

SCONUL

HEFCE

Shared Services Study

Business Case

November 2009

The SCONUL Shared Services Study was submitted to HEFCE late in 2009 as an application for Shared Services funding.

This version for open distribution has been modified to remove material that is commercially sensitive or confidential in the context of ongoing funding considerations.

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EXECUTIVE SUMMARY

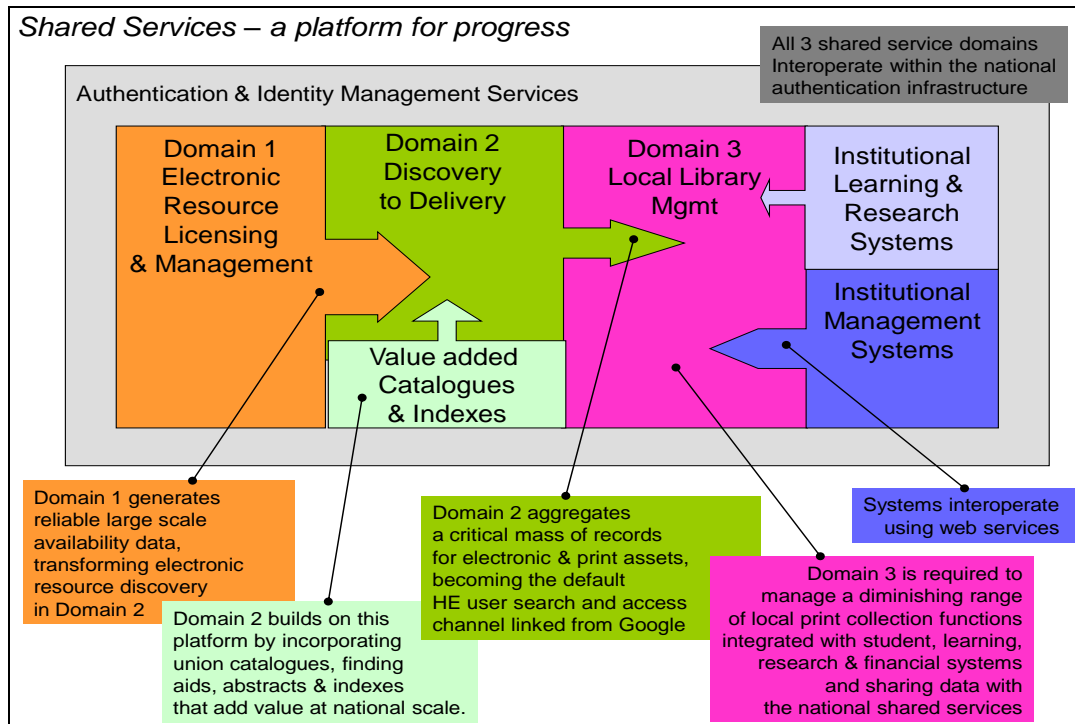
1. The Society of College, National and University Libraries (SCONUL) obtained funding from HEFCE to undertake a Shared Services feasibility study into the Library Management Systems (LMS)¹ and related systems landscape in UK Higher Education. The study was led by Sero Consulting in partnership with Curtis + Cartwright and Ken Chad Consulting, working closely with the SCONUL Shared Services Steering Group, which is chaired by Anne Bell, the Librarian of the University of Warwick.
2. The study has provided opportunity to review the role that shared services might play in individual library strategic plans and in enhancing library services across the UK HE sector. In this context, it addresses the following key questions:
 - What, if any, opportunities exist to develop a shared service response within the current LMS landscape for UK higher education libraries?
 - What, if any, opportunities exist to develop a shared service response for a next generation, service-oriented, open source LMS for UK higher education libraries?
 - Is there a viable business case to support any such opportunities?
 - How might any such shared service opportunities be structured, delivered and governed?
3. The proposed shared service outlined in this document will make a major contribution to ensuring ease, efficiency and continuity of access to scholarly resources required by researchers, students and their teachers across UK Higher Education institutions, in an economically, organisationally and technically sustainable environment. It will also take advantage of opportunities created by recent technical and information landscape changes. It will take into account and integrate with existing initiatives being developed by other sector stakeholders.
4. The study has taken into account the potential synergies that many expect will arise from ongoing work in the sector, led by JISC, the national Resource Discovery Task Force and the Libraries of the Future programme (BL, RIN, RLUK, JISC and SCONUL).
5. The scope of the business plan and the proposed Pathfinder programme is limited to:

¹ A definition of LMS is provided in **Appendix A, Section 2**.

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- **Clients** – initially limited to HE institutions across the UK, covering the four nations; this is compatible with current SCONUL membership, with the exception of the Republic of Ireland, where the HE libraries have expertise and interest that would commend inclusion in such a service on appropriate terms.
 - **Services** – the business case is grounded in procurement, licensing, discovery and delivery, plus associated ‘web scale’ user services; this demands inclusion of remaining local library services which will consequentially have a reduced footprint.
 - **Assets** – focus on published resources, both commercial and open access, monographs and journals, whether electronic, digitised or print; this will beneficially include supporting finding aids and databases (abstracts, citations, indexes, table of contents).
6. Consultation with UK HE sector libraries and service stakeholders has been extensive and has included a sector-wide survey focused on the appetite for shared services, individual institution consultations, a shared service workshop and an Electronic Resource Management (ERM) survey. Consultation has also included systems vendors and service providers in the UK and in the international community.
7. Evidence generated by this research demonstrates strong and widespread interest in shared services, strongly focused on the licensing and management of electronic content linked to a strong sense of cost benefits. This is backed up RIN research, notably the 2009 e-Journals Report, and developments in shared and community services from outside the UK.
8. Six potential shared service options have been considered as well as the ‘do nothing’ approach. The preferred option is to develop an ‘e-Content Licensing Scheme integrated with a total Library Management & Services Platform’.
9. The proposed shared service will consist of services developed in the following three ‘Domains’, which can be implemented separately and concurrently:
- **Domain 1 – Electronic Resource Licensing & Management**
 - **Domain 2 – Discovery to Delivery Services**
 - **Domain 3 – Local Library Management**
10. The relationships between the three Domains are presented in the following diagram, which adopts a ‘jigsaw’ metaphor.

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11. The development of the SCONUL shared services business case has underscored both cashable and wider benefits that could be deliverable to the UK HE sector, for the participating institutions, including their library services and for individual users – notably researchers, students and their teachers.
12. It is proposed that the Operating Entity that will deliver the Shared Service will be a company limited by guarantee. Profits will not be distributed to members but will be reinvested in the company. The Shared Services Company will be established by the JISC Infrastructure & Resources Committee (JIR) at the outset of the project. At the discretion of JIR, it may be an existing entity operating within the UK HE community or a new entity if deemed beneficial on the basis of expertise and mandate. We propose that the strategic direction of the Shared Services Company will be advised by a Pathfinder Board. The Members of the Board will include the Service Director, representatives of JISC JIR and the Pathfinder Partners. HEFCE could be represented on the Board should this be appropriate. The JISC JIR role will be informed through the SCONUL and JISC Strategic Alliance.
13. HEIs wishing to become Pathfinder Partners and therefore Members of the Shared Service Company will contract with the Shared Service Company and in return for annual fees will receive a specified range of services.

14. Ten institutions have agreed in principle to participate in early pathfinder activity with the provisos that external events (e.g. potential HEFCE budgetary considerations) may limit their involvement, recognition that timelines and resource commitments will need to be clarified and agreed with pilot partners and an acknowledgement that key library staff have existing internal commitments that may be a priority.
15. The Pathfinder business plan covers a period of 5 years that will run from the first quarter of 2010, with the first six months of start-up activity potentially being supported by existing funding arrangements. Such a commitment will however require visibility of funding from the point at which management appointments are initiated in Quarter 2.
16. The proposition requires public funding of **£8.25m** in Years 1–4 to achieve a sustainable business model. The required funding includes £1.5m, spread over Years 1–3, as a long-term loan to cash flow national level e-resource licensing deals. Whilst this loan could be repayable out of margin from Year 6, it is likely to be advantageous to leave it in the business to develop further opportunities.
17. In terms of turnover, the 5 year plan will require £14.3m expenditure to generate £6.2m income from institutions. The business generates a surplus in Year 5 and thereafter. The next 5 years (Years 6–10) will require £12.7m expenditure to generate £14.4m income, yielding a surplus of £1.7m (12%) excluding any potential licence margins.
18. The Shared Services proposed in this Business Plan are projected to yield **£88.4m** savings over the first 10 years based on prudent calculations of service take up and impact. A more aggressive impact scenario has been run, which projects **£148.5m** savings over the same period. Additional benefits are also identified in the form of increased access to electronic content at reduced unit costs, valued at a further £59m.
19. The principal recommendation of this report is that HEFCE should support this business plan for funding under the Shared Services programme on the basis of the financial, organisational and scholarly benefits demonstrable across the UK system. JISC should work with SCONUL on the basis of their strategic partnership to coordinate the development of this prospect in respect of funding, stakeholder awareness, community engagement in order to maintain the momentum that has been generated to date. To assist the wide range of stakeholders engaged in this proposition, further recommendations are detailed for institutions, SCONUL and JISC as well as for HEFCE.
20. This study would not have been possible without the considerable input of individual institutions, UK stakeholders, international partners and the supplier community.

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Whilst it is not possible to thank everyone by name, the consultant team wishes to express particular thanks to the project Steering Group (Anne Bell, Rachel Bruce, Professor Jane Core, Ian Dophin, Suzanne Enright, Fiona Parsons, Mark Toole and Paddy Walker, who represented the HEFCE Shared Services team); to colleagues from JISC Collections (Lorraine Estelle, Liam Earney), Edina (Peter Burnhill), Mimas (led by Joy Palmer) and RLUK (represented by Mark Brown); and to the international Quali OLE project (Brad Wheeler and US partners).

1 INTRODUCTION

This Document

- 1.1 This Business Case sets out a potential shared service for the UK library sector which includes a potential combination of in-house, sub-contracted and open source developed services.
- 1.2 The terms of reference for this research is set out in **Section 2**. The vision, challenges, opportunities and vignettes demonstrating what success would like are presented in **Section 3**. The scope of the study and the consultation activities undertaken with the sector are presented in **Sections 4 and 5** respectively. Primary evidence and secondary sources of evidence are presented in **Section 6**. Potential options for a shared service are analysed in **Section 7** and a detailed description of the preferred options is set out in **Section 8**. The benefits of the shared service are set out in **Section 9** and a proposed governance model is presented in **Section 10**. The financial costs and savings of the proposed model are presented in **Sections 11 and 12** respectively. The nine institutions willing to engage in pathfinder activity are listed in **Section 13** and a risk register is presented in **Section 14**. A five year pathfinder plan is presented in **Section 15** and recommendations for key library sector stakeholders are set out in **Section 16**.
- 1.3 A glossary of terms used in this report is presented in **Appendix A, Section 2**.

Scale and scope of library management

- 1.4 University library services are estimated to represent a £630m² investment per annum in providing essential resources and services to researchers, students and their teachers across 160 plus UK institutions.

² Expenditure by SCONUL Members 2007/08.

- 1.5 All libraries in higher education are established users of IT systems, upon which their day-to-day operations have been dependent for three decades. Consequently, the year on year costs of local library management systems are hard to isolate from the broader university library services environment, in which the systems are deeply embedded.
- 1.6 Due to the changing nature of content (notably the shift from print to electronic) and of user requirements (driven not only by the internet information environment but also by new modes of study, lifelong learning and collaborative research) there is cause to consider which local services would most economically, efficiently and effectively be conducted 'above campus'.
- 1.7 For higher education libraries the shared service opportunity goes beyond outsourcing and 'Software as a Service' (SaaS) to reduce infrastructure and technical management costs. The imperative is to consider the bigger game of shared operations (data management as well as hosting) and service aggregation, which offers:
- **Economy & Efficiency** – reducing the under-resourced endeavours of all to a single optimised endeavour in areas such as electronic resource licensing management;
 - **Effectiveness** – not just improving reliability, accuracy and ease of access for the user, but also leveraging national content and research assets at scale and with visibility within the web environment;
 - **Consistency** – ensuring that cross-sector information and data is managed in a consistent manner.
- 1.8 Four areas of cost are therefore of importance to this study in relation to those licenses, business processes, workflows and 'learn flows' that can beneficially be delivered at the national or consortium level:
- electronic content licenses, including e-journals, e-books and databases;
 - local Library Management Systems and associated services – excluding the 'nuts and bolts' of hardware systems;
 - staffing associated with the technical management of local library systems;

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- staffing associated with data entry and management processes, such as cataloguing, licensing and rights management.

1.9 By way of scene setting, the evidence gathered in this study suggests a cost base in excess of £60m per annum across the UK HE sector for the processes recommended for immediate consideration in this business case, in addition to the £80m spent locally licensing the electronic content.

Trends

1.10 The urgent interest in shared services is linked to a range of trends widely observed in the HE environment and in the global information economy. In the following table, 13 symptomatic trends are headlined and assessed in terms of delivery **challenges** and shared service **opportunities**.

- **Challenges**
 - Institutional Information Systems approach
 - Local library management practice
 - Library Management Systems solutions
- **Opportunities**
 - Service cost saving
 - Service improvement and enhancement

Impact	Institutional IS approach	Local Library Management	LMS Solutions	Service Cost Saving	Service Improvement
Shift of library collection focus, acquisition and use from print to electronic resources	X	X	X	X	X
Administrative impact of Electronic Resource Management, including volatile title ownership	X	X	X	X	
Influence of web world on user information seeking behaviour and access expectations	X		X		X
Attraction of network level services in the global information environment			X		X

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Impact	Institutional IS approach	Local Library Management	LMS Solutions	Service Cost Saving	Service Improvement
Trend					
User attraction to web scale services such as Google and Amazon			X	X	X
Implications of 'do once, use many' economics of reuse in the digital realm		X	X	X	X
Emerging recognition of where libraries and librarians add value in a networked environment		X	X		X
Less confidence in the suitability and sustainability of monolithic systems		X	X		
Reduced footprint and changing requirements expected of local library management solutions	X	X	X	X	
Interoperability requirements of all local institutional systems	X	X	X	X	X
Local service challenges in providing for anytime anywhere any-device access	X		X		X
Advantages of community ownership in a period of uncertain change	X		X	X	X
Decreasing costs of large scale infrastructure – tin, wire and high performance software	X	X	X	X	

2 THE SCONUL SHARED SERVICES STUDY

2.1 The Society of College, National and University Libraries (SCONUL) obtained funding from HEFCE to undertake a Shared Services feasibility study into the Library Management Service (LMS) and related systems landscape in UK Higher Education. The study was led by Sero Consulting in partnership with Curtis+Cartwright and Ken Chad Consulting, working closely with the SCONUL Shared Services Steering Group, which is chaired by Anne Bell, the Librarian of the University of Warwick.

Focus

2.2 The study has provided an opportunity to review the role that shared services might play in individual library strategic plans and in enhancing library services across the UK HE sector. In this context, it addresses the following key questions:

- What, if any, opportunities exist to develop a shared service response within the current Library Management Service (LMS) landscape for UK higher education libraries?
- What, if any, opportunities exist to develop a shared service response for a next generation, service-oriented, open source LMS for UK higher education libraries?
- Is there a viable business case to support any such opportunities?
- How might any such shared service opportunities be structured, delivered and governed?

2.3 The study was undertaken between April and November 2009, leading to the submission of this report and recommended business plan to HEFCE. The report addresses options for shared services in library management and provides a business case and governance model for the recommended options, supported by a forward plan for a Pathfinder service with engaged partners.

Evidence

2.4 Evidence and intelligence has been gathered from a range of sources, covering the underlying landscape and current institutional and stakeholder imperatives.

Landscape

- Detailed landscape and investment evidence drawn from the underlying joint JISC & SCONUL LMS Study (2008)³ and the RIN e-Journals Report⁴ (2009).
- Comparative desk research and enquiry to assess the current range of shared service provision internationally, notably North America, Australia and Scandinavia as well as the UK.

Study Evidence

2.5 More information is provided in **Section 5** and **Section 6**. Key elements include:

- online responses from 83 institutions to a survey of shared service interests and motivations amongst SCONUL member libraries (May 2009);
- follow on consultation with institutions expressing interest in making detailed contributions, through in-depth interviews (8 institutions) and workshop participation (20 institutions).
- a further survey collecting detailed evidence of potential cost saving and benefits around Electronic Resource Management (September 2009); detailed evidence was received from 50 institutions.

³JISC & SCONUL Library Management Systems Study, March 2008.

<http://www.jisc.ac.uk/media/documents/programmes/resourcediscovery/lmsstudy.pdf>

⁴E-Journals: their uses, value and impact, Research Information Network, April 2009.

http://www.rin.ac.uk/files/E-journals_use_value_impact_Report_April2009.pdf

Dialogue

- Supply side information from the four major Library Management System vendors, covering over 80% of the UK HE market, and from sector service providers, notably EDINA, JISC Collections and MIMAS.
- Review of developments planned by potential influencers, notably OLE⁵ (the Mellon Foundation funded LMS community source project under the Kualu Foundation) and OCLC⁶ (the dominant shared catalogue service provider in the global market).
- Strategic guidance from the Steering Group (including representatives of SCONUL, HEFCE and JISC), attendees at the 2009 SCONUL Annual Strategic Planning Meeting, RLUK, the JISC Infrastructure & Resources (JIR) Committee and the Flexible Service Delivery Programme (FSD).

Feasibility Report

2.6 A mid-stage Feasibility Report was drafted (September 2009) to assist consultation in confirming the strategic case and the specific focus for shared library services within the Higher Education sector across the UK. The purpose of the mid-stage report was to:

- demonstrate the appetite for shared services across the sector;
- set out the principal opportunities for shared services;
- quantify the economic and budgetary backcloth against which services opportunities should be evaluated;
- assess a range of shared services options;
- provide an overview of how the preferred option can be taken forward;
- project the current costs of relevant library operations and identify the costs, benefits and payback for the proposed shared services;
- present the non-financial benefits attributed to the preferred option;
- identify any potential constraints to shared services;

⁵ <http://oleproject.org/>

⁶ Not for profit computer service and research organisation whose systems help libraries locate, acquire, catalogue, and lend library materials.

- present the advantages and disadvantages of different governance options.

2.7 Key sections of this mid-stage Feasibility Report are made available in **Appendix B**.

3 VISION

- 3.1 The proposed shared service will make a major contribution to ensuring ease, efficiency and continuity of access to scholarly resources required by researchers, students and their teachers across UK Higher Education institutions, in an economically, organisationally and technically sustainable environment. It will also take advantage of opportunities created by recent technical and information landscape changes. It will take into account and integrate with existing initiatives being developed by other sector stakeholders e.g. JISC.

The Challenge

- 3.2 Academic libraries across the UK are duplicating tasks that could be performed more efficiently on a shared basis. The web has raised questions around the value in traditionally localised processes (such as cataloguing) and services (such as the online catalogue or 'OPAC'). Due to a perceived lack of innovation in the UK LMS market, Higher Education Institutions are predominantly not currently reinvesting in LMS (apart from maintaining existing systems).
- 3.3 Emerging processes and workflows relating to electronic resources have brought a number of issues into sharper perspective including:
- management of permissions and rights;
 - seamless discovery to delivery services;
 - extended search functionality;
 - dislocation between these requirements and traditional Library Management Systems geared to the management of print resources.
- 3.4 Furthermore libraries and associated national services are facing the challenges of:
- interoperability with institutional management functions;
 - integration with learning, teaching and research resources and environments;
 - Linking local catalogues with popular web-scale services such as Google Scholar.

3.5 In facing these challenges, the higher education library community increasingly recognises that the strength of the individual library collection and the quality of its catalogue may no longer represent essential differentiators between UK institutions. Furthermore, it is widely recognised that the right shared service will strengthen the visibility and value of the offer to users whilst also enabling individual institutional libraries to optimise services and sharpen focus.

The Opportunity

3.6 Recognising this landscape, significant numbers (78) of UK HE libraries have expressed support for the development of shared library management services, recognising that a large scale and potentially national service will provide the following benefits to institutions, users and the HE sector as a whole.

Institutions

- Provide cost savings relating to efficiencies of process and economies of scale.
- Leverage national reach from current selective licensing spend.
- Reduce licensing overheads, systems investment and resource management effort at the institutional level.
- Simpler, easier to manage and easy to understand licensing arrangements which would help support collaborative research between institutions and activities with Business and Community Engagement partners.
- Enable senior librarians to focus more effectively on the optimisation and integration of services.
- Generate a new level of management intelligence that will contribute to the effectiveness of library purchasing, services and learning support.
- Open opportunity for smaller institutions challenged by maintaining their collections and services in a fast changing environment.
- Standardise the integration of resource workflows with institutional systems for student records, learning and accounting.
- Provide centralised and authoritative librarian and user service desk support relating to licensing and access.

Users

- Guarantee equality of access to electronic resources for students and researchers across institutions, potentially including colleges delivering such as Foundation Degrees.
- Ensure consistent exposure of resources through the search engines of choice.
- Enhance trust, clarity and efficiency in the resource discovery process.
- Provide a visible national differentiator for overseas students seeking to study in the UK HE system.

UK HE Sector

- Maximise return on investment in system wide discovery to delivery services.
- Provide an optimal platform for realising the potential of Web 2.0 services (notably open data, recommender services and user generated content) within the national information environment.
- Enable vendors, service providers and community developers to enrich the service landscape with best of breed applications.

The Service

3.7 The core shared service will be centred on *'e-resource lifecycle and access management'* encompassing e-journals, e-books, abstracts and other digital content. The shared service will incorporate:

1. Licence negotiation and procurement.
2. Licence, access and descriptive metadata management (with the optional opportunity to add local value to the metadata).
3. Seamless Discovery to Delivery workflows, with direct authenticated access to full text where available.
4. Integrated discovery services – abstracts, citations, indexes and metasearch.
5. Integrated monograph discovery.
6. Usage statistics (attention & activity) – for management information and as a starting point for a recommender service.
7. UK wide user authentication and authorisation.

8. Integration of member HEI systems through common web service interfaces
9. Open data and web services in support of institutional, community and commercial developers.
10. Service desk support for member libraries and their users.

The Implementation

3.8 The proposed shared service consists of:

- a phased programme with three separate and concurrent domains;
- a pathfinder of a small number of institutions;

3.9 A summary of timings and milestones can be found in the Pathfinder Plan in Section 15.

What about the local LMS?

3.10 The shared services Pathfinder will generate increased scrutiny of the traditional footprint of local library management systems, which is reported as an obstacle to the effective positioning of library services within institutional information strategies.

3.11 The intention will be to develop 'Reference Implementations' based on a community source platform reference to challenge the traditional monolithic LMS model by specifying and demonstrating:

- functions that are no longer needed locally – such as Electronic Resource Management (ERM) and perhaps Search;
- local functions that should not be performed by the library or might logically migrate in that direction;
- library functions that are best served by data collected by and stored in other institutional management applications – such as the Finance System, Student records or the VLE.

3.12 The Pathfinder will work with global HE library community partners to design and implement a working component based reference model that will serve the library in the context of both institutional and wider shared services (national or consortium based).

3.13 Where there are no, or few, advantages for national scale, (as would remain the case for example in the management of, and access to, the physical collection on the shelf or in the archive), this initiative recognises that commercial vendors will continue to provide some or all parts of the local applications requirement, as well as being in a strong position to add value to the larger scale services proposed here.

3.14 It is recommended that the reference implementation will be subject to open interfaces, standards based documentation and Open Source software with a licence that facilitates commercial exploitation, which will enable institutional, community and commercial developers to build and to interface components

Extended Opportunities

3.15 The shared services proposed for the Pathfinder phase will create the preconditions for potentially incorporating a range of value added services that will benefit institutions and the community at large. The extended opportunities currently identified include:

- provide a broader based Digital Rights Management service that would cover content generated within institutions;
- consolidate the management and amplify the presence of open resources currently scattered across UK services and initiatives;
- surface and enable the discovery of UK research collections of national and international importance;
- responding to demand from the sector for an ERM linked to licensing⁷;
- responding to demand from the sector that a national ERM would pave the way for effective national resource discovery⁸.

⁷ The sector survey results indicated that 88% of respondents either agreed or strongly agreed that 'ERM linked to licensing at a national level would be liberating'

⁸ 76% of respondents agreed or strongly agreed that a national ERM would open the way for effective national resource discovery

What would success look like?

3.16 The following vignettes encapsulate the service vision to which the proposed Shared Service will make a major contribution.

3.17 That change is described at the level of the individual actor (both users and service providers) and their relationship with library services. The time line for effective change, as set out in this business plan, would be from 2010 to 2015.

3.18 The vignettes highlight 9 key areas of benefit, which are key to the transformational benefits set out in this Shared Services business plan:

- benefitting the user and therefore the UK education and research agenda;
 - availability of resources on demand in flexible modes through optimal workflows linking learning and research systems with resources;
 - widespread access to affordable resources with clarity of rights;
- benefitting both the service provider and the user;
 - value added by staff and suppliers through increased focus, service innovation and leveraging web scale service benefits.

Josie's story

Availability		Cost		Focus	
Flexibility		Access		Innovation	
Workflow		Clarity		Scale	

Josie is an undergraduate working away from the institution on her final year dissertation, which requires access to specialist journal as well as standard bibliographic resources. She remembers the eye opening difficulties she experienced in her first year in navigating indexes and catalogues to locate and gain access to resources listed in the VLE and Google Scholar.

Access now follows a logical and direct workflow from discovery to delivery. Having identified and bookmarked five resources through the shared service book and article web search, she is able to move directly to the electronic

copies of all but one without logging on to any other service. Her bookmarks link her directly the licensed resources – to two e-journal articles (one from a publisher, another Open Access), to a key text available as an e-book and to a digitised copy of an older book. In the final case, she is directed to her university service to request a scanned copy of a print article.

Ahmed's story

Availability		Cost		Focus	
Flexibility		Access		Innovation	
Workflow		Clarity		Scale	

Ahmed is a post-doctoral researcher in an interdisciplinary field who has often been frustrated by the limited range of journal titles available to his research group. Part of the problem is that, typical of interdisciplinary work, his research crosses into areas not core to his department, though the biggest issue is budget in a small university with a teaching focus.

The national deals now available for major publishers have enabled his institution to sign up for scientific and geographic titles that meet the needs of his group. As a result he is able to engage much more dynamically with peers elsewhere in his global circle as well as to ensure that he is not wrong-footed by inability to access the latest work on demand.

Earl's story

Availability		Cost		Focus	
Flexibility		Access		Innovation	
Workflow		Clarity		Scale	

Earl is a subject librarian at a large research-intensive institution. Over the past decade, one of the most frustrating things in his job has been the unremitting requirement to resolve electronic resource access issues. As well as the daily undergraduate queries, he vividly remembers the visiting researcher from Brazil and the high profile corporate partner working on automotive ergonomics. Who could access what from where? Then there were the tricky cases relating to reproduction where the rules might differ

from publisher to publisher, or even licence bundle to bundle and yet no one could ever be sure. To top it all, he was asked to oversee the implementation of the ERM system unsuspectingly purchased as part of some systems deal.

Now the local ERM system has gone, the help desk for rights queries is managed nationally and the deals seem to be struck by smart negotiators with the practical issues and exceptions in mind. So Earl can get back to being an expert subject librarian supporting some very weighty scientific research groups and a large cohort of students.

Alicia's story

Availability	■	Cost	■	Focus	■
Flexibility	■	Access	■	Innovation	
Workflow	■	Clarity		Scale	

Alicia is a library service director in a mid-sized institution with around 150 staff and an annual budget of £8 million. As well as maintaining the highest level of user facing services, the highest corporate priority in her 3 Year Plan is to achieve overall savings of 5%. Whilst systems represent only a small proportion of total spend, she is aware of the extent to which staff time, user self-service and best use of e-content are all impacted by the systems-related factors – linked to both current inefficiencies and potential step changes.

Alicia calculated that the economies of scale achievable through effectively managed consortium services would offer the best opportunity of combining both savings and improvements in a sustainable strategy. As a Shared Service Pathfinder, Alicia commenced change planning in early 2010 to identify ERM savings that would kick in as early as the pilot implementation in September 2011.

Joe's story

Availability		Cost		Focus	
Flexibility		Access		Innovation	
Workflow		Clarity		Scale	

Joe is a talented geek who likes developing inventive applications to do smart things, especially to help in his research. He is a regular user of his university library service – but historically that was frustrating in terms of making smart things happen because the resource data was locked down to all intents and purposes. Such an approach made the library service a poor relation of the other information services in Joe's ambit.

But now the catalogue is accessible as open data (even RDF) alongside the catalogues from about 80 other universities and the national e-resources entitlements. Furthermore the records contain user access statistics linked to JACS codes. Joe just built the 'Book Galaxy' and made his code open source. Why not? That size of dataset is a great challenge and the exposure is a good career move.

Mika's story

Availability		Cost		Focus	
Flexibility		Access		Innovation	
Workflow		Clarity		Scale	

Mika is the product director of a software and services company specialising in the educational, corporate and public service sectors. He recognises that large high value vertical market applications are increasingly hard to sell and maintain. The market is increasingly stagnant and the company's products are locked in to silos more by their customers' systems architectures than their own design.

Conversely, there are emerging opportunities for service globalisation, thanks to the Web, combined with open systems architectures, open data and agile development approaches. Developments like the UK's shared HE library services have unlocked new commercial possibilities of adding value to core applications, potentially leveraging the 'web of data' at scale. Mika is

recommending that the board should embrace these open service developments by developing search interfaces integrating globally significant datasets to add value to the user experience.

4 SCOPE

- 4.1 The study has identified considerable appetite for shared services across the HE library community, its service partners and national stakeholders, eliciting proposals relating to a very wide range of service opportunities.
- 4.2 However, the purpose of the business planning process has been to distil those opportunities that represent a coherent service set that can with certainty be implemented with known technologies, negotiable partnerships and available data assets.
- 4.3 By the same token, the study has taken into account the potential synergies that many expect will arise from ongoing work in the sector, led by JISC, the national Resource Discovery Task Force and the Libraries of the Future programme (BL, RIN, RLUK, JISC and SCONUL). A detailed review of these synergies are presented at **Appendix E**.
- 4.4 The scope of the business plan and the proposed Pathfinder programme is focused on:
- **Clients** – limited to HE institutions across the UK, covering the four nations; this is compatible with current SCONUL membership.
 - **Services** – the business case is grounded in procurement, licensing, discovery and delivery, plus associated ‘web scale’ user services; this demands inclusion of remaining local library services which will consequentially have a reduced footprint.
 - **Assets** – focus on published resources, both commercial and open access, monographs and journals, whether electronic, digitised or print; this will beneficially include supporting finding aids and databases (abstracts, citations, indexes, table of contents).
- 4.5 Future value added opportunities and potential synergies, none of which relate to the proposed business case and which are therefore currently out of scope, may include:
- **Clients** – FE Colleges across the UK, covering the four nations, the Republic of Ireland as compatible with current SCONUL membership; other European and global partners. All this, however, within the rules for Public Sector Investment.

- **Services** – Links to UK Research Reserve and other shared services, creation of a UK National Union Catalogue, Open Access publishing, Open Educational Resources, digital library infrastructure.
- **Assets** – other opportunities may include UK collections of research value held outside the sector, institutional repositories.

5 ENGAGEMENT

- 5.1 A list of the institutions that have contributed to the findings contained within this report can be found in **Appendix A, Section 3**.

Sector Survey

- 5.2 An online survey inviting all SCONUL members to identify their views regarding the potential for shared services was hosted between 6th May and 8th June 2009. The survey gathered responses from approximately 50% of the UK HE sector, representing a good cross-section of institutions by size, geography and research/teaching intensive focus [**83 institutions**].

Individual Institution Consultations

- 5.3 Following the survey, information gathering from a selected cross section of institutions expressing interest in making detailed contributions was undertaken through in-depth interviews [**8 institutions**].

Engagement Workshop

- 5.4 Institutions who had expressed a willingness to actively engage in the shared service feasibility phase of the research were invited to attend a workshop on 29th June 2009 to explore the priorities identified by the sector through the survey [**20 institutions**].

ERM Survey

- 5.5 A specific request for information relating to Electronic Resource Management activity and associated costs was requested via the SCONUL membership between 1st October and 24th October 2009 resulting in approximately 30% of the sector responding [**50 institutions**].

Open Source Discussion

- 5.6 Selected institutions and representatives from JISC, MIMAS and SCONUL attended a workshop on 26th October exploring the role that Open Source could play in developing shared service LMS functionality. Consultations have also been undertaken with OLE (Mellon Foundation) and Kuali. [8 institutions].

Vendor & Stakeholder Engagement

- 5.7 The four principal LMS vendors in the UK (Talis, Innovative, Ex Libris⁹ and SirsiDynix) and two additional vendors (OCLC and Serial Solutions) were invited to comment on the Phase 1 Feasibility Report.
- 5.8 Ongoing dialogue has been undertaken with SCONUL, JISC (including JISC Collections), RLUK, SHEDL, MIMAS, EDINA and UKOLN. Presentations have been made to the SCONUL Management Board, the JISC Infrastructure & Resources (JIR) Committee and to a SCURL Plenary Meeting.

⁹ Provides two services – Aleph & Voyager

6 EVIDENCE

6.1 The evidence presented here builds on the JISC & SCONUL Library Management Systems Study¹⁰, published in March 2008 and undertaken by Sero Consulting Ltd with Glenaffric Ltd and Ken Chad Consulting.

Shared Sector Survey

6.2 A survey investigating SCONUL member's attitudes and priorities in relation to shared services was undertaken in May and June of 2009. A full report of responses and the survey instrument used to conduct the survey can be found at **Appendix A, Section 4**.

6.3 A total of 83 institutions (approximately 50% of the sector) responded to the survey representing a good cross-section of institutions by size, geography and research/teaching intensive focus.

6.4 High level analysis conveys strong and widespread interest in shared services:

- 69% of the respondents are involved in or are planning some form of shared service activity;
- 89% stated that they were open to 'any arrangement that delivers benefits', a similar proportion (88%) supported a governance mechanism operated by a 'sector agency';
- there was little appetite for an outside operator (17%) or even a single HEI (36%) leading and recruiting partners.

6.5 Clear patterns of motivation and tangible benefits have emerged. The highlights are:

- the strongest focus is on adopting digital solutions and electronic content to reduce physical holdings and therefore space (85%);
- high rated cost benefits are principally linked to content licensing (70%) and physical space savings (44%); possible staff savings are rated as medium priorities and are predominantly linked to management time (55%) and cataloguing (43%);

¹⁰ <http://www.jisc.ac.uk/media/documents/programmes/resourcediscovery/lmsstudy.pdf>

- leveraging larger (web) scale services is seen by 73% as a high/medium 3–5 year priority but only an immediate priority for 47%, which fits with the high priority interest (84%) in enhancing flexibility and agility for developing electronic services;
- there is a greater interest in LMS functions being delivered through shared services (74%) than by other local institutions systems (45%), though developing the role of the library service within the institution is a high priority intangible gain (57%);
- there exists a high level of readiness to consider either licensing an Open Source system (62%) or integrating Open Source components (64%) as a solution.

6.6 Responses identified a distinct group of systems functions and human operations that are candidates for shared services:

- principal interest is clearly focused around electronic resource licensing (98%), digital content and rights management (90%) and general cataloguing (90%);
- services that would facilitate more efficient and value added resource discovery fell into the next group with over 50% interest (OPAC, search/locate, Open Data services and support functions such as help desk).

ERM Survey

6.7 A request for further information, specifically in relation to Electronic Resource Systems, was made from 30th September to 24th October 2009. Fifty SCONUL members responded. Institutions were asked to provide details of any existing ERM system (vendor or locally created) they are using and how they keep these systems up to date, which systems they use for electronic resource discovery and meta-search and to identify the key issues in relation to ERM systems in general. Institutions were also asked to estimate the amount of staff resources allocated to managing e-resources. The financial analysis of staff resources is presented in Sections 11 and 12.

6.8 The key points to note from the ERM survey are:

- 90% of respondents either agree or strongly agree that much ERM work is repeated unnecessarily across institutions;

- 81% of respondents either agree or strongly agree that the complexity of ERM requires high level personnel;
- 88% of respondents either agreed or strongly agreed that 'ERM linked to licensing at a national level would be liberating';
- 76% of respondents agreed or strongly agreed that a national ERM would open the way for effective national resource discovery;
- 27 respondents indicated that they currently use an ERM system and of these 42% use a vendor provided system. The most common vendor system is from Ex Libris (9). closely followed by Innovative (7) and Serial Solutions (5). Five institutions are currently considering purchasing a system and six recognise the need to buy a system eventually. Twelve institutions do not currently have a system;
- other than using existing vendor solutions, the most common mechanism for keeping systems up-to-date is by a manual update e.g. cataloguing new publications using RLUK or OCLC records and then uploading these details to the ERM system;
- 35 respondents have a meta-search system in place and the most common systems used are Meta-lib via Ex Libris (20) and Metafind via Innovative Interfaces (6);
- the key issues facing institutions at the moment are:
 - frustration in not knowing what you can use your e-resources for, loss of service and dealing with publishers and subscription agents;
 - maintenance of ERM systems is a key resource issue and is likely to increase in the medium-term;
 - for those without a meta-search capability, a cheap effective system would be "high on our wish list for future developments";
- there is a range of views about whether ERM issues are unique to an institution. Just under a half (47%) agree or strongly agreed that other than costs, little was unique, just over a fifth (20%) were neutral and just under a third (31%) disagreed or strongly disagreed.

RIN e-Journals Report

6.9 The significance of the licensing and management of electronic resources is clearly established in the RIN e-Journals report (May 2009), which sets out the scale of the UK HE annual investment in and use of e-journals¹¹:

- universities and colleges spent £79.8 million on licenses for e-journals in 2006/07. The average e-journals expenditure for SCONUL member libraries is therefore around £500k per annum;
- researchers and students in higher education downloaded 102 million full-text articles in that year, at an average cost of £0.80 per download. CIBER¹² grouped universities according to levels of use and showed that cost per download varied from 89p to 60p;
- searchers always prefer to do their main searching at a level higher than individual journal platforms. Key strategies are Google Scholar, library gateways and A&I gateways (e.g. PubMed Science Direct and Web of Knowledge). For example, just four months after ScienceDirect content in physics was opened up to Google, more than a third of all traffic arrived via this route. Users then stay on the journal site just long enough to pick up the full article already identified.

Overseas Development

6.10 In some countries such as Australia and Sweden, the National Library has taken the lead in building shared library services. For example 'Libraries Australia' has gone further than most in delivering a shared catalogue resource and user access across the whole HE sector and also a large number of other libraries.

6.11 Globally OCLC is the largest and probably the best known shared library 'vendor' service. Its core service is a shared cataloguing resource that dominates the US HE market and is used throughout the world. The 'public face' to this database in WorldCat has over 130,000,000 records from over 70,000 libraries.

¹¹ E-Journals: their uses, value and impact, Research Information Networks, April 2009.
http://www.rin.ac.uk/files/E-journals_use_value_impact_Report_April2009.pdf

¹² CIBER is a policy-led independent organisation that specialises in the mapping, monitoring and evaluating of digital information systems, platforms, services, roll-outs and environments.

- 6.12 LMS vendors provide the software on which a number of library consortia deliver their shared services. OhioLink is a premier exemplar of such an approach. It covers both public and private HE institutions throughout the state and provides resource sharing of both physical and electronic material. The scale and scope of OhioLink are impressive: '47.6 million books and other library materials. Millions of electronic articles; 12,000 electronic journals; 140 electronic research databases; 40,000 e-books. Thousands of images, videos and sounds; 17,500 theses and dissertations from Ohio students'
- 6.13 California state ('Calstate') is migrating to ExLibris provided software and has a similarly impressive scale and claims it 'is now the largest university system in the country, with more than 450,000 students and 47,000 faculty and staff members on 23 campuses'.
- 6.14 MassCat is a more recent and diverse (in terms of cooperating libraries) example with a mission to provide 'a unique opportunity for school, public, academic and special libraries that cannot afford network membership to participate in resource sharing'. It has gone down the Open Source LMS (Koha) route as a means of providing low cost shared software especially to small institutions such as historical societies, medical libraries and schools.
- 6.15 The Open Source Evergreen began as a solution for a shared state-wide system of public libraries in Georgia. Library consortia have made a significant contribution to Open Source LMS development as they can bring significant shared resources to develop new functionality. For example Project Conifer (a collaboration between Laurentian University, McMaster University, and the University of Windsor) is working to create a consortia implementation of Evergreen for HE and in particular acquisitions functionality.
- 6.16 A more detailed synopsis of overseas development can be found at **Appendix A, Section 5.**

7 OPTIONS APPRAISAL

Potential Options

7.1 In the previous section we highlighted a number of high value priorities that the sector had identified through the SCONUL survey. These priorities form the basis of the options that are reviewed here. The seven options are:

- Option 1 – ‘Do nothing’
- Option 2 – ‘Advisory Service’
- Option 3 – ‘Discovery to Delivery (D2D) Service’
- Option 4 – ‘LMS Software as a Service (SaaS)’
- Option 5 – ‘e-Content Licensing Scheme with an Electronic Resource Management (ERM) platform’
- Option 6 – ‘e-Content Licensing Scheme with ERM & D2D platform’
- Option 7 – ‘e-Content Licensing Scheme integrated with a total Library Management & Services Platform’

7.2 The following possibilities and approaches are not considered as there is little added value and no appetite within the sector, as evidenced by the sector survey, to pursue them:

- replace LMS with LMS;
- develop a new system;
- subsume within other local systems (e.g. Registry, VLE).

7.3 Apart from the ‘do nothing’ option, the others can be grouped as follows:

- Options 2 & 3 are discrete services that can be implemented with minimal disruption to local operations and market relationships;
- Option 4 requires a range of library management functions to migrate to the shared service simultaneously;
- Options 5, 6 & 7 involve not just systems but also operational functions (outsourcing of roles); Option 5 represents a core service with Options 6 & 7 providing additional services that can be taken up on an incremental basis.

Option Assessment

7.4 The criteria we have used to assess the seven options are presented in **Table 7.1**. Criteria have been assessed as accruing benefits on a four point benefit scale of zero, low, medium or high. Risk is assessed as an additional factor. This is not included in the appraisal score as it is recognised that high risks will almost certainly be associated with organisational change and high value returns.

7.5 Detailed descriptions and the potential benefits of the seven options including a separate assessment of the positive and negative differentiating factors are presented in **Appendix A, Section 7**.

Table 7.1: Options Appraisal						
Option	Direct Financial Benefits	Non-Financial Benefits	Whole Life Costs Benefit	Timescale Impact	Score	Risk
1 Do Nothing	Zero	Zero	Zero	High	3	High
2 Advisory Service	Zero	Low	High	High	7	Low
3 Discovery to Delivery (D2D)	Zero	Medium	Low	Medium	5	Medium
4 LMS Software as a Service (SaaS)	Medium	Medium	Medium	Low	7	Medium
5 e-content licensing with ERM platform	High	Medium	High	Medium	10	Medium
6 e-content licensing with ERM & D2D platform	High	High	High	Medium	11	Medium
7 e-content licensing with ERM, D2D & LMS platform	Excellent	Excellent	High	Medium	13	High

Scoring: Excellent = 4, High = 3, Medium = 2, Low = 1, Zero = 0

Preferred Option

- 7.6 **Option 7** is the preferred option on the basis that it includes core LMS as well as other higher value opportunities. The following section explores its phased implementation in detail.

8 THE SHARED SERVICE

Introduction

- 8.1 The proposed shared service combines elements that will work together to reduce the cost of institutional library management, optimizing both license costs and human resources in a shared model that has the capability to enhance the user experience, bringing efficiencies to undergraduate and research workflows.
- 8.2 To this end, the SCONUL programme will develop services in three 'Domains', which can be implemented separately and concurrently, with vital synergies being derived through an open and interoperable service. The domains, which are further detailed in this section, are as follows:

The Component Domains

- **Domain 1 – Electronic Resource Licensing & Management**
 - formulates all-in national licensing schemes plus opt-in frameworks for e-journals and e-books;
 - covers the lifecycle from procurement to user desktop;
 - underpins the service with a one stop license and rights data management, including historic licenses and local agreements;
 - generates reliable large scale availability data, transforming electronic resource access workflows for the user, as described in Domain 2;
 - offers benefits of administrative cost saving in each participating institution and wider access to licensed collections across the sector;
 - builds on the successful work of JISC Collections and the SHEDL programme.

- **Domain 2 – Discovery to Delivery Services**
 - builds on this platform by incorporating finding aids, abstracts & indexes that add value at national scale, such as Copac & Web of Knowledge;

- builds on a number of JISC funded projects and services (see **Appendix E**);
 - aggregates a critical mass of records covering high demand electronic & print assets;
 - provides the default HE user search and access channel linked from Google;
 - offers user benefits of improved workflows, saving time and benefitting all types of user, with opportunity to scale beyond licensed electronic resources to open access e-journals, print journals and monographs.
- **Domain 3 – Local Library Management**
 - manages a diminishing range of local print collection functions;
 - reduces the footprint of the management system to the necessary components, removing internal and system-wide duplication;
 - builds on the JISC Flexible Services Delivery programme;
 - interoperates with institutional student, learning, research & financial systems using web services;
 - shares data with the national services;
 - offers local benefits in the form of integration with institutional student, learning and financial systems and agility and efficiency based on an optimised library management footprint.

8.3 All 3 shared service domains interoperate within the national authentication infrastructure, offering seamless access to resources. A detailed consideration of Domain 1 is presented in **Appendix C**. Additional detail regarding Domains 2 and 3 are available upon request.

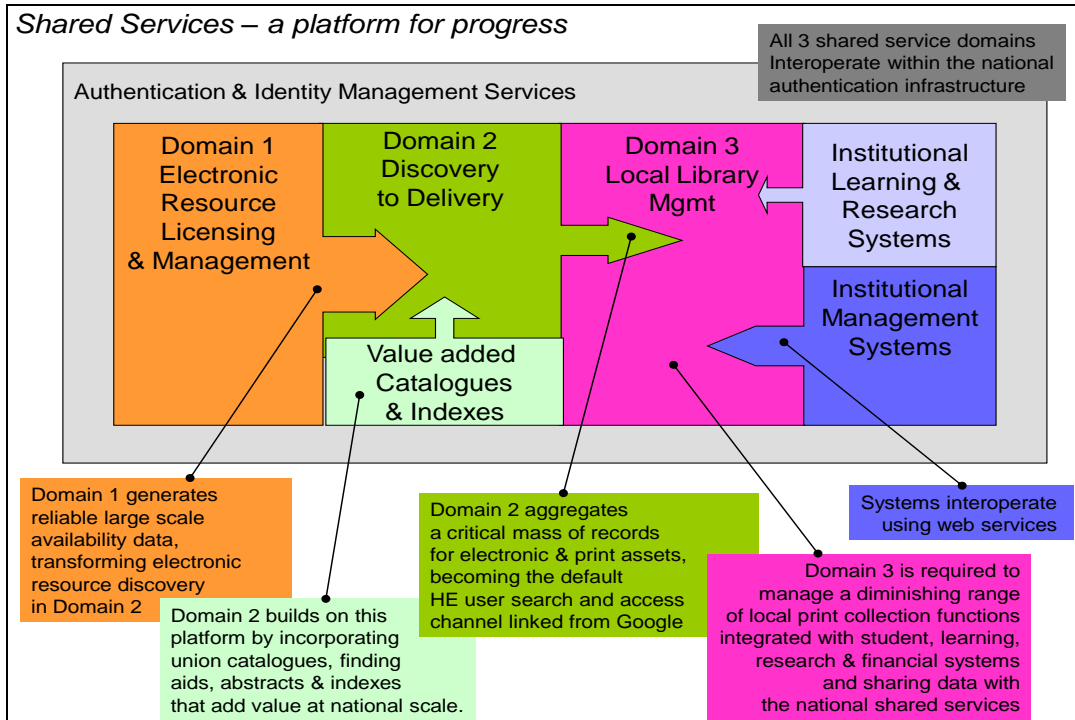
Library Management Functions by Domain

- 8.4 Detailed analysis of library management functions undertaken during the Feasibility Study expresses the overall library management systems landscape as follows in relation to the three domains.

	Shared Service Domain		
	1	2	3
Acquire Assets			
e-Journals Licensing	Yes		
e-Books Licensing	Yes		
Abstracts, Indexes & TOCs Licensing	Yes		
Print Journals Acquisition			Yes
Monographs Acquisition			Yes
Manage Assets			
Electronic Resource Management	Yes		
Electronic Resource Cataloguing	Yes		
Electronic Resource TOCs	Yes		
Local Digital Content Management			Yes
Local Collection Cataloguing			Yes
Reading Lists			Yes
User Services			
e-Content Search, Locate & Deliver		Yes	
Full Catalogue Search & Locate		Yes	
Electronic Full Text Access		Yes	
Recommender Services		Yes	
Circulation			Yes
Inter-Library Loans			Yes
User Records			Yes

The service ecosystem

- 8.5 The following 'jigsaw' diagram illustrates the service ecosystem. It presents the opportunity for the redistribution of 'Library Management System' functions between specialised shared services (serving the common sector library requirements at scale - Domains 1 & 2) and local management systems (such as student records, learning and research management), thus defining smaller footprint and more agile local library management functions (Domain 3).



Domain 1 – Electronic Resource Licensing & Management

Current setting

- 8.6 There are two elements to this domain: licensing and ERM.
- 8.7 The existing situation is:
- JISC Collections currently undertake negotiation of national content licensing deals, and frameworks through which other resources can be bought. Nearly all (161) of UK HE institutions use JISC Collections services;
 - several vendors have produced ERM systems. ERM systems manage library subscriptions to electronic resources, including financial and contractual aspects. However, the ERM solutions available are cumbersome and generally not well regarded by institutions: uptake is low.
- 8.8 At present, staff at each individual institution process licences and undertake very similar administrative tasks.

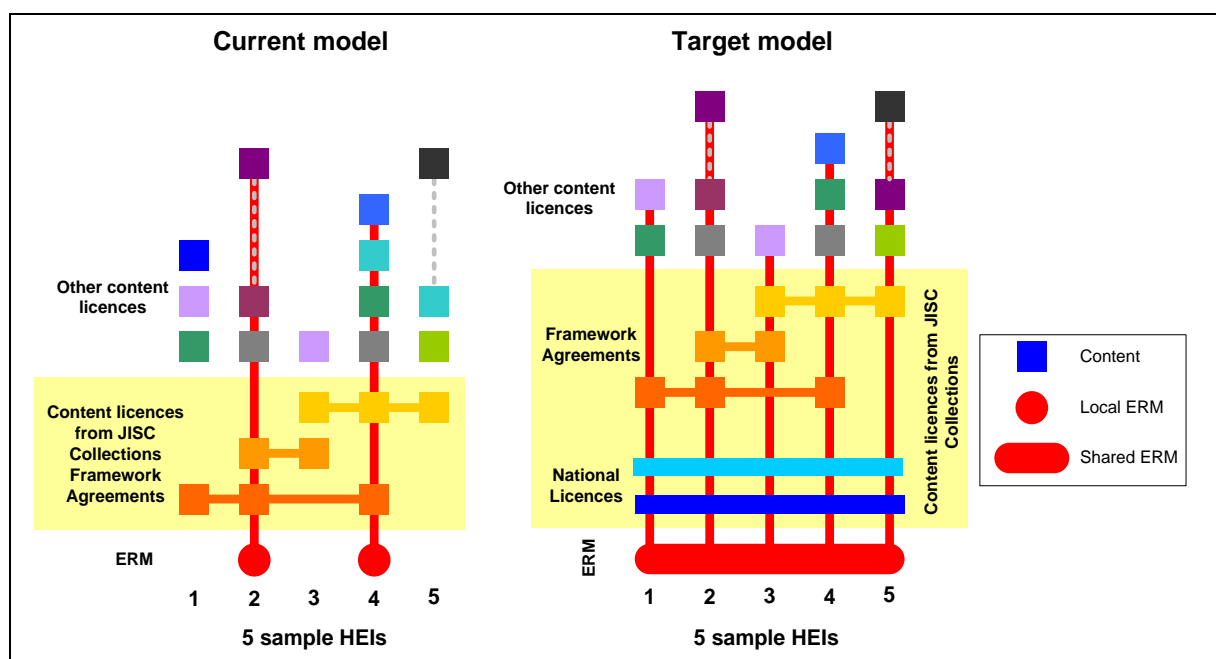
Target scenario

- 8.9 Two factors will be different in the target scenario:
- JISC Collections will negotiate more licences on a UK-wide basis (rather than as framework agreements);
 - a shared ERM system will be provided to all member institutions, and managed by JISC Collections.
- 8.10 The provision of a national ERM system has the potential to offer significant savings of time and money in managing licensing agreements for electronic resources. Combining national licence negotiation with provision of an ERM platform provides greater benefits than either alone could.
- 8.11 The ability to mediate access to licensed resources allows more flexibility in pricing resources, and more power in negotiating with content providers. Providing a platform through which librarians can manage their subscriptions, understand usage data, and make better decisions about subscriptions will allow valuable resource to be freed.

Change required

8.12 The major elements of change are:

- A new, shared ERM system will need to be developed, and populated with content.
- The service provider will negotiate licences on a national basis (rather than as framework agreements) wherever possible.



Service features

8.13 In the target scenario, a shared ERM service will be used by the service provider and customer institutions to keep track of electronic information resources, supporting acquisition and management of licensed e-resources. This will include resources licensed at a UK level where all students and staff in the UK can access them, resources with a UK framework agreement where any UK institution can obtain discounted access for its staff and students with standard licenses. The system will handle the metadata for resources and machine-readable versions of all licence agreements. The ERM system will include usage statistics related to the electronic resources.

8.14 It is proposed that a number of content agreements (a basket) are negotiated as national licences; the service provider will ensure that all UK academic institutions can participate and have access and that the overall cost of the inclusive licence is no more than the total currently paid by institutions on an individual basis. On evaluation of the first exemplar national licences, further baskets of content will be licensed in this way, and defined in consultation with the community.

8.15 The key benefits will be:

- improved availability of resources;
- reduced prices for content by leveraging existing buying power;
- reduced duplication of effort at the local level;
- procurement processes streamlined, resulting in lower prices.

Domain 2 – Discovery to Delivery

- 8.16 The development of a shared Electronic Resource Management (ERM) service (Domain 1) offers a platform to transform the means of accessing scholarly resources across the UK HE system, by consolidating intelligence on user access rights to journal titles with article datasets.
- 8.17 This opportunity to improve access workflows, saving time and benefitting all types of user, will immediately apply both to resources licensed nationally and also to those licensed directly by institutions joining the shared ERM service.
- 8.18 By building on the joint work of the British Library, JISC and RLUK, the same service could readily be scaled to embrace the vast majority of open access e-journals, print journals and monographs. Furthermore the national licensing service will bring e-books and the leading abstract, index and citation services in to a common 'one click' framework.

Current setting

- 8.19 Academic workflows, for undergraduates and researchers alike, are currently inhibited and disrupted by the lack of seamless pathways from discovery to delivery.
- 8.20 Symptomatic problems relating to accessing licensed materials are illustrated as follows:

<p>Step 1: Search – a user search for articles through such as Google Scholar is dislocated from intelligence on available copies and the desired end result of accessing the full text; furthermore many assets are not surfaced at all through the search engines.</p>

<p>Step 2: Locate – the right to access an article is governed by institutional association and therefore a licensed copy appropriate to the ID of the individual needs to be located (if at all).</p>

<p>Step 3: Deliver – the user has to engage with a different local system to access the desired article.</p>

<p>Step 4: Rights – upon delivery the user may or may not be informed of rights relating to the materials, leading to uncertainty and a downstream burden on library support services plus potential infringement implications.</p>
--

<p>Step 5: Citation – The availability of citation information will be dependent on local</p>
--

institutional licensing.

Change required

8.21 The change required can be summarized as

1. Provide 1-stop minimum-click workflows from search to accessing the material (from 'discovery to delivery').
2. Integrate citation information, usage data and user generated reviews and ratings.
3. Pass the user through to local library service only if necessitated, not as the default destination.
4. Achieve the scale to effectively expose the service to the major search engines.

Target scenario

8.22 The objective of this service is to transform user workflows relating to e-journals (both publisher licensed and open access) and e-books and to open up the same possibilities for monographs and other collections.

8.23 The national shared licensing service and the associated Electronic Resource Management data will provide a powerful platform to synchronise and optimize the Discovery to Delivery workflow, both saving time for the user and also reducing the burden on local IT and human support services.

8.24 The workflow relating to a high proportion of licensed materials will be cohered in a single integrated process for the authenticated user:

Step 1a: Search – searching for articles through the shared service ERM linked catalogue provides immediate access to availability information (which will be redundant for nationally licensed materials) and associated abstracts and reviews through national licensed Abstracting & Indexing datasets (such as Web of Knowledge).

Step 1b: Citation – nationally licensed citation information will be a click through at any stage in the process.

Step 1c: Recommendation – immediate access to recommendation data drawing on user activity ('users like me'), reviews and ratings.

Step 1d: Rights – the status for the articles identified will be a click through, being part of the same shared service ERM linked catalogue and will be consistently

defined.

Step 1d: Deliver – one-click access electronic items will be authorized and recorded through the same application.

8.25 The currently dislocated process will only continue to apply in the following cases, which can be incrementally addressed:

- for users at institutions that do not buy in to the shared ERM service;
- for accessing print journals articles where the holdings data lacks clarity or is incomplete ;
- for journals not covered by the BL article database, though other sources of data will be established as the service gains momentum.

Downstream opportunities

8.26 Such a service will necessarily be developed and deployed on the 80:20 principles central to the world of the web. Professionals operating in the global information economy recognize that solving a high proportion of the challenges in an accessible, timely, efficient and economic manner will meet the needs of the vast majority of users most of the time. Hence we observe the attraction of HE users to ‘Google-like’ search services, evidenced in the RIN e-journals report.

8.27 It is proposed that this shared service will have the institutional traction and user momentum to generate a cycle of ongoing enhancement. The centre of mass offered by the UK scale discovery service, itself fed by the shared Licensing & ERM services, will open up a number of opportunities that add value to the core service:

- providing an attractive point of access for resources and data sets beyond traditional library boundaries, possibly including VLE content, Open Education Resources (OER) and institutional repositories;
- motivation for cataloguing and retro-conversion to surface the long tail of specialist resources, currently inaccessible scholarly assets such as those in special research collections outside universities;
- generating innovative interfaces by opening data up for use by developers within and beyond UK Higher Education.

8.28 Without doubt, such a desirable service opportunity will face challenges, not least from third party services looking to achieve the same network effects. However, there are distinct advantages of owning and operating such a service within the HE community. For example, national scale and focus provide opportunity for:

- incorporation of a wider range of resource types;
- integration of emerging and innovative services;
- federation with the wider national information environment;
- economies of scale to embrace the small and the specialist;
- leveraging data only available within the sector such as user affiliations;
- offering a platform for large scale recommender services.

Domain 3 – Library Management System

Current setting

8.29 HE library services are mature IT systems users and all libraries are dependent on management and end user systems. The UK HE landscape is dominated by 7 Library Management Systems from just 4 suppliers, which:

- are high value in terms of library budgets yet low value in terms of supplier return on investment;
- involve duplicated costs of ownership (infrastructure, technical administration) and operation (e.g. a search interface in every HEI);
- incur relatively high costs of migration on account of data;
- do not easily support disaggregation with limited open interfaces leading to duplication with other institutional systems and services, multiple data entry and difficulties in obtaining consistent and consolidated management information.

8.30 Furthermore the global information environment has changed massively during the life of most products, challenging not only the systems but also the core processes and business rationale of university libraries:

- the underlying LMS model is to connect the patron with local resources;
- specialized resources are not effectively leveraged across the HE community;
- software is designed around processes that manage local print collections (e.g. acquisition, accession, circulation, reservation);
- electronic content and access to global resources requires different processes which have been appended to these systems over time.

Target Scenario

8.31 The traditional LMS footprint, which is fundamental to most vendor products, should be transformed to take account of the most economic and effective location of data and services. As described above:

- some services should operate at higher levels of scale (e.g. Licensing, ERM and the discovery and delivery of at least electronic resources – see Domains 1 & 2);

- other data should be entrusted to core institutional services, such as student records for user names and affiliations.

8.32 Consequently the local library management system should be required to perform less, enabling the library service itself to focus on user support and new forms of collection management (exposing resources, facilitating access, selective acquisition).

Change Required

8.33 If shared services are to be developed, as proposed under Domains 1 & 2, it is desirable that the traditional LMS is disaggregated, with open interfaces to enable the exchange of data and the integration of services across platforms, both locally (e.g. VLE <-> LMS) and beyond the institution (e.g. LMS <-> shared services).

8.34 It is unrealistic to rely on vendors to lead that task on an investment basis as it requires commitment to design and develop multiple interfaces involving vendor, local and open source applications. However, there are global HE community partners who are already committed to that mission, most notably the US-based Quali Foundation implementing the Open Library Environment (OLE) design with support from the Mellon Foundation.

8.35 Under Domain 3, the programme will therefore develop 'Reference Implementations' based on a community source platform such as Quali OLE, which will:

- design and prove interfaces required between local library functions and:
 - institutional management applications and institutional teaching, learning and research systems;
 - shared services;
 - other services leveraged beyond the institution;
 - establish data migration and implementation pathways;
- instantiate these approaches in working systems in both SaaS and local operations;
- generate design and service documentation based on a standard format, such as that used within the international eFramework;

- provide consultancy and support for HE libraries wishing to explore these options.

8.36 This work will be undertaken in an open manner, working with likeminded overseas partners (such as Kualu Foundation members) and sharing designs and results with the developer and vendor community in a 'Creative Commons' environment.

Downstream opportunities

8.37 An open engagement with the global developer community, including commercial vendors, is likely to generate value added components, whether made available through open source or commercial models.

8.38 Experience indicates that such a competitive mixed market, with the resultant synergies and enhancements, will only thrive if the shared service supports open data and open interfaces.

8.39 The successful migration of local library functions to the shared service model and the achievement of critical mass will raise questions about other local services, content and data sets which might be migrated.

9 BENEFITS

Benefits Matrix

9.1 The development of the SCONUL shared services business case has underscored both cashable and wider benefits that will be deliverable at all levels:

- for the UK HE sector;
- for the participating institutions, including their library services;
- for individual users – notably researchers, students and their teachers.

9.2 The following table provides a summary of the 18 key benefits, selected from those referenced throughout the narrative of this report.

Benefits	Domain1	Domain2	Domain3	UK Sector	HE Institution	Researcher	Student	Cash	Non-cash
1) ERM staffing costs	Y				Y			Y	
2) ERM licence costs	Y				Y			Y	
3) Content procurement costs	Y				Y			Y	
4) Service Desk costs	Y	Y	Y	Y	Y			Y	
5) Cataloguing costs	Y		Y	Y	Y			Y	
6) Componentised OS LMS choice			Y		Y			Y	Y
7) Ease of access	Y	Y		Y		Y	Y	[y]	Y
8) Efficiency of workflows		Y		Y		Y	Y	[y]	Y
9) Wider availability of assets	Y			Y	Y	Y	Y	[y]	Y
10) Discoverability of assets		Y		Y		Y	Y	[y]	Y
11) Reliability of data	Y		Y			Y	Y		Y
12) Quality of rights advice	Y				Y	Y	Y		Y
13) Recommendation services		Y			Y	Y	Y	[y]	Y
14) Service simplification & focus	Y	Y	Y		Y	Y	Y	[y]	Y
15) Deeper Business Intelligence	Y	Y			Y			[y]	Y
16) Community source partnership	Y	Y	Y	Y	Y			[y]	Y
17) Platform for enhancement*	Y	Y	Y	Y	Y				Y
18) International differentiation	Y	Y		Y	Y				Y
Total 'benefits' per category	13	10	7	9	14	8	8	14	13

* Including open specifications and open data

Benefits Profile

9.3 The benefits are analysed in the matrix according to Domain, Beneficiary and Benefit Type (Cash & Non-cashable).

9.4 The benefit type identifies:

- **Tangible cost saving** – 6 benefits involving earmarked savings that are detailed in the Savings section of this report.
- **Possible cost saving**, marked [y] – 8 benefits where a ‘cash’ case could be made, but where the savings could not be linked to single cost lines; it is therefore regarded as prudent that these are not included in the cost-benefit case. Those associated with saving of time for researchers and for highly mobile students (international, distance or part time learners) are most significant (see benefits 7–10).
- **Non-cash** – 13 benefits that represent significant value to the stakeholders un UK Higher Education, of which 8 are also linked to possible cost savings.

9.5 The matrix illustrates an overall benefits mix that characterises the strengths of this business plan:

- cross-cutting impact (or ripple effect) – the majority of benefits impact a combination of two or more of the user, the institution and the sector;
- the three domains complement each other in terms of benefit profile as well as in mutually dependent functionality:
 - the Electronic Resource Licensing & Management and the Local Library Management domains offer strongest cash benefits;
 - the Discovery to Delivery domain pulls though the user benefits accruing from the optimised business processes.

Intangible benefits.

9.6 The intangible benefits fall in to two important but not mutually exclusive groups – users and library services.

User Benefits

9.7 Whilst each of these benefits will be valued by all types of user (students, researchers and teachers), the potential efficiencies linked to researchers are of particular interest.

- **Ease of access & efficiency of workflows** – arising from an electronic resource service capable of linking article level enquiries with access rights and therefore direct access to full text, citations and reviews.
- **Wider availability of assets** – arising from national licence deals and benefitting a high percentage of research groups.
- **Reliability of data & discoverability of assets** – enabled by metadata derived from source, linked reliably to location and exposed to such as Google at scale.
- **Recommendation services** – made possible in a high volume service channel engineered with these values in mind.
- **Quality of rights advice** – arising from an expert national service.

9.8 A measure of such user benefits, explored in the Savings section within the context of UKRC and HEFCE research investment, would be the potential to reduce researcher search and access time, especially in interdisciplinary areas, at critical moments of focus in information gathering and collaboration.

Library Service Benefits

9.9 Library services across the participating institutions will benefit from

- **Service simplification & focus** – outsourcing and sharing of complex duplicated processes will enable library managers and their teams to focus on core customer service and collection management issues.
- **Deeper Business Intelligence** – shared and comparative non-competitive business intelligence regarding library processes and assets will enable services to learn together and to identify evolving service opportunities in a more timely manner.
- **Community Source partnership** – benefits arising from systems development and support, conducted collaboratively in partnership with likeminded institutions in the global community.

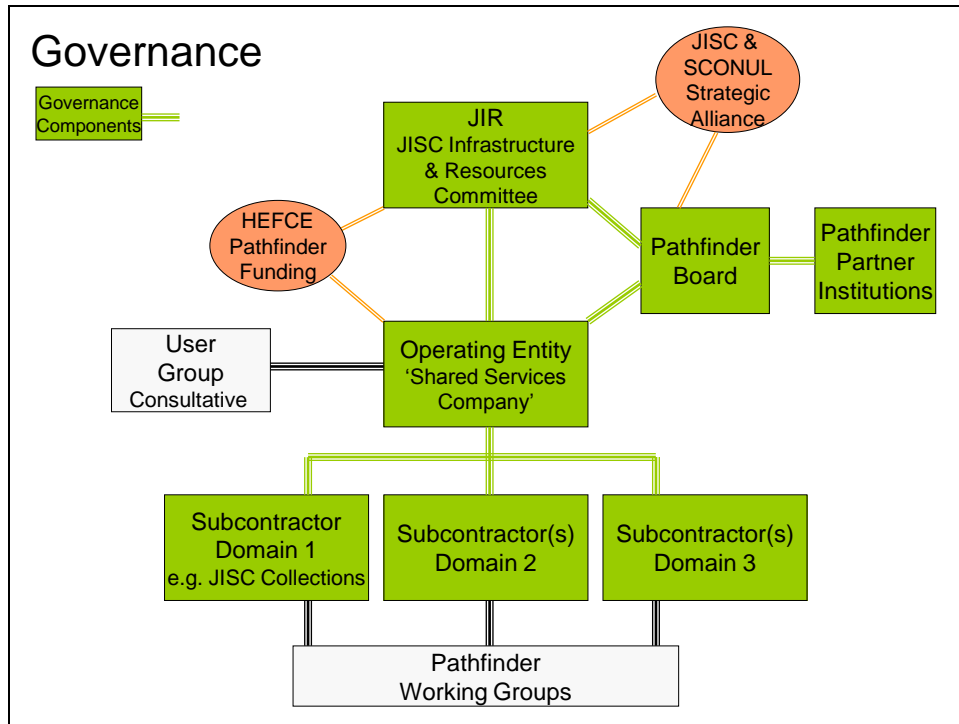
- **Platform for enhancement** – opportunity and sustainability in the face of ongoing change arising from having control of the service platform and the associated business rationale.
- **International differentiation** – the shared service covering core assets for learning, teaching and research will be a visible and powerful advert for the UK Higher Education system and its institutions, not least for overseas learners participating in mixed mode and distance courses.

10 ORGANISATION

Governance Arrangements

- 10.1 The proposed governance arrangements are presented in **Figure 10.1** below. Wake Smith & Tofields solicitors have provided legal advice and their full report can be found at **Appendix A, Section 6**.
- 10.2 It is proposed that the Operating Entity (referred to throughout as the Shared Services Company) will be a company limited by guarantee. A company limited by guarantee will have no shareholders or share capital, but instead has members who act as guarantors. Profits will not be distributed to members but will be reinvested in the company.
- 10.3 The Shared Services Company will be established by the JISC Infrastructure & Resources Committee (JIR) at the outset of the project. At the discretion of JIR, it may be an existing entity operating within the UK HE community or it may be a new entity if deemed necessary on the basis of expertise and mandate.
- 10.4 The Memorandum of Association will stipulate the legal relationship between the Shared Services Company and JIR, the Pathfinder Partners and the range of subcontractors who will be charged with developing and providing services in the three domains.
- 10.5 The Articles of Association will define the regulations governing relationships between the Pathfinder Board and Members of the company.

Figure 10.1



10.6 The Pathfinder Partners are the 8 HEIs who have in principle agreed to take forward initial pathfinder activity. The Pathfinder Partners are listed in **Section 13**. The number of Pathfinder Partners will increase as other HEIs join the service.

10.7 We propose that the strategic direction of the Shared Services Company will be advised by a Pathfinder Board. The Members of the Board will include the Service Director, representatives of JISC JIR and the Pathfinder Partners. HEFCE could be represented on the Board should this be appropriate. The JISC JIR role will be informed through the SCONUL and JISC Strategic Alliance. This will ensure that sector priorities and JISC current and proposed activities are aligned and integrated. The Chair of the Pathfinder Board will be able to request papers/presentations from members of the User and Stakeholder Group, subcontractors and members of Pathfinder Working Groups as appropriate.

Functional Responsibilities

10.8 The Shared Services Company will be responsible for delivering the following functional responsibilities:

- **Financial** – This will include the receipt of funding from HEFCE and pathfinder partners and the disbursement of funding to sub-contractors charged with developing the three Domains of the Shared Service;
- **Contractual** – This will include satisfying the requirements of the contract between the company and HEFCE and developing appropriate contracts with member institutions and subcontractors;
- **Service Level Agreements (SLAs)** – This will include establishing and agreeing SLAs between the company and Pathfinder Partners and between the company and service subcontractors;
- **Programme Management and Monitoring** – This will include actions to ensure that the Shared Service Company programme of activities are effectively co-ordinated, directed and implemented to achieve agreed outcomes and strategic benefits of the business. This will also include ensuring that appropriate Pathfinder Working Groups are established to support design, development and pilot work in each of the domains and that contracts and SLAs with sub-contractors are honoured;
- **Sector Engagement** – It will be important that the Shared Service Company consults regularly with the sector via the User and Stakeholder Group to ensure that ongoing development meets user requirements.

Shared Service Membership

10.9 HEIs wishing to become Pathfinder Partners and therefore Members of the Shared Service Company will contract with the Shared Service Company and in return for annual fees will receive a specified range of services.

10.10 The contract will include an annual review option to enable Members to exit the service should this be required e.g. in the event that service standards are not met.

11 SAVINGS

Headline Savings

- 11.1 The Shared Services proposed in this Business Plan are projected to yield £88.4m savings over the first 10 years based on prudent calculations of service take-up and impact. A more aggressive impact scenario projects £148.5m savings over the same period.
- 11.2 In addition, the service is geared to deliver improved value estimated at £59m from 10 year electronic licensing costs of £798m.
- 11.3 The business case for savings is built around a portfolio of three key elements:
1. Electronic resource management
 2. Licensing and utilisation of electronic resources
 3. Efficiencies in UK research activity
- 11.4 The strength of this savings portfolio lies in combining a spread of cashable savings (ERM), tangible time efficiencies (Research) and increased value (licensing). These elements share mutual synergies, directly derived from the nature of the proposed service. However, they may each be subjected to varying emphasis in the business plan as it goes forward, depending on market conditions and HEI service uptake. This provides significant flexibility as well as opportunity.

Sources of Savings

- 11.5 The portfolio offers benefits valued at £20.6m across the HEIs projected to take on the service in Year 1–5, building to £88.4m over Years 1–10:
- **Electronic Resource Management** – to achieve an overall saving of 45% on the local costs of electronic resource management and discovery; this is made up of 40% savings on reported staff costs and as higher saving on systems costs.
 - **Licensing and utilisation** – to increase electronic resource access and utilisation through a national licensing model that drives the average cost per download down by a target of 25%; it is noted that this offers increased value but does not represent a saving.

- **Research time** – to provide efficiencies in the use of the national RCUK budget; it is apparent that the conduct of research can be enhanced by more optimal and consistent access to electronic journal resources.

11.6 Each of these propositions is detailed in the following sections. The cumulative impact of this portfolio is summarised as follows for Years 1–10:

- Benefits (all three elements of the portfolio) – £147.4m
- Savings (only ERM and Research time) – £88.4m
- Cashable Savings (only ERM) – £49.2m

Benefit Targets	Cost p.a. for all 166 HEIs	Level of Benefit	Benefit p.a. for all 166 HEIs	Year 10 Take Up	Year 10 Benefit	Saving over Years 1–10
	£m		£m		£m	£m
ERM costs	27.487	45.6%	12.534	110	8.309	49.2
Cost for downloads	80	25%	20	166	20	59.0
Research: £3bn (RCUK) + £1bn (HEFCE)	4,000	0.25%	10	110	6.627	39.2
Total Benefit					£33.74	£147.4
Total Saving					£13.74	£88.4

11.7 A number of less significant areas of saving and therefore of tangible benefits are not detailed here as they do not change the scale or the direction of the business case; for example, the optimised Local Library Management system footprint and delivery mode.

11.8 Furthermore key ripple effects, such as the reduced cost to libraries of providing access to scholarly journals as the delivery shifts to online, are referenced but not counted as savings in scope.

Electronic Resource Management Savings

11.9 Currently all 166 HEIs repeat the same management tasks relating to procurement, license management and discovery, processing very similar (and often identical) data relating to electronic resources. HEIs will be able to pass the performance of those tasks to the shared service, whilst retaining the necessary controls within the shared system.

11.10 The current costs gathered by this study from 49 HEIs are summarised as follows:

	1-Off Purchase Costs		Annual Costs	
	Average Per HEI	Sector (166)	Average Per HEI	Sector (166)
ERM Management Software*	£18,499	£3.07m	£7,209	£1.20m
ERD Discovery Software**	£18,367	£3.05m	£10,911	£1.81m
Human Resource***			£140,102	£23.26m
Total Costs	£36,866	£6.12m	£158,222	£26.27m

* based on 15 institutions / **based on 20 institutions / ***based on 49 institutions

11.11 Whilst not all institutions currently licence commercial software for these purposes, it is noted that 81% of the cost relates to human resource (applying to all institutions) and that professional software is increasingly necessary for any institution.

11.12 A realistic view of the potential cashable savings across the sector would be

- 50% of the human resource – £11.6m per year;
- local costs for management and discovery software costs – £4.2m per year, assuming a 5 year renewal cycle.

11.13 The projected savings, taking account of shared service take up, will be:

- by Year 5, take up by 82 out of 166 HEIs, with a saving of £6.2m per annum;
- by Year 10, take up by 110 out of 166 HEIs, with a saving of £8.3m per annum;
- a total of £49.2m over 10 years.

11.14 These savings are set against the forecast annual shared service charges, averaging £20k per participating institution (£1.6m in Year5, £2.2m by Year 10). The net saving in Year 10 across 110 HEIs will therefore be £6.1m.

Electronic Resource Licensing & Utilisation Savings

11.15 The significance of the licensing and management of electronic resources is clearly established in the RIN e-Journals report (May 2009), which sets out the scale of the UK HE annual investment in and use of e-journals:

- universities and colleges spent £79.8 million on licenses for e-journals in 2006/07. The average e-journals expenditure for SCONUL member libraries is therefore close to £500k per annum and continues to rise;
- researchers and students in higher education downloaded 102 million full-text articles in that year, at an average cost of £0.80 per download. The RIN study grouped universities according to levels of use and showed that cost per download varied from 89p to 60p.

11.16 Dialogue with institutions and publishers places this information in a supply and demand context:

- cost constraints do not allow all research groups to access the journals they require;
- directed undergraduate use of journals is growing on account of electronic access; furthermore this trend to electronic access is likely to catalyse the rationalisation of e-books licensing, for which this proposed shared service would be well placed;
- publishers and subscription agents are faced with significant costs of sale and in particular with diseconomies relating to gaining additional subscriptions.

11.17 These findings, backed up by the survey conducted by this study, present strong indications of the significant costs and therefore the savings are at stake. Only a fraction of these have been tapped by current JISC Collections initiatives. In addition:

- levels of e-Books licensing will also rise as the market matures, bringing further opportunities to reduce costs and to increase access through large scale and national deals;
- supporting databases containing such as abstracts and citations can also be licensed and implemented at the national level.

11.18 The target set by the Shared Services project is therefore:

- to use national deals to increase access and therefore reduce the cost per download by as much as 25%, based on the RIN cost range, which would represent a £20m value increase on the current £79.8m per annum e-journals investment. The build up of national level deals profiled in this business plan amounts to £236m over 10 years and therefore a 25% benefit would be calculated at £59m;
- to contain costs in current and developing market conditions;
- to use demonstrable publisher benefits to seek savings as the e-market matures.

Evidence from JISC Collections

- 11.19 JISC Collections has provided evidence of the valuation of equivalent benefits from its current portfolio. It should be recognised that such value targets are situated in a wider ecology as more journals shift to electronic only publication (therefore more of the total current £163m UK HE journals spend will be subject to these opportunities) and as the overall volume of global scholarly publication increases.
- 11.20 The RIN report 'Activities, costs and funding flows in the scholarly communications system' (Cambridge Economic Policy Associates for RIN, May 2008; <http://www.rin.ac.uk/our-work/communicating-and-disseminating-research/activities-costs-and-funding-flows-scholarly-commu>) highlights that sustained increases in global research investment over the next ten years are predicted to yield a rise of 11% in the number of journals published and of 28% in the number of articles. Such a rise in the production of articles will clearly have an impact on costs resulting in increases in breakeven subscription prices of around 12–13% over 10 years.
- 11.21 The resulting escalation in e-journal (and e-book) investment provides further rationale and likelihood of further savings and economies of scale arising from the licensing and resource management services proposed in this business plan.
- 11.22 Finally, the role of this service as a catalyst in the shift from print to electronic resources across the full range of UK libraries will be significant, but is not proposed as a direct saving. The RIN report on the costs of scholarly communications processes evidences that:

- UK libraries spend £163m on journal subscriptions (split almost equally between print and electronic in 2008) and a further £72m on the provision of access facilities;
- in the shift towards electronic only journals publishing, the largest predicted reductions in costs would be accounted for by a fall in libraries' costs in providing access to journal articles; for UK academic libraries this would save £23m access costs annually.

UK Research Efficiencies

11.23 The same RIN report vividly draws attention to the costs of accessing scholarly communications as part of research undertaking:

- the global cost each year of publishing, distributing and accessing journal articles is estimated at £25bn, only 14% of the overall costs of undertaking, communicating and reading the results of the research reported in journal articles;
- within these wider processes, £16.4 billion is spent globally in user time in searching and accessing, amounting to £541m in the UK with 3.3% of the global research investment;
- this is set in a growth scenario that, in recent years, the global increase in research funding has been of the order of 2.5% a year in real terms, with related increases in the number of journals and articles published;
- sustained increases of this order over the next ten years are predicted to yield a rise of 11% in the number of journals published, and of 28% in the number of articles.

11.24 The scale of the user activity relating to 'searching and accessing' is a major target of the efficiencies proposed in this business plan, arising from the combined impact of the services in Electronic Resource Licensing & Management (wider access) and Discovery to Delivery (where a range of user workflow benefits have been described relating to access and integration).

11.25 Apart from small scale and product related usability studies, there are no known baseline indicators of the time spent on the various aspects of these workflows. However, powerful anecdotal feedback throughout the library community indicates that the discovery to delivery processes relating to electronic resources are far from fit for user purposes. It is therefore proposed to set expectations for this service around conservative estimations, which can be substituted from real research undertaken in parallel.

11.26 For example, a 5% saving of the reported UK searching and accessing time of £541m would be £27m per year across all research establishments. An alternative basis for calculating efficiencies around research funding is that total 2010–11 RCUK/HEFCE funding will equate to £4bn (see BIS 'Higher Ambition'). This equates to roughly 45% of UK research income so the national base is £8.9bn. In this context an efficiency saving of 0.25% would equate to £10m per year for RCUK spend or £22.2m per year for the wider UK spend.

11.27 Using either metric, the contribution of the project is dependent on the number of institutions and therefore researchers accessing the shared service, for which predictions are high.

Ten Year Profile

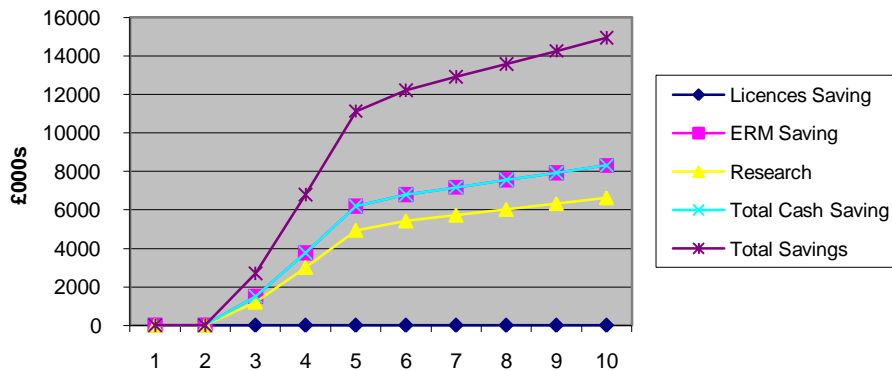
11.28 By Year 10, it is expected that 90% of the sector will be using at least some of the national deals, with two thirds of institutions subscribing to the shared ERM service.

11.29 The annual benefits, as set out above, will therefore build year on year to produce sector wide savings (£'000s) as follows:

Savings	Years 1–3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10 Years
ERM Saving	1,511	3,777	6,194	6,798	7,176	7,553	7,931	8,309	49,248
Research (RCUK)	1,205	3,012	4,940	5,422	5,723	6,024	6,325	6,627	39,277
Total Savings	2,715	6,789	11,134	12,220	12,899	13,577	14,256	14,935	88,525

11.30 The projected growth profile and the balance of the savings portfolio is illustrated in the following chart:

Savings over 10 years



11.31 Sensitivity analysis indicates that the ERM net savings are dependent on:

- take up institution numbers – a function of perceived value, quality of service and market competition;
- cost of the new service – most importantly a function of changes in requirements as well as of unforeseen complexity of service delivery.

11.32 The figures here projected that, after a relatively steep initial adoption of the ERM services in Years 3–5, take up will continue to grow steadily to Year 10, without substantive increase in operating costs from the Year 5 ‘steady state’ level. This projection may therefore be modified in recognition of these sensitivities.

12 COMMITMENT

Pathfinder Partners

12.1 Ten institutions have agreed in principle to participate in early pathfinder activity with the following provisos:

- external events (e.g. potential HEFCE budgetary considerations) may limit their involvement;
- recognition that timelines and resource commitments will need to be clarified and agreed with pilot partners;
- an acknowledgement that key library staff have existing internal commitments that may be a priority.

12.2 The precise nature of the commitment in terms of resources will be agreed with individual institutions during Year 0 of the Pathfinder Programme.

12.3 The pathfinder partner institutions are:

1. Northumbria University
2. University of Bournemouth
3. University of East London
4. University of Edinburgh
5. University of Huddersfield
6. University of Southampton
7. University of Stirling
8. University of Warwick
9. University of Westminster
10. University of Wolverhampton

13 PATHFINDER PLAN

Overall Timeline

- 13.1 The Pathfinder business plan covers a period of 5 years.
- 13.2 This study has identified local momentum and sector synergies and has indicated that time is of the essence in terms of the opportunity to achieve savings and to leverage the current climate of anticipation of necessary change.
- 13.3 It is therefore recommended that the Pathfinder will run from the first quarter of 2010, with the first six months of start-up activity potentially being executed at risk supported by existing funding arrangements. Such a commitment will however require visibility of funding from the point at which management appointments are required in Quarter 2.
- 13.4 Key decisions regarding the sourcing of systems development partners may impact the timeline, which is currently based on the recommendation that shared service software be developed collaboratively with non-profit community source partners, such as the Quali Foundation (see Appendix F).
- 13.5 However, due diligence and associated negotiations will be essential prerequisites to be undertaken within the Pathfinder programme itself. Should that lead to an alternative development approach requiring competitive tendering, the timeline will require a further 6 months elapsed relating to Projects 1-3, though the licensing service would be able to proceed to plan.

Aims & Objectives

- 13.6 The aims of the Pathfinder plan are to:
- develop and deliver the **shared services** demanded by the UK HE library community, responding to ongoing developments in the UK and global environment;
 - establish a sustainable and accountable **operational business model** for service development and delivery;
 - position the resulting services to engage **complimentary community and 3rd party developments** to the best advantage of UK institutions and their students, researchers and teachers.

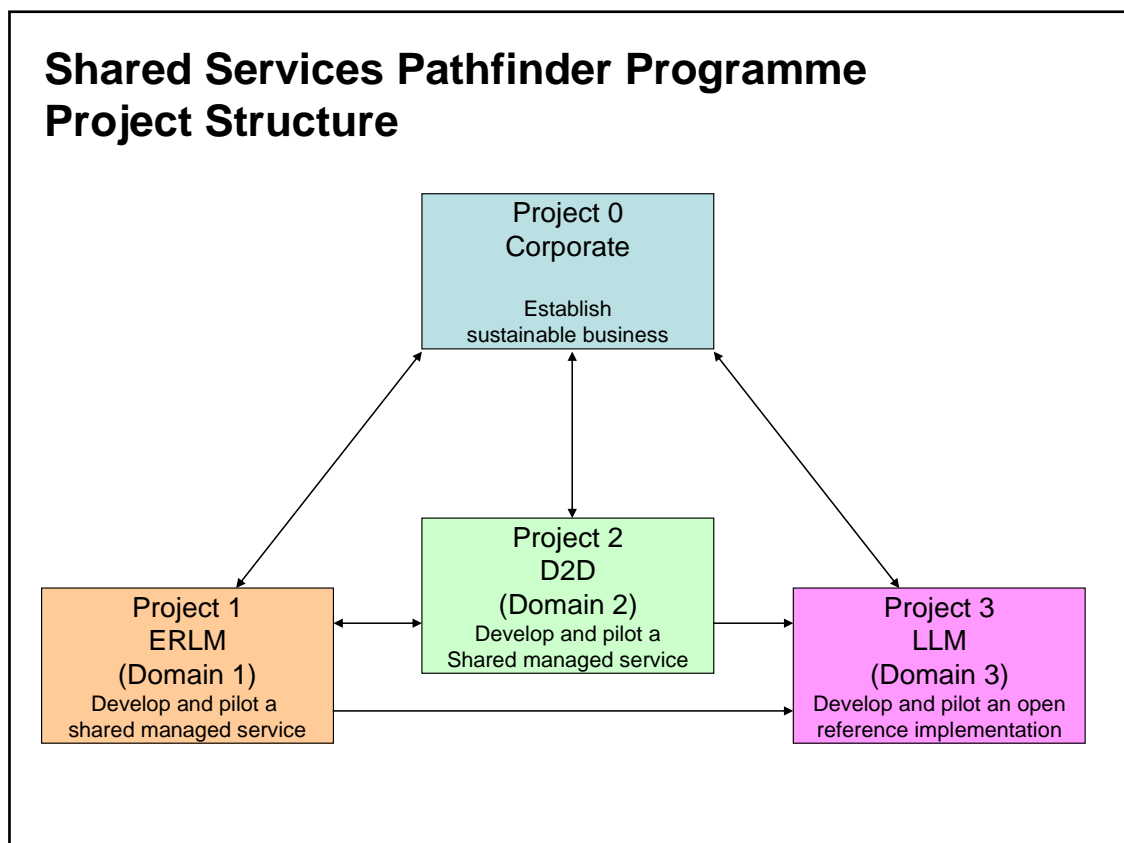
13.7 The Pathfinder plan is therefore structured around 5 key objectives:

- early establishment of **corporate direction**, translating this SCONUL business plan in to a programme of work which is led by the management team, accountable to members and stakeholders and, not least, implemented through optimal delivery and Pathfinder partner arrangements – see Milestones 1 & 2;
- early availability of a **high visibility industrial strength service** (i.e. National licensing), backed by indication of Pathfinder institution buy-in to the services under development– see Milestone 3;
- on time and on-budget launch of **first shared software services** (ERM with integrated discovery to delivery) which demonstrably deliver cost savings and user benefits – see Milestone 4;
- establishment of an effectively budgeted, responsive and professionally executed **product & service upgrade cycle** – see Milestones 5 & 7;
- Delivery of a proven open model for optimising the local elements of HE library services – see Milestone 6.

Projects

13.8 In order to facilitate the timely and effective development and delivery of the proposed services, the programme is divided in to four projects as illustrated:

- **Project 0** – Corporate affairs including management, partnerships, membership, accountability, business and service planning and marketing.
- **Project 1** – ERLM (Electronic Resource Licensing & Management) – see Service Domain 1.
- **Project 2** – Discovery to Delivery (D2D) – see Service Domain 2
- **Project 3** – Local Library Management (LLM) – see Service Domain 3



Take up volumes

13.9 The Pathfinder plan is geared to a level of take up indicated to be feasible in the SCONUL study. The plan is based on achieving a sustainable business based on the '5 Year' target, though the potential to expand take up beyond that point is illustrated in the '10 Year' projection.

Service	Basis of Service	After 2 yrs	After 3 yrs	After 4 yrs	After 5 yrs	After 10 yr
Domain 1a - Licensing	National deals - sliding scale based on size	130	140	140	140	166
Domain 1b - Electronic Resource Management	Site contracts - SaaS with data management	8	20	50	82	110
Domain 2 - Discovery to Delivery Services	Open to all - No revenue	5	60	110	140	166
Domain 3 - Local Library Management	Site implementations - SaaS or local	3	6	10	18	40

13.10 The take up volumes will differ significantly by individual offering within the overall shared service:

- **Licensing** – take up potential close to 100%;
 - the ‘national’ deals approach will lead to very full engagement, with few exceptions for major publishers and titles (as illustrated by JISC Collections Oxford Journal Archive example);
- **ERM** – potential to exceed 50%;
 - 50% uptake is high for any software service, unless it has demonstrable system wide cost and quality benefits, as is the clear case for the ERM function;
- **D2D** – potential close to 100%;
 - current take up of national or large scale discovery services (i.e. use by students and staff across institutions and embedding in local library services) is typically high for volume assets such as books and journals and should be higher for directly accessible electronic resources;
- **LLM** – potential of around 25%;
 - No current library management system exceeds 25% UK HE market share, though the market has traditionally favoured a small number of popular products (currently 4 vendors have 80% plus market share);
 - Whilst market demand may be higher than implied by the rollout targets (18 sites by close of year 5), it should be noted that the implementation cycle for local collection management is necessarily more elongated than for less mature and virtual services.

Take Up Timeline

13.11 The build up of institutions using the shared service, as reflected in the 5 Year Pathfinder Timeline, is broken down as follows.

Key to table

ERM - Electronic Resource Management

D2D - Discovery To Delivery

LLM - Local Library Management

[p] - Pilot sites

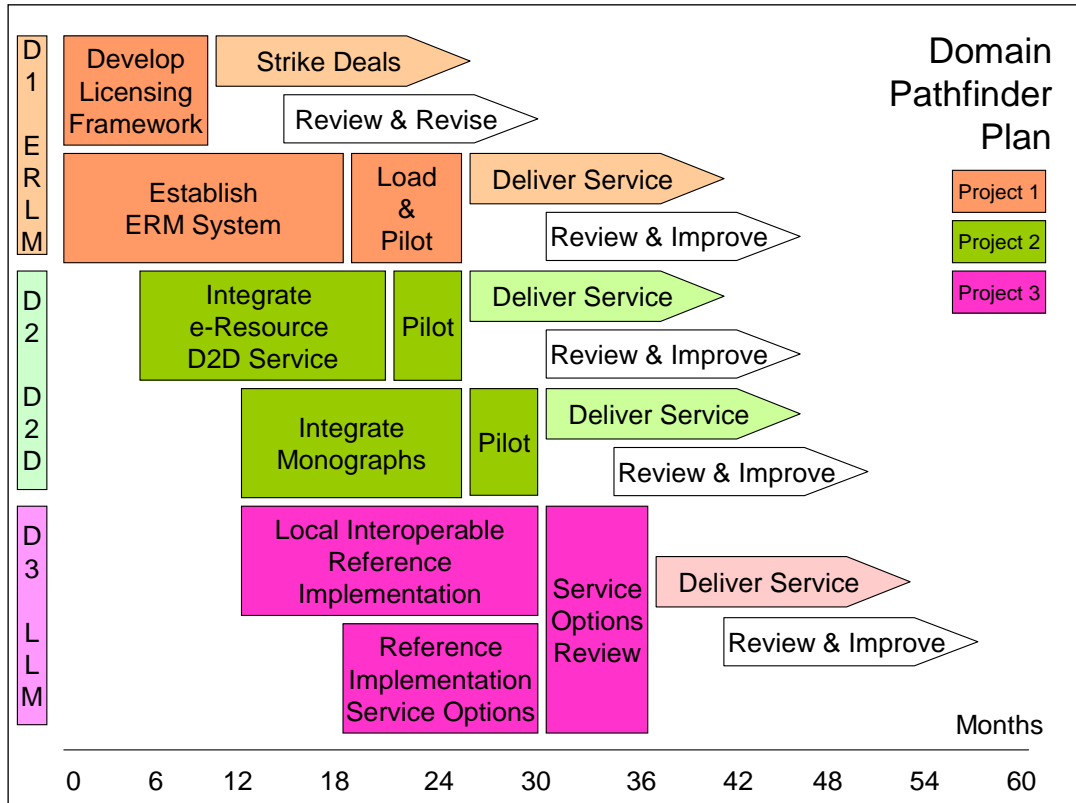
Major service launches - **green**

Qtr	Licensing	ERM	D2D	LLM
4				3 [p]
5	30			
6	60			
7	30		5[p]	
8	10	8 [p]		3 [p]
9	10			
10				
11		6	30	
12		6	25	
13		6	10	
14		8	10	
15		8	10	4
16		8	20	
17		8	20	4
18		8	10	
19		8		4
20		8		
5 yr HEIs	140	82	140	18
5 yr % Sector	80%	50%	80%	11%

10 yr % Target	100%	70%	100%	25%
10 yr HEIs	166	110	166	40

Milestones

13.12 The overall service development and launch sequence is illustrated in the following diagram:



13.13 Within this overall plan, the 8 milestones which instantiate the Pathfinder objectives are as follows:

	Yr	Qtr	Area	Milestone description
M1	1	2	Corporate	Management team appointed & Development partners selected
M2		4	Corporate	'Corporate' launch with 1 st annual business plan (signed off)
M3	2	5	Licensing	Licensing scheme launched (with publishers) & ERM pilot partners announced
M4	3	9	ERM & D2D	Shared ERM & integrated discovery services launched (after pilot)
M5		12	Corporate	1 st software upgrade plan signed off
M6	4	13	LLM & Corporate	LLM Service launched (after pilot) with Open Reference Specifications
M7		16	Corporate	1 st consolidated software upgrade released
M8	5	20	Corporate	80 th ERM and 20 th LLM clients celebrated at 4 th Annual User Conference

Pathfinder Timeline – 5 Years

13.14 The 5 year time line is broken in to the four Projects identified above:

- Project 0 – Corporate
- Project 1 – ERLM (Electronic Resource Licensing & Management) – see Service Domain 1
- Project 2 – Discovery to Delivery (D2D) – see Service Domain 2
- Project 3 – Local Library Management (LLM) – see Service Domain 3

SCONUL Shared Services: Business Case

Corporate

Project 0 Corporate Activity	Year 1				Year 2				Year 3				Year 4				Year 5			
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4

0.1 Appoint management team		M1																		
0.2 Select Development Partners *		M1																		
0.3 Establish governance																				
0.4 Business planning cycle				M2																
0.5 'Corporate' launch				M2																
0.6 Appoint core service/support team																				
0.7 Engagement, sales & marketing																				
0.8 User Group Events & Conferences																				M8
0.9 Establish technical doc framework																				
0.10 Maintain technical documentation																				
0.11 Publish open reference specs														M6						
0.12 Annual service development plan													M5							
0.13 Service & Software upgrade cycle																M7				

Note * Assumes that the selection process will prioritise the community partnership option and therefore that a European procurement process will not be necessary. It is estimated that a European procurement (for which 'Competitive Dialogue' would be the recommended mode) would add 3-6 months to this timeline.

SCONUL Shared Services: Business Case

Electronic Resource Licensing & Management

Project 1 ERLM (Domain 1)	Year 1				Year 2				Year 3				Year 4				Year 5			
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
1.1 Establish licence framework																				
1.2 Establish licensing charging models																				
1.3 Market test framework & models																				
1.4 Plan licensing priorities																				
1.5 Review framework & models																				
1.6 Launch licensing scheme					M3															
1.7 Operate licensing scheme																				
1.8 ERM - Specification																				
1.9 ERM - Build																				
1.10 ERM - Data ingest																				
1.11 ERM - Pilot [No of libraries]					M3	[8]														
1.12 ERM - Service launch									M4											
1.13 ERM - Rollout [No of libraries]												[6]	[6]	[6]	[8]	[8]	[8]	[8]	[8]	[8]
<See Corporate Ref 0.12> Service/software development plan														>>						

SCONUL Shared Services: Business Case

Discovery To Delivery

Project 2 D2D (Domain 2)	Year 1				Year 2				Year 3				Year 4				Year 5			
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
2.1 Agree service & data priorities																				
2.2 Specify requirements																				
2.3 Phase 1 - implementation																				
2.4 Phase 1 - ERM integration & pilot							[5]													
2.5 D2D Service launch											M4									
2.6 Int'l Developer Competitions																				
2.7 D2D Service Phase 1 Take up																				
2.8 Phase 2 - implementation																				
2.9 Phase 2 - Bib+ integration & pilot																				
2.10 D2D Service Phase 2 Take up																				
<See Corporate Ref 0.12> Service/software development plan																				

SCONUL Shared Services: Business Case

Local Library Management

Project 3 LLM (Domain 3)	Year 1				Year 2				Year 3				Year 4				Year 5			
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
3.1 Define Reference Imp'n ToR																				
3.2 Evaluate available models																				
3.3 Identify Reference Imp'n libraries																				
3.4 Develop Implementation Plan																				
3.5 Phase 1 - implementation				[3]																
3.6 Phase 1 - integration & pilot																				
3.7 Phase 2 - implementation								[3]												
3.8 Phase 2 - integration & pilot																				
3.9 LLM Service launch														M6						
3.10 LLM Rollout [No of libraries]															[4]		[4]		[4]	
<See Corporate Ref 0.12> Service/software development plan													>>							

14 RECOMMENDATIONS

14.1 The principal recommendation of this report is that HEFCE should support this business plan for funding under the Shared Services programme on the basis of the financial, organisational and scholarly benefits demonstrable across the UK system.

14.2 To assist the wide range of stakeholders engaged in this proposition, further recommendations are detailed for institutions, for SCONUL, for JISC as well as for HEFCE.

HEFCE

- HEFCE should endorse this business plan as a strong exemplification of the opportunities and benefits for sector wide shared services.
- HEFCE should support this business plan with the level of funding requested to deliver a sustainable business within 5 years of the first shared service product launch (7 years from project commencement in Spring 2010).
- HEFCE should work with the funding bodies of Northern Ireland, Scotland and Wales to secure their inclusion in the opportunity.
- HEFCE should work with JISC and SCONUL to identify the potential synergies between this and other shared services such as UKRR.
- HEFCE should provide SCONUL with feedback on this plan so that wider library service planning can benefit from the exercise to date.

HE Institutions & their Libraries

- All institutions should take account of the findings of this study and the potential of the proposed service in their Information Systems strategic planning processes.
- Libraries wishing to engage in the Pathfinder stage for any or all of the three Domains should express interest to SCONUL.
- Libraries planning for the Pathfinder stage should work with their internal partners to undertake change planning exercises at the earliest opportunity

- RLUK, on behalf of its members, should proactively work with SCONUL to develop further the vision for how this service will benefit the RLUK membership and mission.

SCONUL

- SCONUL should ensure that the momentum in terms of interest and planning arising from this study is maintained and developed by maintaining a Steering Group and by leading a proactive communications, engagement and member support plan.
- SCONUL should build on its strategic partnership with JISC to ensure that wider planning, project investment, service development and sector engagement coherently and consistently takes account of the proposed service.
- SCONUL should work with JISC, RLUK and HEFCE to provide a programme of planning support for libraries considering engagement at the Pathfinder stage.
- SCONUL should engage library systems and service vendors and other interested third parties with the vision, motivations and opportunities relating to the proposed service.

JISC & its Committees

- JISC should work with SCONUL on the basis of their strategic partnership to coordinate the development of this prospect in respect of funding, stakeholder awareness, community engagement and programme investment.
- JISC should review its project and service development plans in the light of this business plan, including the forthcoming review of Copac and Suncat in 2010.
- The key JISC committee, notably JIR and the related FSD Programme, should include the proposal on their agendas.
- JISC should ensure that the Resource Discovery Task Force and the Libraries of the Future programme take full account of the proposed shared service.
- JISC should commit targeted resource as an immediate priority to developing a framework for working collaboratively within international community source consortia, such as the Quali Foundation.