

# Welsh Shared Service Library Management System Feasibility Report

## Purpose

The WHELP Partners have been awarded funding through JISC, as part of its Digital Infrastructure Programme (Library Systems Projects) to undertake a feasibility study for a shared Library Management System across Wales. The Project will address the requirements and financial and operational feasibility for a shared LMS across Wales, encompassing all Welsh HEIs, plus the Welsh NHS libraries currently supported by the Cardiff University LMS installation.

The Project outputs are as follows:

- A set of high-level agreed consortial requirements for a shared LMS.
- A proposed governance model for the consortium.
- High level recommendations on integration requirements for local systems; map communications standards which are applicable to the project against standards in use by suppliers.
- A business case for a Wales-wide consortial LMS, including cost matrices for the different approaches presented.
- Recommendations on the most cost-effective approach for software, hosting and ongoing management of the LMS.
- A road-map and timelines for potential implementation.

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## 1. Executive Summary

In July 2012 the Welsh Higher Education Libraries successfully obtained funding from the Joint Information Systems Committee (JISC) to explore the potential for a shared Library Management System across all higher education institutions and the NHS libraries in Wales.

The project is part of the JISC Library Systems Programme; which is exploring the significant changes in the Library systems market; including the development of 'next-generation', unified library systems which are seeking to bridge the gap between print and electronic resources, and the emergence of open source and community systems in the library market.

This report follows on from the internal report: 'WHELF Sharing a Library Management System – Research, Scoping and Specification Study, which was completed in 2012.

The project has identified four main options for provision of a shared service.

1. **Do Nothing** (each institution remains with current supplier or replaces LMS at their own pace and independently of the others). This is not really a do nothing option as practically all institutions have indicated that they need to change or upgrade their Library Management Systems
2. **Buying Club** (the partners collaborate on a single tender exercise with the view to achieving a single supplier for Wales HE, but with different LMS instances, and the potential for mixed supplier cloud and local hosting or group hosting).
3. **Consortia with Governance** (the partners set up a formal consortium, mandating a single supplier for Wales HE, but with different LMS instances which could be hosted in the cloud.
4. **Fully shared LMS instance** (formal consortia with single supplier on a single, shared LMS instance which could be hosted in the cloud.

The institutions host all current systems. Local hosting could continue under the 'do nothing' option or the 'buying club' option but achieving benefits that would make adding the overhead of governance worthwhile, would almost certainly mean a move to the cloud. Maintaining instances on a common technical architecture is important if efficiencies such as shared testing and shared system customisation are to be achieved. The cloud supplier could be one of the institutions but should there be serious service issues it would not be desirable to see Welsh institutions taking sanctions or legal action against another Welsh HE institution.

Obtaining accurate financial information from institutions has been a challenge. Understandably, some providers were reticent and concerned about how the information may be used and/or had genuine difficulty in obtaining the information required to derive the financial figures. Additionally due to the diverse nature of the institutions, the LMS systems and interfaces it has been challenging obtaining like for like figures across institutions.

It has also been a challenge to obtain financial figures from potential suppliers in advance of a full tender document and competitive dialogue. Despite assurances suppliers have been hesitant in supplying information that may adversely impact or commit them to something that they could not subsequently honour. However, a number of 'ball park' quotations and potential consortia discount rates have been obtained on condition that suppliers were not subsequently quoted.

Despite the significant challenges surrounding the financials, the project group has been able to obtain enough financial information which when combined with identified issues, risks, non financial benefits & dis-benefits to make the following unanimous recommendations: -

### Recommendation 1

Option 1 the 'do nothing' option is not really a do nothing option as all institutions have indicated that they expect to upgrade or replace their current systems. The advantages of option 1 are that each institution can specify their exact requirements and choose their system without considering the needs of other institutions. This however equates to a higher overall cost to the institution and

the sector in Wales as a whole and significantly reduces the ability to collaborate. This option is not recommended.

### **Recommendation 2**

As a minimum this report recommends that we go forward with option 2 (The Buying Club). Historically this has provided cost savings via the joint Voyager procurement in 1999. Suppliers have indicated that discounts in the region of 20% are achievable if an all Wales buying consortia could be achieved. However if an all Wales consortia could not be achieved the potential savings are likely to diminish in direct proportion to the size of the consortia.

### **Recommendation 3**

Option 4 the single instance LMS for all Wales provides the potential for the largest financial savings to the on-going cost of licence and maintenance of an LMS. It provides the opportunity for significant collaboration and subsequently a reduction in Library Systems staffing across the consortia as a whole. This could ultimately lead to a single Library Systems Team which would be managed by the consortia itself with an independent management structure. However there are significant challenges associated with this shared services model. A single strong governance model and strict limitations would be required on certain aspects of the system as it is implemented managed and maintained. In addition implementation costs are likely to be high given the complexity and the need to integrate across multiple corporate systems and some suppliers have stated that they would not be able to deliver this model due to the likely complexity of interfaces. Therefore given the complexity, risk and recognising the diversity of the institutions we would not recommend this option at this time.

### **Recommendation 4**

Option 3 'consortia with governance' is the recommended option and has the unanimous support of the Project Team. This option offers the most advantageous solution in balancing the risks and benefits. This option offers all of the potential savings available with option 2. In addition, it also realises the opportunities and benefits for collaboration and sharing which we have outlined in this report while offering individual institutions the flexibility to differentiate their service offering. This option could also be viewed as a stepping stone towards a single LMS at some point in the future.

### **Recommendation 5** (assuming recommendation 4 is accepted)

A cloud solution hosted by a supplier is the preferred option.

### **Recommendation 6** (assuming recommendation 4 or 2 is accepted)

WHELF provides a clear re-statement of its vision for sharing and signs up to a statement as to the level of shared services it wants to provide, via a shared LMS. This is needed to provide a compelling statement of intent for senior stakeholders and staff to achieve buy-in to the strategic direction which is being proposed.

### **Recommendation 7** (assuming recommendation 4 or 2 is accepted)

The diversity of the institutions is recognised and acknowledged. Additionally institutions are at various stages of their LMS lifecycle. Therefore it is understood that the timing of any tender process undertaken by WHELF may not fit with other strategic priorities of individual institutions. It will be essential to identify this prior to the commencement of any tender exercise, as misleading suppliers as to the size of the contract could lead to compensation claims.

### **Recommendation 8** (assuming recommendation 4 or 2 is accepted)

Open source v Proprietary software has been much debated and there are benefits and risks associated with both approaches. The project team believe that this is a debate that can and should be left until the response to tender and competitive dialogue stages. It will be important to ensure at the tender stage that neither approach is specifically excluded but it is acknowledged that the requirements could lead to a preferred approach.

### **Recommendation 9** (assuming recommendation 4 or 2 is accepted)

Given the immaturity of the current next generation market it is recommended that the tender exercise commences in Jan 2014 at the earliest. This provides both time for the market to continue to develop and also the preparation of a single set of requirements and tender documentation between now and this date. This time will also be required for obtaining institutional buy-in and developing governance structures.

**Recommendation 10** (assuming recommendation 4 is accepted)

It has been recommended in the report that we take a phased approach to implementation. It is anticipated that the first implementations will be no sooner than Summer 2014. Aberystwyth and Swansea are likely to be among the first institutions to migrate given their institutional drivers.

**Recommendation 11** (assuming recommendation 4 or 2 is accepted)

A task and finish group should be convened to quickly put together a high level plan, costs and cost allocation (i.e. funding) for the establishment of a project team for delivery of the tender and governance stages.

## 2. Background

In July 2012 the Welsh Higher Education Libraries successfully obtained funding from the Joint Information Systems Committee (JISC) to explore the potential for a shared Library Management System across all higher education institutions and the NHS libraries in Wales.

The Library Systems Shared Services Feasibility Study (Wales) would provide a practical vision and road-map for a shared model; exploring opportunities for integration and collaboration across the WHELF community.

The project is part of the JISC Library Systems Programme; which is exploring the significant changes in the Library systems market; including the development of 'next-generation', unified library systems which are seeking to bridge the gap between print and electronic resources, and the emergence of open source and community systems in the library market.

This report follows on from the internal report: 'WHELF Sharing a Library Management System – Research, Scoping and Specification Study, which was completed in 2012.

Given the complexity of providing a full, functional specification acceptable across all WHELF institutions, and the limited timescale associated with the project, the group concentrated on defining an outline specification for an all Wales HE library management system in broad terms. Thus, the final definition produced is as follows:

1. The system shall contain the following areas of functionality as these are of the highest strategic importance:
  - i. 'Core' LMS - including Circulation, Cataloguing, Serials Management, Patron Management, Acquisition, Management Information and Inter Library loan functions.
  - ii. Resource Discovery – provision of 'next generation' online catalogue functions either within the traditional bundled 'OPAC' or as an additional module. This should include potential to provide a single search across multiple resource formats (e.g. search across both print material such as books and electronic subscriptions).

- iii. OpenURL and Knowledge Base – provision of an OpenURL linking function for easy navigation to & desktop delivery of full text electronic resources (e.g. as per the SFX commercial system). Knowledge base support key as this ensures resource links are kept up to date & robust at all times.
  - iv. Metasearch / Federated Search – provision of the ability to search across multiple data sources (e.g. across multiple electronic subscription platforms) and return a consolidated results set. Federated search (i.e. searching multiple platforms simultaneously in real-time) is one alternative method for the product to do this, the other potential method is Metasearch (or searching of a single consolidated index of data in one place) is another. Or a combination of the two methods is also possible.
  - v. Electronic Resource Management – this function is of increasing strategic importance to academic libraries. An ERM product will contain functionality designed to assist in managing electronic subscriptions and information held by a library.
2. The core system (i) shall be provided as a single installation, hosted either by an agency within the HE sector or by an independent commercial provider, or potentially the system software supplier themselves.
  3. The system shall be able to be configured on a consortial basis i.e. Interaction possible between individual institutions using the system to engender & assist in collaboration, but with sufficient safeguards to protect data security, data integrity, and variance in parameters required by differing policies at each individual institution.
  4. All functionality should be integrated to the greatest degree possible with minimal switching between differing product interfaces for key workflows.

## 2.1 Library Management Systems

Many libraries are in the process of re-thinking the effectiveness and functionality of their Library Management Systems (LMS), and library users increasingly expect ease of discovery and delivery from an LMS, in line with their experiences of using tools like Google and Amazon.

There's an increasing desire from library staff for an LMS which enables the integrated management of print and electronic resources; and which can smoothly and efficiently handle the integration of workflows around these. Staff also recognise the need for much tighter integration with other campus information systems – especially student information systems, finance and virtual learning environments in order to reduce the level of manual and semi-automated data transfer between systems and the management overhead associated with dealing with this; plus the desire to provide a more joined-up service for users.

Staff are also keen to see improved facilities for reporting and management information, with more opportunities for non-IT staff to produce their own reports and interrogate data about user behaviour, to feed into the development of collection management strategies or information literacy teaching.

In 2008, JISC and SCONUL jointly produced a report on the future of the LMS<sup>1</sup>, which stated the following:

- The UK LMS market for Higher education is mature, dominated by a small number of vendors, and with little product differentiation, leading to stagnation in the market.
- Libraries are unable to exploit intelligence (management information) about their user habits and behaviours, as data tends to be 'locked in' to the LMS.
- The traditional OPAC is being challenged by new resource discovery interfaces, and is in danger of losing primacy in the market.
- LMS vendors have not, on the whole, responded to developments in the wider software markets around open data, open standard and open interfaces.

In response to this, LMS vendors have started to develop new library services platforms, commonly described as 'next generation LMS'. In many cases, vendors are starting to take a radically different approach to re-development of their systems, taking advantage of emerging technologies and concepts such as software-as-a-service and cloud-based hosting of systems.

The 'next generation LMS' typically aims to enable seamless and integrated management of all information resources across print and electronic formats whilst improving staff workflows.

The LMS market has also seen the emergence of open source products. The 2008 JISC report stated that open source was not "workable for most institutions in the current climate, largely because of staff capacity and support overheads but also because of the mission criticality of library systems requires users and procurers to have confidence in a robust system"<sup>2</sup>. However, since 2008, the open source LMS market has continued to develop apace, with the emergence of products such as Evergreen and Quali OLE. Limited take-up of these is starting to be seen in both the US and UK markets. Open Source has provided a valuable catalyst for change in what was a stagnant market.

## 2.2 Institutions involved

The Wales Higher Education Libraries Forum (WHELP) is a group of Welsh University Libraries and the National Library of Wales. The Chief Librarians and Directors of Information Services of the institutions form the WHELP Steering Group. WHELP is a common community of Library and educational endeavour, and sees its mission as promoting collaboration within Higher Education libraries in Wales.

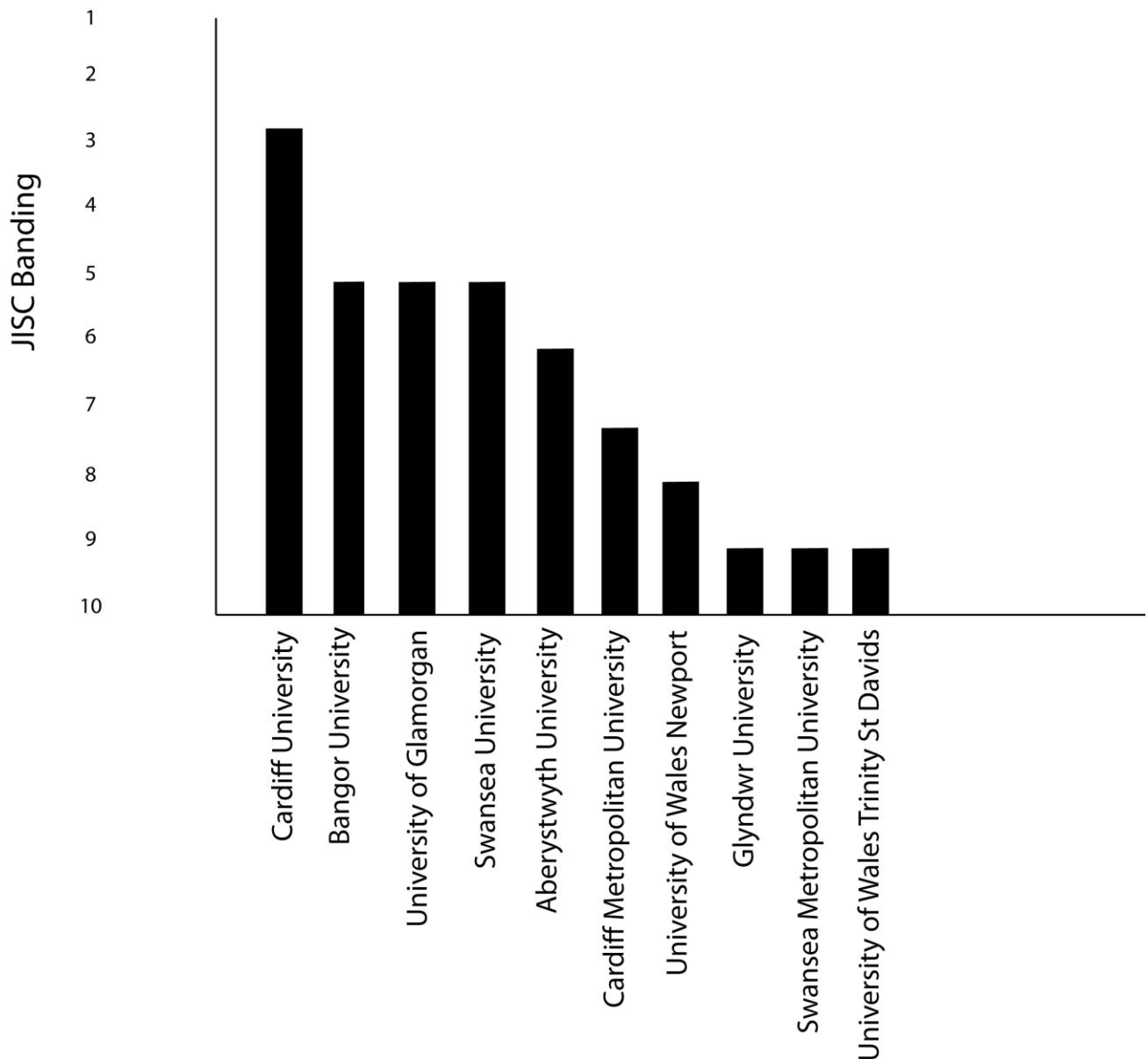
WHELP is characterised by considerable diversity amongst its membership in terms of scale, scope and focus – encompassing large and small institutions, some with a strong research focus and others with a stronger focus on teaching. There is also a large variation in size and local resources (skills and money) available across the WHELP partners. This can be illustrated by looking at the JISC Banding scheme which shows the different sizes of the institutions involved:

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<sup>1</sup> JISC and SCONUL Joint Library Management Systems Study, available at <http://www.jisc.ac.uk/media/documents/programmes/resourcediscovery/lmsstudy.pdf>

<sup>2</sup> JISC and SCONUL Library Management Systems Report, available at <http://www.jisc.ac.uk/media/documents/programmes/resourcediscovery/lmsstudy.pdf>, page 10.





WHELF has promoted collaboration across this diverse user base, and has been successful in a number of key areas, including digitisation of special collections, walk-in access to libraries, shared procurement of electronic resources and information literacy<sup>3</sup>.

### 2.3 Business Drivers for change

On the 1st February, 2011 the Welsh Assembly Government published “Libraries Inspire<sup>4</sup>” a draft strategic development framework for Welsh Libraries 2012-15 for consultation. The strategic development framework aims to build on the success of the Welsh Assembly Government’s Libraries for Life Strategic Programme (2008-11) and continue to modernise Welsh libraries and encourage take-up and use of services for the benefit of Wales as a whole.

Libraries Inspire sets out a draft vision for libraries in Wales:

“Libraries in Wales will work together to inspire people to enjoy reading, improve their knowledge,

<sup>3</sup> WHELF collaborative work, available at <http://whelf.wordpress.com/current-initiatives/>

<sup>4</sup> Libraries Inspire: draft strategic development framework for Welsh libraries 2012-15, available at <http://wales.gov.uk/consultations/cultureandsport/librariesinspire/?lang=en>

develop their skills and participate in their respective communities. Library services will be responsive to meeting people's changing needs in a local, safe, modern physical and virtual environment."

The report specifically mentions both HE and WHELF:

"The Wales Higher Education Libraries Forum (WHELF) will work towards achieving the partnership agenda outlined in the annual report for 2009-10:

Our vision is a holistic approach to higher education library services in Wales. All university students and staff in Wales will have access to the shared resources and services of a virtual academic library for Wales. This will be based on:

- Shared resources: As well as above 5 million print items, this will include e-resources and shared access to institutional repositories
- Shared access: This will include access in person, reciprocal borrowing and document delivery
- Shared services: There will be a pilot project to share a single Library Management System between an initial cluster of universities, along with other shared services like an Electronic Resource Management system."

These aims are reflected in the WHELF Action Plan 2011-2013<sup>5</sup>, which identifies the need to focus on:

- Opportunities for sharing library services across Wales
- Development of consortial purchasing deals for electronic resources
- Collaborative working on other key initiatives such as Welsh repositories.

Welsh Higher Education is also facing considerable flux, with the publication of the 2009 report from the Welsh Assembly Government; "For Our Future - the 21<sup>st</sup> Century Higher Education Strategy and Plan for Wales."<sup>6</sup> The report sets out a vision for a sustainable higher education market in Wales, which was followed by a statement in 2012 on proposals for reconfiguration of Higher Education institutions in Wales to consolidate provision into a smaller number of larger institutions<sup>7</sup>. This has resulted in considerable uncertainty around the future shape of Welsh HE, making the potential for collaboration and sharing of systems more complex.

Against the background of these changes, WHELF is keen to explore whether a shared LMS would enable realisation of increased collaboration; opening up the potential for sharing of software, hardware and staffing costs, but also offering the potential to build new services off the back of a shared LMS – such as shared access arrangements, inter-library loan services and reciprocal borrowing.

## 2.4 Existing LMS in Welsh HE

The current state of LMS provision in Welsh HE is characterised by a large spread of different systems in operation. The table below shows the core LMS systems currently implemented by the partners.

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<sup>5</sup> WHELF Action Plan 2011-2013, <http://whelf.wordpress.com/action-plan/>

<sup>6</sup> For Our Future, available at <http://wales.gov.uk/topics/educationandskills/publications/guidance/forourfuture/?jsessionid=0249000F354CDC06017CC305E2D7A345?lang=en>

<sup>7</sup> Welsh Government, Statement on Higher Education Reconfiguration by Leighton Andrews, available at <http://wales.gov.uk/newsroom/educationandskills/2012/120717statement/?lang=en>

Institution	LMS
University of Wales Newport	SirsiDynix Symphony
Cardiff Metropolitan University	Capita Alto
Bangor University	Innovative Interfaces Inc. Millennium
University of Glamorgan	Capita Alto
Glyndwr University	Innovative Interfaces Inc. Millennium (shared system hosted by Bangor)
Swansea University	Ex Libris Voyager
Cardiff University	Ex Libris Voyager
Royal Welsh College of Music and Drama	Exlibris Voyager (shared system hosted by Cardiff University)
Aberystwyth University	Ex Libris Voyager
Swansea Metropolitan	Capita Alto
University of Wales Trinity Saint David	SirsiDynix Horizon

These systems have all been implemented at various points over the last 15 years, and the products are at different stages in their development lifecycle, with some considered 'end of life' by their vendors and others still being actively developed. There has been varying levels of investment in the systems over the years; with some institutions having invested heavily in new functionality such as OpenURL resolvers, resource discovery layers and meta-searching tools; and others still heavily reliant on the core system functionality. None of the institutions have implemented an Electronic Resources Management (ERM) module, and this is felt to be a major functionality gap by all partners.

There is also considerable diversity across the partners for integration with corporate systems (for example: VLE, Finance systems, Student Information Systems and HR systems) as well as diverse integration requirements for various 3<sup>rd</sup> party vendor systems.

## 2.5 Existing Consortia

A number of existing consortial arrangements for LMS management already exist within the WHELF partnership. In particular, Bangor University hosts and provides a service for Glyndwr University, and Cardiff University provides hosted services and support for the Welsh NHS Libraries and the Royal Welsh College of Music and Drama.

## 2.6 Business Need

We have seen in section 2.2 'Institutions involved', that there is considerable variety across the WHELF group. The project has also identified that the institutions have differing drivers for upgrade, replacement or potential sharing of their LMS systems (with some overlap across all of these drivers). These drivers include;

- The need to replace ageing hardware, and to make a decision on whether to move to a shared or hosted system before making this investment.
- The desire to have a new, fit-for-purpose LMS system in place prior to the opening of a major new campus, which will require changes in staffing and support mechanisms.

- The need to replace or integrate a system, driven by imminent institutional mergers.
- Desire to improve services to users, increase workflow efficiencies and free up staff to provide more 'added value' support in a time of increasing student expectations.
- The need to make efficiency savings, and do more with less (especially around staffing and infrastructure costs).
- The need to improve system resilience and availability.
- Replacing a system which has reached end of life and may shortly no longer be supported by the vendor.

Each of these drivers will have different timelines and levels of urgency. This would imply that a phased approach to adopting a shared system would be most appropriate, to enable alignment with other institutional priorities and timescales.

The key benefits for the partners can broadly be defined as:

- Making efficiency gains
- Improving end-user services

These potentially could be realised through:

#### **Efficiency gains:**

- Obtaining leverage on pricing in the procurement process, through consortial purchasing; with potential for percentage discounts on licensing, implementation and support costs.
- Opportunity to share a system which offers improved workflows, resulting in more efficient use of staff time across the partners.
- Sharing of costs on licensing, development, infrastructure/hosting and staffing to reduce duplication of effort across the partners.
- Ability to collaborate effectively on shared challenges, such as release of open data, development of mobile apps etc, and share systems knowledge.
- Potential to increase efficiencies through more sharing in the creation and management of bibliographic records across a consortium, and/or make it more efficient by use of a shared knowledge base approach.
- Ability to share management information and utilise this across the consortium for benchmarking and demonstrating value for money.
- Ability to share technical developments across a consortium (for example, shared development of mobile apps).

#### **Improving end-user services:**

- The opportunity to build new services on top of a shared LMS – for example, a Union Catalogue for Wales HE; shared inter-library loan facilities, reciprocal borrowing etc.
- Opportunity to create a 'level playing field' across all institutions in relation to provision of common core functionality – eg: ERM, resource discovery layer etc. All partners are not currently equally invested in these areas.

## **2.7 Impact of Not Changing**

If a shared service is not selected as the preferred option, WHELP will lose the opportunity to collaborate in the areas outlined above. It's unlikely that a similar opportunity would emerge again in the near future, as each institution will move forward and procure new systems independently.

Once the investment in new systems is made, institutions are very unlikely to want to (or be able to) go through the cost of moving systems again in the near future.

WHELF would also lose the opportunity to make savings through joint work on the procurement process, which would lead to considerable costs being borne by the institutions separately, and a strong potential for duplication of effort and staff time.

## **2.8 The Programme/Project**

### **2.8.1 Scope**

The scope of the Project is to:

- Produce a practical vision, set of requirements and a road-map for a future shared LMS infrastructure which would support Welsh HEIs and partners.
- Provide a comparison of infrastructure models, potential costs and ongoing support requirements for local versus regional versus international cloud hosting models.
- Provide a set of use cases and practical guidelines for integration with local systems such as Student Information Management systems and Finance systems.
- Provide a risk analysis of different software models and approaches – eg: open source, commercial-off-the-shelf, hybrid approaches; and delivery models – eg: local hosting, regional hosting, commercial cloud hosting.
- Develop a set of best practice guidelines for a governance structure for a consortial model.
- Develop a business case for a change of model from locally managed systems to a consortial approach.

### **2.8.2 Objectives**

The Project outputs are as follows

- A set of high-level agreed consortial requirements for a shared LMS.
- A proposed governance model for the consortium.
- High level recommendations on integration requirements for local systems; map communications standards which are applicable to the project against standards in use by suppliers.
- A business case for a Wales-wide consortial LMS, including cost matrices for the different approaches presented.
- Recommendations on the most cost-effective approach for software, hosting and ongoing management of the LMS.
- A road-map and timelines for potential implementation.

### **2.8.3 Approach**

The project has taken the approach of engaging with all project partners to understand their requirements and strategic goals for the development of their LMS. The project manager visited each partner site and conducted interviews with key staff – including Systems Librarians and IT staff, senior managers and other library staff.

Each site was asked to outline their current development plans for their LMS, issues with their current system and outline road-map for change or development. The project manager also collected data from the partner sites on the key elements of their current LMS (modules implemented etc) and integration requirements with other on and off-campus systems. The project manager also sought costs on current expenditure – including costs of maintenance and support for

the current LMS system, staffing costs and infrastructure costs. In many cases these were difficult to obtain and there is an element of uncertainty about some of the costs— particularly around staffing and infrastructure costs – where resources may not be dedicated to the LMS alone.

The project has also engaged with LMS suppliers (including open source ‘vendors’) to understand their likely range and scale of costs for the provision of next generation systems, either hosted by the supplier or hosted at an institutional on behalf of the consortium. All costs have been indicative costs at this stage and any negotiation around cost would be subject to a formal tender exercise.

#### **2.8.4 Strategic Benefits**

WHELP is seeking greater collaborative amongst its members, in line with Welsh Government expectations. It is assumed that collaboration and sharing of an LMS would drive down costs, increase efficiencies and provide improved services and user experiences.

#### **2.8.5 Key Stakeholders’ Requirements**

All partners have confirmed a core set of requirements for an LMS, which includes the following:

- The system should be capable of providing unified management of all library resources, including print and electronic resources.
- Integration with other systems should be achieved via the utilisation of service orientated architecture approaches.
- The system should provide facilities for the rapid development of new functions and integrations using supported APIs and with an active developer community.
- The system should provide seamless integration and interoperability with the range of resource discovery functions currently available.
- The shared system should enable cross-searching across the entire Wales catalogue.
- The shared system should also enable the ability to search a single catalogue of any of the partner institutions, with pre-limiting of searches to specific collections.
- The shared system should enable access and sharing of bibliographic records across Wales as part of a shared knowledge base.
- The shared system should enable the shared reporting on use of collections across Wales.

These, and other, requirements have been captured in a combined requirements catalogue which has been developed by the project, and is available below.

#### **2.8.6 Options**

The project has identified four main options for provision of a shared service.

1. **Do Nothing** (each institution remains with current supplier or replaces LMS at their own pace and independently of the others). This is not really a do nothing option as practically all institutions have indicated that they need to change or upgrade their Library Management Systems.
2. **Buying Club** (the partners collaborate on a single tender exercise with the view to achieving a single supplier for Wales HE, but with different LMS instances, and the potential for mixed supplier cloud and local hosting or group hosting).
3. **Consortia with Governance** (the partners set up a formal consortium, mandating a single supplier for Wales HE, but with different LMS instances almost certainly in the cloud).
4. **Fully shared LMS instance** (formal consortia with single supplier on a single, shared LMS instance almost certainly in the cloud).

### 2.8.7 Risks

These are the high level risks for a proposed consortium approach.

Scoring; 1 = low or little effect 10 = high or great effect

Risk	Likelihood	Impact	Score
There is a risk that not all Welsh HE institutions want to participate in an LMS consortium; which would reduce any benefits to be gained from sharing	2	2	4
There is a risk that the 'next generation LMS' marketplace (including open source) is not yet sufficiently mature to provide stable and reliable products, with the ability to meet our core requirements	3	3	9
There is a risk that the licensing models for shared LMS are not sufficiently flexible to meet the requirements of a diverse consortium with partners of different sizes and budgets	2	3	6
There is a risk that LMS suppliers are unable to provide us with accurate and realistic costings for a shared LMS, and that true costs will not emerge until we are in a competitive tendering process	3	3	9
There is a risk that partners will be unable to provide accurate figures for their current costs, resulting in an inability to gauge how much we are currently spending, and to understand any true cost savings	3	3	9
There is a risk that the WHELF strategy and objectives for sharing an LMS are insufficiently well defined, leading to confusion about where the key benefits should be	2	2	4
There is a risk that not all partners will benefit to the same extent from sharing; for example, partners who have invested heavily in infrastructure may see greater savings than those who have not had the opportunity to invest in this area; partners who have invested in additional functionality will not see considerable end-user benefits through sharing etc.	3	2	6
There is a risk that any savings resulting from a shared service will be minimal, and costs may be higher than is currently the case for some partners.	3	3	9
There is a risk that institutions will not buy-in to the changes proposed through a shared service	2	3	6
There is a risk that requirements are too diverse across the consortium, leading to inability to agree on or identify a system which can meet all needs.	2	3	6
There is a risk that external forces outside of WHELF could impact on an institutions ability to proceed with a consortia approach. The Welsh HE environment being one of considerable change.	2	3	6

### 2.8.8 Constraints

Any move to a shared LMS will require strategic and funding commitment from each of the WHELP institutions. Individual Library Directors will need to negotiate this at the institutional level, and it is likely that not all partners would be ready to commit at the same time. In addition, partners may have different priorities and timescales for moving forward, driven by other strategic institutional priorities as outlined above. It is therefore assumed that a phased approach to implementation would be taken, with an initially small number of institutions acting as 'early adopters' and others following over a period of time. This approach would also be in line with vendor expectations, as vendors have indicated that they would be unlikely to have the resources to migrate all Welsh HEIs to a new system at the same time.

### 2.8.9 Key Assumptions

It has been assumed that the WHELP Libraries will move to a shared 'next generation LMS'. In discussion with Libraries both in WHELP and England it was clear that a sideways step to another traditional LMS would not offer the opportunities of the newer systems available.

### 2.8.10 Dependencies

All institutions will be dependent on agreement of strategy, timescales and funding at an institutional level.

## 3. Requirements

### 3.1 Method of requirements gathering

The project gathered high level requirements using two methods. Firstly an LMS functional requirements template was sent to partner institutions. This was to help generate agreement on basic function and the institutions were asked to add any further requirements to this. Secondly, sites visits were held with the institutions (except Aberystwyth which was conducted by phone) to further explore both functional and non-functional needs.

The project also developed system integration diagrams for each institution to further explore areas of convergence, disparity and integration needs with other on and off-campus systems.

Generic requirements



shared services combined  
requirements c

#### 3.1.1 NHS requirements



Library Management  
System Requirements

## 4. Market Analysis

The primary difference between traditional LMS products and 'Next generation' LMS is their ability to manage more than just print collections effectively. They aim to manage the Library collections in an integrated fashion, including print, e-resources and other subscriptions, institutional repository content and archival resources. Many also claim to provide improvements to back-office workflows, increasing staff efficiency.

It is also important to note that many suppliers are now moving towards 'cloud' hosting; with the delivery of software and infrastructure capacity over the network. 'True cloud' hosting utilises multi-tenancy; which means that a single instance of software runs on a cloud server, supporting multiple



customers, with virtual partitions separating customers' data, configurations and customisation. This offers benefits for vendors, in that they can leverage economies of scale - for example, by upgrading all of their customers at the same time, and ensuring that all customers are on the same version of the platform, reducing support complexities. For the LMS, this also opens up the possibility of new developments around shared. Many of the LMS vendors are building such new services into their 'next generation' offerings; offering their customers the opportunity to join a 'virtual consortia,' sharing with a global customer base.

Moving to this type of hosting model will reduce flexibility for individual customers, as there will be less control over upgrade timescales, and, indeed, whether or not to choose to take an upgrade. However, this might be balanced by the benefits of no longer needing to manage software and infrastructure in-house - potentially resulting in cost savings. As many of these services are in their infancy, it is difficult to obtain an accurate understanding of the likely level of savings, potential impact on staff roles, and the likely return on investment. The development of opportunities for sharing services will also challenge current models of provision of these types of services, and raise questions for future staff roles in these areas.

The project looked at 6 products, currently focused on the Higher Education market;

- Alma from Ex Libris
- Intota from Serial Solutions
- Quali OLE Open Source
- Open Skies from VTLS
- Sierra from Innovative Interfaces Inc.
- WorldShare from OCLC

All of the next generation products on the market are still in their infancy, and take-up has so far been limited.

**Alma (Ex Libris):** <http://www.exlibris.co.il>

Ex Libris have developed Alma to provide comprehensive, unified resource management for libraries. This is an entirely new product which has been developed and optimised for cloud hosting. Alma is only available as a cloud-hosted service; and builds on this to offer new functions such as a shared knowledge base of bibliographic records amongst Alma customers, and potential for sharing of other services such as e-resources records and licensing data, management information etc.

As a new product it is still under rapid development with EAD and MODS support to come in 2013.

Exlibris offer impressive data centres within Europe which are SAS 70 certified (data centre not application).

Alma currently has the most UK implementations (2 live and 6 in implementation) in UK HE out of the 6 next generation systems. The growing customer base of early adopters will provide opportunities for seeking further information about actual experiences with the product.

**Intota (Serials Solutions):** <http://www.serialssolutions.com/en/services/intota>

Intota is again a totally new product and supports true cloud functionality. Intota represents a new direction for Serials Solutions, who have not previously ventured into the LMS market. However, Serials Solutions do have considerable experience of management of electronic resources, and are building on their expertise in this area. The product is not currently available as a live service, with expected release to market towards the end of 2013. Intota is creating interest in the sector with a fresh approach, potentially not held back by the baggage of previous systems.

Intota aims to offer a holistic and integrated collection solution with streamlined workflow and efficient back-office management. Intota is also concentrating on the development of comprehensive and sophisticated management information tools for analysis of user behaviour.

As a product still under development, it will be harder to ascertain its readiness for service and examine library implementation experiences.

### **Kuali OLE (Open Source):**

Kuali OLE is an open source development with financial backing through the Mellon Foundation and a number of academic and research libraries in the US. The product is still under development with a version 1.0 release expected around the end of 2013. As part of the wider Kuali open source development it should be seen as a work in progress. The Bloomsbury Group of academic and research libraries in London have selected the Kuali OLE for their proposed consortium system<sup>8</sup>. This move has increased the focus on the open source option for Academic Libraries in the UK. Bloomsbury Consortium have stated their reasons for selection as:

- To achieve better functionality for the same level of expenditure – open source is not expected to provide cost savings.
- Interoperability is seen as being at the core of the development of Kuali OLE, with data managed once and re-used many times across the system.
- Kuali OLE is a membership organisation with strong governance and direct input for members into the strategic direction for development of the product.

Kuali OLE is a software-as-a-service offering, and institutions using the system must select their own hosting partner. There is an intention to enable data sharing across customers using open linked data models. Currently available functionality includes acquisitions, record loading, financial management and basic reports, with other functionality such as circulation and ERM planned for future releases.

### **Open Skies (VTLS): <http://www.vtls.com>**

As the newest offering in the market the project has had little opportunity to investigate the Open Skies product. This is a reworking of pre-existing products. It is expected to be released in early 2013. VTLS have focused on adding support for multimedia, multi-format metadata, mobile devices and greater interoperability with third party systems through support for open APIs. Open Skies will be available either as a hosted offering or for local installation.

### **Sierra (III): <http://sierra.iii.com/>**

Sierra is the Innovative Interfaces entry into the library services platform arena and represents a different approach than that taken by many of the other library services platform providers. Innovative's approach is to largely repackage their previous product, Millennium, and move it to run on a new open source database (PostgreSQL), use a new open source indexing engine (Lucene), add some new open API's, open up some of the existing API's, update the interface and add some new, functional modules. The totality of this package is called Sierra and is available either as software-as-a-service (Saas) or a local install.

There are currently 3 live HE implementations of Sierra in the UK, 3 HE institutions awaiting implementation, with over 300 libraries worldwide having made the decision to move to Sierra.

### **WorldShare (OCLC): <http://www.oclc.org/us/en/worldshare-platform/default.htm>**

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<sup>8</sup> Bloomsbury LMS Consortium, available at <http://www.blms.ac.uk/>

This is a completely new product with cloud hosting. OCLC are new to the LMS market, but have many years of experience of development of union catalogues, offering huge potential for shared cataloguing possibilities.

OCLC have coined the term “Web Scale” to describe their product, as it seeks to leverage the collective power of libraries to raise the visibility and impact of their collections through working together.

OCLC are also promoting the openness of their product, through the provision of open data and open APIs. Libraries and other partners are being actively encouraged to build services on top of these APIs. OCLC have a data centre in Europe which is ISO 27001 compliant and aim to add another within 2013.

### **Product differentiation:**

Many of the vendors have taken a decision to ‘start afresh’ with their product development, rather than building on top of existing products. One advantage of this is that they can take advantage of newer software architecture to support multi-tenancy, analytics and provision of integrated workflows.

However, this approach also results in risks – mainly in readiness for market. Early adopters may find that they are implementing products which are missing key elements of functionality; or have not had major bugs ironed out through extensive customer use and testing.

Other vendors have focused on re-development of existing products. This enables them to move forward quickly with products which are ready for market, and benefit from years of previous development. However, these products are more likely to be saddled with the older architecture and baggage of the past, and opportunities to redesign workflows to improve efficiency may be missed. Hosting solutions are likely to be more limited without true multi-tenancy hosting capabilities. Evolution of these systems towards true ‘next generation’ is likely to be slower in the longer term.

Open source software is becoming an increasingly viable option for libraries; open source solutions will almost certainly play a larger part in the market over time, but as yet there is no single solution which supplies the needs of the larger Universities within WHELF. Quali OLE is the closest, but as yet has not reached version 1.0. This system is arguably at a relatively early stage of development, with an initial functional release due in 2013, but it has already attracted at least one peer UK Library consortium, the Bloomsbury Group, to commit in principle to develop and use it.

Quali OLE also has an added advantage of having built a close working relationship with UK libraries via JISC Collections, with whom they have been involved in the design of the Knowledge Base+ and forthcoming GoKb services.

Koha (<http://koha-community.org/>) open source software represents a complete featured ‘existing generation’ LMS with a web-based staff client and existing consortial implementations worldwide. This is in use across a number of libraries in the UK, with Staffordshire University being perhaps the highest profile in the HE sector.

Evergreen (<http://www.open-ils.org/>) represents a newer & potentially more scaleable ‘existing generation’ LMS that has consortial features at its centre & a number of high profile North American users e.g. Georgia Pines Consortium, Conifer Consortium etc.. There is a UK customer in the form of the SEDAR consortium of Scottish Public Libraries, but as yet no academic library customers.

VuFind (<http://vufind.org/>) represents a complete product, currently on version 2.0 release. This lacks the bundled ‘consolidated index’ functionality of products such as Summon or Primo, but if a

consolidated index is available (e.g. via subscription to Primo Central index), this can be incorporated into search results.

Proprietary link resolver products are platform independent and can be used with OSS or proprietary discovery platforms, but there are also OSS products available (note, where OSS products often compare poorly to commercial equivalents in this area is in Knowledge Base provision)

Some institutions have opted for a 'best of breed' solution. This can broadly be defined as a suite of software platforms which between them provide the full coverage of functionality we have defined for a Library system.

A 'best of breed' solution offers a 'pick and mix' approach, as opposed to the tightly integrated 'black box' implementation where there is little choice over components (e.g. a different resource discovery product or OpenURL resolver), or to not implement (and pay for) functionality that is not required.

This could provide benefits in selecting core components common to all that could be shared (e.g. a core LMS), while choice could be maintained over other areas of functionality (e.g. not all may want ERM functionality, or there may be preferences over alternative discovery products). A best of breed approach would also enable the implementation of a 'mixed economy' approach, whereby Open Source and Proprietary solutions could be deployed and used together.

Key benefits of the 'best of breed' approach include:

- Flexibility – libraries have no obligation to pay for or implement functionality they do not require
- Cost saving – sharing some or even just core components could realise an overall cost saving, though obviously this may not be to as great a level as for a fully shared and hosted solution.
- Ability to pick and choose the best software to deliver each distinct area of functionality
- Ability to provide a higher degree of customisation if required by institutions
- Ability to select truly mature systems with complete sets of functionality

However, there are risks to this approach, which would include:

- Integration issues – far more integration work to be done between software platforms than with a single unified system
- Support issues – potential to be dealing with multiple suppliers on support and maintenance, which could be less reliable than dealing with a single company with 'ownership' of the entirety of any problem.
- Is just sharing core components going to give us significant benefit over just 'going it alone' – is there enough benefit to justify doing this?

- Flexibility and choice of software could mean supporting different software products designed to provide the same functionality (e.g. both Primo and Summon for discovery). This would be an inefficient use of support resources & require duplication of similar tasks across institutions
- Using multiple platforms is likely to mean a far more disjointed workflow than would be possible with a single unified system, reducing benefits from saving staff time through process streamlining.

## 5. Existing Consortia & Governance Models

A large number of LMS consortial arrangements currently exist worldwide. Examples include the SEALS Consortium (South Africa)<sup>9</sup>, ORBIS Cascade (US)<sup>10</sup>, SWIFT (Australia)<sup>11</sup> and ELNET (Estonia)<sup>12</sup>. The UK HEI market has not tended to focus on consortial arrangements for the LMS to such an extent; however, there are some well-established examples, such as the collaboration between University of the West of England (UWE), Bath University and Bath Spa University, and the recently formed Bloomsbury Group in London.

All of the international consortia have taken a formal approach to governance. In most cases, these are set up as third-party bodies, with independent status from their member institutions. Detailed legal agreements have been drawn up to help the consortia operate; and all have formal, structured frameworks for decision-making.

In some cases, one of the consortium members will act as the hosting body for the LMS; and may provide development and support resources, to which other consortium members will buy in. Where this is the case, the consortia has developed formal service level agreements to govern the service levels provided by one member to the others, which are subject to regular review. However, these models are now starting to shift away from local hosting and towards third party hosting via the cloud (often provided by the vendors).

The consortia have also put in place formal mechanisms for termination of agreement, acceptance of new members and resignation of existing members.

Costs are shared out in a variety of ways, but most typically this is based on a combination of size of institution, level of participation and staff FTEs. Start-up fees may be payable for institutions who seek to join an established consortium, and consortium costs will usually include the cost of administrative and other support for the consortium itself. In some cases, these can be quite extensive – for example, ORBIS Cascade currently employs 9 staff for the consortium, including an executive director, business manager, shared system manager, IT manager, resource sharing programme manager, digital resources programme manager, e-resources programme manager and admin support.

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<sup>9</sup> SEALS, <http://www.seals.ac.za/>

<sup>10</sup> ORBIS Cascade, <http://www.orbiscascade.org/>

<sup>11</sup> SWIFT Consortium, <http://www.swiftproject.org.au/>

<sup>12</sup> ELNET, <http://www.elnet.ee/en/>

For a WHELF Consortium it is proposed that a formal arrangement would be required. The level of formality depends on the nature of the consortium and the nature of services to be offered:

Solution Type	Likely Consortium Arrangement
System is vendor hosted	<p>Memorandum of Agreement covering broad operating rules, cost sharing arrangements, arrangements for joining and leaving.</p> <p>The Service level agreement would be a separate document negotiated with vendor.</p>
System is hosted by a member institution	Formal legal structure; formal service level agreements between the host site and other members of the Consortium.

The more formal level of Consortium would need to be established as a separate legal entity; with its own registered office, with charitable status, although potentially hosted by one of the partners.

Effective and appropriate financial management arrangements would need to be in place for the conduct of Consortium business, with possible local financial and procurement support from one of the partners.

The Consortium would require a formal Steering Committee and Working Group for decision-making purposes; this would need to represent all consortia members, including the NHS libraries.

The Steering Committee should have the right to:

- Set overall policy, vision and strategic direction for the Consortium.
- Set annual subscription fees.
- Approve budgets.
- Approve decisions on the development of new or expanded collaborative services; procurement of new functions.
- Approve membership changes.

An Annual General Meeting would be required to elect/remove members of the Steering Committee, and confirm/remove members of working groups. The AGM would also elect Chairs of the Steering Committee and Working Group, and receive financial accounts, which would require formal audit. A quorum (one third) will be required at the AGM to ensure that business can be transacted.

The Steering Committee would act as the Board of Directors for the Consortium, and should consist of:

- Officers of the Consortium (Chair, Secretary, Treasurer)
- Elected representatives from the member institutions.
- Consortium manager or Programme Manager.

- At least one co-opted observer from the Working Group.

The Working Group would carry out the detailed work on behalf of the Consortium, answering to the Steering Committee. The Working Group would provide a mechanism for expert advice to the Steering Committee, and would ensure the day-to-day successful operation of the Consortium.

Membership of the Consortium could be open to Higher Education Institutions and NHS bodies involved in the delivery of Higher Education in Wales. Other bodies could be invited to join subject to the agreement of the majority of representatives present at an Annual General Meeting of the Consortium.

The Consortium should have the right to set appropriate varying categories for membership. These might include (but not would not be limited to):

- Core membership – participating in the core LMS only.
- Enhanced membership – participating in the core LMS and additional functionality.
- Premium membership – participating in any other collaborative arrangements.

Consortium fees would potentially be established on the basis of the following:

- Initial procurement and implementation costs.
- Maintenance costs/ costs for support and development
- Consortium staffing and office costs.
- Additional varying costs based on add-on products.

The costs sharing mechanism would need to be chosen.

The Consortium would require dedicated staffing. Staffing requirements will differ depending on the nature of the consortium, phases of work and nature of services procured.

For the procurement and implementation phase, the following staffing is expected to be required as a minimum:

- 1 FTE Programme Manager.
- 0.25 – 0.5 FTE business change resources for each partner (potentially seconded from consortia partners).
- 0.25 FTE – 0.5 FTE Library systems support for each partner (potentially seconded from consortia partners).
- 0.25 FTE admin/finance support.

Depending on the nature of the procurement, other dedicated staffing may be required, including:

- Systems administration and database resources
- Software developers.
- Service Desk or Service Level Manager.
- Change and Release Manager.
- Firewall and security.

## 6. Open Source v Proprietary

There are advantages and disadvantages to Open Source solutions and Proprietary solutions. Deciding on whether to go for an Open Source solution or Proprietary has to be based on the context of the business model, the requirements and support & development capabilities.

It is not necessary to make a decision either way at this point. Any decision on the solution of Open Source v Proprietary can and should be made in response to the issued tender and the requirements specification.

## 7. Notes on the financial figures

Obtaining accurate financial information from institutions has been a challenge. Understandably, some providers were reticent and concerned about how the information may be used and/or had genuine difficulty in obtaining the information required to derive the financial figures. Additionally due to the diverse nature of the institutions, the LMS systems and interfaces it has been challenging obtaining like for like figures across institutions.

It has also been a challenge to obtain financial figures from potential suppliers in advance of a full tender document and competitive dialogue. Despite assurances suppliers have been hesitant in supplying information that may adversely impact or commit them to something that they could not subsequently honour. However, a number of 'ball park' quotations and potential consortia discount rates have been obtained on condition that suppliers were not subsequently quoted.

Therefore, the figures were viewed with a degree of caution though there was a confidence that the figures were robust enough to determine which high level option provides the best balance between financial benefit v risk.

## 8. Option 1: Do Nothing

### 8.1 Description of option

This option is fundamentally a continuation of the current situation at a local level. Each institution would continue to run its own locally-hosted LMS, supplied by a proprietary third party vendor. The institutions would take local, independent decisions as to when to upgrade or migrate and in investment in new and additional functionality. Any regional or other consortia (eg: with the NHS) would remain in place. However most institutions have indicated a requirement to upgrade or change their LMS system in the next few years.

### 8.2 Assumptions

This option assumes that each Library would implement, upgrade or migrate to a new LMS platform at some point during the planning period (assumed as year 3) which will continue to be hosted locally. It also assumes that each Library will do this alone and not in conjunction with another institution.

### 8.3 Non financial benefits

Flexibility, the Institution is free to choose whichever solution it feels best fit its requirements and budget. The institution can integrate the solution and to an extent depending on the supplier and licence conditions adapt that solution to fit local practices.



## 8.4 Dis-benefits

This option requires the institution to fully undertake and complete the procurement process alone, thus missing any efficiency benefit of sharing the tender process and limiting future collaboration.

This option misses the opportunity to gain a group purchase discount.

This option will not put in place system foundations for easier collaboration with WHELP partner institutions; and the opportunities presented by collaboration (described above) will be lost.

## 8.5 Risks

Collaboration opportunities are not realised, and WHELP will not meet its strategic aims.

Any potential cost savings will not be realised; institutions will continue with their current costs, and will almost certainly see increased costs around licensing and infrastructure.

Opportunities to improve the end-user experience, and realise the benefits and opportunities offered by 'next generation' systems will not be realised (or realised more slowly and at greater overall cost to the sector).

## 8.6 Governance models

No governance model is required for this option; each institution would continue to locally govern its own arrangements.

## 8.7 Next steps

Each institution continues to define its own road-map for development of its LMS, at its own pace.

# 9. Option 2: Buying Consortia

## 9.1 Description of option

This option provides an opportunity for some or all of the WHELP institutions to collaborate on the procurement of a 'next generation' LMS. The institutions would develop a single set of agreed requirements, and run a joint tender and review exercise with the intention of purchasing or selecting a single product, or agreed suite of products. Consortial discounts are likely to be available from the vendors for a collective purchase – suppliers have indicated that this could be in the region of 20%. However it should be noted that discount is likely to be directly linked to the size of the consortia.

### 9.1.1 Sub options

Each institution has the opportunity to make local decisions on how to host the LMS – either locally on their own infrastructure, or via a supplier hosting platform. Institutions can also exercise local choice on the extent to which they buy-in to specific functionality, giving more freedom of choice around areas such as OpenURL, resource discovery etc, but also providing greater local control over costs. Each institution would also be free to set their own local parameters and take upgrades and service packs at their own pace, and subject to the local requirements of their customer base.

## 9.2 Assumptions

This option assumes that partners are able to agree a shared set of requirements, and can agree a single product via a tender selection exercise. Partners may not be able to agree a single product – the implication of this would be to reduce any financial benefits available through consortial purchasing.

It is also assumed that not all partners would want to replace their LMS at the same time (and this would probably not be possible for a single supplier to achieve). Partners would therefore need to commit to entering into the buying consortium, but with clarity around their requirements on

timescales. This would provide a phased road-map for implementation, to be agreed with the supplier.

### **9.3 Non financial benefits**

Partners will save resource / staff time in the procurement and selection process, through agreement of a single set of requirements, and through conducting a single (rather than multiple) tender and selection exercise.

Partners will continue to make their own local choice as to how their LMS is hosted, and local configuration decisions.

Partners have flexibility to buy-in to additional functionality, dependent on their budget and strategic requirements.

### **9.4 Dis-benefits**

Significant cost savings around infrastructure management, system configuration etc will not be realised, as local control around these aspects will remain.

### **9.5 Risks**

There is a risk with this option that the partners cannot agree on the selection of a single supplier through the procurement process. This may result in the partnership fragmenting, resulting in a return to the status quo of multiple systems. This would significantly reduce any vendor discounts and may run the risk of reputational damage and damage to the relationship with vendors.

### **9.6 Governance models**

This model would require strong governance around the procurement process, with a formal steering group and working group in place to develop the tender documentation, agree criteria for selection, assess products and make a decision on purchase. This process would need to be well supported and closely monitored by at least one of the Purchasing Offices of the partners.

Project Management support would be required for this process, and it is proposed that the partner institutions would fund this jointly for the period.

Once the procurement is complete, institutions are free to develop the product as they choose, and local governance arrangements would then come into play.

### **9.7 Next steps**

Agree the size of the consortia – whether this will include some or all WHELF HEIs and NHS

Agree a road-map and timescales for when each institution would want to implement a new LMS, based on institutional priorities and funding availability.

Agree funding for project management, and appoint a project manager.

Refine and further develop the outline set of requirements.

Undertake a tender exercise and appoint a supplier.

## **10. Option 3: Consortia with Governance**

### **10.1 Description of option**

This option requires the formal establishment of a consortia for both purchasing and ongoing management of an LMS. Partners would establish joint requirements and undertake a joint selection exercise, followed by purchase/selection of a single system, jointly hosted. The shared system would then provide opportunities for building shared services on top of the core software – for example, union catalogue, shared ILL, shared cataloguing services etc. The procurement would

be structured in such a way to make these requirements mandatory. Partners would need to agree certain configuration options in order to facilitate resource sharing (for example; cataloguing standards).

### **10.1.1 Sub options**

The cloud supplier could be one of the institutions but should there be serious service issues it would not be desirable to see Welsh institutions taking sanctions or legal action against another Welsh HE institution.

## **10.2 Assumptions**

This option assumes that there are suppliers available in the market (or that products can be developed) that can facilitate the types of sharing required.

## **10.3 Non financial benefits**

This option opens up greater opportunities for sharing services across the partnership as well as the LMS.

Partners will save staff time in the procurement and selection process, through agreement of a single set of requirements, and through conducting a single (rather than multiple) tender and selection exercise.

## **10.4 Dis-benefits**

This option requires strong governance, not just around the LMS itself, but around the nature and level of other services to be shared.

Institutions will lose some local control over infrastructure management and system configuration.

## **10.5 Risks**

Partners may not be able to agree on requirements, on system selection, or on the level of services that would be shared, resulting in the risks outlined above.

A complex governance model will be required – this may be costly in terms of staff time, and may slow down institutional decision-making processes.

## **10.6 Governance models**

A formal governance model would be required, similar to the one outlined above in the section on Consortia and Governance.

Dedicated resources would be required to run the consortium. The level of such resources would be dependent on the type of system selected, and the extent to which this is locally hosted.

## **10.7 Next steps**

Institutions will need to seek local buy-in for this approach – both from their senior stakeholders, and from staff whose roles may be directly affected.

Financial commitment will be required from each institution in order to proceed.

Agreement of a phased road-map for implementation, with timescales agreed for each institution.

Set up the governance mechanisms as a legal entity.

Establish the decision-making structures, cost sharing mechanisms and arrangements for joining and leaving the consortia.

Recruitment of dedicated staff to support the consortia and the procurement and implementation process.

Refine and further develop the outline set of requirements.

Undertake a tender exercise and appoint a supplier.

## **11. Option 4: Single Shared LMS**

### **11.1 Description of option**

This option requires the procurement/selection of a single instance of the LMS. While there may be flexibility around some policies (e.g. loan policies, borrower categories), Partners would need to agree in some key areas (e.g. data standards, cataloguing) to implement a single set of configuration options in order to maximise the efficiency gains that could be achieved through sharing. There would also be significant restrictions on individual institutions flexibility due to the fact that any software updates or changes would be applicable to all Partners, and by the very nature of a single system, take place at the same time. The consortium staffing and independent management would be required to centrally manage the LMS on behalf of the partners. Opportunities for local customisation would be very limited (although separate branding and separate OPAC views for each partner would be required as a minimum).

#### **11.1.1 Sub options**

The cloud supplier could be one of the institutions but should there be serious service issues it would not be desirable to see Welsh institutions taking sanctions or legal action against another Welsh HE institution.

### **11.2 Assumptions**

This option makes the assumption that there is sufficient commonality between the partners to enable the consolidation of configuration options. This may be very difficult in practice, especially given the divergent requirements of the NHS and HEIs libraries

### **11.3 Non financial benefits**

The option realises all the benefits outlined about in terms of efficiency gains. In addition, it maximises the efficiency gains by removing the potential for local configuration of systems – resulting in a single set of parameters which is more cost-efficient to manage.

### **11.4 Dis-benefits**

Institutions will lose control of their configuration settings and their ability to make local decisions about their system to suit the needs of their customers.

### **11.5 Risks**

Partners may not be able to agree on requirements, on system selection, or on the level of services that would be shared, resulting in the risks outlined above.

A complex governance model will be required – this may be costly in terms of staff time, and may slow down institutional decision-making processes.

One size might not fit all? There will be less opportunity for localisation across the partner institutions.

### **11.6 Governance models**

A formal governance model would be required, similar to the one outlined above in the section on Consortia and Governance.

Dedicated resources would be required to run the consortium. The level of such resources would be dependent on the type of system selected, and the extent to which this is locally hosted.

It is likely that an independent organisation with a central pool of LMS staff would need to be created.

## 11.7 Next steps

Institutions will need to seek local buy-in for this approach – both from their senior stakeholders, and for staff whose roles may be directly affected.

Financial commitment will be required needed from each institution in order to proceed.

Agreement of a phased road-map for implementation, with timescales agreed for each institution.

Set up the governance mechanisms as a legal entity.

Establish the decision-making structures, cost sharing mechanisms and arrangements for joining and leaving the consortia.

Recruitment of dedicated staff to support the consortia and the procurement and implementation process.

Refine and further develop the outline set of requirements.

Undertake a tender exercise and appoint a supplier.

## 12. Option Comparison

The 'do nothing' option is not really a do nothing option as all institutions have indicated that they expect to upgrade or replace their current systems. The advantages of option 1 are that each institution can specify their exact requirements and choose their system without considering the needs of other institutions. This however equates to a higher overall cost to the institution and the sector in Wales as a whole and significantly reduces the ability to collaborate.

Institutions collaborating at the procurement stage are likely to achieve savings and this was the case in 1999 with the joint Voyager procurement. Suppliers have indicated that discounts in the region of 20% are achievable if an all Wales buying consortia could be achieved. However if an all Wales consortia could not be achieved the potential savings are likely to diminish in direct proportion to the size of the consortia.

A single instance LMS for all Wales provides the potential for the largest financial savings to the on-going cost of licence and maintenance of an LMS. It provides the opportunity for significant collaboration and subsequently a reduction in Library Systems staffing across the consortia as a whole. This could ultimately lead to a single Library Systems Team which would be managed by the consortia itself with an independent management structure. However there are significant challenges associated with this shared services model. A single strong governance model and strict limitations would be required on certain aspects of the system as it is implemented managed and maintained. In addition implementation costs are likely to be high given the complexity and the need to integrate across multiple corporate systems and some suppliers have stated that they would not be able to deliver this model due to the likely complexity of interfaces

A 'consortia with governance' would provide the cost savings available from the buying club option but would also maximise and facilitate opportunities for on-going collaboration but would have a considerably lower risk profile than the creation of a single LMS instance.

## 13. Recommendations

### Recommendation 1

Option 1 the 'do nothing' option is not really a do nothing option as all institutions have indicated that they expect to upgrade or replace their current systems. The advantages of option 1 are that each institution can specify their exact requirements and choose their system without considering the needs of other institutions. This however equates to a higher overall cost to the institution and the sector in Wales as a whole and significantly reduces the ability to collaborate. This option is not recommended.

### Recommendation 2

As a minimum this report recommends that we go forward with option 2. Historically this has provided cost savings via the joint Voyager procurement in 1999. Suppliers have indicated that discounts in the region of 20% are achievable if an all Wales buying consortia could be achieved. However if an all Wales consortia could not be achieved the potential savings are likely to diminish in direct proportion to the size of the consortia.

### Recommendation 3

Option 4, the single instance LMS for all Wales, provides the potential for the largest financial savings to the on-going cost of licence and maintenance of an LMS. It provides the opportunity for significant collaboration and subsequently a reduction in Library systems staffing across the consortia as a whole. This could ultimately lead to a single Library Systems Team which would be managed by the consortia itself with an independent management structure. However there are significant challenges associated with this shared services model. A single strong governance model and a standard configuration across LMS services is required. In addition implementation costs are likely to be high given the complexity and the need to integrate across multiple corporate systems and some suppliers have stated that they would not be able to deliver this model due to the likely complexity of interfaces. Therefore given the complexity, risk and recognising the diversity of the institutions we would not recommend this option at this time.

### Recommendation 4

Option 3 'consortia with governance' is the recommended option and has the unanimous support of the Project Team. This option offers the most advantageous solution in balancing the risks and benefits. This option offers all of the potential savings available with option 2. In addition, it also realises the opportunities and benefits for collaboration and sharing which we have outlined in this report while offering individual institutions the flexibility to differentiate their service offering. This option could also be viewed as a stepping stone towards a single LMS at some point in the future.

### Recommendation 5 (assuming recommendation 4 is accepted)

A cloud solution hosted by a supplier is the preferred option.

### Recommendation 6 (assuming recommendation 4 or 2 is accepted)

WHELP provides a clear re-statement of its vision for sharing and signs up to a statement as to the level of shared services it wants to provide, via a shared LMS. This is needed to provide a compelling statement of intent for senior stakeholders and staff to achieve buy-in to the strategic direction which is being proposed.

### Recommendation 7 (assuming recommendation 4 or 2 is accepted)

The diversity of the institutions is recognised and acknowledged. Additionally institutions are at various stages of their LMS lifecycle. Therefore it is understood that the timing of any tender process undertaken by WHELP may not fit with other strategic priorities of individual institutions. It will be essential to identify this prior to the commencement of any tender exercise, as misleading suppliers as to the size of the contract could lead to compensation claims.

**Recommendation 8** (assuming recommendation 4 or 2 is accepted)

Open source v Proprietary software has been much debated and there are benefits and risks associated with both approaches. The project team believe that this is a debate that can and should be left until the response to tender and competitive dialogue stages.

**Recommendation 9** (assuming recommendation 4 or 2 is accepted)

Given the immaturity of the current next generation market it is recommended that the tender exercise commences in Jan 2014 at the earliest. This provides both time for the market to continue to develop and also the preparation of a single set of requirements and tender documentation between now and this date. This time will also be required for obtaining institutional buy-in and developing governance structures.

**Recommendation 10** (assuming recommendation 4 is accepted)

It has been recommended in the report that we take a phased approach to implementation. It is anticipated that the first implementations will be no sooner than Summer 2014. Aberystwyth and Swansea are likely to be among the first institutions to migrate given their institutional drivers.

**Recommendation 11** (assuming recommendation 4 or 2 is accepted)

A task and finish group should be convened to quickly put together a high level plan, costs and cost allocation (i.e. funding) for the establishment of a project team for delivery of the tender and governance stages.