

Kuali Student MoU Committee Report 2013

Executive Summary

In 2008 the University of Washington (UW) invested as a founding partner in Kuali Student (KS), a consortium of higher education institutions working together to develop a next-generation student system to significantly improve educational quality and the student experience. This investment was made in part because neither major vendor solution offered a significant improvement over UW's legacy system functionality, or had acceptable cost profiles.

In April 2013, the KS MoU (Memorandum of Understanding) Committee (The Committee) completed the third annual review of the project to evaluate the strategic direction and rationale for continued investment in KS, and to make a recommendation on whether the UW should renew its founding partner investment. The Committee reviewed and validated criteria used for the previous two annual assessments, and added Kuali Foundation stability as an additional criterion.

Upon completion of the assessment, The Committee concluded that **Kuali Student remains the UW's preferred replacement path, and made the following recommendations:**

- **Renew:** Continue the UW's founding partner investment in KS by signing a three-year Memorandum of Understanding (MoU). Additionally, because KS has significant dependencies on Kuali Rice, the UW should continue its 80/20 split of funds across these two projects.
- **Accelerate:** Consider additional investment to speed up delivery of a fully working core student information system. At current staffing levels, completion of all core modules would not be complete by the end of the UW's new three-year MoU. Efforts are underway to secure more funding for accelerating completion of the Enrollment module and initiating development of the Financial Aid module.
- **Communicate:** Create and implement a communications plan to remind the UW community of rationale for the Kuali investment and provide an update on Kuali outcomes.
- **Fund local implementation efforts:** Continue and accelerate local implementation efforts. The project to implement Curriculum Management is currently understaffed by three FTEs. Funding this project will re-enforce the UW's commitment to KS and Student Information System (SIS) replacement.
- **Manage expectations:** Develop concrete plans on when a student replacement project could realistically begin, based on other major University-wide IT projects (e.g., HR/Payroll).

The following table summarizes 2013 findings for each of the criteria used in the assessment.

Criteria	Kuali Capability	Summary of 2013 Findings
1. <i>Strategic drivers and functional goals</i>	✓	Neither of the two major vendor products represents a significant step forward in improving the student experience, or provides flexibility to adapt to changing needs.
2. <i>Strategic framework for replacement</i>	✓	UW's strategic approach to system replacement calls for maintaining a high-level of control in areas core to its mission. Maintaining our investment as a founding partner in KS provides that level of control.
3. <i>Architecture and integration</i>	✓	KS's service-oriented architecture remains the best fit for an incremental system replacement, integration into existing legacy systems, and flexibility to support emerging needs.
4. <i>Costs</i>	✓	The cost of developing and implementing KS is expected to be significantly lower than the cost of procuring and implementing a vendor product. Additionally, KS's cost profile provides the most flexibility to balance rate of expenditure with funding availability, and allows the UW to control how and when we make additional investments.
5. <i>Kuali Foundation stability</i>	✓	The Kuali Foundation has grown significantly since its inception in 2007. It currently has 72 member institutions and an annual net revenue of \$23M.
6. <i>Peer bench-marking</i>	✓	Many UW peers adopted Oracle PeopleSoft in the mid 1990s, and others on 'burning platforms' are adopting it now because KS is not yet complete. University of Utah and Indiana University exemplify a third category, institutions that have time to invest in KS as an alternative solution. UW peers involved in Kuali Student include University of Maryland, Indiana University, University of Southern California, University of Utah, and University of Toronto.
7. <i>Trends in the vendor marketplace</i>	✓	SIS vendors are attempting to adapt to shifting procurement patterns and the influence of community and cloud sourcing, but it is not known how quickly they will be able to modify legacy code and validate cloud models. Additionally, the UW learned through discussions with other schools that Oracle PeopleSoft, which has been seen as the only other viable option for the UW, provides only minimal enhancement to the core Student Information System – opting instead to put research and development into new products that require additional licensing fees. Based on what The Committee learned, it does not deem Oracle PeopleSoft to be a significant step forward in supporting the UW's academic mission.
8. <i>Outcomes to date</i>	✓	Direct outcomes of UW investment in KS justify continued investment. These include release of Curriculum Management 2.0 and Kuali Rice 2.2, considerable progress on Kuali Student Enrollment and Kuali Student Accounts, use of Kuali Rice for business process automation associated with tuition changes and supplier registration, and alignment of UW's SIS portfolio, skills, and technical infrastructure to agreed-upon vision and goals. Additionally, through Indiana University's adoption of MyPlan (Kuali Student Academic Planning), the UW is already seeing the benefits of the community source model over a custom-built approach.
9. <i>Current risk profile</i>	✓	The UW recognizes that KS carries different risks than a traditional vendor product approach. Geographic distribution and architectural complexity are no longer risks to the projects. Risks related to partner changes have significantly decreased as the project's organization, tools, and processes have stabilized. Risk associated with lack of staffing resources remains significant, and additional investment will be necessary to deliver all functions of a core SIS within the UW's proposed three-year MoU.

The following sections provide additional detail for each of the criteria used to assess the UW's ongoing investment in KS.

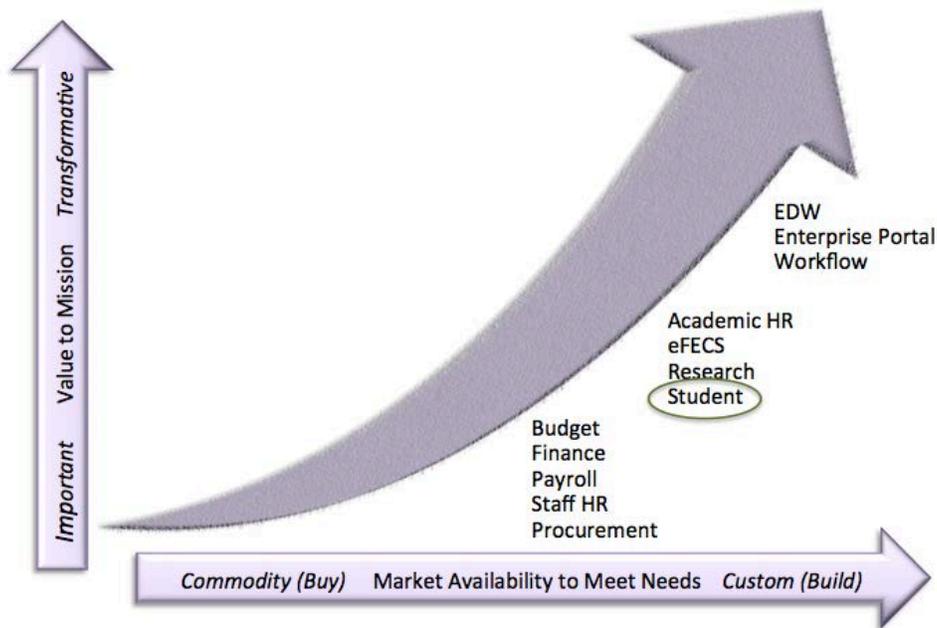
1. *Strategic Drivers and Functional Goals*

The UW's future SIS must support the recruitment and retention of top students in an increasingly competitive market: by making it easier for them to discover and connect to the UW's rich learning opportunities, and by enabling comprehensive and efficient student support and engagement. SIS Sponsors and other academic leaders identified the following strategic drivers that any future SIS must be able to support:

- **Demographics of our student body** – increases in international, out-of-state, underrepresented, and first-generation students
- **Demands for academic programming** – increases in professional masters degrees and certificate programs (experiential and professional); new online degree completion program; continued increase in interdisciplinary programs
- **Needs and expectations of students** – personalized support and service; collaboration and team work; flexibility in time and location of learning; mobility across institutions
- **Parent expectations** – increased emphasis on improved value and reduced cost; emphasis on graduation and entry into the workforce

2. Strategic Framework for Replacement

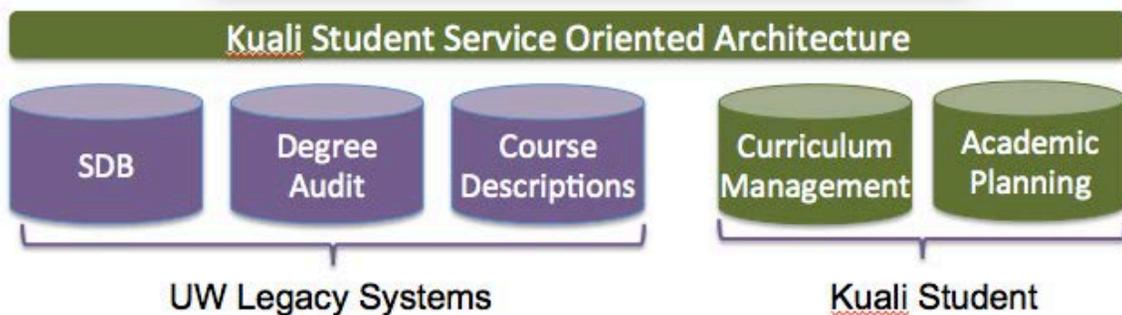
The UW's strategic framework for replacing our legacy systems (shown in the following diagram) focuses on a best-in-breed approach, generally seeking commodity solutions for support functions and more custom solutions for strategic functions. While custom-built solutions allow for the most specialization, these solutions are extremely costly to develop and become brittle over time. No peer institutions are pursuing a custom-built SIS. As community source software, Kualu Student allows us to reduce the total cost of ownership and maintain a high-level of control over core functions.



3. **Architecture and Integration**

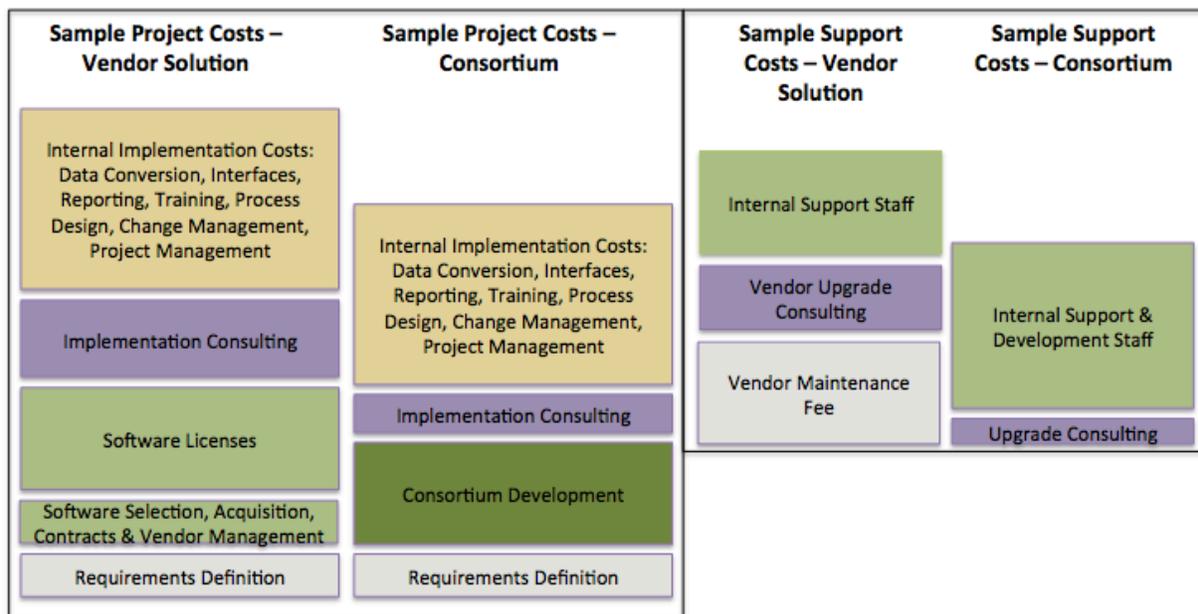
The UW’s changing needs demand that our administrative systems support agility, process efficiency, and access to information for decision-making. Meeting these demands requires architectural guidelines and standards, which are emerging through the work of the Enterprise Architecture Steering Group (EASG). Among the principal guidelines being identified is the need for service-oriented architecture (SOA) to support modularity and interoperability; these are required for agility and seamless integration.

SOA is particularly important for SIS replacement, which is expected to occur incrementally over the next several years. MyPlan demonstrates the value of KS’s SOA. As shown below, MyPlan’s academic planning features are supported by a blend of new Kualu-based capabilities with capabilities provided by the UW’s legacy systems. Through MyPlan we are realizing more value from our legacy systems, while also incrementally implementing KS.



4. Costs

The overall cost of implementing and maintaining Kualu Student is expected to be significantly lower than that of a vendor solution. Additionally, our ability to manage the speed and resourcing of implementation and major upgrades allows for greater flexibility to balance costs over time with existing and emergent funding options. The diagram below shows a high-level summary of the cost elements (and their relative size) involved in a typical vendor system implementation and maintenance compared with KS.



5. Kualu Foundation Stability

The Kualu Foundation, Inc. is a 501(c)3 non-profit organization incorporated in the State of Indiana. The objectives of the Foundation are to build and sustain a community of higher education institutions and companies that develop and sustain open source software for higher education. Kualu started with one system, the Financial Information System, and has grown to encompass eight projects:

- Kualu Financial System
- Kualu Coeus for Research Administration
- Kualu Student
- Kualu Open Library Environment
- Kualu People Management for the Enterprise
- Kualu Mobility
- Kualu Rice (middleware, shared services, and rapid application development)
- Kualu Ready

Stability Metrics

- 72 foundation members
- 9 commercial affiliates
- 2011 total assets: \$23,959,434

Growth Metrics

	2005	2006	2007	2008	2009	2010	2011	2012
# of Members	7	10	22	33	37	57	58	72
# of Projects	1	2	3	4	5	7	8	8
# of Investing Partners	5	13	22	31	44	63	70	71
Kuali Days Attendees	120	219	207	520	350	690	815	816

Kuali Product Profiles

(Does not include Mobility, Open Library, Ready, and People Management)

System	Investors	In Production	In Progress	Investors/Implementers Short-list
Kuali Financial System (5.0)	11	13	4	<ul style="list-style-type: none"> • Indiana University • Michigan State University • University of Arizona • Cornell • University of Southern California • Colorado State University • UC Davis
Kuali Coeus (5.0.1)	18	8	8	<ul style="list-style-type: none"> • Indiana University • University of Hawaii • UC Irvine • University of Arizona • Cornell • Michigan State University • Colorado State University • MIT • John Hopkins

System	Investors	In Production	In Progress	Investors/Implementers Short-list
Kualo Student (2.0)	8	3	6	<ul style="list-style-type: none"> University of Washington University of Toronto University of Maryland College Park University of Southern California Indiana University University of Utah
Kualo Rice (2.2)	6	21	8	<ul style="list-style-type: none"> University of Washington UC Davis UC Irvine UC San Diego University of Arizona Cornell University of Maryland College Park Michigan State University

6. Peer Benchmarking

The SIS marketplace is dominated by two major vendor products: Ellucian Banner and Oracle/PeopleSoft. Given the UW’s size and complexity, Banner is not seen as a viable solution for our needs. This leaves Oracle/PeopleSoft (PeopleSoft) as the only alternative to our continued investment in KS, or continued reliance on our more than 35 year old mainframe. The following table summarizes current SIS approaches taken by UW peer institutions.

PeopleSoft	Kualo Student (future): PeopleSoft (legacy)	Kualo Student	Undecided (evaluating options)
<ul style="list-style-type: none"> University of Michigan University of Wisconsin, Madison University of Minnesota Washington State University 	<ul style="list-style-type: none"> Indiana University University of Utah 	<ul style="list-style-type: none"> University of Maryland, College Park University of Toronto University of Southern California 	<ul style="list-style-type: none"> Michigan State University University of Texas, Austin Iowa State University Penn State University UC Berkeley

Among UW peer institutions, we observe two distinct scenarios:

1. Institutions on burning platforms (**shown in red**) because their legacy systems are beginning to demonstrate failure, or because they are currently using unsupported versions of PeopleSoft. These institutions must go with a vended solution if KS's timeline does not align to their replacement needs.
2. Institutions with the luxury of time because their existing systems are stable and supported. These institutions have flexibility to select a SIS based on institutional priorities and constraints. Within this population, we are observing increasing interest in KS as an alternative to traditional vended options. Three of the five 'undecided' organizations listed above (**shown in green**) are actively exploring KS, as demonstrated through their participation in Quali Days and outreach to peer institutions (including the UW) for information.

7. Trends in the Vendor Marketplace

Although it is difficult to access information on proprietary solutions within the SIS vendor marketplace, a recent Gartner publication, *IT Market Clock for Higher Education, 2012*, provides some insight. According to this analysis, the SIS vendor marketplace is stable with systems that have been around for decades. Vendors are struggling with modernizing their underlying development platforms to cater to audiences (like students) used to increasingly sophisticated consumer web services. Gartner comments that while the marketplace is stable, there is much room for improvement. They advise institutions to evaluate SISs based on what process improvements they enable, rather than focusing on cost. In addition to reviewing Gartner research, The Committee also spoke with the Chief Information Officer from University of Utah (UU) to understand why UU recently invested in KS as a replacement to PeopleSoft. Key factors that played into UU's decision included:

- Minimal functional and technical improvements to PeopleSoft since UU's initial implementation
- No major innovations planned
- PeopleSoft would not support the types of improvements to the student experience that the UU President and others were seeking
- Vendor model did not represent the future that UU wanted to invest in

After reviewing the information available, The Committee concluded that while PeopleSoft is the only viable vendor solution for the UW, it does not represent an acceptable option.

8. **Outcomes to Date**

In Fiscal Year 2013, the UW's investment in Quali produced the following valuable outcomes:

- **Leveraged development team made up of 45 FTEs from 8 Quali Student investing partners to achieve the following software delivery outcomes:**
 - **Software Releases:** Curriculum Management (CM) 2.0 and Quali Rice 2.2.
 - **Quali Enrollment (ENR):** Development of KS ENR course offering is progressing on schedule, with a founders release scheduled for December 2013. Course registration design is underway, with development planned for 2014. At the current pace of development, the entire ENR module is scheduled to be complete by the end of 2016.
 - **Quali Student Accounts (KSA):** Development of KSA is progressing on schedule. The first phase, student accounts receivables, will be complete in spring 2013. The second phase, fee management, and the Founder's release are scheduled for August 2013. While the UW did not choose to be a co-investor in this module, we have reviewed requirements and deliverables. Reviewers concluded that the resulting product will be a close fit to our needs. Concurrent development of KSA has significantly increased the pace of software delivery.
- **Quali Student Academic Planning (KSAP):** The UW's contribution of MyPlan is underway, and KSAP 0.9 is scheduled for release by December 2013. Indiana University (IU) is implementing KSAP, as an add-on to PeopleSoft, with plans to be in production by May 2013. They have several enhancements planned, and will be contributing these back to KS. Starting in October 2013, the UW expects to be able to benefit from IU's product enhancements, which will accelerate our pace of delivery to UW students and advisors.
- **Curriculum Management (CM):** The UW has a small team assigned to implementation of Curriculum Management. UW-IT's FY 2014 budget request includes funding for additional staff that would allow us to accelerate delivery of CM to the University.
- **Deliverables that are being leveraged for MyPlan development:** Flexible technology infrastructure, user interface design and style-guide, Quali Rice 2.2 (including the new Quali Rapid Application Development module).
- **Alignment of local activities to long-term vision and needs:** With MyPlan and Curriculum Management implementations underway, we have officially initiated our process of incremental modernization to replacement. We are developing functional and technical expertise that we will need to support a larger replacement project. We have also implemented core infrastructure (servers and databases) that can be scaled as additional KS products are implemented.
- **Governance and processes to support legacy data conversion:** The UW has made significant strides in establishing data governance and processes required for conversion of

legacy data. We have successfully migrated UW's legacy course data into Curriculum Management, completed data mapping and integration of the UW's time schedule data to KS Enrollment, and completed critical data quality improvement efforts.

- **Cross-institutional collaboration and best practices:** The UW leveraged lessons learned from the University of Maryland and UC Berkeley in our data migration efforts.

9. Current Risk Profile

From the start, the UW recognized that investing in KS carries significantly different risks than a traditional vendor product.

The following categories of risk no longer impact KS:

Novelty of architectural approach: There are currently no major architectural decisions pending. In February 2012, the Accelerating Quali Student taskforce re-affirmed KS's service oriented architecture. Efforts such as MyPlan are demonstrating the power of this architecture in enabling legacy systems and supporting incremental implementation.

Geographical distribution: The team has become proficient with tools and processes necessary to support efficient software development, despite geographical distribution. Additionally, the emphasis on regional teams, and strategic use of face-to-face meetings resulted in increased efficiency and more predictable timelines.

Risks associated with partnership changes significantly decreased since the last review:

While we continue to see partnership changes, (most recently the withdrawal of UC Berkeley) the overall stability of the project, coupled with new investors, has minimized the churn associated with these transitions. UC Berkeley withdrew because of growing risks that their legacy system would have a catastrophic failure. The addition of University of Utah has resulted in an overall net gain in financial and staff resourcing.

Risks inherent to participating in a community remain constant: In any community, the seat of influence can shift periodically based on a number of triggers, including level of investment of each partner, relationships, and risks that the community is experiencing. With new and existing partners significantly increasing their investment in KS (to accelerate its delivery), there is increasing risk that the UW's voice and influence will be diminished to some extent. The Committees recommendation to increase investment is intended to mitigate this risk.

Risks associated with legacy systems becoming burning platforms continue: As noted in the peer benchmarking section, institutions on burning platforms are invariably forced to choose solutions based on timeline constraints rather than on institutional priorities. While the UW is

not currently on a burning platform, the team that supports the Student Database (SDB) is nearing retirement age, and the system as a whole becomes more complex and difficult to maintain each year. The longer we wait to replace SDB, the more likely it is that we will experience unacceptable system failures. Two factors impact our replacement timeline: 1) completion of the Kualo Student software; and 2) the UW's replacement funding and timeline. The Committee's recommendations to increase investment in Kualo Student and develop concrete replacement plans are intended to manage this risk and bring clarity to the UW's replacement plans.

Risks associated with inadequate staffing increased in the last year: The Enrollment Module is significantly larger and more complex than Curriculum Management, and there is a growing need to support collaboration and maintenance across all of KS's development streams (CM, ENR, KSA, KSAP). KS received a \$700,000 infusion of funds as a result of the Accelerating Kualo Student taskforce last year, however, the resourcing gaps are still significant. We continue to hear that there are additional investors 'in the wings', and several existing investors are 'digging deep' to increase their investment. The Committee's recommendation to increase investment is intended to mitigate this risk.