style="list-style-type: none"> ● Non-digital users lack trust (Go ON UK 2012) <p>Child and teen safety online</p> <ul style="list-style-type: none"> ● Parents often want more ability to monitor children <p>Access to audience of critical mass</p>	<p>Book widget to display library-based standard book information and reviews</p> <p>Social tools: review/rate books</p> <ul style="list-style-type: none"> ● Personal record-keeping ● Encourage users to share <p>Safe library ID</p> <p>Message users across country, or meet up with users locally</p> <ul style="list-style-type: none"> ● Become champion for book -- encouraging any who has on “For later” shelf to start it 	<ul style="list-style-type: none"> ● Community ● Collections 	<ul style="list-style-type: none"> ● Social Tools
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Respond/remix/create

How opportunity divides are changing			How digital-enabled library can help close them		
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Support to create <ul style="list-style-type: none"> ● Space ● Inspirations 	<ul style="list-style-type: none"> ● Wattpad ● Amazon self-publish Exponential growth of books <ul style="list-style-type: none"> ● Hard to be discovered 	Support to publish and distribute <ul style="list-style-type: none"> ● Access to audience ● Access to editors Support young people in writing as an educational tool <ul style="list-style-type: none"> ● Fan-fiction 	Local author pages <ul style="list-style-type: none"> ● Promote and introduce local emerging authors Youth and fan-fiction at library <ul style="list-style-type: none"> ● Enable teens to write fan-fiction and share within library (in e-format) 	<ul style="list-style-type: none"> ● Community ● Collections 	<ul style="list-style-type: none"> ● CMS ● Enhanced catalogue ● Basic self-publishing tools
Give					
Volunteer					
Awareness of opportunity <ul style="list-style-type: none"> ● Bulletin board General volunteer tasks <ul style="list-style-type: none"> ● Low-skill 	<ul style="list-style-type: none"> ● Websites like volunteering.org.uk Fewer staff, more volunteers <ul style="list-style-type: none"> ● Heads of service need tech. to organize (Lee 2014) Service/skilled economy dominates <ul style="list-style-type: none"> ● Time-constrained ● Better educated, choosier Economic shock <ul style="list-style-type: none"> ● Increases need for volunteering mid-life (stay active even if unemployed; UK Government Office for Science 2015) Baby boomers retiring <ul style="list-style-type: none"> ● Volunteering to stay cognitively/socially tuned (UK Government Office for Science 2015) 	Awareness of meaningful opportunities -- online Matched volunteer tasks <ul style="list-style-type: none"> ● based on interests and skills Earned impressions and awareness <ul style="list-style-type: none"> ● Public sector not engaging beneficiaries to tout the service at scale of commercial brands 	Targeted, auto- appeals for volunteering <ul style="list-style-type: none"> ● By location, interest shown by books, and other factors Creative appeals for library support <ul style="list-style-type: none"> ● Ask people to list the library books that changed their lives and share on social media ● Scan a book with phone to see if “white-listed” for rapid donation 	<ul style="list-style-type: none"> ● Community ● Values 	<ul style="list-style-type: none"> ● Volunteer tool

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Help my family

Staff support to learn of opportunities for children	Enrichment divides (Gibb 2015) Time-wasting divides	Online awareness of opportunities for children	Online “kids corner” with events in language kids and adults can understand	<ul style="list-style-type: none"> ● Values ● Staff supervision ● Library ID ● Parent-child accounts 	<ul style="list-style-type: none"> ● Parent-child management ● Community Events Calendar
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Appendix IV

Digital solutions for the “negative image” of public libraries

While the best practice can be brilliant, some services are not fit for service. Unfortunately, this makes many perceive libraries, in William Sieghart’s words, as “old-fashioned places that have little relevance in today’s society.” To repair this perception, let alone true perception, can be expensive. Digital offers an alternative to cost-effectively create a contemporary public library service.

Ideal	Perceptions of Some	Hard Fix	Digital Fix
Buildings			
<ul style="list-style-type: none"> ● Clean ● Plush and Comfortable ● Contemporary ● Safe ● Attractive 	<ul style="list-style-type: none"> ● “Grubby and Grotty,” per a user ● “Stiff,” per a user ● “Old-fashioned,” per <i>Independent Library Report for England</i> 	<p>Build new or renovate existing branches to compete with Costa and Starbucks</p> <ul style="list-style-type: none"> ● Cost: <ul style="list-style-type: none"> ○ Renovation <ul style="list-style-type: none"> ■ Basic effort to paint and add more comfortable chairs and other superficial improvements at £15,000 per location would across 3,000 library service points still cost nearly £50M ■ Overall renovations to reach “fit for purpose” standards was estimated at £950M+ in today’s pounds (adjusted from 2006 pounds reported in Information Daily 2006) ○ New <ul style="list-style-type: none"> ■ £1B+ for re-building central branches in authorities. Examples: <ul style="list-style-type: none"> ● £189M - The Library of 	<p>Re-activate and make reservable existing branches to differentiate from others</p> <ul style="list-style-type: none"> ● Cost <ul style="list-style-type: none"> ○ Programming costs ○ £20M digital platform ● Examples <ul style="list-style-type: none"> ○ Author events ○ Community events ○ Rooms that can be reserved for meeting or study (different from Costa) <p><i>“Better chairs wouldn’t do it. Islington is diverse I think the library could do events and reading groups that bring people together around each other’s culture and literature” (AB white woman stay-at-home mom in 50s, Islington)</i></p> <p>Create new digital branch</p> <ul style="list-style-type: none"> ● Cost

Ideal	Perception	Hard Fix	Digital Fix
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- Birmingham
- £1M upfront, £6M total for Dorset's main location
 - If we estimate a need across England's 151 library authorities for just 1 more Birmingham-sized new building and 150 Dorset-sized new or substantially renovated buildings, we face £1B+ in expenses

- Challenges:
 - Expensive
 - Benefits are temporary; footfall increases following renovations or new branches seem to fall back after first 5-10 years.

- £20M for all of England, in 151 local instances
- Examples
 - Stunning contemporary websites
 - Fluid user experience to browse books (e-books or print)
 - Gateway to programs and activities

Atmosphere

- Purposeful
- Quiet and focused
- Non-judgmental

- Stuffy
- Dead and boring -- though many do appreciate focused quiet

Punish behavior after

- Examples
 - Wait until conflict to resolve

Enable to sort, forewarn, and allow

- Examples
 - Reserve quiet rooms
 - Reserve discussion rooms
 - Check location rules and uses before you go, such as schedules for multiple-use sites

Library users

- Cultured
- All-accepting and diverse
- Aspiring
- Diverse cross-section

- Homeless: "I only go to the library on sunny days; on rainy days, it's just full of people looking to stay dry" (woman)

Reject loud and smelly guests

- Examples
 - Create policy to keep from library people who carry large bags or present in a certain way
- Challenges
 - Edge cases
 - Antithetical to mission of library to give

Attract and connect critical mass of all guests

- Examples
 - Events marketed online
 - Book club and other groupings self-initiated

Ideal	Perception	Hard Fix	Digital Fix
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interviewed).

opportunity to all, to be non-judgmental

Staff

- Helpful
- Personable
- Well-trained

- “Harsh and quiet”
- “Bureaucrats. Just looking to do the bare minimum”
- Not tech-savvy
- Staff not always as relatable as peers

Train all staff to be helpers to all

- Examples
 - Digital skills leadership funded by SCL
- Cost
 - £5M+ to train staff in all 151 library authorities (scaled based on past foundation grants for training)
- Challenges
 - Range of skills required and magnitude of skills gap in many circumstances
 - “I did not get enough training prior to taking the job...Some happened, but it was not enough... The level that is needed is fairly high because it is nerve-wracking and exhausting to explain something you only partly understand to a person who does not understand anything. I took a course outside work on Microsoft Word 2010 in order to help” (female staff worker in 50s, Doncaster)

- Staff turnover ... especially as funding declines

Changing attitudes:

Broadcast the best of staff skills, and convene community skills

- Examples
 - For those opting in, people checking out advanced math books are suggested to volunteer as mentor for those checking out basic math books
- Benefits
 - £1M+ value equivalent to staff time if volunteer time increases 10% from today, driven by online calls to action, online volunteer matching, and online registration

Irrelevance: “Does anyone still use the library anymore”

- Perennially valued
- Dignifying
- Engaging

- “The web is better”
- “Books are cheap”

Traditional Marketing Campaigns

- Paid - out of reach
- Community circulars
- In-branch -- only reaching existing users

Cost-effective marketing

- Social media
- Organic search marketing
- Events Calendar

Ideal	Perception	Hard Fix	Digital Fix
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- “Boring”
- Not cool - not even for today’s tech nerds
- “None of us use it--” “Nah, you do too!”

Focus on “value-adding” services *around* free in digital: discovery and engagement

Appendix V

Digital solutions for operational effectiveness in libraries

The lack of shared digital services across libraries not only hurts the customer experience, it hurts the entire operation that stands behind it: from performance management to marketing. In the business world, digital platforms have changed both customer expectations and the ability to deliver services that meet those customer expectations. In libraries today, the lack of digital infrastructure continues to limit the ability of libraries to understand and to meet user needs, adding cost while decreasing benefit.

Problem	Quantitative explanation of problem	Quotes about problem	Local-Level Fix	National Digital Fix
Gather data to understand performance				
<ul style="list-style-type: none"> ● No or limited real-time data about collection use, program attendance, and outcomes (e.g. UK MLA 2006 report on “Better Stock, Better Libraries”) ● No or limited ability to compare library authorities on apples-to-apples ● Limited use of data in real-time resource management ● Poor stock management - as long holds queues 	<ul style="list-style-type: none"> ● 50-200 FTEs (£1-5 M in salary) for extracting data across England because of difficulty (based on estimates from library staff surveyed) ● £0.5-1.5 M costs spent on consultants and software 	<ul style="list-style-type: none"> ● “We’ve no confidence in the figures that we receive” ● Need “staff users able to create and manipulate management reports without the need to have technically advanced knowledge” ● About 20% mention poor reporting limiting their 	<ul style="list-style-type: none"> ● ~1/3 libraries using software or consultants individually (about £0.5-1.5 M costs) to help with data and performance management, which are redundant costs and don’t solve underlying problem of comparability across services ● “Found stock management difficult, [so] purchased CollectionHQ to assist” 	<ul style="list-style-type: none"> Collect big data <ul style="list-style-type: none"> ● Normalized data from each local LMS ● Privacy settings and other safeguards at individual and aggregate level Common tools for understanding data <ul style="list-style-type: none"> ● Template reports to save time ● Realtime, apples-to-apples comparisons across libraries Common tools for acting on data <ul style="list-style-type: none"> ● Personalization services that make use of data ● Automated actions to optimize collection performance given real-time data, such as promoting other content whenever wait time for a given item is above a threshold

tend to lead to over-purchase of stock

to do tasks that should happen within the core software

work in free text response (SCL/BiblioCom mons Survey 2015)
● About 20% mention usability of admin panel hurting their work in free text (SCL/BiblioCom mons Survey 2015)

Integrate to work fluidly across suite of IT services

- Core IT not built to accept innovative new products through integrations, nor to evolve internally
- Adds cost to budgets
- Adds complexity to user experience
- IT services in library sector are vertically stacked, with each vendor trying to build all layers of functionality despite having split the market into small amounts of funding

- 30-100 FTEs (~£0.8-2.6M in staff salary) in managing online databases, including their integrations
- 40% say their LMS does not support integrations they need, even as 77% have attempted integrations -- the overlap in percentages suggesting

- Catalogue records management: "Regular updates sent to OCLC and Collections HQ. Would like a better API."
- Payments: "Lacks integration with local authority FMS system - now seen as an absolute must have."
- Need "fines integration"
- "EDI required workarounds to function. Stock rotation only functions due to

- Expensive custom work to create one-off integrations that don't work well for users
- Technical and cost limits stop projects

Platform middleware to normalize local data for national applications

- Create common infrastructure for shared fixed costs on top of which "apps" can be built at lower cost

Platform APIs to enable two-way integrations with new applications

- This expands the number of potential offerings
- This reduces switching costs for migrating to a potential offering, ensuring more robust competition

Move towards a horizontal IT services market

- Avoid replication of core functionality by multiple vendors
- Avoid lack of interoperability between multiple vendors
- Instead focus vendors on problems whereby the solution can be scaled across all libraries, and switched out if it fails to work
- This makes the least amount of library IT funding go furthest

the
frustration
and wasted
effort
(SCL/BiblioC
ommons
Survey 2015)

adjustments”

Adopt best practices from other libraries and innovate new national services

- Best practices in one library authority is often non-transferrable to another because of IT differences
- Core IT not built to accept innovative new products through integrations, nor to evolve internally
- Adds cost to budgets
- Adds complexity to user experience
- IT services in library sector are vertically stacked, with each vendor trying to build all layers of functionality despite having split the market into small amounts of funding

- £0.5-1.5M spent on e-book platform fees that should instead be spent evolving core platform (based on estimates from library staff surveyed)

- "[E-book catalogue integration] is offered as an optional extra, good product but expensive"

- Best practices are discussed but not implemented
- Shared innovative projects stay at the margins: as with Bookmark Your Library, national resources are put into silos that take extra effort to build and produce lower benefits in usability
- Technical limits and costs stop projects

Adopt shared technology infrastructure so that best practices are relevant and can be implemented across libraries.

Instead of sharing ideas, share the work of implementing them: with the right underlying infrastructure, IT projects enable the same work to be enjoyed across all libraries

Platform middleware to normalize local data for national applications

- Create common infrastructure for shared fixed costs on top of which “apps” can be built at lower cost

Platform APIs to enable two-way integrations with new applications

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- This makes the least amount of library IT funding go furthest

Collaborate digitally with partner organizations, sharing audience and resources

- Lack of uniformity across library authorities increases costs to collaborate with national partners
- National resources that would be shared for free with libraries are withheld, such as free content from publishers, BBC, British Library, etc.
- Local audiences that would be shared for free with partner non-profits are also withheld
- £40-400K spent on “content enhancement” that publishers would likely give for free if distribution were simplified (based on estimates from library staff surveyed)
- Stephen Page, CEO of Faber and Faber, has suggested that “you don’t need a book-buying budget ... to make available an extraordinary wealth of material” -- but you do need a technology platform! He cannot provide free material given the “heavy lifting” and “structural” impediment of feeding content one-by-one (Reading Agency 2013)
- Technical limits and costs are non-starter
- Partner resources remain untapped
- Partner resources put in silos that take extra effort to build and produce lower benefits in usability (for example tools of The Reading Agency: excellent, yet not at scale and not integrated for full benefit with the library; book lists are created, yet no link to see how to check one out)
- Platform middleware to normalize local data for national applications
 - Create common infrastructure for shared fixed costs on top of which “apps” can be built at lower cost
- Platform APIs to enable two-way integrations from national partners, inserting resources into the library environment and pulling audience out of the library environment

Ease staff-side user experience to avoid training and time waste

- High barrier to staff retraining limits decisions to migrate
- Also limits full cost savings and viability of community-managed libraries
- 40-200 FTEs (£1-5.3M in staff salary) for “importing and managing records,” a task that should be more automated
- Comments from BiblioCommons survey:
 - “In current financial circumstances migration is no longer a serious option due to staff and volunteer retraining
- Attempt to overcome through training
- Invest in shared interfaces where input from across libraries can be put towards a better interface one time

- costs."
- "Many procedures require access to multiple screens."
- Want "fewer steps/screens to achieve transaction"
- "Reporting is not as intuitive as it should be"
- Top issue of one LMS manager is "Fewer clicks, more intuitive interface"

Make public aware of services

- Marketing is more expensive and less effective because digital infrastructure is missing
- Low use of existing web services because they remain buried
- 160-500 FTEs (£4-13M in staff salary) for marketing and promotion of services, and yet very little on online marketing at scale (estimates from staff surveyed)
- Library staff feel their work is invisible, unappreciated -- bad for impact and also for morale
- Library users discover library programs, and have said "Shout it from the rooftops!"
- Attempt to overcome through traditional marketing -- posters, flyers, direct mail
- Online presence to drive offline presence
 - 80%+ of consumers research online before buying offline (Rueter 2012)
- Common social sharing tools
 - Social referrals now the #1 source of web traffic (NYTimes 2014)
 - Ensure large number of users overall, so that the small portion of users who choose to share (the norm across the web) is still large enough to make a mark
- Search engine optimization
 - Requires consistent strategy and broad scale across library authorities

Appendix VI

Digital solutions for activating existing library assets

A digital strategy will succeed only as part of a sound library strategy. And a sound library strategy applies assets the library uniquely holds to solve public problems nothing else can. The library must use its unique strengths, from the size of its community to the strength of its values. The library will not be able to supplant the associations it has with literacy and learning, nor should it; instead, it must build powerfully upon and around them.

Quality	Quantity	Why costly if lost	How to use it in digital
Values Open to all, for all they aspire to			
<ul style="list-style-type: none"> ● Safe <ul style="list-style-type: none"> ○ Youth say “parents were happy with them spending time in the library, not only because of its association with education and learning, but also because parents ‘trust’ the library” (ACE 2012, 8) ● Open to all <ul style="list-style-type: none"> ○ 74% say libraries are important to their community (Macdonald 2012) ● Free to choose all aspirations <ul style="list-style-type: none"> ○ Philip Pullman: “The blessed privacy! No-one else can get in the way, no-one else can invade it, no-one else even knows what’s going on in that wonderful space that opens up between reader and book” (quoted in Overbey 2011). ● Internally motivated <ul style="list-style-type: none"> ○ Zadie Smith: “There’s no point in goofing off in a library: you are acutely aware that the only person’s time you’re wasting is your own” (2012). ● Not pressured (not commercial) 		<ul style="list-style-type: none"> ● Trust developed over 100+ yrs ● Among most all-embracing social institutions 	<ul style="list-style-type: none"> ● Create value-infused space online <ul style="list-style-type: none"> ○ Safe ○ Open ○ Free to choose ○ Motivated ○ Not pressured (non-commercial) ○ Not judged (non-governmental)

Quality

- Not judged (no government)
 - Bob Gann, NHS: “We found the non-judgmental space of libraries uniquely enables people to feel comfortable seeking help”

Quantity

Why costly if lost

How to use it in digital

Community

Many, diverse, readers

- | | | | |
|---|---|--|--|
| <ul style="list-style-type: none">● Goodwill<ul style="list-style-type: none">○ Pro bono outreach like “Premiere League Reading Stars” is incomparable● Diverse<ul style="list-style-type: none">○ equal use by top 20% of wealth and bottom 20% of wealth (UK DCMS 2014b)● Readers<ul style="list-style-type: none">○ best predicts library use (Macdonald 2012)● Children, Parents, and Retirees | <ul style="list-style-type: none">● Large audience online<ul style="list-style-type: none">○ Libraries have ~5M visit websites each month, mostly in the catalogue○ Waterstones has <1M and Goodreads ~2M● 1/6 visit to borrow<ul style="list-style-type: none">○ ~8M borrowed last year in England (CIPFA 2014)● ~18M visited libraries last year in England (UK DCMS 2014b) | <ul style="list-style-type: none">● Size<ul style="list-style-type: none">○ Audience expensive to grow online: tech is cheap, marketing fickle● Diverse<ul style="list-style-type: none">○ Top incomes influencer (Sieghart)○ “Services only for the poor become poor services”● Funding<ul style="list-style-type: none">○ More willing to pay for libraries if you use them○ More willing to pay for councils if you use libraries | <ul style="list-style-type: none">● Leverage volunteers and partners● Develop apps that thrive through crowd-sourcing and web-scale● Share audience with partners<ul style="list-style-type: none">○ Other cultural and service institutions want to reach bottom 20%○ Publishers especially want to reach top 20%● Use top-incomes to help serve bottom-incomes● Shape culture through readers |
|---|---|--|--|

Collections

Tell us about the world, and the world about us

- | | | | |
|---|--|---|---|
| <ul style="list-style-type: none">● Lead to activity<ul style="list-style-type: none">○ Learning○ Self-help○ Exploration● Lead to connections<ul style="list-style-type: none">○ Excuse to meet people○ Relevance of services● Free access and desired serendipity | <ul style="list-style-type: none">● ~50% of books read in UK issued by library (Nielsen BookScan 2014 and CIPFA 2014)<ul style="list-style-type: none">○ Nearly 70% of reads in early 2000s, possible to regain ground | <ul style="list-style-type: none">● Hard to develop an audience<ul style="list-style-type: none">○ Risk losing without collections given they are #1 predictor of library use● Hard to develop the | <ul style="list-style-type: none">● Use book choice as signal to direct users to activities<ul style="list-style-type: none">○ Events○ Classes○ Branches● Use book choice to build social groupings<ul style="list-style-type: none">○ Peers |
|---|--|---|---|

Quality	Quantity	Why costly if lost	How to use it in digital
<ul style="list-style-type: none"> ○ Free means lower penalty for bad choice ○ “Let’s see what they have about...” ○ Greater willingness to wait for exact match ● Children’s Books <ul style="list-style-type: none"> ○ Huge, persistent demand ○ Brings young parents of all incomes into library 	<ul style="list-style-type: none"> ● ~78M books in stock 	<p>equitable “social graph” (or web of relations) that books suggest</p> <ul style="list-style-type: none"> ○ Can use books as nodes to build an equalizing network rather than a rich-get-richer network ○ Based on interests not income or race 	<ul style="list-style-type: none"> ○ Mentors ○ Groups ● Stretch and nudge choices as a service <ul style="list-style-type: none"> ○ Leverage willingness to explore ● Use massive reader demand to help shape cultural growth, not just respond to it <ul style="list-style-type: none"> ○ Local authors ○ One Book One London ● Use books as building block for children’s literacy and digital literacy

Buildings Local, neutral, safe places for meeting (though too many branches becomes burdensome)			
<ul style="list-style-type: none"> ● Embedded in local community fabric ● Often in places most central to life of community 	<ul style="list-style-type: none"> ● 3,000+ service points (CIPFA 2014) ● As many as Costa Coffee (Wood and Bowers 2011) 	<ul style="list-style-type: none"> ● Real estate likely will never be re-purchased by libraries again -- values have increased in many areas 	<ul style="list-style-type: none"> ● Support discovery online of locations, community events calendars, reservation abilities, and other ways to show what takes place inside and motivate coming in

Staff Helpful and at their best as “community impresarios”			
<ul style="list-style-type: none"> ● Patient and people-oriented 	<ul style="list-style-type: none"> ● 16,000 full-time equivalent staff in England (CIPFA 2014) ● Also 32,000 volunteers in part-time work in England (CIPFA 2014) 		<ul style="list-style-type: none"> ● Activate as impresario: <ul style="list-style-type: none"> ○ “The 21st century librarian will need to be more of a community impresario ... who can champion their communities’ needs and generate new

Quality

Quantity

Why costly if lost

How to use it in digital

business and audiences for the library” William Sieghart (UK DCMS 2014)

Library card and identity

Easy to get, holds people accountable, lets people explore -- especially kids

- Civic and Universal
 - No commercial use
 - No cost barrier
 - Independent
 - Shielded from probing government use
 - Can maintain private
 - Accountable
 - not anonymous
 - tied to a real name
 - checked by staff
 - Anonymity of other online IDs like emails linked with rise in abuse online (Dugan 2014)
 - Exploratory
 - can be pseudonymous
 - can hide from others as barcode or username
 - Pseudonymity linked with moving beyond stereotypes and stigma (Kaste 2011)
 - Linked between parent and child
 - In-branch process to monitor use of material
- ~30M estimated library card holders in England (based on US ratios & CIPFA data)
 - versus ~20M credit card holders (UK Cards Association 2014)
- Need formal process for gathering IDs at scale
 - Need to build trust
- Use across cultural institutions and civic web online
 - Use to help parents and service providers safe-guard children online, such as for learning apps

Quality

Quantity

Why costly if lost

How to use it in digital

Online library catalogue

The seeds of something good: Many users, expressing intentions and connections, while logged in to ID

- Where users express intentions
 - Searching for books indicates a need
- Where users express ID
 - Logged-in state
- Where users express location
 - Looking to place requests at select locations
- Search is basic and contemporary to web world
 - Google search results and Amazon search results are fundamentally similar
- BUT the user experience of most catalogues today is fundamentally impaired
 - None of the above potential is leveraged
 - Hard to use
 - Fragmented with other digital silos: e-book catalogue, digital reference, etc.
- ~70%+ of time online at library is in catalogue (based on comparing local pageviews across website and catalogues)
- Hard to build user-base online
 - Otherwise pay Google and Facebook to present ads to users
- Hard to develop user interaction that reveals intentions and opportunities for connections
 - Otherwise rely on social or commercial interests, which segment even more by race and income
- Exploit potential of search terms to
 - suggest partner materials
 - showcase events, classes, etc.
 - connect users
- Develop data and decision-support tools
 - Pull information from use of catalogue to inform staff about program development
 - Help manage collections development

Appendix VII

Options considered for national integration

i. The Integration Challenge

The path to creating integration is not obvious or easy. All local libraries in the UK have mature library automation systems in operation today, with many moving parts. Many of these systems have evolved over decades without coordination, yet together, these systems serve millions of users a day. The success of any national services platform is closely dependent on deep integration with these existing systems and the user workflows that they support. Without complete integration, users will revert to existing siloed catalogues and other applications to perform daily activities, leaving the national services platform and applications without the reach and critical mass upon which its success depends.

Interoperability would make integration easier. Unfortunately the library automation sector has not prioritized data standards or APIs. In the LMS sector APIs are incomplete. And where they exist they are often proprietary, meaning that point-to-point integrations must be developed for each LMS. e-Book lending services are similar. They have released APIs to 3rd party integrators within the last 2 years, but again the lack of open APIs means that point-to-point integrations must be developed for each vendor. And they illustrate the need for comprehensive integrations: in the absence complete APIs users have continued to use vendor silos for their transactions, isolating those users from a full experience of their library. Achieving integration across the LMS and many other digital suppliers in all local authorities, with the flexibility to easily add new integrations, will necessitate a significant financial investment.

ii. Integration – An Appraisal of Options

We considered five integration approaches, which are ordered here from least cost to highest cost:

1. Lightweight Apps
2. Extension of Bookmark Your Library
3. Middleware
4. Standards-based LMS Interoperability
5. National LMS

	Deploy in and improve local user experience		Enable national modules & other sharing		Support IT ecosystem for ongoing innovation	Near-term achievable
	<i>UX</i>	<i>Utility</i>	<i>UX</i>	<i>Utility</i>		
Lightweight Apps (local website)	✓					✓
Extension of Bookmark Your Library (national website)			✓			✓
Middleware-based Interoperability with apps	✓	✓	✓	✓	✓	✓
LMS-based Interoperability with apps	✓	✓	✓	✓	✓	
National LMS		✓		✓		

ii.1 Lightweight apps (local websites)

Description

Lightweight mobile or web applications that use what is available through existing LMS APIs to provide an improved UX across multiple platforms

Relative cost

Low in the short term, high in the long term

Depth of integration: low

- Supports only the most basic search, circulation and account management use cases
- Not viable as a comprehensive OPAC replacement since it lacks advanced functionality, for example faceted search
- Without normalization of data, no value-added data processing (e.g. associating the various editions of a work) or data enhancement (e.g. shared user-generated content or reading-level data, or shared national-partner content) is possible.
- Doesn't allow for any new functionality beyond what's supported by each individual LMS, for example improved relevance in search results

Obstacles to implementation

- Completely dependent on LMS API support, which some LMS vendors may not be able to provide, or only at high cost
- Lack of offline indexing will make normalization across LMS vendors, integration with other systems, or advanced data processing difficult. As a result it would be difficult to aggregate UGC, catalogue enhancement, partner content across library authorities.
- Not suitable as a basis for a library-services platform.

ii.2 Extension of Bookmark Your Library (FAB Libraries)

Description

Bookmark Your Library, or more particularly the FAB Libraries service that displays inactive catalogue records from multiple libraries, could be extended to better integrate with the LMS. Existing LMS APIs could be leveraged to support basic circulation use cases in the FAB Libraries interface, and links to local OPACs could be improved.

Relative cost

Medium in the short term, high in the long term

Depth of integration: low

- Catalogue metadata and holdings are well integrated, as most libraries are already uploading data
- Not viable as a comprehensive OPAC replacement since it lacks advanced circulation and account management functionality; also lacks item availability
- Doesn't allow for new functionality beyond what's supported by the LMS, except what's enabled from indexing of metadata
- Not suitable as a basis for a library-services platform.

Obstacles to implementation

- LMS integration has been a weakness of WorldCat and the FAB Libraries solution
- Completely dependent on LMS API support, which some LMS vendors may not be able to provide, or only at high cost

ii.3 Middleware-based LMS interoperability

Description

Using enterprise application-integration methodologies, middleware could be developed for each LMS to provide a standardized API.

Relative cost

High in the short term, potential long term savings from standardizing the requirements of the LMS in England, and enabling transformation at scale.

Depth of integration: high

- Ability to extend LMS APIs with enterprise application integration (EAI) patterns such as web-scraping means comprehensive integration is possible.
- The middleware can be used to define evolving API standards for LMS providers.
- Full access to LMS data for indexing enables new functionality beyond what's currently supported by the LMS, for example improved relevance
- Enables data normalization across LMS vendors, deep integration with other systems, and advanced data processing such as FRBR
- Provides a platform for others to build on.
- Suitable as a basis for a library-services platform.

Obstacles to implementation

- Reliant on several integration strategies in the worst case, but achievable through well established enterprise application integration (EAI) patterns
- EAI strategies require specialized experience and tooling
- Middleware for each LMS must be coordinated with API changes
- The absence of a standards-based architecture among LMSs

ii.4 Standards-based LMS interoperability

Description

LMS vendors adopt and implement common standards for data and business logic, implement modular architecture, and deliver open standard APIs. SIP is a good example of an LMS standard - unfortunately there are few others.

Relative cost

Very high cost, and would take years to implement

Depth of integration: High

Obstacles to implementation

- The library-technology community in England is at least three steps away from a standards-based service model. And each of these steps would take at least a year to implement, at substantial expense. Each LMS would require:
 - A modular internal architecture - to compartmentalise business logic and data. To varying degrees this would be a departure from the monolithic, vertically integrated status quo.
 - Comprehensive, open APIs
 - Adoption of common standards.
- Some legacy LMSs have been superseded and vendors would require libraries to migrate to their newer platforms. This would force a costly premature upgrade on many local authorities.
- Not fit for purpose: the LMS was designed to manage local physical inventory and it would remain difficult to change internals of LMS or extend LMS functionality beyond that.
- Not suitable as a basis for a library-services platform.

While a standard-based approach to creating LMS interoperability may on first blush seem to be a feasible alternative approach to aggregation, we concluded that it would not provide a timely solution. The systems which require interoperability (the various LMSs across authorities) are in most cases two “generations” away from being able to support standard APIs. A modular architecture would need to be implemented first in each LMS to make APIs possible. Then the standardized APIs would have to be implemented in each LMS. These steps could take years to implement.

ii.5 National LMS

Description

Select a single national LMS vendor and migrate all local authorities to this system.

Relative cost

Very high in the short term, likely long term savings from consolidation

Depth of integration: Highest

- Highest possible degree of integration, assuming full control of LMS
- Ability not just to extend APIs, but change internals of LMS
- Easier implementation of national programs, for example migration to a shared cloud catalog, or automatic registration at birth

Obstacles to implementation

- Not fit for purpose: the LMS was designed to manage physical inventory. It offers a fraction of the functionality that is required for a user-centred web presence for libraries.
- Harmonization of requirements across all local authorities may not be possible
- Large migration and onboarding effort for each local authority.
- Disruption of existing staff workflows, re-training. One library authority, for example, reported. "In current financial circumstances migration is no longer a serious option due to staff and volunteer retraining costs."
- Disruption of local applications and programs built against existing LMS
- Multi-year contracts make a near-term migration difficult: only 38% of LMS contracts are up for renewal before 2018.

iii. A 6th option: Make no concerted investment

Likely outcome: invisibility, growing irrelevance, and possible extinction of public libraries.

VIII Suite of Components for a Modular Platform Architecture

Library Automation Layer

"One thing I've learned about the tech side of libraries is to build services not websites."

Nick Poole, Chief Executive Officer at CILIP

The library automation layer provides a unified, comprehensive set of APIs for for all patron-facing data and transactions at all libraries, regardless of underlying limitations or variations of each LMS, or custom configurations at each local library.

Key Requirements

The Library Automation Layer consists of two fundamental services that underpin the

1. Middleware:

- a. Purpose: to translate data and business logic to a standard suite of APIs and data formats.
- b. Middleware must be built for each LMS that will standardise for all proprietary 1) business logic and 2) data formats within each LMS

2. Data Aggregation Services - Transformation and Enhancement

- a. Purpose: indexing and processing of existing data for linking, aggregation, enhancement.
- b. Normalizing and mapping MARC and collection codes from libraries (in all their flavours) and ONIX from publishers onto a single bibliographic data model
- c. FRBR - the linkage of all editions and formats of a single work - across all libraries
- d. Data enhancement services - FRBR-based mapping enhanced data from various suppliers to individual titles or authors:
 - i. User generated content such as tags must be both displayed and indexed
 - ii. Reading-level data must be both displayed and indexed

- iii. Jacket images from vendors or publishers
- iv. Author bios, interviews, or sneak peaks from publishers
- v. Third-party reviews, e.g. from the *Times* or the *BBC*

Identity Service

Strategic Purpose

As device and channel fragmentation increases, it's increasingly imperative to identify customers across devices, build rich customer profiles and provide more personal experiences across channels. The identity service must provide APIs to easily deploy a secure, standardized registration, authentication, and profile management experience across all web properties, mobile applications and partner and community integrations.

Key Requirements

- Central identity management service for all libraries, and across all components
- Single sign-on with username or email replaces lower-level credentials such as patron barcode
- Single user profile combines user information, accounts, activities, and shared content in one place
- Open standard APIs such as OpenID Connect and OAuth 2.0 enable integration with partner and community sites

Single point of integration for linking library IDs with other national or local government identity initiatives

Branding Service

"I can't remember the last time I borrowed a book. But I often go to a library - it is an institution, civic and enlightening - that I want to be a part of."

User interview

If libraries are to nurture an ecosystem of interoperable service providers to deliver best-in-class functionality for each component, a

branding service is required to allow libraries to to configure their branding assets once, and have those assets rendered in every user-facing module on all devices.

Strategic Purpose

The local face of the community library was identified in user research as an asset with the potential to draw lapsed users back to the library. This point was underscored in conversations with representatives of local government, who emphasized the importance of local identity in service delivery.

Effective library branding extends beyond brand assets to encompass library-centric service design. In contrast to existing practice for e-content, for example, linkages with third-party suppliers must direct the user's attention, activity and data back into the cultural space of libraries.

Key Requirements

- Centralized repository for stylesheets, images, components, navigation, settings and other branding assets
- Easy to use management interface for configuration of all brand parameters
- Fine grained branding control at both national and local levels
- Ability to create separately branded program, partner and community sites
- REST and JavaScript APIs for easy integration of brand assets and code into other components
- Library-centric service design for commercial third-party integrations

Catalogue

The catalogue is the foundation of an online services provider in any sector that manages an inventory of objects, whether goods or media - whether for loan or for sale. In the ecommerce world the catalogue component consists of two basic components: the product database and Order Management. The same is true for the library.

Key Requirements

The old minimum:

- A search engine in keeping with modern web standards
 - Indexing and facets that reflect the richness of library structured data.
 - Search relevance highly optimized for library metadata and use cases
 - Fully integrated ebook discovery
- Easy transactions -- including:
 - account creation (card sign up)
 - full replacement of all existing OPAC transactional functionality

The new minimum: “attention management”

- Cross merchandising or “feature display”
 - The linking / associating of related offers -- events, services and partner offers --to a user’s search.
 - Ultimately, we believe that effective cross merchandising for libraries will depend on a combination of “hand curation” and machine magic (effective algorithms). In our own research and development work in this area with North American libraries....
 - All bidders should be asked to detail their own approaches and capabilities
- The ability to prioritize the display of “inventory” that is most sustainable for the library... For e-commerce providers this means the “highest margin” items -- for libraries this means
 - Alternate titles that are “available now” presented in search results or a holds queue
 - Alternate formats for a given work, ideally the format that is most affordable for libraries.
- Browse vs. search (see CMS)
- Flexibility to re-imagine traditional borrowing models -- e.g.
- Complete integration of e and p resources

Without these capabilities users will only ever see what they know to ask for.

Social Layer for Catalogue

"The knowledge was in the community, not in the books. Staff became librarians of the knowledge in the community."

Tim Ahrensbach, coordinator of Library Lab on Williston Green

Social functionality encompasses a spectrum of user engagement. A small but significant percentage of users will fully engage in creating written content or content lists. Many more will rate content, "like," or engage in personal record-keeping on virtual bookshelves. Nearly all users will passively benefit from reading reviews, or discovering new content through lists and read-alike recommendations.

Strategic Purpose

- Equip the Information Enabled as co-producers for the Information Overwhelmed
- Network the Connection Poor
- Engage the Digitally Distracted while delighting the Digitally Inspired
- Orient and motivate the Passive Majority while mobilizing the Confident Contributors
- Establishes the same sense of community and group-forming that enlivens the library's physical spaces.

Key Requirements

- Personal Record Keeping tools
 - Most users of social systems are motivated to contribute "social" data first and foremost for reasons of personal utility -- not community benefit.
 - Requirement: Granular controls over what is shared, what remains private.
 - Shared Response
 - ratings
 - reviews
 - tags
 - Collaborative Curation and list building
 - Group forming + messaging -- around shared interests / intentions
- [NB -- all based on profile data which users have chosen to make visible to the community]
- For all "wishlist" functionality
 - for example: Anyone want to read "XXX" together -- messaged only to those in the community

- “Who else has this on their for later
- Question / Answer
- Follow - by category / genre
- Catalogue/ annotations -- ability to add
- Resource curation -- “lists”
- Messaging - Private
- Messaging -- Group

Underpinning all

- Legal infrastructure to support content sharing
- Safety, services tailored for use by children
- Flagging content (violates terms, potentially offensive, spoilers)
- Blocking users
- Following users
- Granular privacy controls

Technical

- Shared content aggregated globally across libraries
- Content is shared across editions (within and across library systems) using FRBR matching
- User generated content matched and incorporated into the search index
- APIs and widgets for integrating social sharing into websites and native apps

Content Management System

Strategic Purpose

A Content Management System allows multiple people to create, publish, and edit content using a centralised web-based user interface. Using a content management system, content creators can publish not only complete documents, such as articles, blogs, or pages, but also dynamically assemble chunks or fragments of content in different ways to ensure that it is kept timely and relevant to visitors. Content management systems typically provide content creation tools that do not require specific technical expertise to use.

Key Requirements

- Multiple users and roles with different levels of control

- Non-technical content creation environment (WYSIWYG editors, visual tools)
- Content publishing and approval workflows
- Scheduled content publishing and removal
- Group and associate content according to configurable categories (taxonomies)
- Configurable look and feel
- Upload and manage content assets such as images, media, and other static content resources
- Assemble dynamic web pages from multiple content fragments
- Search Engine Optimized

Library eReader

“Libraries must be able to choose content, devices and apps from any provider or from multiple providers, without bundling that limits a library’s ability to serve content they purchase on platforms of their choice.”

readersfirst.org

Strategic Purpose

Control of ebook workflows should be a part of a library’s digital strategy. Both discovery and reading experiences should be optimized for ease-of-use, response and engagement, and providing discovery pathways to my next read. From this perspective, the e-reader is an important extension of the library brand. The configuration of both the e-reading and e-discovery experiences determine the degree to which e-borrowers are exposed to the full scope of the library’s offer.

A locally branded library-centric e-reader is an important complement to unifying e and p discovery. A library e-reader can draw users into conversations and subcultures around books. The library’s community space is strengthened by fully integrating these conversations about ebooks into its community spaces.

Key Requirements for e-Reader

- Rich reading experience across a broad range of platforms and devices, including iOS, Android and modern web browsers
- Support open digital content formats, primarily ePUB and PDF

- Access DRM-protected content from multiple digital vendors within a single application
- Integrated discovery, borrowing and reading experience, all within the library brand
- Social annotation and sharing functions within the e-reader
- Personal and social annotations saved and aggregated in a library-based repository

Events and Bookings Service

Strategic Purpose:

Libraries in England run thousands of events every month, yet they are hard to find on the Internet. An Events module would expose events on the web, and display them intelligently in the catalogue alongside related searches and books. The module could also be used for discovery of events hosted by community partners or cultural agencies, making the library a hub for the discovery of local events.

This component could be a local council's choice for other services as well, provided standardized APIs are available that the CMS and catalogue can ingest.

Key Requirements

- Standardized APIs are available that the CMS and Catalogue can both read and write back into, such as for
 - date
 - time
 - location
- Other needs as determined by Council or library

Marketing Automation Service

Strategic Purpose

Marketing automation software enables organizations and marketers to more effectively promote products and services across multiple online channels, including email, social media properties, websites,

and mobile applications. Marketing automation aims to provide prospects with highly personalized, useful content to help move prospects to customers or customers to engaged customers. Marketing automation combines tools to automate repetitive tasks and also to analyse the efficacy of different campaigns. Marketing automation tools can be used for both inbound and outbound marketing strategies.

In the library context, marketing automation is critical to:

- Reaching new audiences in the community to promote the (often unknown) services and offerings available to them from the Public Library
- Re-connecting with lapsed members of the library to entice them to return
- Continuing to engage infrequent library members to nudge them into being more active users

Key Requirements

- Multiple channel support: web, email, social, mobile
- Integrated campaign analytics
- Email creation, validation, scheduling and testing tools
- Campaign management tools, including scheduling, budgeting, and program management
- Online marketing tools to provide a/b testing, dynamic content
- Social tools to enable social sharing, social ads, social campaigns and social measurement

Customer/Constituent relationship management (CRM)

Strategic Purpose

Customer/Constituent Relationship Management (CRM) software is used to help an organization create a “360 view” of its customers or constituents. They can then use this information to more effectively connect with current and future constituents in order to acquire, retain, and continue to engage those customers and constituents. CRM tools

enable organizations to gather information about individual prospects or existing constituents across multiple touchpoints, and in turn provide those customers with tailored communications, services, and products.

In the library context, CRM tools enable:

- library members to specify content and programs of interest and receive automated updates on those interests
- library members to opt in to library personalization services made possible through the tracking of activities such as events attended or items borrowed
- library staff to add constituent information during telephone, in-person, and online interactions
- libraries to seek out specific groups of constituents or individuals for input on specific services
- analysis of trends in constituent behaviour and target initiatives to encourage or discourage those trends
- provide additional opportunities to capture constituent activity and sentiment from multiple touchpoints (social media, in-library interactions, telephone interactions, online feedback)
- enable libraries to feed this data into marketing and communication programs to cross-promote content, programs and services

Key Requirements

- Contact management tools, including customizable database
- Email campaign support or integration
- Social media campaign support or integration
- Data import/export
- Reporting/analytics
- Survey support or integration
- Inbound phone integration
- Physical location/terminal integration

Centralized Analytics Service and Data Warehouse

Strategic Purpose

Online service providers must track detailed transactional data about their products and customers, and use that data to inform business

decisions, and to optimize customer experience and ROI. This is only possible if transactional data can be normalized, aggregated and efficiently accessed by business intelligence and data analytics tools. A unified analytics and data warehouse provides these functions, and enables integration with a broad range of BI and data analytics solutions.

Key Requirements

- A scalable, centralized data warehouse for tracking and analyzing all patron interactions across all local libraries
- Standardized APIs for tracking web and mobile visits and transactions across all digital channels
- Import APIs for ingestion of offline visits and transactions including circulation history, event attendance, etc.
- Export APIs with fine-grained access controls, for extraction into business intelligence and data analytics solutions
- Secure anonymization of all patron identifiers to enable personalization while protecting privacy

Appendix IX

Sample procurement criteria

The following are characteristics and competencies that a partner should have to succeed in delivering digital services such as those described in this report.

Area	Specific attribute
Vision statement	
<ul style="list-style-type: none">● Has a compelling vision for a Digital Presence for Public Libraries, to the extent it varies from that of the SCL recommendations.● Understands the architectural approach recommended as well as other technical options considered, and is able to highlight alternatives	
Organizational makeup and ability to collaborate	
● Business Model	<ul style="list-style-type: none">● Has an ownership structure that helps the company support library goals● Uses open contract terms and open pricing
● Willingness to collaborate with other partners	<ul style="list-style-type: none">● Has track record of openness, and transparency, and consistency in dealings between customers and between vendors● Uses and creates open APIs
● Strategically tied to the success of libraries	<ul style="list-style-type: none">● Uses white-label solution tied to the branding of public libraries● Uses modular solutions tied to the use cases of public libraries

- Financially investing in R&D and the success of libraries
- Team Structure
- Makes healthy investment in R&D compared to investor payouts over time
- Has an efficient team structure by function

Technical experience working with library legacy IT

- Integration with legacy LMSs and with Ebook providers
- Search
- Third-party integrations
- Designing for staff AND users simultaneously
- Can integrate
 - MARC records
 - ONIX
- Uses algorithms to link related works across MARC (print) and ONIX (ebook)
- Demonstrates user insights and rigorous user-testing of user interfaces that combine services
- Experience managing natural language search
- Experience with socially-aware search -- that treats user activity as an input for relevance rankings or secondary sorts
- Experience creating contextually-aware search, such as privileging copies that are available in a preferred branch ahead of other copies in results
- Demonstrates user insights research and user-testing
- Able to display in search results and bibliographic title pages supplementary content as may be requested by a library from time to time
- Demonstrated user-insights investment

- Data management

- Has deep experience with bibliographic data in libraries

Record of innovation creating new capabilities in library IT

- User-centred design innovation

- Can give 2-3 examples of feature evolution over time in response to user learnings
- Has compelling approach to user research
- Can show artefacts from research within the last two years, and tell how these have affected product design
- Demonstrates expertise in building social functionality that is actually used - i.e. an architecture of participation. (Building social features is easy; getting traction is tough)

- Approach to agile development – and delivery

- Iteratively refines feature details over time

- Demonstration of continuous innovation

- Can share last two years of release notes
- Can describe contributing "industry firsts" to whatever sector the company operates in
- Enjoys the endorsement of opinion-leading public-library customers in this or other jurisdictions

Outcomes achieved for libraries and library users

- Customer Service

- Has recommendations from existing library partners

- Customer Support Responsiveness
 - Can describe and provide a well-considered and effective customer support process
 - Has tools to ensure this customer support can occur
 - Commits to service levels and monitors those with performance management metrics

- Models for customer collaboration in the development of new products
 - Can provide examples, including size of project, description of process, references

- Quality Assurance investments and processes
 - Meets or exceeds commercial standards for SaaS uptime for last two years
 - Can provide a sample Service Level Agreement
 - Systems Administration track record

Appendix X

Benefits

The benefits outlined here are meant as an order-of-magnitude estimate of about ~£10M in financial benefits and ~£100M in non-financial benefits annually. While some benefits come as reduced input (£2 M in reduced technology and content costs, and £6M in saved staff time), most benefits sized come as increased output (£61 M in avoided costs for libraries, £18 M in avoided costs for partners, and public benefits for literacy and social inclusion).

Some benefits were not included in this analysis that are important to consider as regards the future sustainability and resilience to change of libraries. In time, future innovations built on the platform could produce even more cashable savings. These could include savings from creating national contracts and rationalizing other technology components, both made possible only by the platform (these might apply to local archive management, computer reservation systems, self-check systems, and others). Also, data gathered on the platform will help with performance management and service optimization, and this will help cut waste that has not been included in this assessment (for instance, it may show that inter-library loan expenses do not provide high social return). Finally, there are other benefits to partners possible that have not been calculated, such as fixed costs for building future program applications (like reading programs) that might be reduced by the platform. And the literacy and public goods benefits are potentially massive, yet hard to quantify.

Summary (annual figures)			
Financial - fewer inputs		Non-financial - more output	
£	2 M	£	61 M
	Cash savings		Library (avoided cost for new output)
		£	6 M
			Staff time made free for analytics, community engagement online, etc.
		£	26 M
			Community “willingness to pay” metric (per Fujiwara)
		£	18 M
			Partner Organizations (avoided cost)
		(not quantified)	Public Policy Goals (long-term value)

Challenge	Opportunity		Indicators	Benefit			
	Theory of change	Tools Used	Other KPIs	Benefit KPI	Base	Goal	Benefit (annual)

Stop decline: Broaden the number of people using the service (£80 M)

Visible: make libraries easy to find online, and therefore offline (£54.2 M)

60%+ library customers don't know of website	Better organic search and social referrals at scale through coordinated web platform, bringing UK web visits to US levels	<ul style="list-style-type: none"> ● Search engine optimization ● Social tools ● Widgets and links posted on third-party sites 	# referred visits	# web visits per capita	2	14.5 (US levels)	£53 M¹
	Increased sharing of social messages about the library will organically improve awareness 20x more than events. ²	<ul style="list-style-type: none"> ● Social tools 	# views	# social shares per web visit	0	0.01 (1 per 100)	£1.2 M³
Library visits are declining, maintenance costs are not; meanwhile, Starbucks and Costa offer attractive spaces	Online channels drive online and offline use. ⁴ Provide more awareness of the space and more compelling ways for people to meet with one another at branches. ⁵	<ul style="list-style-type: none"> ● Location info ● Calendar of Events ● Volunteer registration 	# loc. page visits	# branch visits per capita	4.5	4.9 ⁶	Increased use of library (tallied below)

Easy to use: make libraries user friendly

Library website feels old-fashioned ⁷	New configurable content management system (CMS) for libraries makes sites look and feel like culturally and	<ul style="list-style-type: none"> ● Well-designed CMS 	time on site % bounce	% surveyed say site looks fun to use	NA	75%+	Increased use of library
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¹ Equivalent to cost of in-kind inbound marketing online for added web visits. £0.81 is used as benefit per click, and is the average of two quotes: £0.26 is the suggested bid for pay-per-click Google AdWords related to "Find Books" in UK as of August 2015, and £1.36 is the suggested bid for words related to "Book Reviews" (both BiblioCommons analysis). To be conservative, assume campaign will explain only 1/10 of the uptick in visits.

² Word-of-mouth marketing is 20x more effective than marketing events and 30x more effective than media appearances in changing impressions (Trusov et al 2009).

³ Equivalent to cost of outbound marketing online for added social shares. £0.50 was the effective cost-per-social-share of a 2014 case study of several outbound marketing campaigns using Facebook (Search Engine Journal 2014). Likely social shares are based on two approaches: First: 50% of UK on Facebook as indicator of social media overall (30M in UK on Facebook, per Statista 2014), 82% of Facebook users on every month (Harris Interactive 2015), a conservative posts-per-month of 50 based on profiles (Harris Interactive 2015); then assuming these proportions apply to 50% of the roughly 15M English library users (a conservative scalar), and that 1/1000 posts could relate to the library and 1/2 of those could be generated from the library (a conservative scalar), finally carrying this across the year. This renders £0.9M. Second: use target of 14.5 visits per capita, assumption of 50% of these users also on Facebook (conservative), assumption of 82% using it monthly as indication of likelihood to post, assumption of posting 1/100 visits to the library, rendering £1.6M. Answer averages two approaches.

⁴ Interviews with middle class respondents in Islington suggested community events and volunteering opportunities were more likely to bring them to the library than better couches

⁵ See government study on risks to High Street retailers who lack an "omnichannel" presence (UK Dep. for Business Innovation & Skills 2013).

⁶ ~9% increase, or roughly 1/4 of the percent uptick in footfall a retail store would expect after investing in a robust digital channel

⁷ As Sieghart said, "Libraries often present a negative image of being old fashioned places that have little relevance in today's society." (UK DCMS "independent Library Report for England" 2014a)

Challenge	Opportunity	Indicators	Benefit				
	Theory of change	Tools Used	Other KPIs	Benefit KPI	Base	Goal	Benefit (annual)

experientially rich places, and leads to more use of other library assets; good design is #1 user predictor of perceived quality.⁸

Enjoyable and worth advocating for: make libraries relevant and desirable to use (£26 M)

Middle-class perception and use of library is at risk: they are large taxpayers and influentials (Sieghart)	Good design and content online communicates library as vital cultural institution. Co-produced community content engages community members. ⁹	● Community recs	# visit online	% Middle class visiting online	17% ¹⁰	37%	£10 M ¹¹
		● Cultural resources	# visit offline	% Middle class visiting offline	35%	42%	
		● Events Calendar ● Volunteering Tools					
Younger persons' perception of library is at risk (Paternoster 2015), and they are next generation of taxpayers	Improved mobile experience prevents defection of 55% of young people unwilling to use library a product/service (Oracle and Opinium Research LLP, 2015). ¹²	● Mobile-responsive design	Time on site % bounce	% surveyed users say site looks fun to use	None	75%+	£16 M ¹³

⁸ Visual design is the #1 predictor of a site's perceived credibility with 46% of users surveyed; this is 3x the number citing usefulness of information (Fogg 2003). Among at-risk groups who need the library most, difficulty of navigation is multiplied (BBC 2010)

⁹ Increase UK online use of libraries among As, Bs, C1s (~17%) to US-based levels (~37%), and/or similarly increase UK-based levels of offline use among As, Bs, C1s (35%) to 2009 levels (42%). The new or re-engaged users should expand their theoretical willingness to pay for the library from non-user level towards user levels (willingness to pay per Fujiwara et al 2015)

¹⁰ BiblioCommons calculations based on DCMS 2014, using Indices of Multiple Deprivation.

¹¹ This is willingness to pay. Two approaches: First, looking at uptick in usage if we get towards US levels. Second, looking at uptick in usage if we re-engage ABC1s who have left in the last decade. For the first approach, as background, only ~17% of ABC1s in England visit library websites (14% of UK visits library websites, yet based on overall digital cultural participation being skewed towards the wealthy by 44%/36% we therefore assume the number rises to 17% for indices of multiple deprivation 8-10), compared to 35% of ABC1s in England who visit libraries offline (UK DCMS 2014b), and compared to ~37% in the US (US incomes > \$75K from survey Pew Internet 2013). Interestingly, using indices 8-10 for ABC1s, this group makes up 30% of the UK population but a larger 38% of those visiting cultural websites each year (UK DCMS 2014b). For the benefit calculation, we take raising the number of ABC1s who visit the library from 17% to 37% (US levels), or an increase by 20 points. If the same proportion holds that roughly 33% of these new converts only visit the library website (UK DCMS 2012 shows figures for those who visit online, offline, or both), this means 33% of 20 points or an uptick by 6.6 points of ABC1s with a new relationship to the library. This is 6.6% of 30% of the English population of 53M, or roughly 1M. If we then multiply this number by an increased willingness to pay given the new use of the service from non-user level (£10.31) to user level (£19.51) (Fujiwara et al 2015), we get £9.5M in customer willingness to pay. Second, we look to levels of participation for offline visits to libraries. From 2009 to 2014, the groups 8-10 on the indices of multiple deprivation decreased their visit to the library, from 42.1% to 34.8% reporting they had visited the library (this is the broadest span of years available; average of categories in UK DCMS 2014b). This is a 7.3% percentage spread on 30% of the population of 53M, again giving us 1.2M. Multiplying this by the £9.20 delta in willingness to pay, we get £11.4M in willingness to pay. Averaging these methods, we get £10M. (Willingness to pay per Fujiwara et al 2015)

¹² As Leon Paternoster, IT Director at Suffolk Library, puts it, "I've seen in our data that we lose patrons at the age of 11 or 12 and there's a gap until they retire, when they come back to the library. Why would they put up with a frustrating online experience during that time? It's so easy to just get what you want online, and so cheap" (interviewed 2015).

Challenge	Opportunity	Tools Used	Indicators	Benefit			
				Other KPIs	Benefit KPI	Base	Goal

Increase use: Deepen the use of assets by each person (£67 M)

Collection Management (£1.4 M)

Best sellers are expensive, heavily used briefly, then discarded. Supplying bestsellers to readers is not the greatest public benefit.	The library has the power to create demand, managing attention away from bestsellers by having readers create and share recs at opportune moments (e.g. "While you wait..."). Managing attention through algorithms and UX can be effective (e.g. Barrett 2014).	<ul style="list-style-type: none"> ● Enhanced catalogue ● Co-Production tools ● Live indexing of availability 	# best sellers purchased per 10,000 people	~4	~3.6 (10% reduction)	£1.4 M¹⁴
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Co-Production of Data (£0.2 M)

Search can be improved with enhanced metadata in fields such as series data and micro-genres -- both important for discovery, but traditionally sparse in MARC.	Enable users to generate metadata for their own use (as by tagging for personal record-keeping) and leverage for public benefit	<ul style="list-style-type: none"> ● Co-production tools ● Enhanced catalogue 	# volunteer hours	% pop served contributes 5min+ per month of tags, metadata	0%	0.03%	£230 K¹⁵
Increasing demands on service and decreasing budgets and staff time	Shift from providing service directly to providing a space where community members provide one another services	<ul style="list-style-type: none"> ● Volunteer registration tools 	# volunteer hours	% pop served contributes 5min+ per	0%	Trend up	Increased use of library

¹³ Willingness to pay of those who use library services is £19.51, and only £10.31 for those who do not -- a gap of £9.20 (Fujiwara et al 2015). If millennials currently have the potential to use the library in their lifetime at the same rate as the average population now uses the library today, which is roughly 1/3, and they represent 20% of England's 53M population (UK ONS), in total they should be willing to pay £141M per year across their careers. But, if on account of off-putting website experiences, they ultimately use the library at only 55% that rate, this removes roughly half of those willing to pay at the higher rate. The difference is roughly £16M per year.

¹⁴ First Method: Spot-checking of three recent bestsellers in Lewisham's catalogue suggested avg 122 books ordered per bestseller. Bestseller data is elusive, yet assuming 10 hardcover and 10 paperbacks at any time across 52 weeks, with an average lifespan on the list of 8 weeks, the total bestsellers each year may be 106 -- or 100. Assuming half of the bestselling paperbacks are last year's bestselling hardcovers, which were not desirable for repurchase by libraries, this leaves 75 bestsellers to purchase. For Lewisham, this would be roughly 7,500 copies -- or roughly 25% of its entire acquisitions in a given year (28.5K per CIPFA 2014). Note that reviewing 1997 and 2007 best sellers in Lewisham shows holdings of roughly 13 copies per 1997 title today v. ~130 per 2014 title, meaning it is likely 90% of the bestseller copies will eventually be weeded. Regardless, if that 25% rate of new acquisitions is true across the country, this is roughly 25% of 8.3M new acquisitions, or 2M. If the platform can divert even 10% of these purchases to other titles by providing well-placed recommendations for other titles and editions, then 200,000 book purchases can be avoided -- copies of bestsellers that are typically discarded once their time in the limelight has passed. At £7 per book, this is roughly £1.4M. This is just over 10% of annual print book acquisition for England (CIPFA 2014); these titles tend to be more expensive. Second Method: If 10% of requests trigger a new book acquisition (bunched as they likely are in bestsellers), and if in turn 10% these triggers can be avoided, then the resulting 1% of 15M requests or 150,000 books would not need to be purchased. At an average price of about £7, this results in a figure in the £1M range.

¹⁵ Value volunteer hours at wage rate of an employee -- not because volunteers will replace current employees, but because this would be required to supplement services otherwise. Assumption is 10% of service area is registered, and 30% of those registering take on average 5min creating user-generated content each month. This results in 15,900 hours per year for UK population of 53M, which against a salary of £26.5K for 1.771K hours equates to £230K in avoided staff hire.

Challenge	Opportunity	Tools Used	Indicators	Benefit				
			Other KPIs	Benefit KPI	Base	Goal	Benefit (annual)	
			<ul style="list-style-type: none"> ● Big data to drive matches ● CMS 	# volunteer registrations	month of tags, metadata			
Space (£66 M)								
Library visits are declining, maintenance costs are not; meanwhile, Starbucks and Costa offer attractive spaces	Online channels drive online and offline use. ¹⁶ Provide more awareness of the space and more compelling ways for people to meet with one another at branches. ¹⁷		<ul style="list-style-type: none"> ● Location info ● Calendar of Events ● Volunteer registration 	# loc. page visits # Cal. page visits	# branch visits per capita	4.5	4.9 ¹⁸	£66 M ^{19 20}
Staff Time (£6 M)								
Self-Service Online (£1.7 M)								
75%+ library users do not use library website, citing lack of awareness or usability. ²¹	Easier self-service will encourage more people to use website and enable staff to do higher-value tasks		<ul style="list-style-type: none"> ● SEO and social referrals ● CMS ● Catalogue 		% online of existing 12.2 M requests, so exclude uptick	~5% ²²	~60% ²³	£1.7 M ²⁴

¹⁶ Some ABC1s interviewed in Islington suggested community events and volunteering opportunities were more likely to bring them to the library than better couches

¹⁷ See government study on risks to High Street retailers who lack an "omnichannel" presence, UK Dep. for Business Innovation & Skills 2013)

¹⁸ ~9% increase, or roughly 1/4 of the percent uptick in footfall a retail store would expect after investing in a robust digital channel

¹⁹ Benefit derived from avoided in-kind direct marketing mail. McKinsey report shows that clothing retail businesses with a web-only presence sell \$157 per customer, versus physical stores of \$195 per customer, versus multichannel stores of \$485 per customer (McKinsey 2014). Several assumptions are required here given direct access to data is not possible, and given more analogous studies were not available. First, let's assume that the increase is shared proportionally across the web and physical presence. This gives us 157:195 or 45%:55%; with an increase over the baseline of 133 across both channels, this means the 55% of the added value going to the physical side is 73 more. This is an increase of 37% over standard physical retail sales without the complement of the internet. Second, let's assume that this uptick is proportionate to number of visits and can relate across to libraries. Libraries in England currently enjoy 4.5 visits per capita (CIPFA 2014). If we were to increase this by 37% -- the amount that an omnichannel experience would expect to increase physical footfall -- this would result in 6.1 visits per capita. Let's conservatively deflate this expectation, however, and suggest that visits per capita only raises by one quarter that amount, or 9.2%, to 5 visits, a delta of 0.4 visits. This accounts for the fact that the retail and library examples may not be tight analogies. Third, let's assume that this can be valued in terms of marketing dollars. A traditional direct-mail campaign, which in interviews customers noted libraries use and that they respond to, has costs per converted footfall. Conversion rates for direct-mail sent to existing customers (higher than non-customers) is about 4% for mailings (Schiff 2012). This means that to generate 0.4 more visits per capita against 53M people, or 21.2M more visits, would require 21.2/(4%) or ~500M mailings. That's roughly one mailing per person in England every month. The cost of this is substantial. Contact lists are obtained at 12p per head, postage expenses in bulk for Franked 2nd Class letters is 39p per head, and printing costs are 2p per head when running >20K letters; this is in total 53p. With all of those costs included, the costs would be £265M. If the library authority can reduce by half contact information costs and postage costs given its size and public status, then the costs would be £132M. If we divide costs in half again, we get £66M. Note that in total this has been deflated to 1/16 what the straight back-of-the-envelope math would suggest, so the correction here is a full order of magnitude more conservative.

²⁰ An additional methodology is to compare to the benefit derived from avoided branch "re-skins" at most important 797 library locations. This is estimated at £230 M. Additional methods information available on request.

²¹ Several customers interviewed came to perform tasks like renew a book or place a request that could have been done from home. Similarly, 40%+ of users interviewed by CarnegieUK Trust said that the ability to place online holds would increase their use of the library (Macdonald 2012).

²² Estimated rate based on customer interviews and data; requests is per CIPFA summary numbers scaled from UK to England

²³ This rate is estimated for US based on company experience

²⁴ Roughly 17.2K FTEs, across professional and other categories, in England and Wales (CIPFA 2014 data, which summarizes England and Wales together). The total employee cost for the same set £455.8M. On average, therefore, the cost per FTE is £26,500. An FTE is considered 35 hours per week and 253 business days per year. This is 1.771K hours per FTE per year. The assumption is that staff time processing is 1 minute per request.

Challenge	Opportunity	Tools Used	Indicators	Benefit			
				Other KPIs	Benefit KPI	Base	Goal

Interlibrary Loan (ILL) and UnityUK (£1.1 M)

Looking at distant library collections and borrowing through ILL relevant to a minority of users, yet this is a costly service; libraries must upload and match records manually	Use automation, including prepopulating fields and pre-validating requests, to refocus staff time from ILL to tasks that benefit more patrons; eventually wind down ILL.	<ul style="list-style-type: none"> ● National set of records ● Automated matching of records (rather than manual) 	# FTEs for ILL (survey)	84*	42 (50% reduction)	£1.1 M²⁵
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Cataloguing: Importing and managing records (£1 M)

Cataloguing is managed locally even though all records are largely the same; at best, this is redundant, at worst it creates challenges for mapping records nationally	Use a national set of records and in each local case simply match to holdings information, thereby saving staff time and facilitating scaling	<ul style="list-style-type: none"> ● National set of records 	# FTEs for cataloguing (survey)	42*	4 FTEs (90% reduction)	£1 M²⁶
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Reporting (£1.2 M)

Staff struggle to obtain data from the Library Management System (LMS), and then leaders and policymakers struggle to make comparisons across systems	National reporting tools and nationally comparable data will save staff time and lead to more actionable insight	<ul style="list-style-type: none"> ● National set of data 	# FTEs for data exporting (survey)	191*	143 (25% reduction)	£1.2 M²⁷
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Online databases (£0.3 M)

²⁵ An FTE is considered to be £26,500 per year (BiblioCommons analysis of CIPFA 2012). Note that this conservative estimate as only 25% of libraries reported figures in this area and these numbers were not grossed up to cover 100% of libraries, on the assumption that regional consortia explain most of the absent data.

²⁶ An FTE is considered to be £26,500 per year (BiblioCommons analysis of CIPFA 2012). Note that this conservative estimate as only 25% of libraries reported figures in this area and these numbers were not grossed up to cover 100% of libraries, on the assumption that regional consortia explain most of the absent data.

²⁷ Note that this estimate grosses up the number in to cover all libraries at the average rate reported by libraries with a >0 FTE count. This is justified because the policy pressure for data-driven validation and management will make these practices increasingly the norm, if not already.

Challenge	Opportunity	Tools Used	Indicators	Benefit			
				Other KPIs	Benefit KPI	Base	Goal
Staff have many tasks supporting separate silos	Routinize support for online databases by building new capabilities in platform	<ul style="list-style-type: none"> ● CMS for standard UX ● ID for single-sign on 		# FTEs for ref. databases	28*	14 (50% reduction)	£370 K²⁸
Supporting programming (£0.8 M)							
Staff need to "reinvent the wheel" when creating program ideas, registering patrons, or messaging attendees	Routinize support for programming by building new capabilities into the platform and by allowing staff from across libraries to find examples relevant to them from other libraries (best practice sharing)	<ul style="list-style-type: none"> ● CMS ● ID management ● Registration tools ● Catalogue integration ● Partner integration 		# FTEs on admin tasks of 1,260 FTEs for programs	126*	95 (25% reduction)	£820 K
Save costs and time: Cut redundant expenses and liberate staff time (£8 M)							
Cataloguing (£3.4 M)							
Catalogue records are purchased by each library from the same supplier, creating needless costs, necessitated by broken IT	Use a national contract to obtain a national set of records and in each local case simply match to holdings information, thereby reducing contracting costs with BDS and enhancement vendors	<ul style="list-style-type: none"> ● National set of records 		£ budgeted	£1.8 M*	£1.44 M (20% reduction, estimate)	£360 K²⁹
Collections management support paid for by libraries	Use national data to provide this collection management support through the platform, thereby reducing contracting costs	<ul style="list-style-type: none"> ● National data ● Reporting portal 		£ budgeted	£500 K*	£0 costs	£500 K

²⁸ Note that this estimate is very conservative. Note that this conservative estimate as only about 25% of libraries reported figures in this area and these numbers were not grossed up to cover 100% of libraries, on the assumption that regional consortia explain some of the absent data.

²⁹ Records are currently provided by BDS on an individual contract with each library, even though these records are the same across all libraries. An initial cost savings can be made by reducing records purchases. While earlier phase should be cheaper per platform contract, later phase also to reduce staff time by absorbing some tasks in platform.

Challenge	Opportunity	Tools Used	Indicators	Benefit			
				Benefit KPI	Base	Goal	Benefit (annual)
Separate e-book platforms make readers choose costly ebooks, divide library resources across redundant IT investments, and position e-book vendors to take the library customer base	Return the e-books into the same catalogue as the rest of the collection, allowing the library to bring these users into the brand and larger context of the library and to manage their attention across print, e-books, and events.	● Catalogue with e-book records management	Other KPIs	% libraries served	33%*	100%	£1 M
				£ budgeted	£600 K*	£0	£600 K
				% libraries served	36%*	100%	£1 M
				Mobile (£0.7 M)			
Separate mobile and desktop versions are costly	Create platform that is mobile-responsive, enabling retirement of standalone app	● Mobile-responsive CMS and catalogue	Other KPIs	£ budgeted	£70 K*	£0	£70 K
				% libraries served	10%*	100%	£630 K
Digital reference databases (£3.1 M)							
Database silos create fragmented user experience and redundant costs	Enable cost reductions: eliminate low-use databases determined using metrics from platform, make platform-wide contract for remaining ones, and improve UX connection to remaining ones	● Catalogue SaaS ● LMS	Other KPIs	£ budgeted	£3- £6 M	£2.4 - £4.8 M	£0.6 - £1.2M
				% libraries served	50%*	100%	£1.5- £3M
Reporting (£0.9 M)							

Challenge	Opportunity	Tools Used	Indicators	Benefit			
				Benefit KPI	Base	Goal	Benefit (annual)
Reporting from LMS is hard and produces numbers that cannot be compared	Concentrating investment in shared tools will lead to better tools and more useful analysis	<ul style="list-style-type: none"> ● Data ● Reporting interface 	Other KPIs	£ budgeted	£50 K	£25 K (50% reduction)	£25 K
				% libraries served	5%*	100%	£950 K
Local archives							
Fragmented integration of local archives is costly, prevents nationwide applications of interest	Platform could make it easier and cheaper to integrate separate local archives	<ul style="list-style-type: none"> ● Platform APIs 		£ budgeted (currently serves ~15% libraries)	£800 K	£720 K (10% reduction)	£80 K
Create partner benefits (£18 M)							
Nonprofits (£12.5 M)							
Hard to reach a large audience, and pay-per-impression is too expensive for most	From within library searches, point users to relevant partner resources, such as a person searching for “diabetes” being referred to a public health info meeting	<ul style="list-style-type: none"> ● Search engine optimization ● Social tools ● Widgets and links posted on third-party sites 	# referred unique visits	% web visits leading to partner visit	0% of 2 web visits per capita (UK levels)	2% of 14.5 web visits per capita (US levels)	£12.5 M ³⁰
Publishers (£6.2 M)							
Hard to obtain insights on audience given domination by Amazon and	Provide aggregate and anonymized data to partners of the library or the public to	<ul style="list-style-type: none"> ● Big data 		# publishers accessing library data	0	3	£210 K ³¹

³⁰ £0.81 is used as benefit per click, and is the average of two quotes: £0.26 is the suggested bid for pay-per-click Google AdWords related to "Find Books" in UK as of August 2015, and £1.36 is the suggested bid for words related to "Book Reviews" (BiblioCommons analysis). Given 14.5 per capita web visits are achieved in English public libraries, and that 2% of these include an impression of partner content or a visit to a partner website, this amounts to 15.37M hits. At a cost of £0.81 per hit, this would be £12.5M

³¹ Bookscan subscriptions are roughly £70K, when last quoted publicly. If this is sold or given away to 3 publishing houses in the UK, this would be a benefit of £210K.

Challenge	Opportunity	Tools Used	Indicators	Benefit			
				Benefit KPI	Base	Goal	Benefit (annual)
fragmentation among other publishers	broaden competition among cultural industries and publishers						
Fear libraries divert demand for books instead of encourage and direct it	From within library searches, point users to relevant author pages or publisher resources, such as a person searching for a book from an author seeing a page with author interview, and developing a following and eventually buying multiple books by the author	<ul style="list-style-type: none"> ● Search-engine optimization ● Social tools ● Link to local site for third-parties ● Widgets to display resources remotely 	# referred unique visits	% web visits leading to partner visit	0% of 2 web visits per capita (UK levels)	1% of 14.5 web visits per capita (US levels)	£6 M ³²

Create public benefits

Literacy

Reading competes with other activities for kids' attention	Praise for reading from peers/celebrities stimulates reading	<ul style="list-style-type: none"> ● Partner tools ● Peer group-forming ● Social tools ● National scale to enable niches 	# users registered # child users registered				<p>Literacy increases the capacity and self-sufficiency of a person throughout life, reducing their burden on and increasing their benefit to society. Platform can more specifically reduce overhead costs to running literacy campaigns at scale.³³</p>
Required reading of texts can turn them away from continued reading and growth	Finding the "right book" excites personal drive and motivation to learn to read	<ul style="list-style-type: none"> ● Big data for personalization 	% conversions from book lists				

³² £0.81 is used as benefit per click, and is the average of two quotes: £0.26 is the suggested bid for pay-per-click Google AdWords related to "Find Books" in UK as of August 2015, and £1.36 is the suggested bid for words related to "Book Reviews" (BiblioCommons analysis). Given 14.5 per capita web visits are achieved in English public libraries, and that 1% of these include an impression of partner content or a visit to a partner website, this amounts to 7.7M hits. At a cost of £0.81 per hit, this would be £6.23M

³³ Assume that even 5% of the £20M platform expenses are targeted towards tools that are focused chiefly on expanding literacy (tools that would not be developed otherwise -- such as low literacy UX, reading recommendation and social support tools), with other expenses either indirectly promoting literacy or simply underlying technology costs. Then rely on analysis that £1M of funding for literacy resulted in £17M in benefits. Even if the literacy programs supported by the platform are half as effective, 5% of £20M remains £1M, and a 17/2 multiplier gives us £8.5M in benefits. Of course, this should recur annually. This is likely not appropriate even as a rough estimate, however, because the "Every Child a

Challenge	Opportunity		Indicators	Benefit			
	Theory of change	Tools Used		Other KPIs	Benefit KPI	Base	Goal
Children can be motivated by challenge, yet are not often challenged	Provide “Stretch Goals” to challenge kids with higher reading level, a different perspective, etc.	<ul style="list-style-type: none"> ● Community Curation ● Badging 	% conversions from book lists				
Engagement around texts requires structure that few children have outside the classroom	Responding and connecting with others around books or music develops higher orders of literacy through writing and interpreting	<ul style="list-style-type: none"> ● Social tools for commenting online ● Group organizing tools 	Median time spent in catalogue prior to request # UGC / person # groups formed / person				
Fragmented literacy programs make it hard for individuals to take advantage of offerings	Greater coherence and connection between multiple offerings improves the use and value of any one offering ³⁴	Enhanced catalogue showcasing partners					
Lifelong learning, workforce development, and entrepreneurship							
Cannot use resources without awareness	Make resources more discoverable online: “Link up the learning provided by the public, private, and third sectors to broaden choice and clarify the	<ul style="list-style-type: none"> ● Search engine optimization ● Social sharing 	# web visits per capita	Support for the conditions of entrepreneurship leads to more entrepreneurship and more of its benefits.			

Reader” program was so clearly pitched at the children who, while hardest to teach, also had the greatest likely benefit from learning to read. We can instead run the analysis by assuming that these tools can help any given program reduce its cost overheads (match volunteers, find appropriate books, find appropriate spaces to meet, solicit donations and reduce marketing budgets, etc.). Let’s take a typical after-school literacy program and assume it has a 15% overhead (National Literacy Trust, for instance, appears to have about 2% governance overhead and 13% fundraising overhead, per annual reports), and that 10% of the overhead, or 1.5% of all costs, can be eliminated by drawing on the platform and the library. This would mean that for every £1 formerly spent, they now have £1.013 to spend (because the last bonus itself loses some value from overhead). Now, spending that money with returns of 17x on investment using the rate of Every Child a Reader, this means that for every £1 formerly spent, there might be an additional £0.22 in new benefits, or 1.3% increase in return on investment. If we just take the National Literacy Trust budget by itself of £2.5M on programs, this returns £30K (all National Literacy Trust numbers are gleaned at a very high level from National Literacy Trust 2014, 31).

³⁴ Illiteracy leads to costs on society, such as special needs schooling, lower employment opportunities, higher health risks, and even arrest and imprisonment; ensuring a person is literate removes those costs from society. Using this analysis, one study found that a reading program called “Every Child a Reader” had £17 benefit for every £1 spent (cited in Marmot 2010, p. 106)

Challenge	Opportunity	Tools Used	Indicators	Benefit			
				Benefit KPI	Base	Goal	Benefit (annual)
	opportunities for learners" (UK Dept. Innovation & Skills 2009, p.4)						
Distraction and loss of motivation is key obstacle to skill and business development	Online tools provide way to help maintain focus and commitment in personal goals	<ul style="list-style-type: none"> ● Better location and calendar tools ● Badging ● Nudging tools ● Personal record-keeping tools 	<ul style="list-style-type: none"> # badges issued # personal records 				
Mentors of quality are not always available for those who need them most	Provide ways to access outside mentors or peers in the community and help "build businesses' confidence and know-how, and [be] the first step towards use of external advice and support." (Young 2013, 25)	<ul style="list-style-type: none"> ● ID ● Volunteer tools ● Big data personalization 	<ul style="list-style-type: none"> # peer-groups formed 				
Peers support learning yet are not always available	"Support people to drive their own learning, in particular by making it easier for people who want to start "self-organised" groups"; Provide "toolkit on how to set up, support and maintain a self-organised group" (UK Dept. Innovation & Skills 2009, 4-6)	<ul style="list-style-type: none"> ● Group-forming tools 	<ul style="list-style-type: none"> # peer-groups formed 				
Health							
Lack of information may lead to overuse of expert sources	Better discovery leads to better information leads to increased self-care and reduced costs on professional care	<ul style="list-style-type: none"> ● Co-Production ● Partner tools 					
Social isolation leads to depression, dementia, issues	Ability to connect with people with similar interest or illness in safe, trusted space	<ul style="list-style-type: none"> ● Co-Production ● People matching ● Volunteer tools 					Library use prompts social activity (through events, volunteering, and other areas) and cognitive activity (through reading and learning) and these lead to lifelong health benefits (e.g. Marmot 2010). The aging of baby-boomers makes these benefits more important than ever to realize for Treasury (UK Government Office for Science 2015). More direct benefits come from

Challenge	Opportunity		Indicators	Benefit			
	Theory of change	Tools Used		Other KPIs	Benefit KPI	Base	Goal
Aging and retirement leave people vulnerable to lower social and cognitive activity and increased dementia	Staying active, staying engaged delays medical problems and costs	<ul style="list-style-type: none"> ● Co-Production ● People matching ● Volunteer tools 		information access about particular conditions (e.g. Reading Agency 2014)			
Digital inclusion							
Support in overcoming all 4 barriers is not easily obtained by all given lack of peer knowledge; staff sometimes intimidating or not expert	"Strong presumption towards procuring external resource to provide assisted digital support, from the private sector, the voluntary sector..." and "further efficiency savings in assisted digital through the application of new technologies, innovative arrangements with external providers and intermediaries, and departments working jointly to procure assisted digital support." (UK Gov "Government approach to assisted digital" 2014)	<ul style="list-style-type: none"> ● Volunteering tools ● Enhanced catalogue featuring partners 		Digital inclusion creates personal, social, economic, and government financial benefits. Through the platform libraries can act directly on three of four elements of UK Government Digital Inclusion Strategy: skills, motivation, and trust to use the web (UK Gov "Government digital inclusion strategy" 2014)			
"Access" is 1 of 4 barriers; mobile phone increasingly last resort for low-income (UK Gov 2014)	Mobile-responsive library website and resources will be help more people learn about location and hours to then access computers on site	<ul style="list-style-type: none"> ● CMS 					
"Skill" is 1 of 4 barriers, and literacy and conventions are a major part (Macdonald 2013)	Support digital skills by promoting basic literacy (Macdonald 2013)	<ul style="list-style-type: none"> ● Enhanced catalogue 					
	Create easy-to-use interface	<ul style="list-style-type: none"> ● CMS with age-appropriate UX 					
"Motivation" is one of 1 of 4 barriers,	One of 4 barriers identified by GDS strategy, meaning "motivation - knowing	<ul style="list-style-type: none"> ● Right book recommender 					

Challenge	Opportunity		Indicators	Benefit			
	Theory of change	Tools Used		Other KPIs	Benefit KPI	Base	Goal
"Trust"	<p>the reasons why using the internet is a good thing" (UK Gov "Government digital inclusion strategy" 2014); Motivation "ties everything together and can often be the factor that reduces or removes barriers" (Go ON UK, 2015)</p> <p>One of 4 barriers identified by GDS strategy, meaning "a fear of crime, or not knowing where to start to go online" (UK Gov "Government digital inclusion strategy" 2015)</p> <p>Need to directly reference and disarm the following sentiments: "It's not safe"; "It's taking jobs"; "It's far too complicated"; "It's too addictive"; "I don't understand social media"; "I have no access to help"; "It's killing communication" (Go ON UK 2012, 15)</p>	<ul style="list-style-type: none"> ● Personal record-keeping tools ● Right book recommender ● Community curation ● Staff profiles for presence ● Community moderation 					

Appendix XI

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Appendix XII

Presentation from the Digital Presence Workshop

Possibilities Enabled by Essential Digital Infrastructure

The following presentation was given at the British Library in September 2015 for discussion among stakeholders convened by the British Library and the Society of Chief Librarians. Most of these stakeholders had provided input that informed the understanding of the problems and potential solutions described in this summary.

Please note that this set of slides is intended to be accompanied by spoken narrative. Some slides may not convey their full meaning, or may even mislead, in the absence of this narrative.

Essential Digital Infrastructure for Public Libraries in England

A plan for moving forward.



*"My dear, here we must run as fast as we can, just to stay in place.
And if you wish to go anywhere you must run twice as fast as that."*

SCL

Commissioned by
The Society of Chief Librarians



With funding from
Arts Council England



Prepared by
BiblioCommons

Despite many past reports, there has been little progress in reversing library decline.



A key reason was given by Stephen Page in 2013 (audio clip). To paraphrase, he said the strategic and digital fragmentation of libraries made it difficult to partner with and support them. The digital infrastructure limits also thwart library-led change.



Panel: Compelling Reader
Experiences in the
Library of the Future

January 17, 2013

More than give support, however, Stephen Page, CEO of Faber and Faber, wanted something else: engagement with the library audience.



8 MILLION



Many organizations are eager to reach the users of libraries.



8 MILLION



Library users share a love of reading, the leading library activity even today. They account for nearly half of books read. That share has declined from nearly $\frac{2}{3}$ of books read, however.



MACMILLAN.
CANCER SUPPORT

BBC

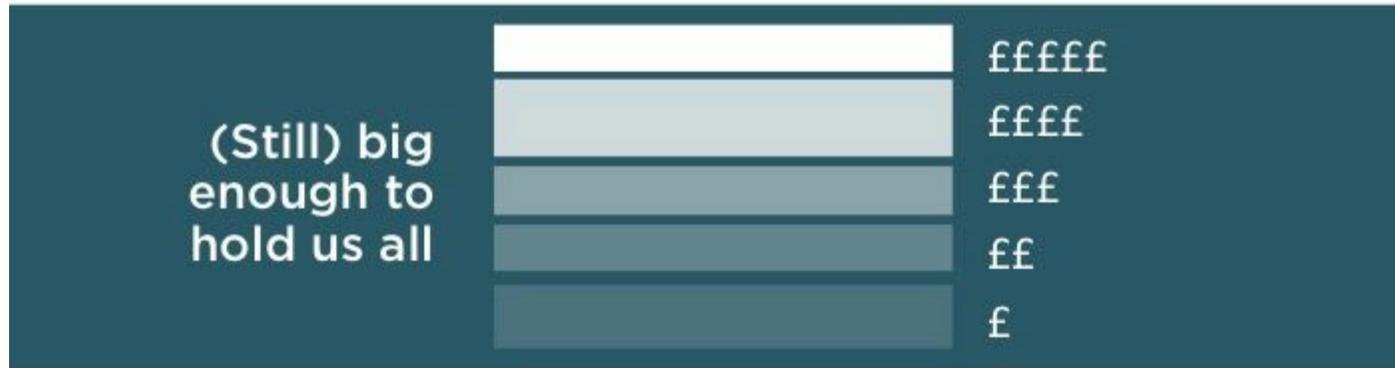
ff

SUMMER
READING
CHALLENGE

BRITISH
LIBRARY

A

Library users are also socioeconomically diverse: they are evenly divided by income bracket. That said, use by all but the 20% lowest income group is declining.



More than anything, however, library users are united by a love of the public library. Would anyone say this about an online retailer?



“...cathedrals of the mind, hospitals of the soul, theme parks of the imagination...”

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CANCER SUPPORT

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SUMMER
READING
CHALLENGE

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A

The challenge we were tasked with was how to improve the digital experience for this large set of users, and how to make it easier for them to find and make use of partner resources. How to make the connections?



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In the physical world, local libraries have local branches. It takes a lot of work to coordinate initiatives with national partners and move physical program materials and people.



In the digital world
this need not be
the case, in
principle.



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BRITISH
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A

Yet, the websites of local libraries haven't grown independently around the local authorities



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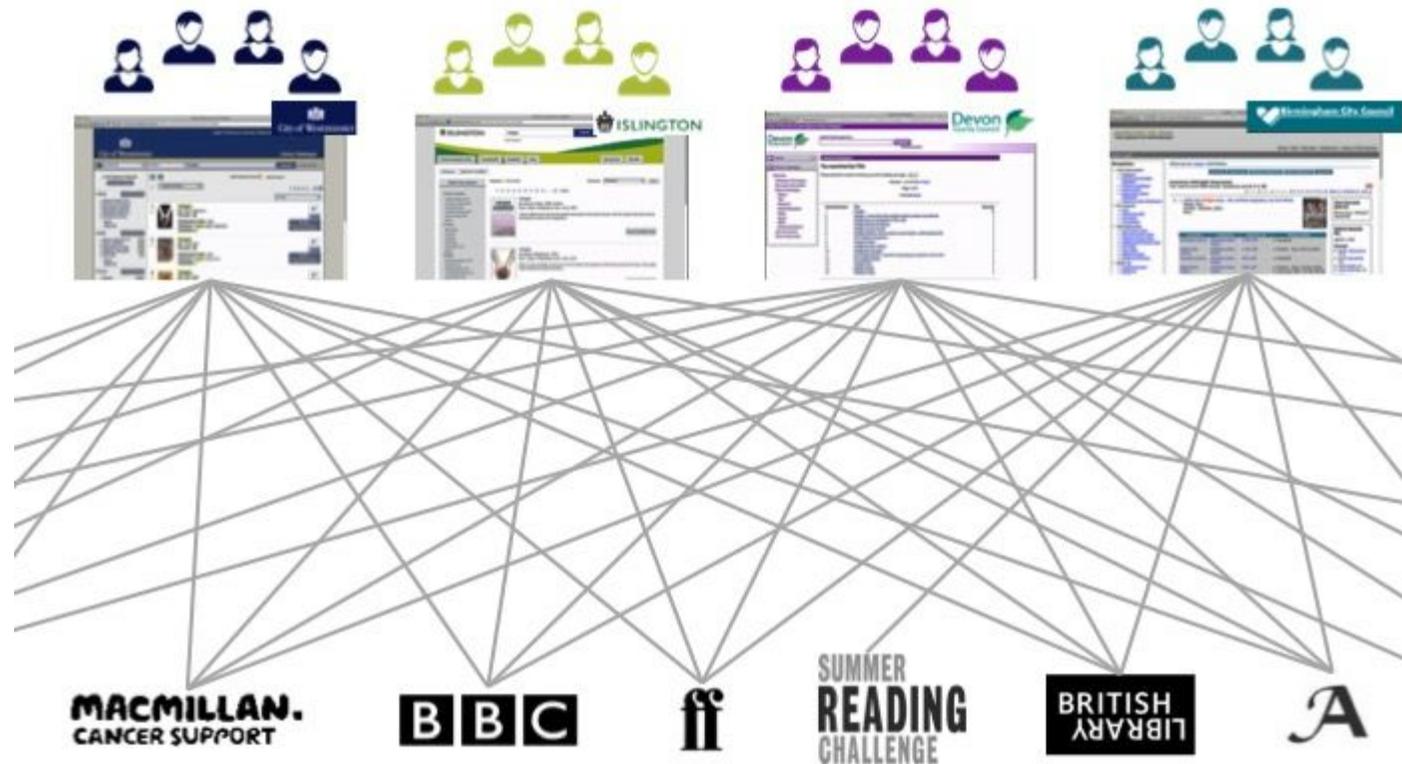
ff

SUMMER
READING
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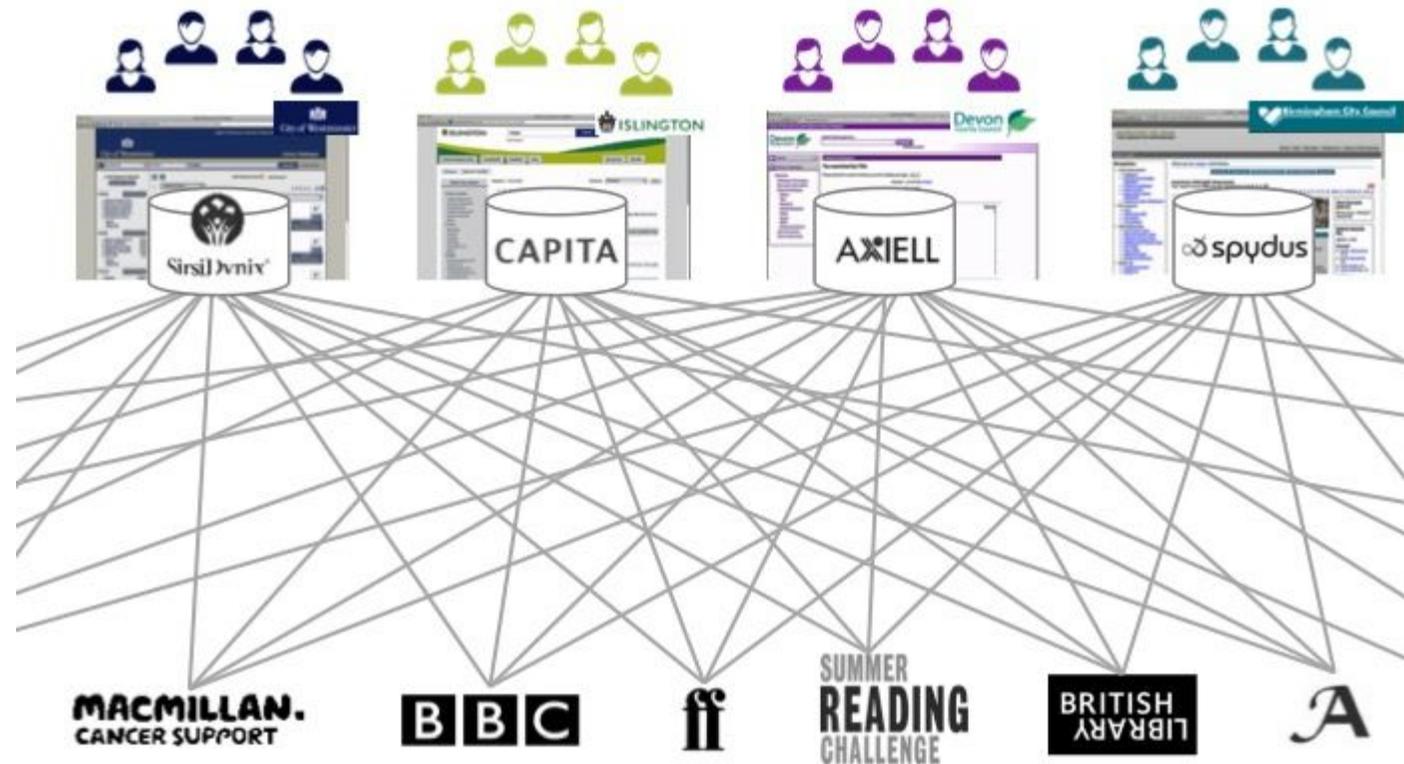
BRITISH
LIBRARY

A

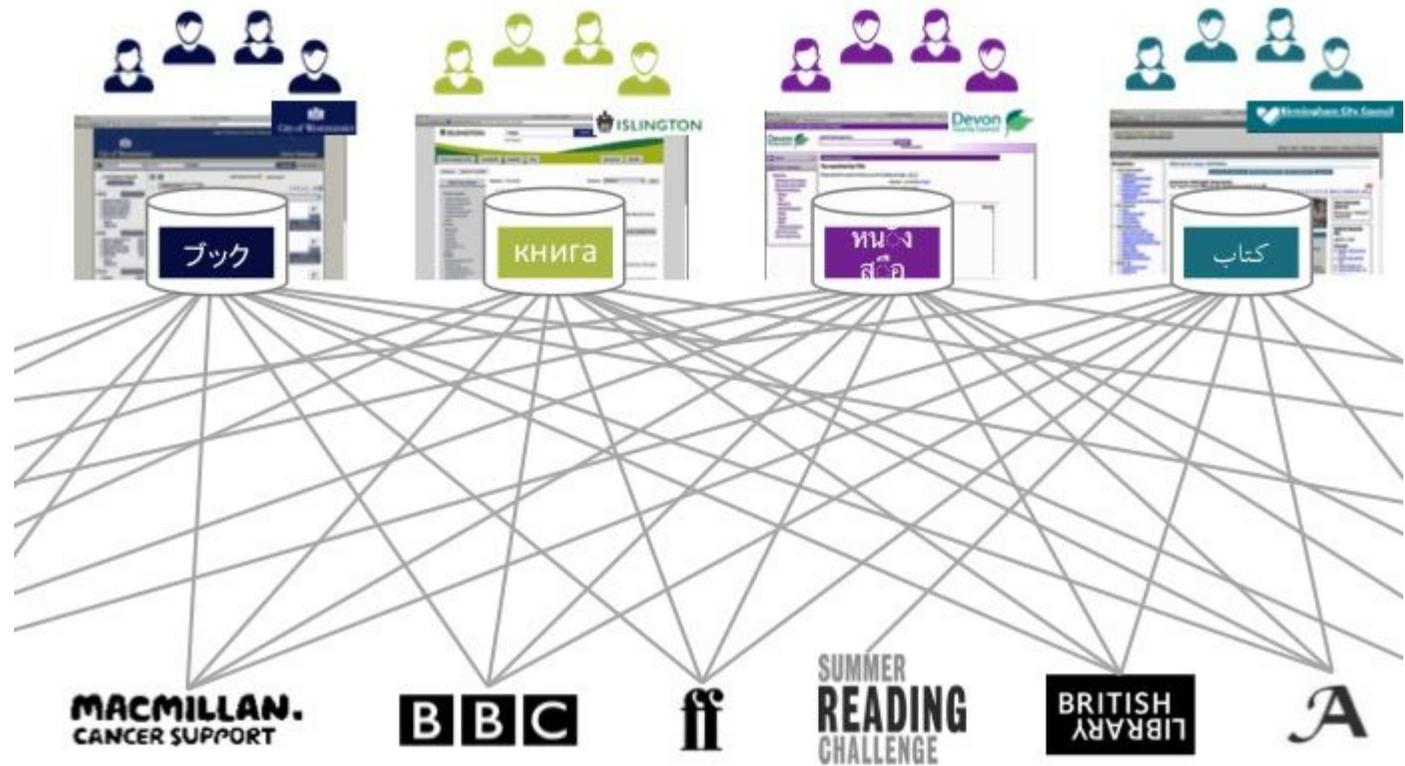
...making it as difficult to reach local libraries online as reaching them physically. Each library authority requires a separate technical integration.



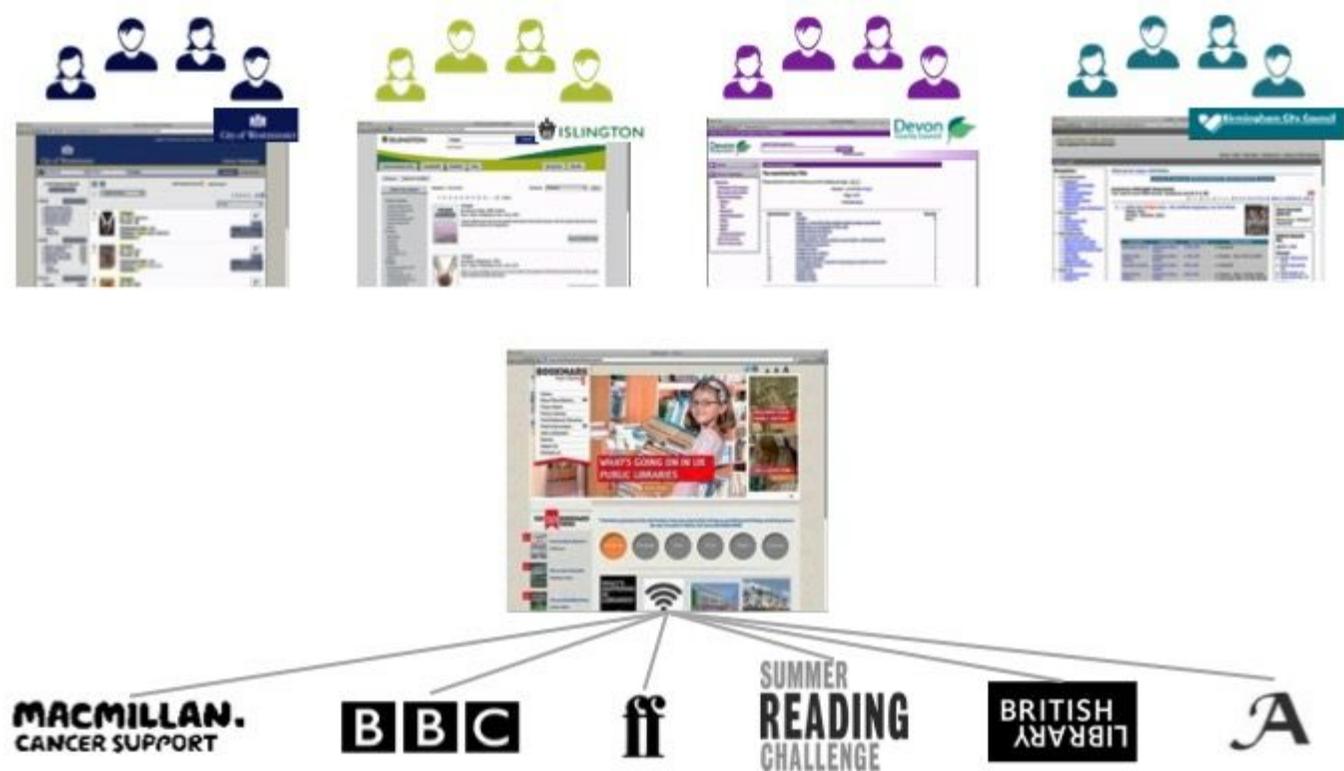
Across at least four separate LMS systems, and all of their versions and customizations.



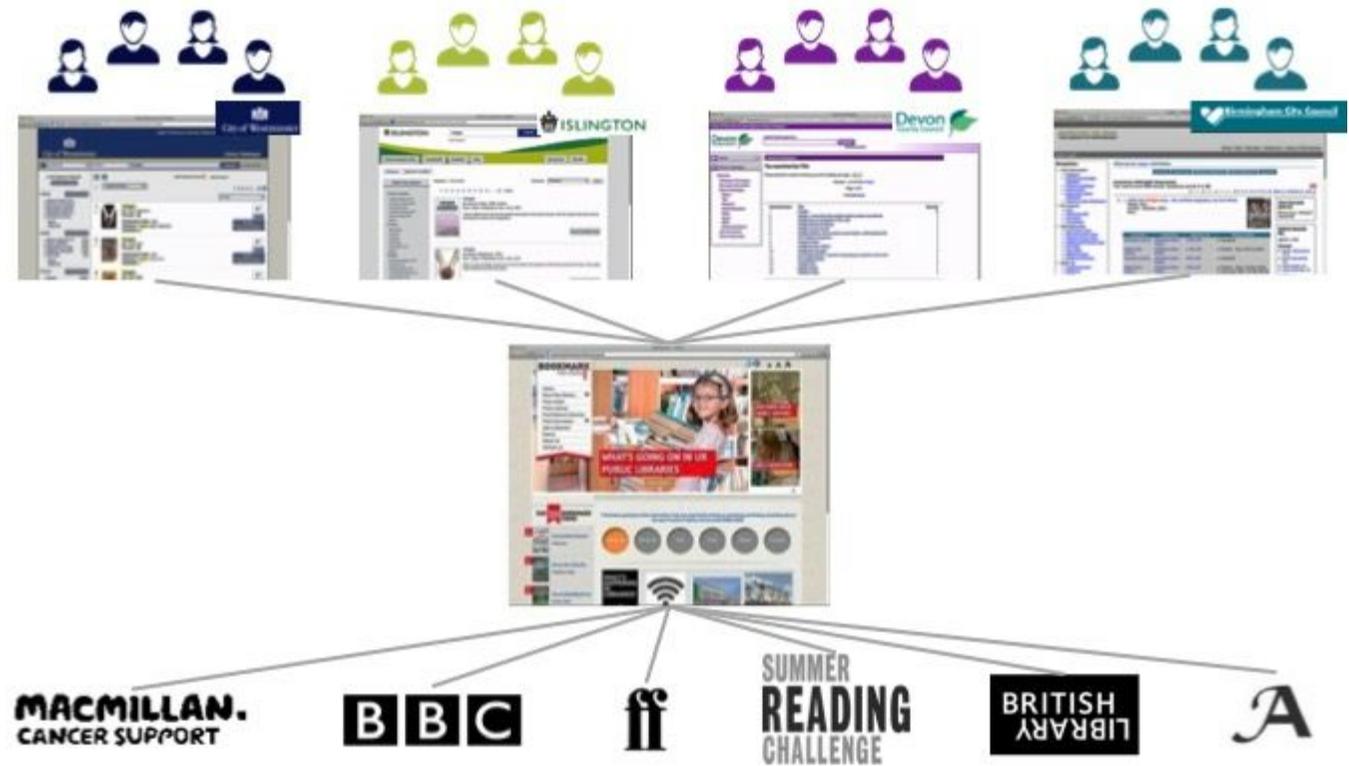
Each speaks a different language.



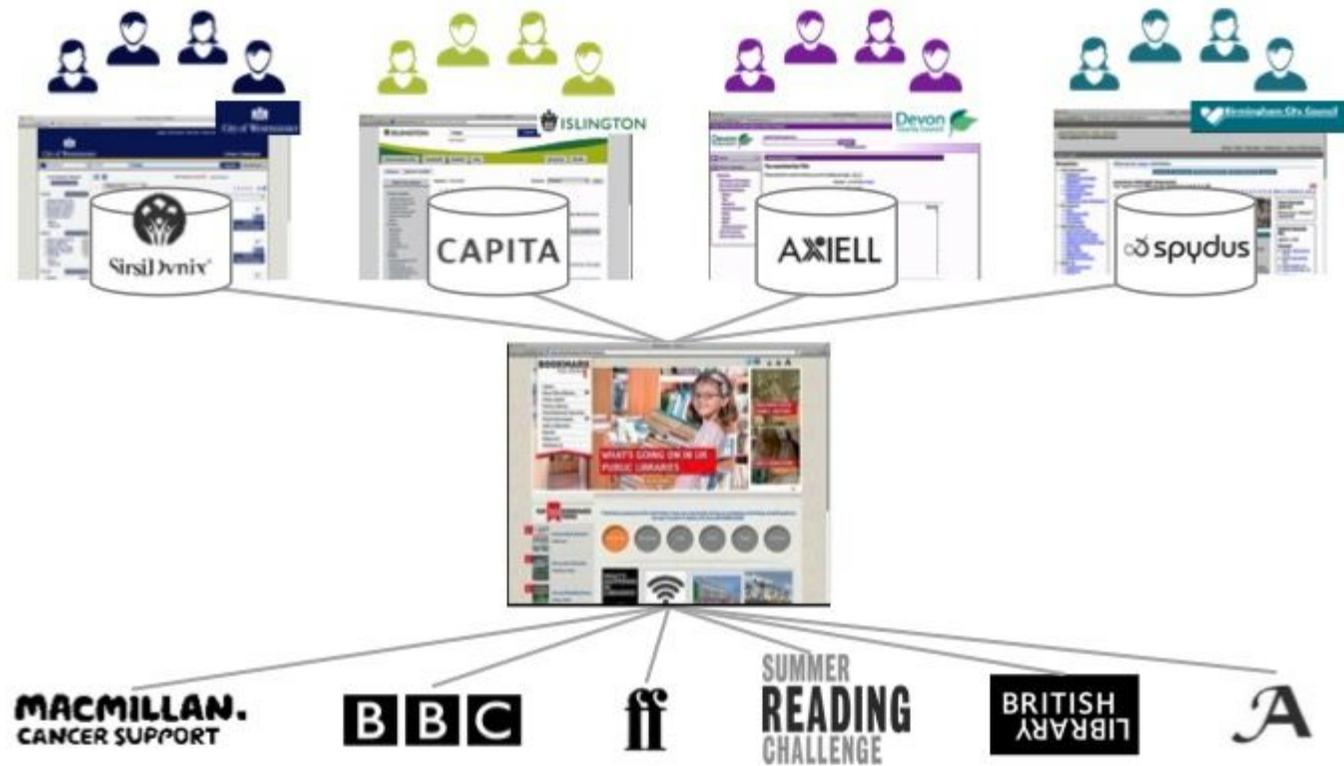
“Bookmark Your Library” worked around this problem by creating a single national website. It could be a model for a single point of connection for libraries.



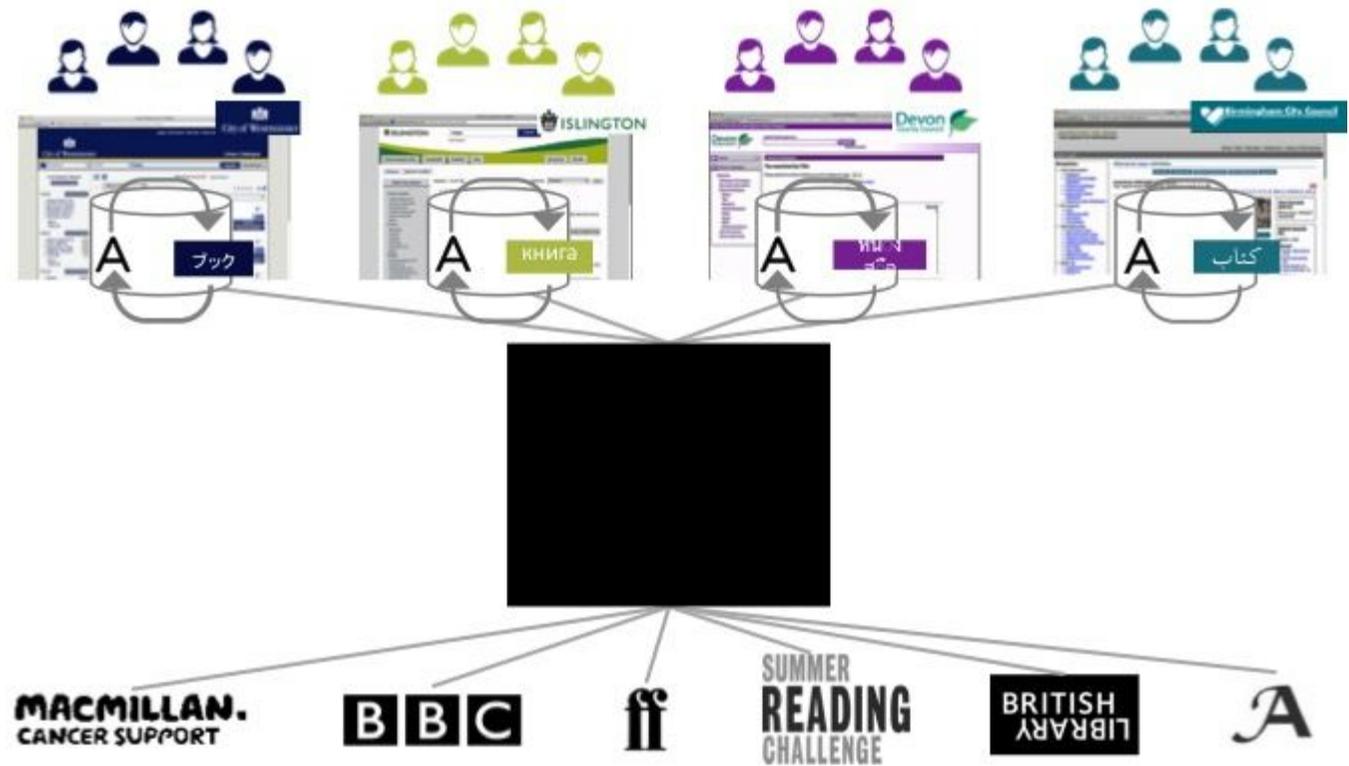
But local book inventory was not displayed in real time on the national site; it reaches almost none of the 3.3M active monthly users across England's public library catalogues.



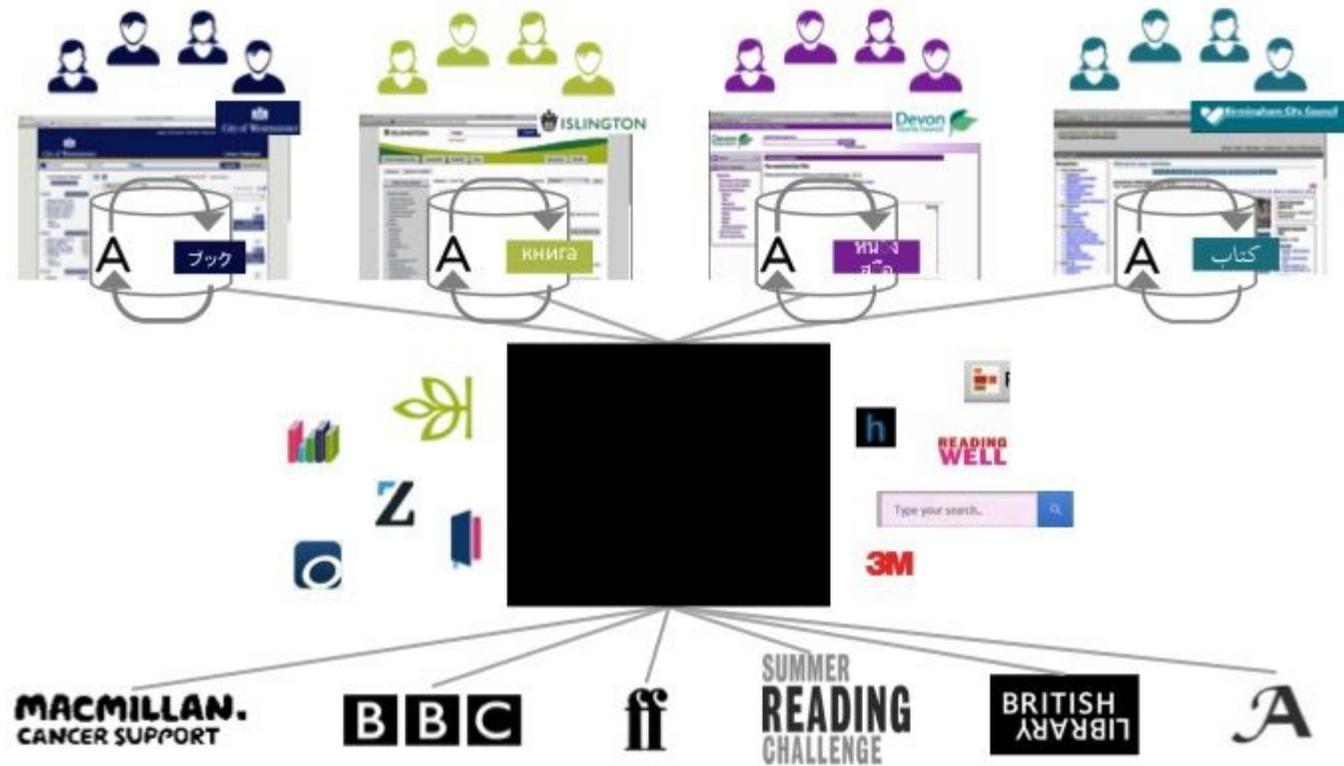
The national site had less than 10.0% the traffic of a single library catalogue, or less than 00.1% of England's public library traffic.



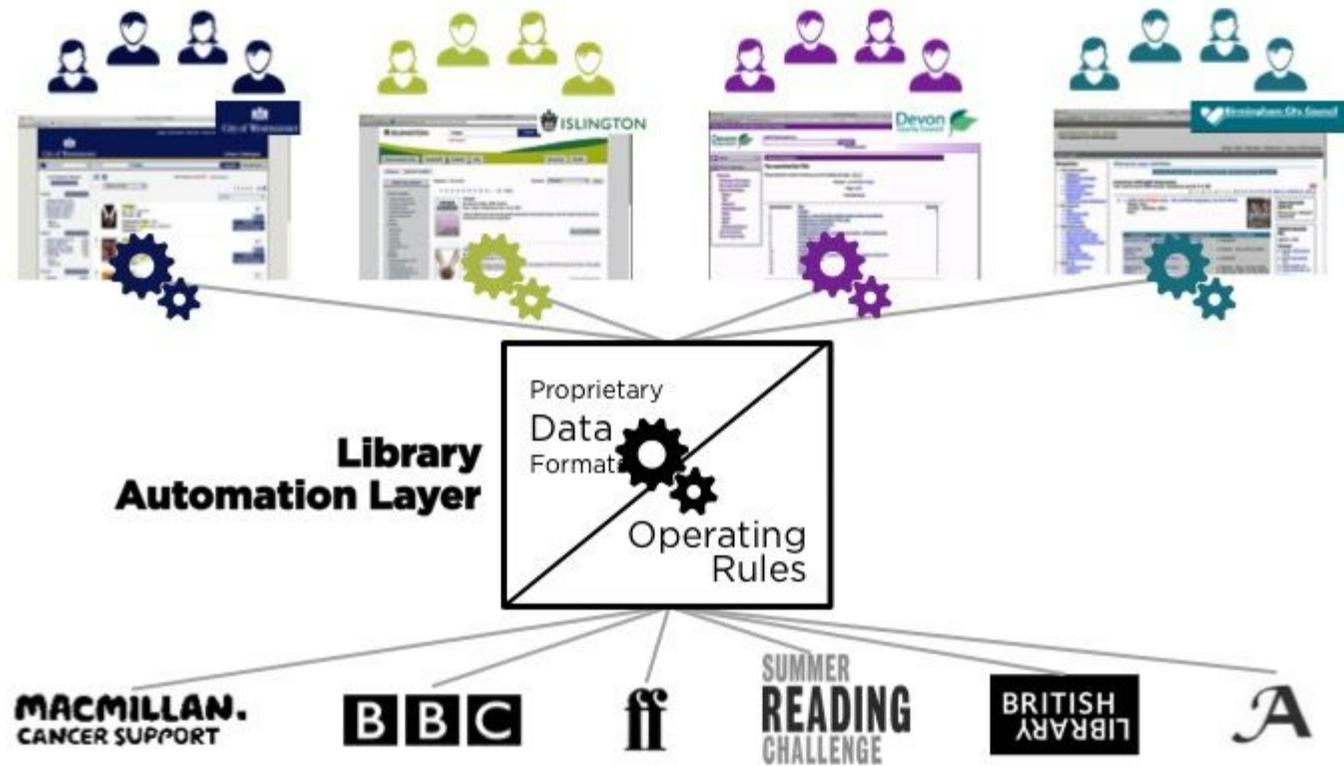
What's needed is a system that translate the data and business logic of each LMS to a common set of standards.



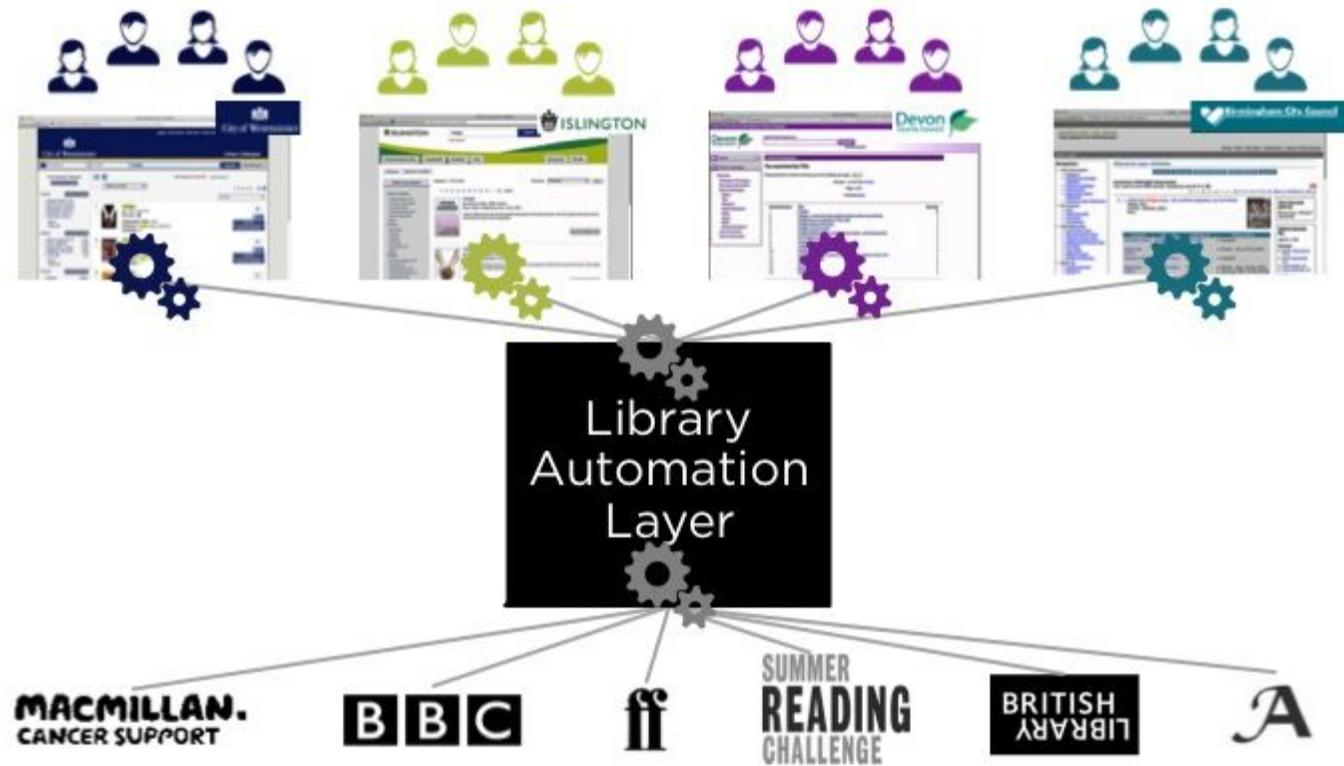
And make those standards available to the many other services libraries manage.



The system should provide APIs so that live information about books and users can be available to create new web experiences.



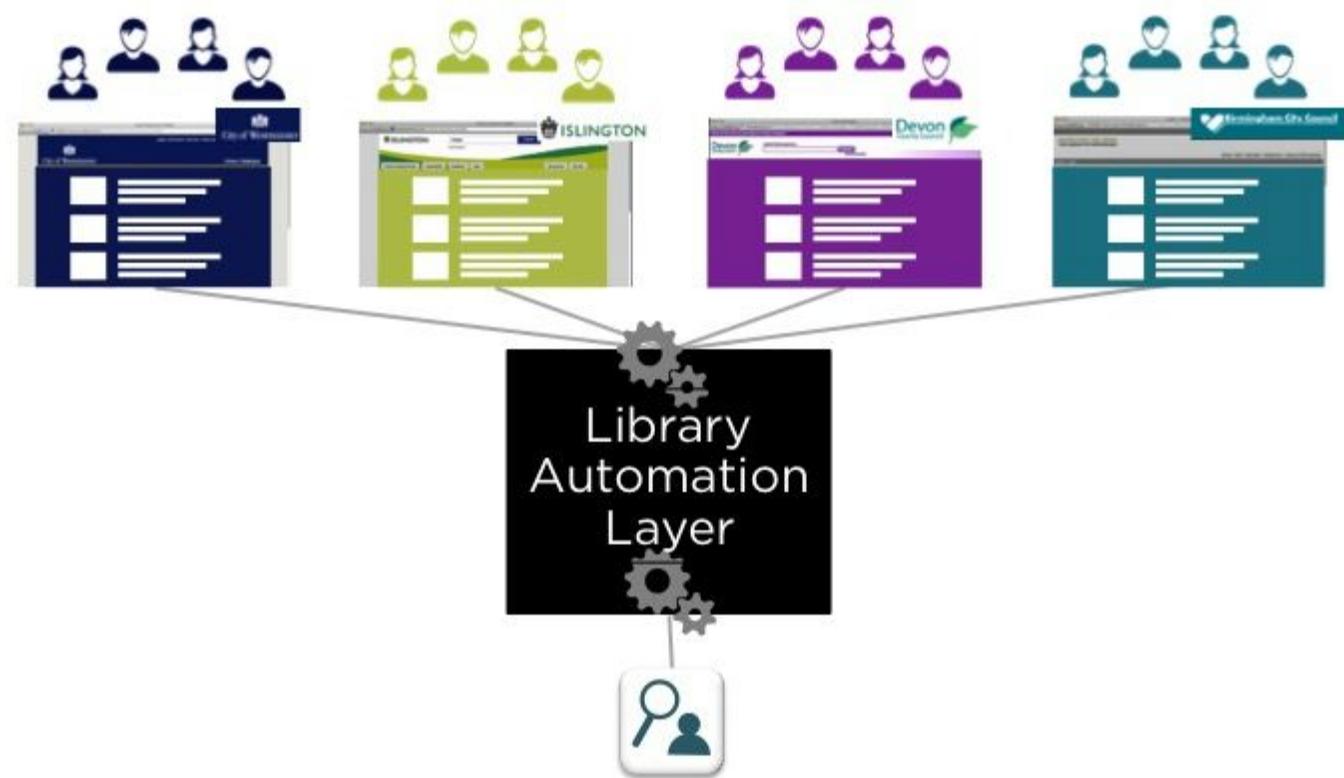
This we call the Library Automation Layer - the keystone of a standards-based digital platform for England's libraries.



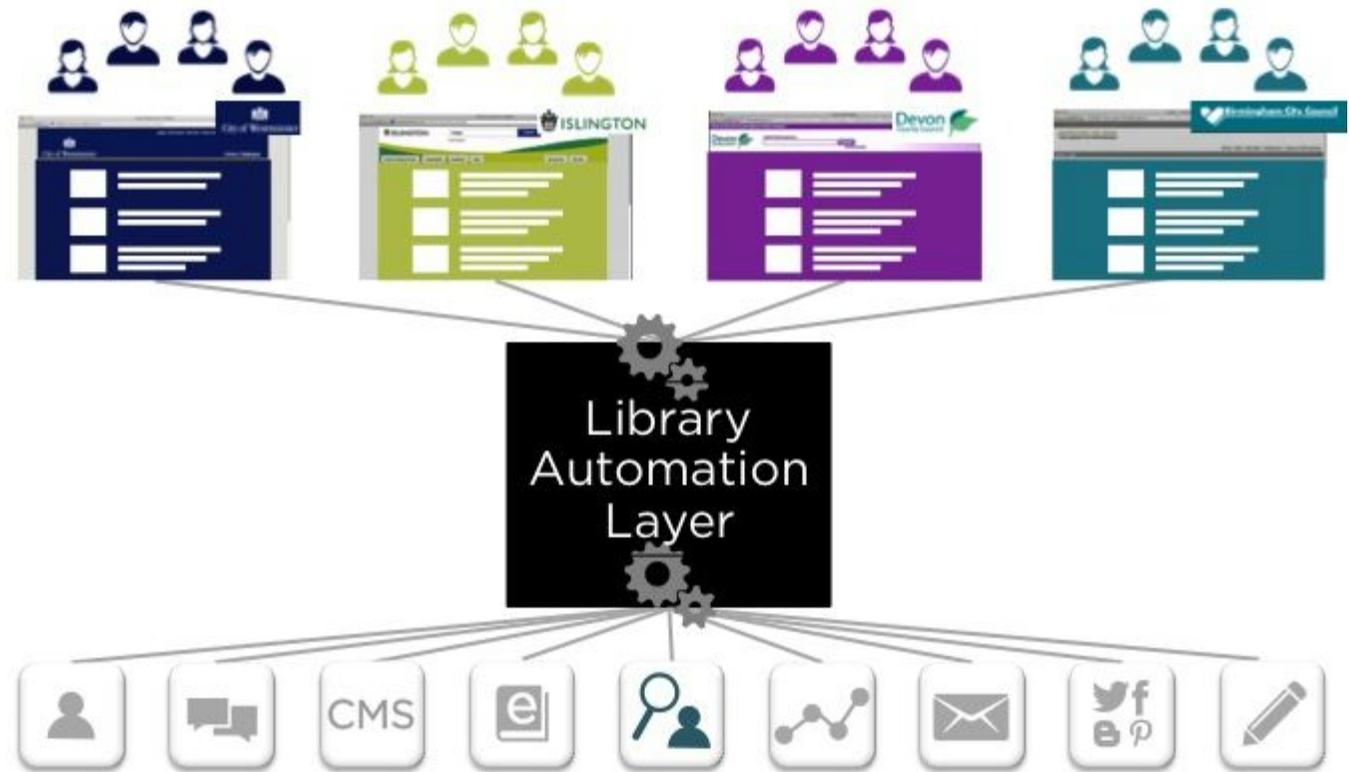
This is not a website -- it's a set of foundational infrastructure like plumbing. Once those pipe ends are clearly exposed, new websites and applications can be built. This includes a modern catalogue interface.



The new catalogue can be branded and configured to serve the needs of each local authority -- now drawing on the book data and shared content from national partners, other libraries, and library users across England.



The same can be done for a number of applications. We recommend a core suite of applications in our report.



The result is that applications benefit from national investment, national partner resources, and a national user community -- as well as from local active user communities and collections.



New Possibilities:

Less Frustration
(less waste)

Making integrations without this Library Automation Layer takes a lot of time that could be spent better elsewhere.

Today:
150 FTEs
 could be redeployed
 to higher-value tasks

Table 1 - Library System Status

System	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Acquisition	1,200	1,100	1,000	900	800	700	600	500	400	300	200
Serials	1,500	1,400	1,300	1,200	1,100	1,000	900	800	700	600	500
Reference	1,800	1,700	1,600	1,500	1,400	1,300	1,200	1,100	1,000	900	800
Technical Services	2,000	1,900	1,800	1,700	1,600	1,500	1,400	1,300	1,200	1,100	1,000
Library Administration	2,500	2,400	2,300	2,200	2,100	2,000	1,900	1,800	1,700	1,600	1,500
Total	8,000	7,500	7,000	6,500	6,000	5,500	5,000	4,500	4,000	3,500	3,000

Table 2 - Library System Status

System	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Acquisition	1,200	1,100	1,000	900	800	700	600	500	400	300	200
Serials	1,500	1,400	1,300	1,200	1,100	1,000	900	800	700	600	500
Reference	1,800	1,700	1,600	1,500	1,400	1,300	1,200	1,100	1,000	900	800
Technical Services	2,000	1,900	1,800	1,700	1,600	1,500	1,400	1,300	1,200	1,100	1,000
Library Administration	2,500	2,400	2,300	2,200	2,100	2,000	1,900	1,800	1,700	1,600	1,500
Total	8,000	7,500	7,000	6,500	6,000	5,500	5,000	4,500	4,000	3,500	3,000



Currently, for example, a national catalogue with less than 00.1% of estimated English public library traffic takes a lot of time to support through manual updates. The Library Automation Layer would remove this need.

Today:

90 FTEs

could be redeployed to higher-value tasks

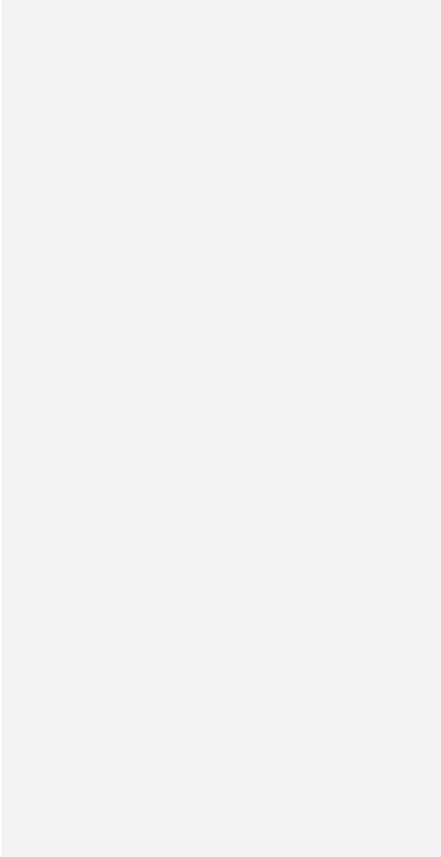


New Possibilities

Local Innovation

Current efforts to improve digital experiences on mobile device, for example, often break at the catalogue today. Individual libraries have created beautiful usable apps, but have been unable to improve the catalogue, where users still must go to get a book.





New Possibilities

+ National Connections

A similar break now occurs between the local library site...



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THE LIBRARY OF BIRMINGHAM

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Anywhere: THE RABBIT PROBLEM (Keywords)
Record 9 of 10

Previous Record | Next Record

Main Title: *The rabbit problem* / Emily Rabbit (i.e. Emily Gravett) ; paper engineering by Lisa Matthews.
Author: Gravett, Emily
Matthews, Lisa
Imprint: London : Noson Children's, 2015.
Collection: CXC (i.e. chiefly cat. 0) ; 28 cm.
Notes: Originally published: 2009. Pop-up book. Nonlinear format. Includes rabbit newspaper, rabbit cookery book, and baby rabbit record book etc.
Summary: Hop along to the field and follow Lively and Chalk Rabbit through a year as they try to cope with their fast expanding brood and handle a different seasonal challenge each month, from the end of February to the end of April and the heat of July.
ISBN: 9781782592676 (pbk)
 Dewey Class: 633.92
Language: English
Subject: Rabbits -- Juvenile works -- Juvenile fiction
Seasons -- Juvenile works -- Juvenile fiction
Toy and model books
Children's stories -- Juvenile works
Average Rating: No reviews available as yet
Add your review
ISBN: 9781782592676

Holdings:

Location	Collection	Item(s) #	Review Date
Library of Birmingham Children's Library, Lower Ground Floor	Picture Books	Picture Book	<ul style="list-style-type: none"> On loan - Due: 08 May 2022 Last copy (Ser: 13 Jul 2015)
Spinney Library	Picture Books	Picture Books	<ul style="list-style-type: none"> Available
Shed End Library	Picture Books	Picture Book	<ul style="list-style-type: none"> Available

And the enriching partner sites...



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Anywhere: **THE RABBIT PROBLEM (Keywords)**
Record 9 of 10

Main Title: **The rabbit problem** / Emily Gravett (i.e. Emily Gravett) ; paper engineering by Amy MacIntyre).
Author: Gravett, Emily
Bookshelves: 4th
Subjects: London -- Fiction; Children, 2010.
Collection: (2013) : chiefly vol. 9, 1-20 cm.
Notes: Originally published: 2008.
Pop-up book.
Nonnarrative format.
Includes rabbit newspaper, rabbit cookery book, and baby rabbit record book etc.
Read along to the Field and follow Lancel and Chalk Rabbit through a year as they try to cope with their fast expanding brood and handle a different seasonal challenge each month, from the cold of February to the wet of April and the heat of July.

ISBN: 9780230526946 (pbk)
923.92
Language: English
Subjects -- Fiction works -- Juvenile fiction
Seasons -- Fiction works -- Juvenile fiction
Toy and model books
Children's stories -- Fiction works
Average Rating: No reviews available as yet
Add your review
ISBN: 999222

Holdings:

Location	Collection	Item no.	Barcode/Call no.
Library of Birmingham Children's Library, Lower Ground Floor	Picture Books	Picture Book	+ On loan - Due: 08 May 2025 + Last copy (Set: 13 Jul 2015)
Spencer Library	Picture Books	Picture Books	+ Available
Stratford Library	Picture Books	Picture Books	+ Available

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The Rabbit Problem
Emily Gravett

Average rating
4 out of 5
14 reviews

How does 1+1 = 200? A family of rabbits soon supplies the answer!

Add to wish list
Browse + join in this author

In the library, you can request the book. In the partner site, you can find books and hear what people have said about them.



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Anywhere: **THE RABBIT PROBLEM (Keywords)**
Record 9 of 10

Main Title: **The rabbit problem** / Emily Gravett (i.e. Emily Gravett) ; paper engineering by Anna Middleton.
Author: Gravett, Emily
Illustrations: Anna Middleton
Originals: London : Roald Dahl Children's, 2010.
Collection: (DfE) p. : chiefly col. ill. ; 20 cm.
Notes: Originally published: 2008.
Pop-up book.
Non-inked format.
Includes: rabbit newspaper, rabbit cookery book, and baby rabbit record book etc.
Read along to the Field and follow Lancelot and Chalk Rabbit through a year as they try to cope with their fast expanding brood and handle a different seasonal challenge each month, from the cold of February to the wet of April and the heat of July.
ISBN: 9781250026946 (pbk)
Dewey Class: 623.92
Language: English
Subjects -- Fiction works -- Juvenile fiction
Seasons -- Fictional works -- Juvenile fiction
Toy and model-making books
Children's stories -- Fictional works
Average Rating: No reviews available as yet
Add your review
ISBN: 999922

Holdings:

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Library of Birmingham Children's Library, Lower Ground Floor	Picture Books	Picture Book	• On loan - Due: 08 May 2025 • Last copy (Set: 13 Jul 2015)
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Sheed-End Library	Picture Books	2 Picture Book	• Available

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The Rabbit Problem
Emily Gravett

Average: 4 out of 5
14 reviews

14

How does 1+1 = 288? A family of rabbits soon supplies the answer!

Add to wish list

Reviews by fans of this author

But there is no pathway between the two. There are separate logins and separate identities for each.

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Anywhere: **THE RABBIT PROBLEM (Keywords)**
Record 9 of 10

Main Title: **The rabbit problem** / Emily Stubbs (i.e. Emily Gravett) ; paper engineering by Anna Matthei (i.e. Anna Matthei).

Author: Gravett, Emily

Readings: 408

Original Title: London - Romaine Children's, 2010.

Collection: (2013) : chiefly vol. 9, 1 (20 cm).

Notes: Originally published: 2008. Pop-up book. Read-aloud format. Includes rabbit newspaper, rabbit weekly book, and baby rabbit record book etc. Read along to the Field and follow Loretta and Chalk Rabbit through a year as they try to cope with their fast expanding brood and handle a different seasonal challenge each month, from the cold of February to the wet of April and the heat of July.

ISBN: 9781250026976 (pbk) 823.92

Language: English

Subject: Rabbits -- Fiction works -- Juvenile fiction. Seasons -- Fiction works -- Juvenile fiction. Toy and model books. Children's stories -- Fiction works. No reviews available at yet. Add your review

Average Rating: 0.00 (0)

Holdings:

Location	Collection	Material As	Status/Date
Library of Birmingham Children's Library, Lower Ground Floor	Picture Books	Picture Book	• On loan - Due: 08 May 2025 • Last copy (Set: 13 Jul 2015)
Spencer Library	Picture Books	Picture Book	• Available
Shed End Library	Picture Books	Picture Book	• Available

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The added investment, including author information, does not go as far as it could because it does not reach the many users in the catalogue. The resources used to compile the book data and authenticate identity could have been created once and shared.



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Where you are: Home > Book to Read > Book to Read

Anywhere: **THE RABBIT PROBLEM (Keywords)**
Record 9 of 10

Main Title: **The rabbit problem** / Emily Gravett (i.e. Emily Gravett ; paper engineering by Anna Middleton)
Author: Gravett, Emily
Bookshelves: 408
Subjects: London -- Juvenile fiction, 2010.
Collection: (2011) : chiefly vol. 9, 1-20 cm.
Notes: Originally published: 2008.
Pop-up book.
Nontrade format.
Includes rabbit newspaper, rabbit cookery book, and baby rabbit record book etc.
Read along to the Field and follow Loretta and Chalk Rabbit through a year as they try to cope with their fast expanding brood and handle a different seasonal challenge each month, from the cold of February to the wet of April and the heat of July.
ISBN: 9780230520494 (pbk)
923.92
Dewey Class: English
Language: Rabbits -- Fiction works -- Juvenile fiction
Seasons -- Fiction works -- Juvenile fiction
Toy and model books
Children's stories -- Fiction works
No reviews available as yet
Add your review
ISBN: 9780230

Holdings:

Location	Collection	Shelfmark As	Status/Date
Library of Birmingham Children's Library, Lower Ground Floor	Picture Books	Picture Book	• On loan - Out: 02 May 2023 • Last copy (Set: 13 Jul 2013)
Spencer Library	Picture Books	Picture Books	• Available
Stratford Library	Picture Books	Picture Books	• Available

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The Rabbit Problem
Emily Gravett

Average rating: 4 out of 5
14 reviews

Become a fan of this author

The excellent content on the partner sites is visible nowhere in the library catalogue.



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Anyways: THE RABBIT PROBLEM (Keywords)
Record 9 of 10

Main Title: **The rabbit problem** / Emily Gravett (i.e. Emily Gravett) ; paper engineering by Anna Matthews.
 Author: Gravett, Emily
 Bookshelves: 408
 Synopsis: London - Ruminator Children's, 2016.
 Collection: (2016) : chiefly col. ill. : 20 cm.
 Notes: Originally published: 2008.
 Pop-up book.
 Hardcover format.
 Includes rabbit newspaper, rabbit weekly book, and baby rabbit record book etc.
 Read along to the Field and follow Lancel and Chalk Rabbit through a year as they try to cope with their fast expanding brood and handle a different seasonal challenge each month, from the cold of February to the wet of April and the heat of July.
 ISBN: 9781782502676 (pbk)
 Dewey Class: 623.92
 Language: English
 Subjects -- Fictional works -- Juvenile fiction
 Subjects -- Fictional works -- Juvenile fiction
 Toy and movable books
 Children's stories -- Fictional works
 Average Rating: No reviews available as yet
 Add your review
 ISBN: 962222

Holdings:

Location	Collection	Item(s) As	Status/Date
Library of Birmingham Children's Library, Lower Ground Floor	Picture Books	Picture Book	• On loan - Out: 08 May 2022 • Last copy (Set: 13 Jul 2015)
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Sheed-End Library	Picture Books	Picture Book	• Available

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Emily Gravett Gallery

One of the Booktrust Best New Illustrators 2008

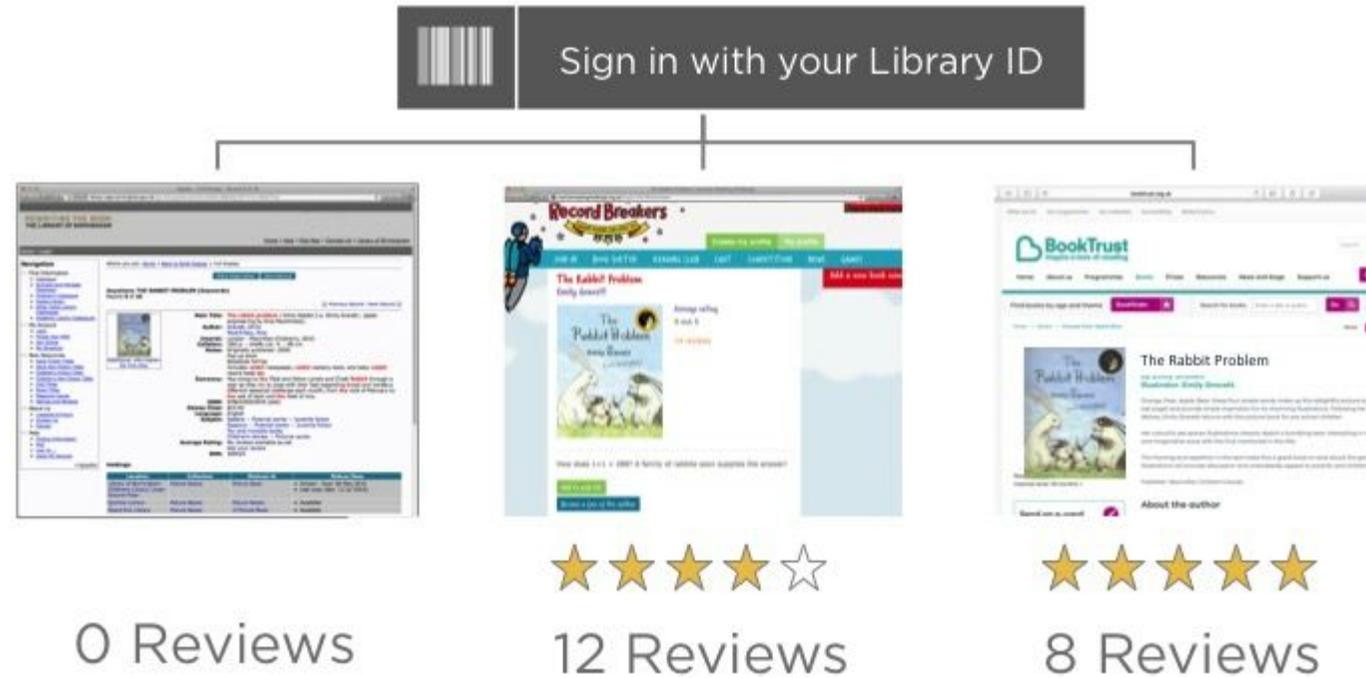
Separate user profiles; separate comments.



The screenshot displays the BookTrust website interface. The top navigation bar includes links for Home, About us, Programmes, Books, Prices, Resources, News and blogs, and Support us. A search bar is located in the top right corner. The main content area is titled 'REWRITING THE BOOK THE LIBRARY OF BIRMINGHAM'. The central focus is a book review for 'Anywhere: THE RABBIT PROBLEM (Keywords)'. The review includes a book cover image, the title, author (Emily Gravett), and a summary. Below the review is a table of holdings from various libraries. To the right, there is a 'Tell us what you thought' review form with fields for Name, Location, and Your rating, along with a verification image and a 'Submit review for approval' button.

Location	Comments	Shelfmark	Status/Date
Library of Birmingham Children's Library, Lower Ground Floor	Picture Books	Picture Book	• On loan - Due: 08 May 2023 • Last copy (Set: 13 Jul 2013)
Spencer Library	Picture Books	Picture Books	• Available
Sheed-End Library	Picture Books	Picture Books	• Available

What if instead those applications built on common foundations, so they could mutually reinforce one another? A single library ID and profile, for instance, could link all reviews.



And on partner sites users would have a clear pathway to the library to borrow the books that appear on these sites.

Record Breakers

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JOIN IN BOOKSALTER READING CLUB CHAT COMPETITION NEWS GAMES

The Rabbit Problem
Emily Gravett

Average rating: 4 out of 5

RESERVE THIS BOOK

REWRITING THE BOOK
THE LIBRARY OF BIRMINGHAM

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Book to Read Challenge

Anywhere: **THE RABBIT PROBLEM (Keywords)**
Record 9 of 10

Main Title: *The rabbit problem* / Emily Gravett (i.e. Emily Gravett) ; paper engineering by Anna Middleton.
Author: Gravett, Emily
Illustration: Anna Middleton
Originals: London : Roald Dahl Children's, 2010.
Collection: [2013] : chiefly vol. 9, 1 20 cm.
Notes: Pop-up book.
Nonnarrative format.
Includes rabbit newspaper, rabbit bakery book, and baby rabbit record book etc.
Summary: Read along to the Field and follow Lancelot and Chalk Rabbit through a year as they try to cope with their fast expanding brood and handle a different seasonal challenge each month, from the cold of February to the wet of April and the heat of July.
ISBN: 9781250026946 (pbk)
623.92
Series Name: English
Language: English
Subjects -- Physical works -- Juvenile fiction
Subjects -- Physical works -- Juvenile fiction
Toy and movable books
Children's stories -- Popular works
Average Rating: No reviews available as yet
Add your review
ISBN: 9781250026946

Holdings:

Location	Collection	Material As	Status/Date
Library of Birmingham Children's Library, Lower Ground Floor	Picture Books	Picture Book	• On loan - Due: 08 May 2023 • Last copy (Set: 13 Jul 2013)
Spencer Library	Picture Books	Picture Books	• Available
Sheed-End Library	Picture Books	Picture Books	• Available

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Home > Books > Orange Pear Apple Bear

Orange Pear Apple Bear
by Emily Gravett
Illustration: Emily Gravett

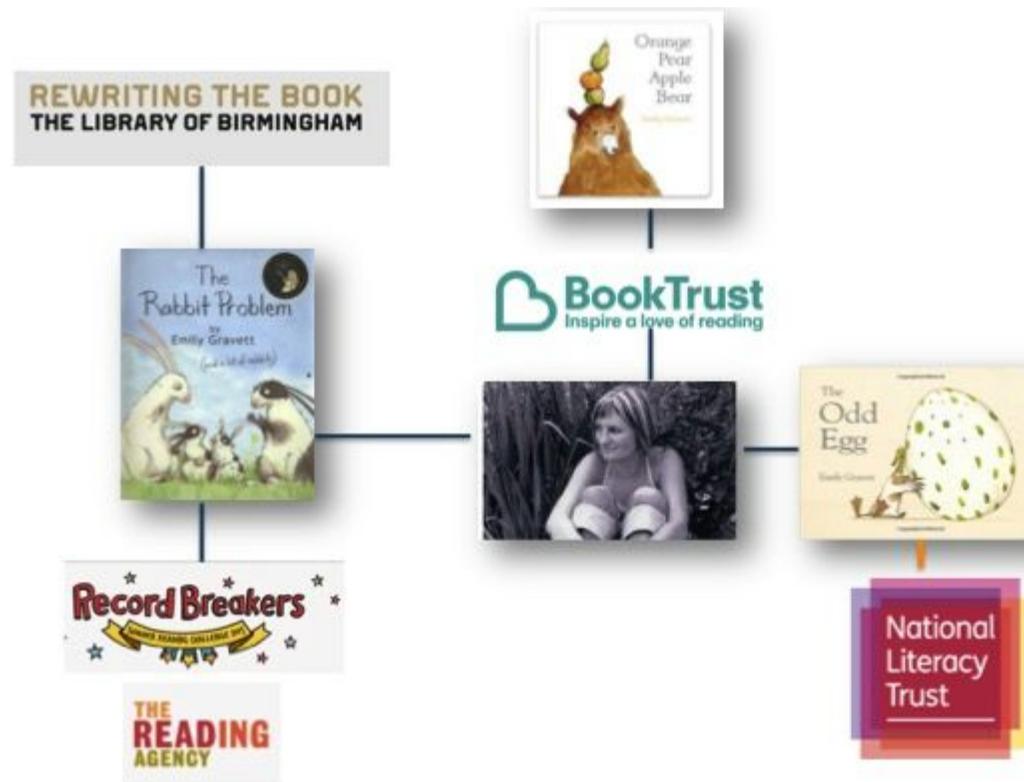
RESERVE THIS BOOK

National Literacy Trust

Books about animals **RESERVE THIS BOOK**

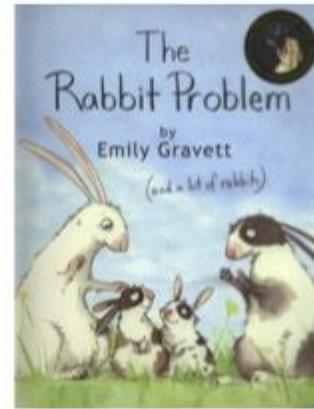
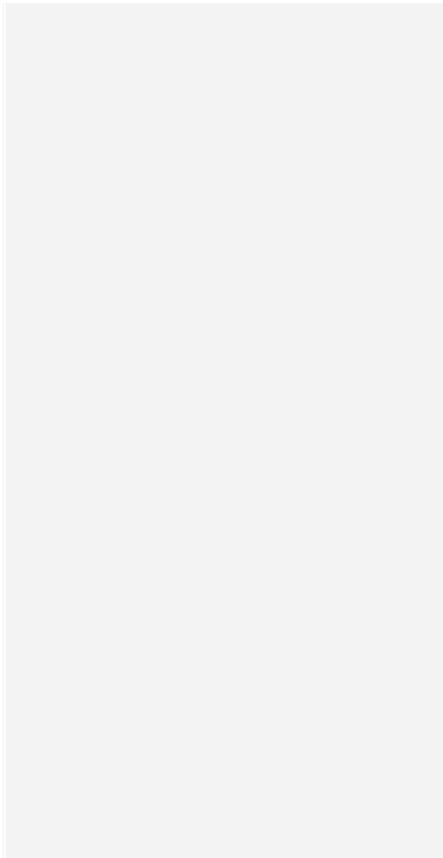
The Odd Egg by Emily Gravett
Chalk is feeling left out. He is the only one without an egg. He sets in search of one and finds one that is brown and covered in other fabulous...

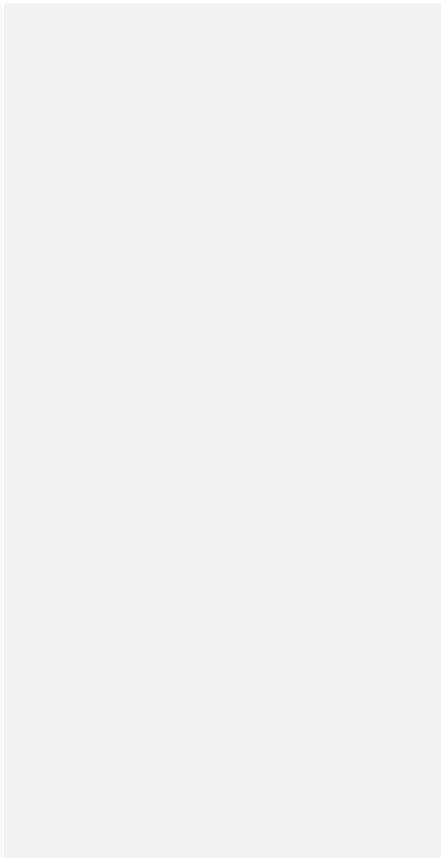
A new graph of literacy, learning, and community inclusion could be created with the resources of the library and its partners.



This graph could collect members of the community, locally and nationally, around their interests and needs.



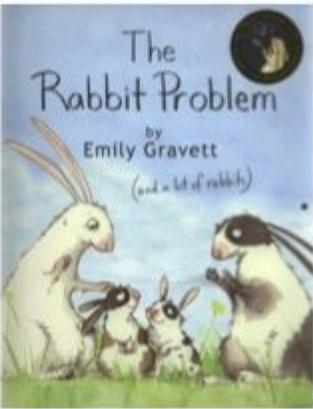




I love math lessons that can incorporate other subjects, especially ones like English. This is a great book for introducing multiplication to students in the younger grades. It is a very ingenious and fantastic book.



This witty narrative is about the problems in a rabbit's life. It begins with one rabbit then they begin to reproduce and each month has a different problem.

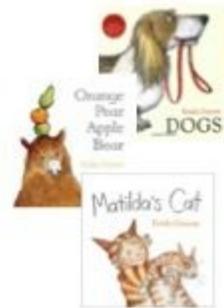
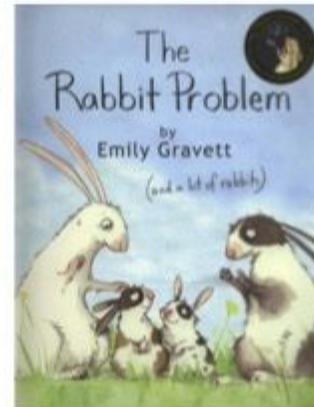


I like bunny books!



The ending is funny!

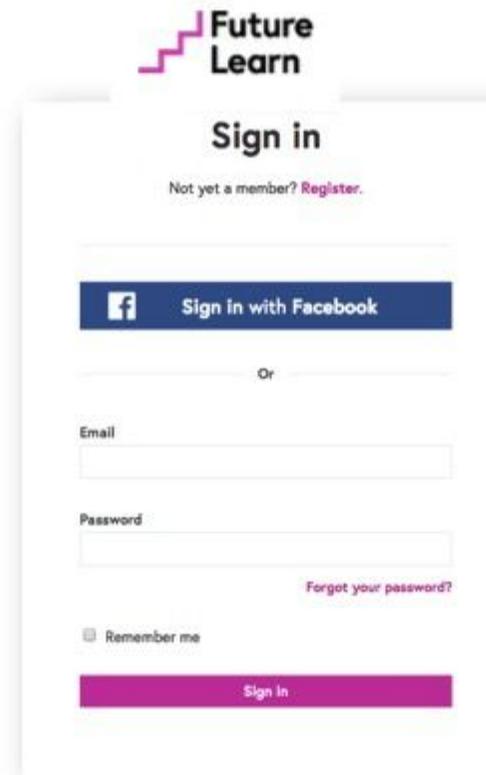
This creates pathways for users to build from one area of common interest towards new areas and ideas that might interest them as well. It also creates opportunities to connect those who have knowledge and skills with those who are learning.



New Possibilities

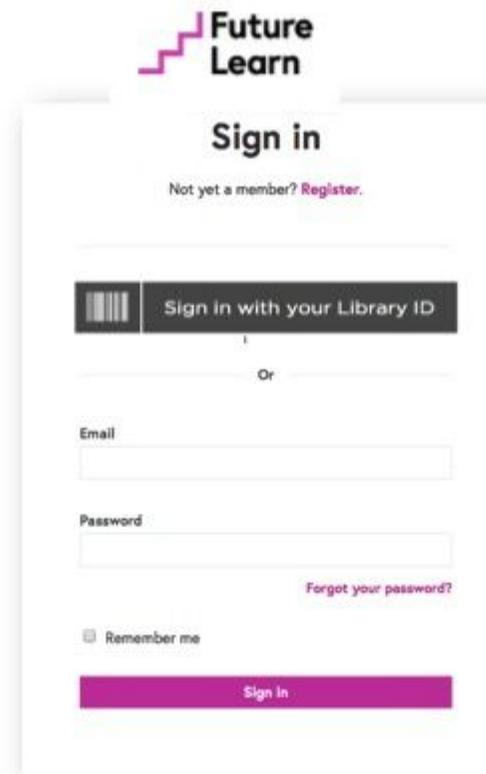
For Learning Together

Sites geared towards learning today have to rely on social logins with terms of use defined by a private company whose business model is driven by advertising.



The image shows a sign-in page for 'Future Learn'. At the top left is the logo, which consists of a pink staircase icon followed by the text 'Future Learn'. Below the logo is the heading 'Sign in'. Underneath the heading is a link: 'Not yet a member? Register.' The main content area contains a dark blue button with the Facebook 'f' logo and the text 'Sign in with Facebook'. Below this button is the word 'Or' centered. There are two input fields: one for 'Email' and one for 'Password'. To the right of the password field is a link: 'Forgot your password?'. Below the password field is a checkbox labeled 'Remember me'. At the bottom of the form is a pink button with the text 'Sign in'.

What if the library offered the common login? Its existing set of card holders is about the same as the number of credit card users in England.



The image shows a screenshot of the Future Learn website's sign-in page. At the top left is the Future Learn logo, which consists of a pink staircase icon followed by the text "Future Learn". Below the logo is the heading "Sign in" in a bold, black font. Underneath the heading is a link that says "Not yet a member? Register." in a smaller, pink font. The main sign-in area is a white box with a dark grey header that says "Sign in with your Library ID" next to a barcode icon. Below this header is a horizontal line with the word "Or" centered underneath it. There are two input fields: "Email" and "Password", both with light grey borders. To the right of the Password field is a link that says "Forgot your password?" in a pink font. Below the input fields is a checkbox labeled "Remember me". At the bottom of the sign-in box is a large, solid pink button with the text "Sign in" in white.

The Library ID could ten be the basis for new applications.



A Beginner's Guide to Writing in English for University Study

Join now – starts 28 Sep

INTRODUCTION

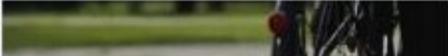
Learn how to use English for study at university or college and develop your writing skills, vocabulary and grammar.

WATCH THE TRAILER



University of Reading

- FREE online course
- Duration: 5 weeks
- 3 hours pw



Online learning programs have high attrition rates -- because, it turns out, people need social reinforcement and structure to succeed. Imagine an app to help peer learners find each other and meet to study in the library.

The image shows a digital interface for a course. At the top, a banner features the title "A Beginner's Guide to Writing in English for University Study" in white text against a background of blurred book pages. Below the title is a pink button that says "Join now - starts 28 Sep". The main content area is split into two sections. On the left, under the heading "INTRODUCTION", there is a paragraph: "Learn how to use English for study at university or college and develop your writing skills, vocabulary and grammar." Below this is a section titled "WATCH THE TRAILER" with a small video player showing a person in a library. On the right, a dark grey box contains the acronym "L A C B M F" in colored circles, followed by the text "6 people in your community are also taking this course". At the bottom of this box is a button labeled "Study Together at the Library".

New Possibilities

New Pathways...
to reading and to the library's resources

One of the greatest things these kinds of utilities enable is the “content-as-marketing” that helps evangelize the library’s offerings and value across the web, even to those who don’t now read books.

Per Mertesacker was FRIGHTENED of Arsenal fans when defender first heard terrace chant 'Big f***** German' | Daily Mail Online

www.dailymail.co.uk/sport/football/article-2611215/Per-Mertesacker-FRIGHTENED-Arsenal-fans-defender-heard-terrace-chant-Big-f-German.html

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MailOnline

Football

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Football | Premier League | Champions League | Rugby World Cup | F1 | Boxing | UFC | Tennis | Golf | Cricket | Fantasy Football | NFL | More Login

Per Mertesacker was FRIGHTENED of Arsenal fans when defender first heard terrace chant 'Big f***** German'

- Central defender was anxious of the swearing
- A German journalist then told Mertesacker it was endearing
- The 28-year-old is known as the BFG at the Emirates

By DAVID KENT FOR MAILONLINE
PUBLISHED: 12:59 GMT, 17 May 2014 | UPDATED: 16:36 GMT, 17 May 2014

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Per Mertesacker thought Arsenal supporters were screaming abuse at him when he first joined the club, but now realises his terrace chant is endearing.

Site Web Enter your search Search

Like Daily Mail Sport Follow @MailSport Follow Daily Mail +1 Daily Mail Sport

Get the Football RSS feed

RSS My Yahoo! Feedy AOL Reader

More RSS feeds...

FREE MailOnline

This newspaper article about the Arsenal player Per Mertesacker concluded with a video clip of him reviewing his favourite book, part of a National Literacy Trust program. Celebrity tie-ins are a key to reaching reluctant readers - central to the mission of libraries.



What if, adjacent to such videos, there were links to find the books in any local library?

Arsenal's Per Mertesackerb on his favourite books

Arsenal's Arsene Wenger on his favourite moments

Swansea City's Nei... Per Mertesacker: A... Stevi Ritchie reveal... Obama goes big o...

Get Per's favourite books at the Public Library

Fairy Tales
Hans Christian Andersen

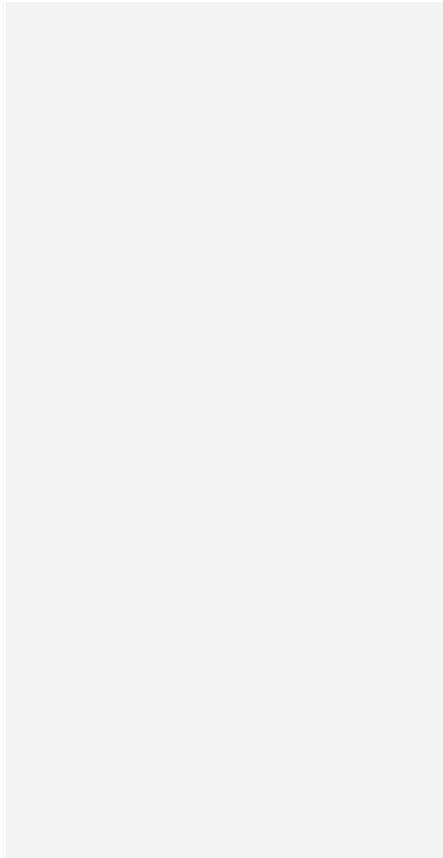
A Life Too Short
Ronald Reng

Find it at the Library

2:08 / 2:08

Facebook, Twitter, Pinterest, Share, Link, Embed, Full Screen

The image shows a video player interface with a dark background. At the top, the video title is "Arsenal's Per Mertesackerb on his favourite books". Below the title, there are several video thumbnails. The largest one shows a man's face with the caption "Arsenal's Arsene Wenger on his favourite moments". Below it are four smaller thumbnails with captions: "Swansea City's Nei...", "Per Mertesacker: A...", "Stevi Ritchie reveal...", and "Obama goes big o...". On the right side of the video player, there is a library overlay. It features a white icon of a library building and the text "Get Per's favourite books at the Public Library". Below this, there are two book recommendations. The first is "Fairy Tales" by Hans Christian Andersen, with a red book cover icon and a "Find it at the Library" button. The second is "A Life Too Short" by Ronald Reng, with a blue book cover icon and a "Find it at the Library" button. At the bottom of the video player, there is a green play button icon, a speaker icon, and a progress bar showing "2:08 / 2:08". To the right of the progress bar are several social media sharing icons: Facebook, Twitter, Pinterest, a share icon, a link icon, an embed icon, and a full screen icon.



Arsenal's Per Mertesackerb on his favourite books

Arsenal's Arsene Wenger on his favourite moments

Swansea City's Nei... Per Mertesacker: A... Stevi Ritchie reveal... Obama goes big o...

Get Per's favourite books at the Public Library

Fairy Tales
Hans Christian Andersen

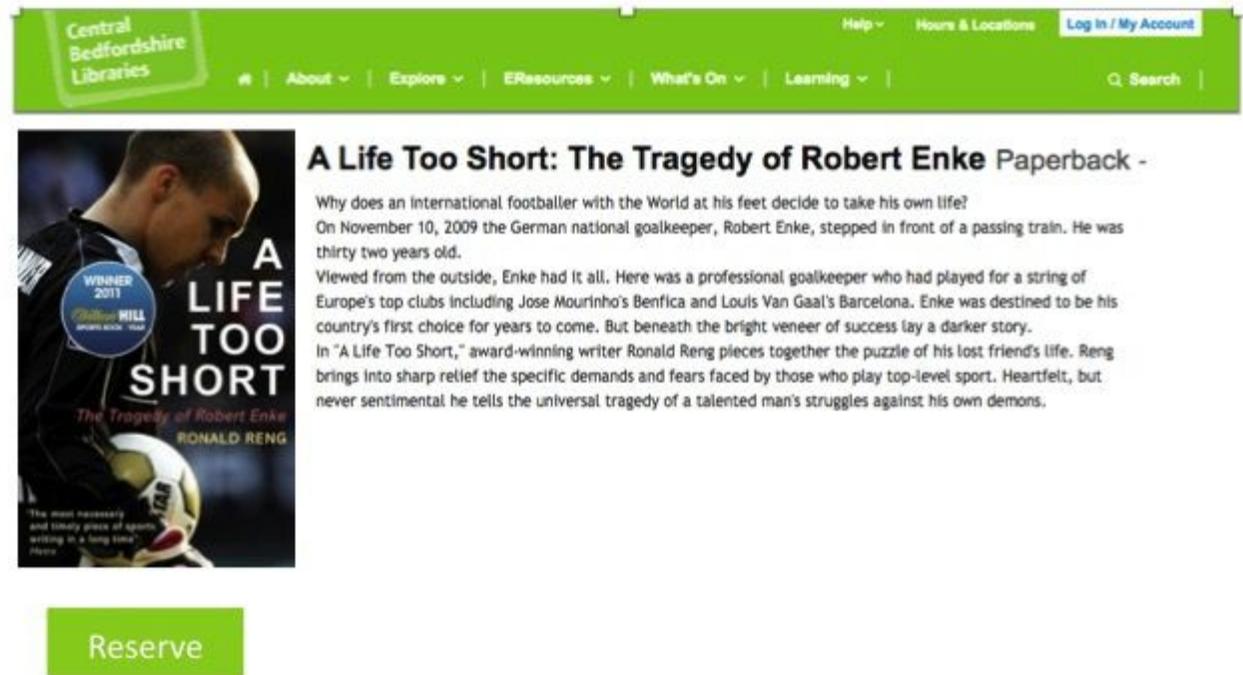
A Life Too Short
Ronald Reng

Find it at the Library

Find it at the Library

2:08 / 2:08

A person who might not have thought about reading before might now be curious, drawn in by this endorsement from a respected role model.



The screenshot shows the Central Bedfordshire Libraries website. The header is green with navigation links: Home, About, Explore, EResources, What's On, Learning, and a search bar. The main content area features a book listing for "A Life Too Short: The Tragedy of Robert Enke" by Ronald Reng. The book cover shows a soccer player in a black jersey holding a ball. A blue circular badge on the cover says "WINNER 2011" and "Jillson HILL". Below the book cover is a green "Reserve" button.

A Life Too Short: The Tragedy of Robert Enke Paperback -

Why does an international footballer with the World at his feet decide to take his own life?
On November 10, 2009 the German national goalkeeper, Robert Enke, stepped in front of a passing train. He was thirty two years old.

Viewed from the outside, Enke had it all. Here was a professional goalkeeper who had played for a string of Europe's top clubs including Jose Mourinho's Benfica and Louis Van Gaal's Barcelona. Enke was destined to be his country's first choice for years to come. But beneath the bright veneer of success lay a darker story.

In "A Life Too Short," award-winning writer Ronald Reng pieces together the puzzle of his lost friend's life. Reng brings into sharp relief the specific demands and fears faced by those who play top-level sport. Heartfelt, but never sentimental he tells the universal tragedy of a talented man's struggles against his own demons.

[Reserve](#)

And, from this book, which deals with the suicide of a former teammate, the person could then be shown related resources concerning depression, in this case the “Books on Prescription” program from the Reading Agency.

Central Bedfordshire Libraries

Help | Hours & Locations | Log In / My Account

About | Explore | EResources | What's On | Learning | Search

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Reserve

You might also be interested in

- Books on Prescription
- RESOURCE LIST
- Coping with Depression
- By Reading Well Books on Prescription
- 14 items

OVERCOMING DEPRESSION

MIND OVER MOOD

OVERCOMING DEPRESSION AND LOW MOOD

Other programs could also be shown that branch out from the book's topic areas, mutually reinforcing the investments of many partners for transformative impact.

You may also be interested in...

The carousel displays three recommendation cards:

- RESOURCE LIST**
Dementia: Support for Relatives and Carers
By Reading Well Books on Prescription
6 items
Essential resources providing tips, detailed insights and practical approaches to caregivers of people with dementia.
- EVENT**
Sporting Memories
Wed 16 Mar 2015
Sporting Memories Network has been established to promote and develop the use of sporting memories to improve the well-being of older people and to help tackle dementia, depression and social isolation.
[Register Now](#)
- RESOURCE LIST**
Dealing with depression
By Emma J
10 items
Good go-to resources for those that are affected by depression or care for a loved one struggling with this terrible disease.

Celebrity recommendations are widely followed.

The Telegraph

Home Video News World Sport Finance Comment
Film TV and Radio Books Music Comedy Art Theatre
Best Books To Read | Book Reviews | Fiction | Non-Fiction | Cl

HOME • CULTURE • BOOKS

Holiday reads: What are Cameron, Miliband, Clegg and Farage packing in their suitcases this summer?

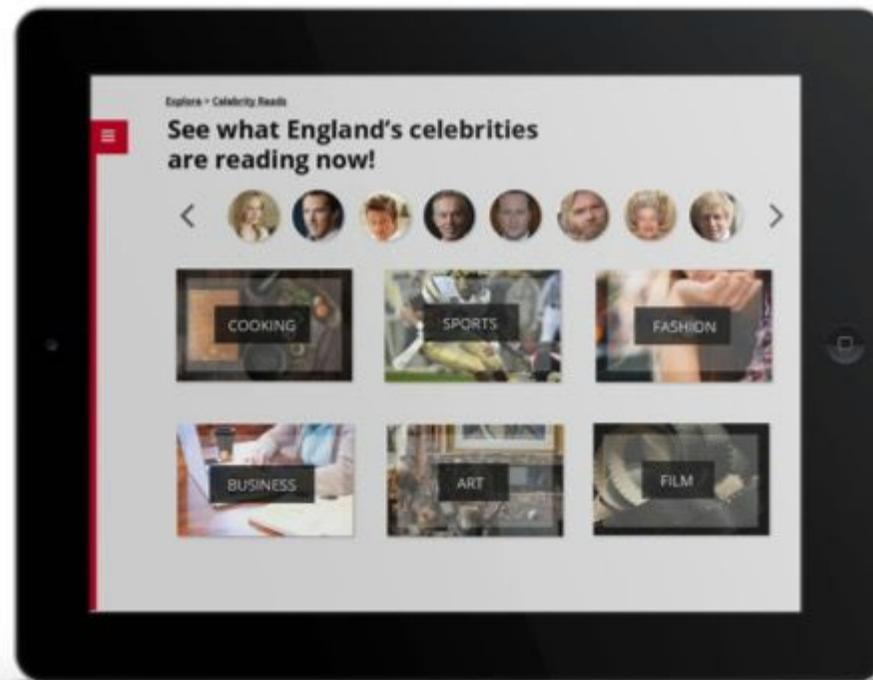
Britain's leaders reveal they plan to devour books about politics, lies, betrayal... and the complexities of the European Union

[f](#) 52 [t](#) 14 [p](#) 0 [in](#) 7 [v](#) 73 [e](#) Email



Photo: GETTY

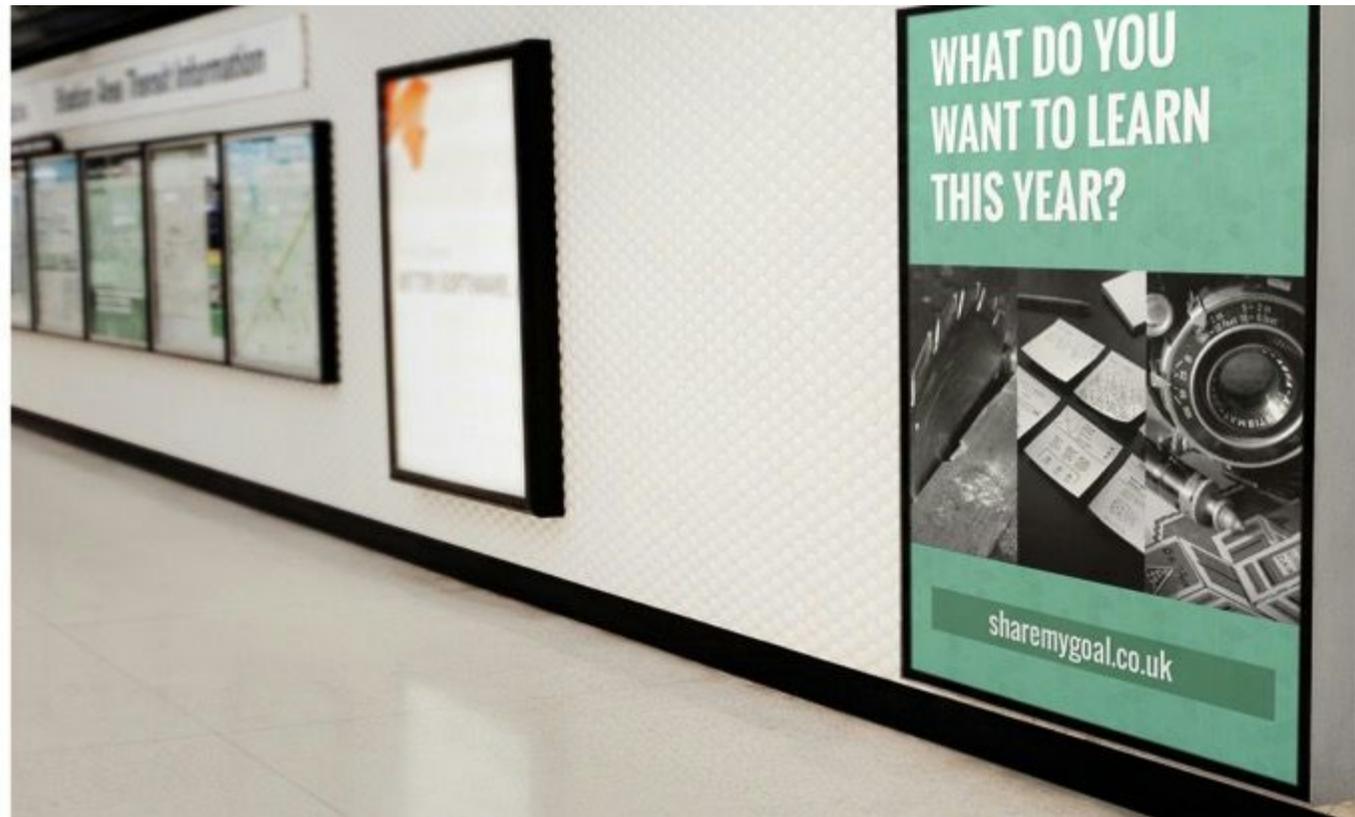
And the library should be the place where these leaders feel compelled to share what they are reading as a way to give back to and help energize the library community.



New Possibilities

NATIONAL MOMENTS

Today, public libraries lack the digital infrastructure to take part in “national moments” at scale. But what if they did?



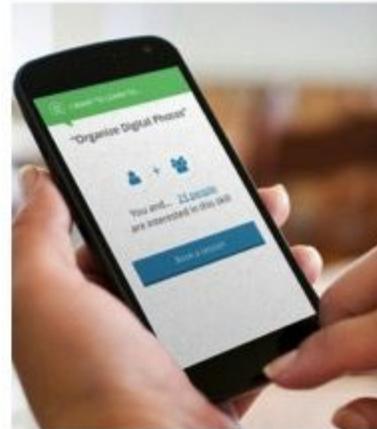
The first day open following New Year's Day tends to be one of the most high-volume loan days of the year. The library could build on this activity by encouraging people to share their learning at the library.



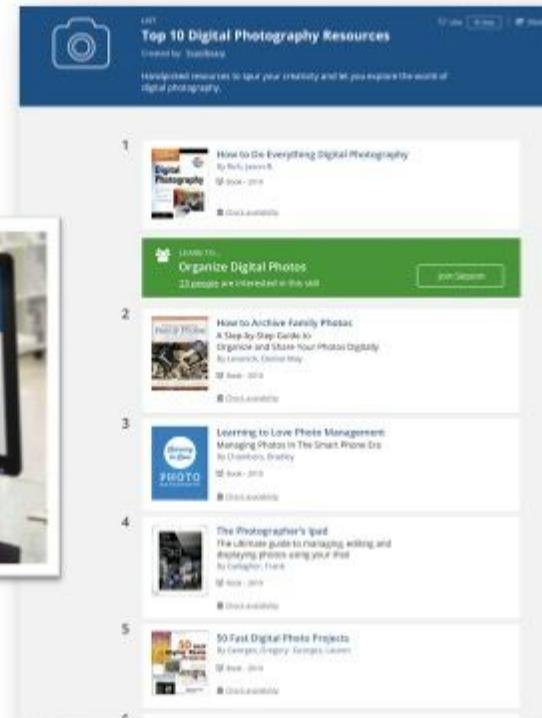
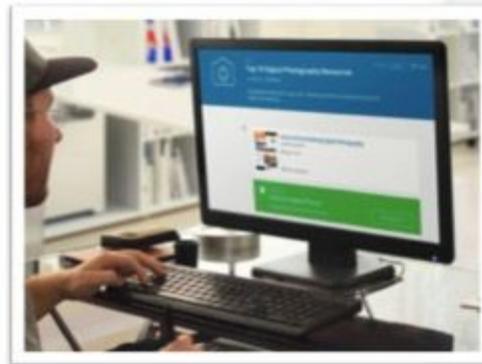
Digital applications could support this campaign, tying together library assets like the goodwill of the community, the large number of users, the branch locations, and the collections.



A person could join a group to learn, or to help teach.



The same kind of activity could be marketed across the library catalogue, where relevant given customer book searches -- in this case a search for a how-to book.



Finally, some groups could meet in the branch, with banners to build more awareness and participation.



The library becomes a hub for informal learning -- for the community, by the community, and aligned with library goals of literacy, lifelong learning, and social inclusion.



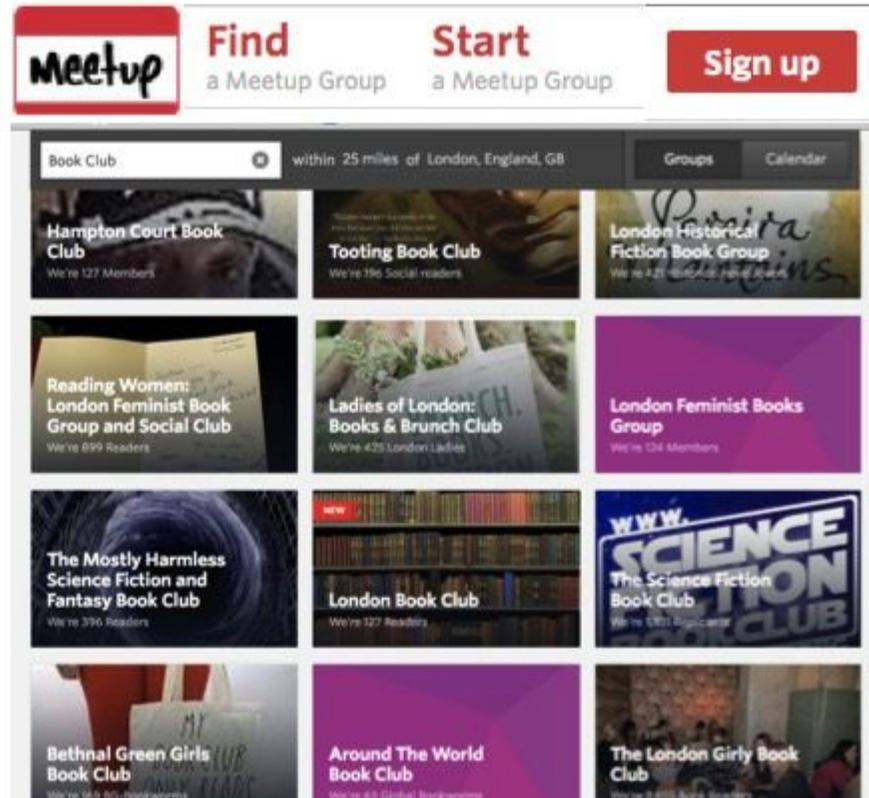
New Possibilities

Reader Engagement

Book clubs are everywhere online today.



And they're meeting offline.



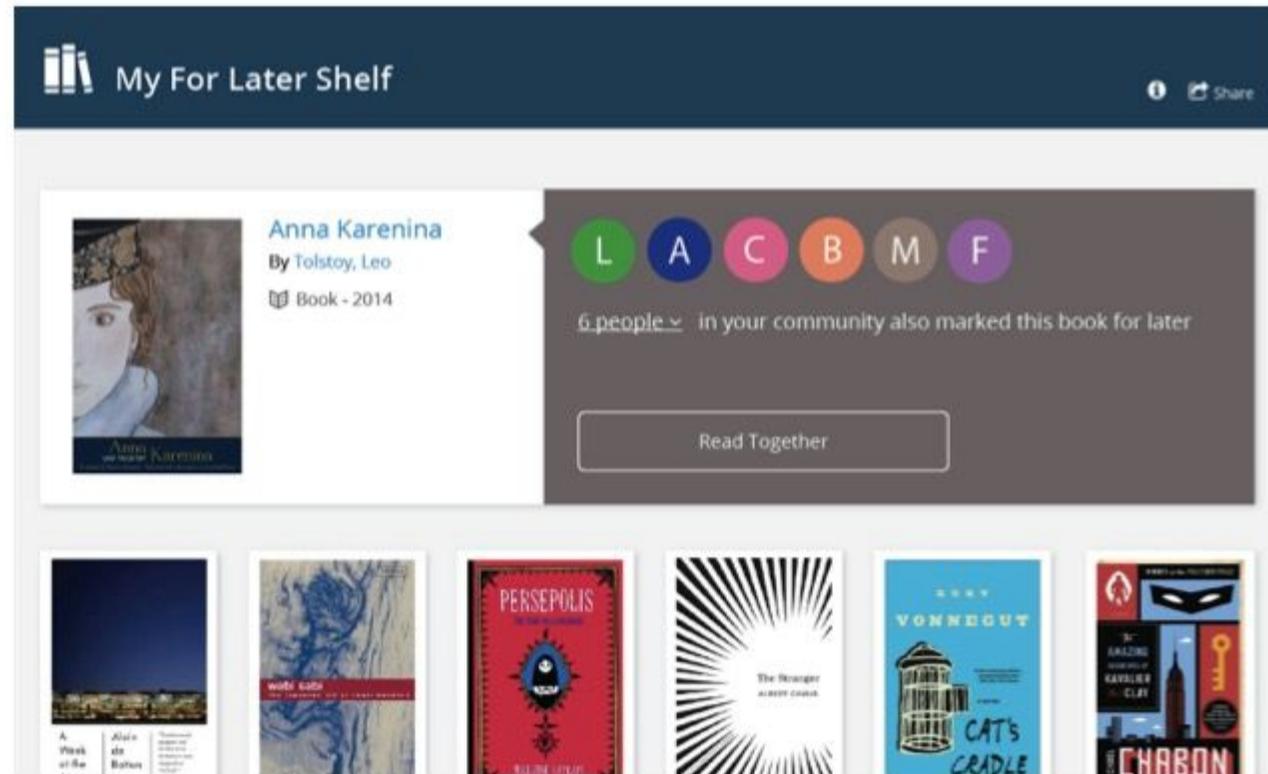
Could the library be a source for recommendations and for supporting book clubs? With better digital infrastructure, imagine enhancements to the very fabric of library catalogues, so that even a “My Account” review is an opportunity to find an interesting recommendation, like what to read while waiting for a book requested.

The image shows a library's digital interface. On the left is a 'My Borrowing' sidebar with the following information:

- On Hold**: 2 items
- Not ready**: 1 item
- Checked Out**: 13 items, due Sep 14
- Late Fees**: \$1.20
- Single-Click Holds is ON**
- Your preferred pickup location is: Leawood Pioneer Library**

The main area is titled 'On Hold' and shows '2 items'. The first item is 'The Goldfinch' by Donna Tartt, which is the #2 on 3 copies at Leawood Pioneer Library. It was placed on hold on Sep 05, 2015, and expires on Sep 05, 2016. Below the main item is a 'While You Wait' section, powered by NoveList, which displays a row of book covers including 'The Goldfinch', 'The Girl on the Train', 'The Seven Husbands of Evelyn Hugo', 'The Nightingale', 'The Girl on the Train', and 'The Seven Husbands of Evelyn Hugo'.

But can't there be a library app for that? The library can help highlight for the user the books on this list that are ready to be checked out -- helping drive the user away from long hold queue. And the app offer connection with users with similar goals -- providing a welcome nudge.



These kinds of experiences, built on top of the essential digital infrastructure, soon create a powerful network.

A platform for communities of readers and learners



The library online environment shifts from being a place where people get free stuff. Instead, it becomes a place online that supports people online and offline to help each other unlock value in the books and subject areas that connect them, and to share what makes them different.

A platform for communities of readers and learners to help each other discover and engage with the ideas, information and inspiration that are the library's collections



We need to build this trusted space not just in our branches, but online.

2013 – Envisioning the Future

“Public libraries are trusted spaces, free to enter and open to all. In them people can explore and share reading, information, knowledge and culture.”

To date, libraries have not evolved much beyond the digital foundations they laid in the 1980s. They have added some accessories, yet the core is broken, and out of date.



Let's not let this become another report and another lost decade. Our recommendations align with findings from these reports -- the difference is the spotlight we place on digital and its potential, if approached systematically to realise those strategies. Without it, libraries will remain unable to join today's conversations or serve today's



needs.