Building the BLMS

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With help (for the slides) from
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and the project teams
Shared Service basics

- Convergence of interests
- Convergence of requirements
- Convergence of frustration
- Convergence of procurement cycles
- Shared interest in obtaining economies of scale
Shared Service basics (notes)

The convergence of interests amongst the consortium partners is shown on the next two slides.

The convergence of requirements arises through a lengthy process of consultation.

There is a convergence of frustration with the limitations of existing LMS from the main vendors (shown on later slides).

The convergence of procurement cycles is an essential element in the opportunity to move towards a shared service and the lack of such convergence is one of the reasons many attempts fail.

The shared interest in obtaining economies of scale is of particular relevance to some of the smaller Bloomsbury Colleges which would struggle to move to a truly next-generation LMS on their own.
BLMS consortium partners

The five colleges below constitute the “Bloomsbury Colleges” group which has a strong track-record in the development and operation of shared services. Senate House Libraries agreed to join with the colleges in this project.

The following slide shows the many ways in which the libraries are linked.
Strong basis for collaboration

1994 group

M25 Consortium

BC Lbns

RLUK

SCONUL

University of London

+13 other Colleges & assorted Institutes

Birkbeck

IOE

LSE

London School of Hygiene & Tropical Medicine

RVC

Royal Veterinary College

SOAS

Senate House Libraries

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The BLMS partners undertook a “horizon scanning” process during 2012 which is documented on the BLMS website at www.blms.ac.uk. The outcome of the process was a decision to join the Kuali Foundation and adopt the Kuali Open Library Environment (OLE) software as the platform for building the BLMS.

Apart from the technological and systems implications (which are discussed below), it is important to understand that Kuali is a collaborative venture between a number of US universities which has an ethos very similar to the collaborative approach taken by the BLMS partners.

The first slide below shows the Kuali Foundation which is a framework for an extensive suite of enterprise systems for HEIs developed on an open source/community sourced basis. The second slide shows the members of the Kuali OLE partnership.

The essence of this approach is collaboration in the academic environment. Kuali is not in competition with systems vendors: it is an entirely different way of meeting the requirements of its members.
University of London Library Systems Association

Founding Members

Associate Members

Possible Members

+13 other Colleges & assorted Institutes

Kuali Foundation

Kuali OLE

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University of London Library Systems Association

The BLMS partners have formed this Association in order to join the Kuali Foundation and the Kuali OLE Partnership. The Association's request to join was accepted in April 2013 and we are now full members of both the Foundation (which provides the overall framework within which Kuali OLE is developed) and the OLE Partnership.

The terms of membership of the Association allow for Founding members (indicated on the slide above), Associate members (currently one college) and permit any other College or Institute within the federal University of London to join.

Opportunities for engagement with the wider UK HE sector are available, as Kuali OLE considers the Association to be its primary UK representative.

The next slide shows the Association alongside the other members of the OLE partnership.
Kuali OLE Partners

Duke University

Indiana University

University of Chicago

The University of London

The Bloomsbury Colleges

University of London

UF Florida Partnership

University of Maryland

Lehigh University

Kuali

open library environment

Kuali

North Carolina State University

Villanova University

Penn University

The Andrew W. Mellon Foundation
A high level of assurance

One of the key benefits of joining the OLE partnership is the high level of assurance which it provides. Unlike some other open source software initiatives which have “forked” (divided into different camps providing different versions of the code-base), making long-term reliance upon the software problematic, Kuali OLE is a “community sourced” software project which has strong governance giving a high level of assurance that the code-base will be developed, protected and supported in a robust and reliable manner.

As a member of the OLE partnership, the Association becomes part of this governance structure, able to feed its requirements into the development track and have an influence over the strategic direction of OLE.

The next slide shows the way in which the OLE partnership is constructed. The Association has a seat on the Board and has also attended meetings of the OLE Functional Council. The OLE Project Manager is in regular contact with the BLMS Project Manager.
Kuali OLE Organization

**Project Expertise**
- Subject Matter Experts
- Consultants
- Manage Entity Relationships
- Select & Acquire
- Communications
- Describe
- Deliver

**Project Development**
- HTC Global Resources
- Kuali OLE Functional Council
- Kuali OLE Project Manager
- Kuali OLE Technical Council

**Project Coordination**
- HTC Coordinator for Kuali OLE
- Kuali OLE Core Team
- Kuali OLE Scope Tiger Team

**Project Management**
- Kuali OLE Board

**Vision & Resources**
A shared sense of frustration (1)

The next two slides depict the difficulties which many libraries have with the traditional model of a vendor-supplied and supported LMS. There is an urban myth which runs along the lines of “hello, I'm from your LMS vendor, I've come to fix your LMS”. “What's an LMS?” “The system which runs your OPACs. Can you show me where it is please?” “Oh.” A long pause whilst the librarian thinks for a while. “What does it look like?” “It's a black box which says LMS on the front.” Another pause. Finally, “come with me”. Librarian leads vendor technician to a cupboard under the stairs. “Is that it?”

More recent conversations with members of an Information Systems division go along the lines of, “we look after information systems, not library systems” (or variations thereof).

The frustration arises on several fronts then: vendors who treat the LMS as a black-box appliance managed by them; LMS which have hardly changed since the mid-1990s; unwillingness of IS professionals to engage with the systems. Often the LMS seem to be the Cinderella of the IS world.

This is a primary driver for a different approach and it is accepted that, for many Libraries, a vendor-provided upgrade is the appropriate route to take.
Classic LMS model

- Library
- Other institutional "Information Systems"
- Black box aka turnkey LMS
A shared sense of frustration (2)

New offerings from the LMS vendors have a number of things in common:

- an offer to move the service “into the cloud” (whatever that is);
- an offer to provide access to a large-scale, consolidated bibliographic database;
- despite the use of “open APIs”, significant elements of the system which remain proprietary and inaccessible to local library or IS staff.

During the horizon-scanning phase of the BLMS project, we gained the distinct impression that vendors were more interested in us for our data than for our money (although they certainly wanted our money).

As for “the cloud”: this term originated amongst network analysts and is used to describe a network about which it is not necessary to know the internal details, only that data can traverse it. Now that the term has been hijacked by marketing people, there is a risk it seems to describe something warm and fluffy rather than the reality, which is that the customer's data is housed in, and services delivered from, a service-provider's large-scale data centre, accessible on terms determined by the provider.
"New" LMS (vendor) model

- Library
- Vendor "cloud" service
- Other institutional "Information Systems"
- Large-scale Biblio database
A shared sense of frustration (3)

The next slide shows where some of the frustration arises: LMS are no longer viable as standalone systems, but require connections and data-exchange with a large number of other systems both within and without the institution.

This is one of the most difficult issues with proprietary systems (a difficulty which is not limited to LMS): how to interface discrete systems with each other when they are controlled by suppliers with restrictions on how much access the user can get to the raw data or the data interfaces. In many cases, creating a connection requires additional licensing and other charges for “bolt ons” which do not come with the system as standard.

The connections shown on the next slide have been derived from a detailed study of the different systems in use by members of the BLMS Consortium.

The slides which follow give an insight into why we found the Kuali model so compelling: it is built in a modular form based on an interoperability layer, with data-exchange designed in from the start, and – because it is open-source – with all schemas and coding structures open to interrogation when new modules are required.
Typical complex arrangements

- Student system
- Resource Discovery x N
- OPAC
- Archive system
- Research repositories
- Print/copy accounting
- LMS
- Self issue/return
- Institutional web
- Finance system
- M'ship cards
- Turnstiles & access control
- Online card catalogue
- User Database

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Kuali OLE Service Layers – Version 0.6

- **Document Editing & Workflow**
  - MARC, Instance, ONIX-PL, & Associate Documents

- **Faceted Discovery**
  - Solr Search & Faceting

- **Select & Acquire**
  - Pay Invoices, Budget and Fund Accounting

- **Descriptive Metadata**
  - Instance Document, ONIX-PL

- **Document Editor Framework**
  - Schema-driven Editors

- **Patron Services**
  - Patron Schema & Classification

- **Kuali Financial System Version 5.0**
  - Kuali OLE Core Financial Functions

- **Apache Jackrabbit**
  - Kuali OLE Document Store

- **KRAD**
  - Rapid Application Development Environment

- **Identity Management**
  - Dynamic Patron Management

- **Kuali Rice 2.0**
  - Enterprise Middleware – Identity Management, Workflow, Messaging, Triggers
  - Rapid Application Development, Service Registry, Rules Engine

- **New!**
  - Faceted Discovery
  - Solr Search & Faceting

- **New!**
  - Kuali Financial System Version 5.0
  - Kuali OLE Core Financial Functions

- **New!**
  - Identity Management
  - Dynamic Patron Management

- **New!**
  - Enterprise Middleware – Identity Management, Workflow, Messaging, Triggers
<table>
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<tr>
<th>Describe</th>
<th>Deliver</th>
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<tbody>
<tr>
<td>Metadata Management</td>
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<td>- Localization &amp; enhanced metadata</td>
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<td>- Document Store linking</td>
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<td>- Ingest &amp; overlay documents</td>
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<td>- Editor infrastructure &amp; web editor</td>
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<td>- Bound-with support</td>
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<td><strong>Select &amp; Acquire</strong></td>
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<td>- Invoice payment types</td>
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<td>- Licensing workflows</td>
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<td>- Roles &amp; workflows</td>
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<td><strong>Kuali OLE 0.8</strong></td>
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<td><strong>Bringing it to the People: Describe &amp; Deliver</strong></td>
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<td><strong>Implementation Tools</strong></td>
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<tr>
<td>- Data integration with discovery systems</td>
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<td>- Initial data migration toolset (extract, transfer, load)</td>
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Kuali OLE 1.0 Target date: Q4 2013

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<thead>
<tr>
<th>Select &amp; Acquire</th>
<th>Implementation Tools</th>
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<tr>
<td>• Serials receiving workflows</td>
<td>• Reporting Tools</td>
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<td>• Voucher output and transmittal</td>
<td>• Documented API &amp; service registry</td>
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<td>• Initial integration with GOKb</td>
<td>• Distribution packaging</td>
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<td>• Electronic acquisitions workflows</td>
<td>• Framework for training development</td>
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<td>• Patron self services</td>
<td>• Documentation</td>
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<td>• Circulation standards: NCIP</td>
<td>• Completed migration toolkit</td>
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<td>• Integration with ILL and Course Reserve Systems</td>
<td>• Descriptive data</td>
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<td>• Circulation history</td>
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<td>• Acquisition history</td>
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<td>• Complete system ready for implementation</td>
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<td>• Exposed Service Registry</td>
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Deliver

Kuali OLE 1.0 Ready for Implementation

Describe

• Batch editing
• Record extraction

Kuali OLE 1.0 Ready for Implementation

Implementation Tools

• Reporting Tools
• Documented API & service registry
• Distribution packaging
• Framework for training development
• Documentation
• Completed migration toolkit
• Descriptive data
• Circulation history
• Acquisition history
• Complete system ready for implementation
• Exposed Service Registry
Kuali OLE Service Architecture

DataStores
- DocStore
- OLE-FS
- OLE-LS

Database Server
Indexing Server
Servers I/O Server
Security Server
App Servers

Service Interfaces
- Service Registry

Coordination & Messaging

Supply Chain
- Entitlements
- Payment
- Purchasing
- GOKb / KB+
- Bibliographic Utilities

Enterprise Services
- Financial Management
- Learning Management
- Identity Management
- Discovery

Partners
- MetriDoc
- Shared Services
- High Density Storage
- 3rd Party Apps
- Resource Sharing
- APIs

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With thanks for the Kuali slides ...

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For more on Kuali OLE see

- The website: http://ole.kuali.org
- The test-Drive - http://kuali.org/test-drives
- Twitter: @kualiOLE
- Blog: http://kualiOLE.tumblr.com