KUALI OLE: A COMMUNITY UPDATE

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Presentation Outline

- Kuali OLE History & Organization
- Technology & Service Layers
- Functionality & Status of Development
- Participation & Sustainability
A Brief History of Kuali OLE

• Following the 2008 OLE Project investigation
• A partnership of 7 higher education institutions with 16 participating campuses
• Funded by Andrew W Mellon Foundation & the Kuali OLE Partnership in 2010 for a 2 year software build phase
• Building a flexible, service-oriented, enterprise library management system for academic & research libraries
Key drivers in building partnership

- Find sustainable model for the Library Management System (LMS) thru community-source
- Build a next generation technology environment for the LMS
- Re-examine library business operations & workflows to ensure Library relevancy to University goals
- Break away from print-based model of LMS software
- Achieve staffing flexibility
- Reflect changing nature of library materials & new approaches to scholarly work
- Integrate with enterprise-level systems
- Adopt & modify agile development approach
Kuali OLE Partners

University of Maryland
Duke
Indiana University
Lehigh University
Michigan
University of Chicago
Pennsylvania State University
University of Florida
The Andrew W. Mellon Foundation
Kuali Foundation

Open Source Administrative Software.
By higher education, for higher education.

GBV – The Library Network
open source administration software for education

Kuali Foundation

ORGANIZATIONAL CHART

GOVERNANCE

APPLICATION ROADMAP COMMITTEE

PROJECT BOARD
FUNCTIONAL COUNCIL
PROJECT MANAGEMENT
DEVELOPMENT TEAMS
SUBJECT MATTER EXPERTS

TECHNOLOGY ROADMAP COMMITTEE

PROJECT BOARD
PROJECT MANAGEMENT
DEVELOPMENT TEAMS

MEMBER INSTITUTIONS

BOARD OF DIRECTORS

COMMERCIAL AFFILIATES

LEGAL SERVICES
FINANCIAL MANAGEMENT
INTELLECTUAL PROP.
HOSTING SERVICES

LICENSING
COMMUNITY COORDINATION

COLLABORATION INFRASTRUCTURE
EVENT MANAGEMENT

SERVICE BUS
Kuali OLE Organization

Vision & Resources
- Kuali OLE Board

Management
- Project Manager
- Project Management
- Functional Council

Coordination
- HTC Coordinator
- Core Team
- Scope

Development
- HTC Global Resources
- HTC Consulting

Tiger Teams
- Describe
- Manage Relationships
- Communications
- Select & Acquire
- Deliver
- Implementation

Expertise
- Consultants
- Subject Matter Experts
Why Community Source?

• Meets needs of users since developed by users
• Line between user & developer is short and clear
• No 3\textsuperscript{rd} party to potentially distort needs or solutions
• Allows for contributions from institutions of different sizes & diversity in goals
• High degree of collaboration—ultimately a better product and shares the risk for all partners
Technology & Service Layers
Our Innovative Technologies

• Service Layer Architecture – to provide isolation of concerns, modular simplicity, & improve flexibility
• Standard interfaces (when it makes sense) – to provide open & predictable pathways in & out
• Kuali Technologies – to provide ready-built technologies for development, messaging, coordination, & financials
• Multiple data stores – to provide purpose-built data repositories that best model interactions & provide some future-proofing
Service Layer Architecture

Amazon EC Cloud

Vendors
- External Interfaces
  - EDIFact
  - ONIX-PL

Utilities & GOKb
- Business Logic & Workflows
  - Bibliographic, Authorities, ERM
  - IdM Standards

Users
- Service Bus: AuthN/AuthZ, Workflows, Queues, Alerts, & Messaging
  - Service Registry
  - Identity Mgmt

Service Layer Architecture

Storage Architecture
- Transactional Data - KFS
- Descriptive Data - DocStore
- Relationship Data - RDBMS

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Key Technologies

• Kuali
  – Rice – Enterprise Middleware
    • Workflow & Rules management
    • Expose service registry
    • Identity Management – supports multiple sources
  – Financials – Kuali OLE Financial Core
• Apache
  – Jackrabbit – Java Content Repository
  – Lucene/Solr – Index and Discovery
• Java
  – Enterprise Strength Programming
  – Spring application development framework
• Service Layer Architecture
  – Independence in our technology stack
  – Built for integration
Global Open Knowledgebase (GOKb)

- Joint Kuali OLE / JISC proposal to Mellon Foundation funded for Apr 2012 – Mar 2013
- Community-managed knowledgebase of subscribed resources (including e-Books)
  - Global data (same for everyone)
  - Local data (specific to your licenses)
  - Focus on management, not on access
- Global-Level Descriptive data about subscribed resources for library management
  - From point of data creation to user access to evaluative use data
- Designed to be open to all, but targeted to integrate with JISC’s KB+ project & with Kuali OLE
Functionality & Status of Development
Year One Deliverable

Version 0.3 Release
November 2011

Implementation of Core Technologies

Features

Select & Acquire
- Kuali® Financial System v4 Core
- Extensive library business process analysis
- Kuali® Rice 1.1 for workflow
  - Supply chain automation
  - Vendor firm order ingest
  - Manual invoice entry
  - Enhanced Pre-order Selection
  - Purchase discrete item
    - Requisition
    - Purchase Order
    - Encumber funds
    - Receive item

Describe
- Apache Jackrabbit™ document repository for metadata
- Support multiple descriptive metadata formats
- Define document types – bibliographic, localization, enhancement
- 5 million bibliographic, 5 million item documents loaded

Searching
- Faceted search for descriptive metadata
- Transactional metadata search with linked descriptive metadata

Research
- Partner finance systems
- Partner identity management systems
- Document store relationship linking
- Data dependencies for Deliver policies
- Metadata editor architecture
- Relationship between bibliographic, holding, and item-level records
- Serials receipts and predictive check-in
Year Two Deliverables

Library Starts Here: Select, Acquire, Describe

Features

Select & Acquire
- Ingest order records
- Fund accounting
- Payment with ERP

Deliver
- Patron infrastructure
- Design Patron classification

Manage Entity Relationship
- Document linking tools

Describe
- Metadata management
- Localization & enhancement metadata architecture
- Linked data integration
- Document Store linking
- Ingest & overlay documents from external sources
- Editor infrastructure

Research

- Initial implementation of Rice 2.0 & KFS 5.0
- Convert code based on Rice 1.x to Rice 2.0
- License management services
- Initial implementation of KRMS Rules Engine
- Pre-requisites for local Financial integration
- Initial integration with ILL, Reserves, Course Management System

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Year Two Deliverables

Version 0.8 Release October 2012

Features

Deliver
- Design Deliver policies
- Policy Management services (Checkin, Checkout, Hold, Reserve)
- Patron Management services
- Patron information services with enterprise IdM
- Initial integration with ILL, Resource Sharing systems

Select & Acquire
- Complex PO to invoice relationships
- License Management workflows
- Document Type for Deals

Complete Describe
- Metadata Editor web application
- Batch Editing
  - Editor interaction
  - Record extraction

Implementation Tools
- Data integration with discovery systems
- Initial data migration tool set (extract, transfer, load)

Research
- Partner ERP integration requirements
- Partner Identity Mgmt integration requirements
- External development and use of API
- Integration with GOKb

Bringing it to the People: Deliver and License Management
Year Two Deliverables

Features

Select & Acquire
- Bi-directional messaging with ERP, supply chain

Deliver
- Patron self services
- Circulation standards (SIP2, NCIP, etc)
- Finish ILL integration

Manage Entity Relationship
- Initial integration of GOKb
- Initial electronic resource workflows

Implementation Tools
- Reporting Tools
- Documented API & service registry
- Distribution packaging
- Training framework
- Documentation
- Completed migration toolkit
  - Description Data
  - Circulation history
  - Acquisition history
- Packaged for implementation
- Expose Service Registry

Research

- Partner implementation strategies
- Software distribution management
- External development and use of API
- GOKb Integration
- OpenURL integration
- KFS 5 Core upgrade
- Planning for Release 1.x

Ready for Implementation

Version 1.0 Release
January 2013
Participation & Sustainability
Year 3 and Beyond

- Year 3 will include final development of 1.x product, implementation patterns, & service integrations
- Adoption, expansion, & integration of GOKb
- Implementation at partner sites
- Developing multiple models of deployment including local, consortial, & cloud-based
- Bring on at least one Kuali Commercial Affiliate to support Kuali OLE
- Business model transition from development organization to sustaining organization for year 4 and beyond
  - Supporting our own infrastructure
  - Keeping core team together to support partners
  - Expanding partnership
Joining the Kuali OLE Partnership

• Models for Joining Kuali OLE
  – Announced at Kuali Days 2011
  – Consists of Multiple Tiers based on Library Budget

• Staff participation needs
  – Board, Functional Council, SMEs
  – 2 – 2.5 FTE for each partner

• Year 3 budget reflects ongoing development & partner implementation
  – Keeping the core team in place
  – Keeping HTC developers engaged
  – Developing sustaining technical capacity

• Year 4 budget will reflect returns on investment & build shared technology refresh fund with ongoing investments
Advantages of Kuali OLE Partnership

• Influence over product development
  – Get what you need
  – Participation on the Board & Functional Council
  – Bring your expertise to bear in development, functionality, deployment, or operations

• Early access to software for download
  – including cloud-based test and demo instances

• Full access to Kuali Foundation and Kuali OLE Communities for support
Thank You

For more on Kuali OLE

• Visit our website: http://ole.kuali.org
• Follow us on Twitter: @kualiole
• Read our Blog at: http://kualiole.tumblr.com
• Contact me at: winkler4@upenn.edu
• Or Twitter at: @winkler4