University of Hawaii Review of Curriculum Central and Evaluation of Kuali Student Curriculum Management as a Possible Replacement

Prepared by

Michelle Bates - Sr. Project Manager
mbates@rsmart.com

Simin Kamali - Technical Consultant
skamali@rsmart.com

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Introduction

rSmart was engaged by the University of Hawaii to review the current Curriculum Central system and provide planning and guidance related to a possible move to the Kuali Student Curriculum Management Module. rSmart visited the University during the weeks of March 11th and March 18th to perform the onsite portion of the work. The engagement consisted of detailed interviews with many of the University team responsible for both the technology used to manage curriculum and the institutional consumers of those services. rSmart’s charter was to perform the onsite assessment and review and to present back an Executive Summary Report and a high level project plan outlining the steps required should the University decide to migrate from Curriculum Central to Kuali Student Curriculum Management. During this visit, the team met with:

- The Executive Committee
- The Curriculum Central User Group
- The Chief Academic Officers
- The Curriculum Committee
- Various members of the Faculty Senate
- Joanne Itano
- Hae Okimoto
- Thanh Giang
- The Banner User Group
- Several team members from:
  - The University of Hawaii - Hilo
  - The University of Hawaii - West O’ahu
  - The University of Hawaii - Manoa
  - Honolulu Community College
  - Hawaii Community College
  - Leeward Community College
  - Windward Community College
  - Kapiolani Community College
  - Kaua‘i Community College

As a result of the information collected during the visit and a subsequent review of the detailed notes, comments and observations, it does appear that Kuali Student Curriculum Management
KS CM will meet the individual and collective needs of the University system. KS CM provides the ability to manage both courses and programs, provides a communication tool (workflow) to help facilitate coordination of course changes between campuses, and through security allows the University of Hawaii institutions to maintain individual processes if desired. Below in this report is a more detailed albeit high level review of the events of the visit. Also attached to this report is a preliminary project plan that outlines the general tasks and effort that will be required should the University decide to move to KS CM. Lastly, the complete set of flow-chart diagrams of the existing Program and Curriculum processes mapped during the visit is attached to provide additional perspective on the complex and comprehensive nature of the current process and related redesign efforts. Given what the onsite assessment team has learned, it is our recommendation that the University consider migrating to KS CM.

Visit Highlights

The engagement encompassed several different activities in order for the rSmart team to gather as much pertinent information as possible in a short period of time. Some of the key information-gathering activities that occurred during the visit included:

- A review of Curriculum Central
- A review of Banner as it relates to courses and programs
- Several demonstration sessions of Kuali Student Curriculum Management
- Site visits to four of the ten institutions
- Detailed business process mapping
- Selected in-person interviews of all persons identified as being part of the curriculum development and management process

Curriculum Central Review

In order to understand the current circumstances around curriculum management at UH, the rSmart team was provided an in depth functional and technical review of the current system. Thanh Giang provided this through an in depth review of the functionality of the home grown
Curriculum Central system.

A few key points of Curriculum Central are:
- The use of multiple color displays and individual questions that are unique to each campus which allows each school to maintain its individual business processes and practices
- Multiple reports are available in the system that can give information based on a specific course allowing for granular information management
- Ability to route information to individuals for approval

A few key concerns that Thanh expressed about Curriculum Central were:
(Issues/Considerations)
- The vulnerability of the system - He is the only one who knows and works on the system.
- A high number of changes (requested customizations) causes issues with institutions affecting downtime and security.
- Besides being the sole resource supporting Curriculum Central, he is also contracted part time which makes keeping up with demand difficult.

Thanh expressed a great deal of interest in KS Curriculum Management. He indicated that he feels the system provides most of the same functionality as Curriculum Central and that moving to a more managed and supported system would benefit the institutions served by the current software.

Banner Review
In order to more fully understand the ways in which Curriculum Central interacts with the core student administrative system (Banner), sessions were held that explored the manner in which the current system interacts with it. During the meeting with the Banner User Group a the following were discussed: (Issues/Considerations)
- Curriculum Central does not interface with Banner causing a lot of dual entry and cut and paste. This leaves opportunity for entry error and takes more time than would automation
of information flow between systems.

- Communication among the campuses is a concern with the group and with students. New courses or changes to existing courses are sometimes discussed after the fact. This is causing Transfer Credit Articulation issues. Course content changes and the students are unaware of the change in transferability.
- CAPP (Curriculum Advising and Program Planning) for prerequisites is used at the University of Hawaii. If Curriculum Management is chosen, special attention will need to be given for this portion of the integration.
- The University of Hawaii uses Banner’s multi campus functionality and that will need to be taken into consideration when configuring a new software like Kuali Student Curriculum Management.

**KS CM Demonstrations**

In order to help provide context to the UH teams, demonstrations of Kuali Student Curriculum Management were given to the following groups:

- Curriculum Central Users Group.
- Faculty Senate.
- Chief Academic Officers.
- Curriculum Committee.

This afforded the groups the opportunity to see the system and learn more about its capabilities. Upon completion of the demonstration, attendees had the opportunity to ask specific questions related to the software. The overall consensus of the group was very positive in that they were clearly visualizing how KS CM might work to fulfill their needs. Items the team shared during the demonstrations include: *(Issues/Considerations)*

- Conversion of existing data and not losing any history of course changes.
  - All data currently housed in Curriculum Central, Banner Catalog information not currently in Curriculum Central, and other local curriculum databases will need to be converted into Kuali Student Curriculum Management.
- Integration with Banner.
The teams felt that without integration to Banner, moving to a new system would not give them any advantage to what is currently in place. KS CM is built so that it has the ability to integrate with other student information systems and integration with Banner would be a priority if the University chooses to implement KS CM.

Site Visits

In order to gain a more comprehensive understanding of the various institutions in the UH system, site visits were conducted at the following locations:

- The University of Hawaii - Hilo
- Hawaii Community College
- Leeward Community College
- The University of Hawaii - Manoa

During the visits, a demonstration of KS Curriculum Management was provided to onsite personnel. Because these institutions were unable to attend the Business Process Mapping meetings, each process for course creation and change management, program changes, and new program creation was reviewed. Upon completion of the visit, each institution had the opportunity to ask questions regarding Kuali Student Curriculum Management and what would be involved in implementing the system. Generally there was optimism and enthusiasm about a move to KS CM. Items that were expressed by the schools were: (Issues/Considerations)

- Availability of resources to implement Kuali Student Curriculum Management if the system is chosen for the schools
- Loss of history that currently resides in Curriculum Central
  - Suggested solution - Historical information should be converted into Kuali Student Curriculum Management as part of the implementation project if the University of Hawaii chooses to implement the system
- Loss of reports that are currently available
  - A reporting strategy should be considered as part of the implementation to address reports that are needed for each institution

Once each concern was discussed, teams were excited about the additional information.
provided in the Program Management portion of Kuali Student Curriculum Management and it’s ability to show courses and their relationship to programs, prerequisites, and course mappings. The addition of Workflow will also help with communication among all of the campuses when programs and course information are created or changed.

Business Process Mapping

A Business Process Analysis was performed with nine of the schools currently using or moving toward implementing Curriculum Central. The business processes that were reviewed were:

- Course creation and/or change management
- Current program changes
- Creation of new programs

Each process has been mapped into a visio document for a full picture of the processes currently in place. Through this exercise, the campuses were able to see just how different each was from the other and the team could get a true picture of what a workflow in Kuali Student Curriculum Management might be like. Through this process, the team could deduce that Kuali Student Curriculum Management would be able to address communication through the use of the software and workflow available with Kuali Rice.

While KS CM provides the ability for each campus to maintain the individuality of the processes for curriculum and programs, some fields should be reviewed more in depth and the institutions consider sharing values to help keep the system more manageable. While reviewing these fields for shared values, the University of Hawaii System may wish to take this opportunity to review the processes and possibly align the institutions with each other in certain aspects of the processes. This would likely require a more intense shorter-term effort but could yield significant streamlining of processes moving forward. While not mandatory, Smart would suggest this approach be seriously considered. If the decision is made to move forward with this idea, additional resources may be needed for the following: (Issues/Considerations)

- A single trainer for all campuses to ensure that all institutions are trained in the same business process. This person could serve as a resource to monitor new processes as needed and facilitate collaboration among the campuses, particularly during
implementation.

Scheduled In-Person Interviews

In addition to meeting with Thanh Giang, the team also had the opportunity to talk with Hae Okimoto and Joanne Itano. While meeting with Joanne Itano, there were two primary concerns that arose from the discussion. *(Issues/Considerations)*

- **Existing Data** - There was a concern that staff would need to re-enter data and lose the large amount of work and information that had already been placed into Curriculum Central. This work will need to be converted into Kuali Student Curriculum Management as part of the implementation if that is the route decided upon by the system.
- **Integration** - Integration with Banner is an imperative aspect with implementation of KS CM. If the system cannot integrate, moving to a new system would not be beneficial at this time to the University.

During the interview with Hae Okimoto, training was reviewed in regards to the current system and how training would be conducted if Kuali Student Curriculum Management was implemented. Training for Curriculum Centration is as follows:

- Training is housed at each campus and is conducted based on the individual needs of that campus
- Curriculum Central is introduced during Faculty Orientation
- Individual instruction on entering data is each campuses' responsibility

If a new system implementation was to take place, a generic training provided similar to that provided for Banner go-live would be a suggested approach.

**Project Plan Overview**

A high level project plan has been created for possible implementation of KS CM for the University of Hawaii system. It provides both functional and technical activities that will be needed to successfully implement KS CM. Included in the project plan is:
- **Define Phase**
  - Creation of the implementation team
  - Creation of the Project Charter
  - Governance
  - Definition of Success
  - Issue/Risk Resolution Guidelines
  - Creation of Project Budget

- **Plan Phase**
  - Creation of Detail Project Plan for both Technical and Functional Action Items
  - Analysis of Data (functional and technical)
  - Develop Testing Plans (functional and technical), Data Migration Plans (technical), Training Plan (functional), Reporting Plan (functional), Gap Mitigation Plan (functional and technical), and Communication Plan (functional and technical)
  - Installation of database and software for implementation (technical)

- **Implementation Phase**
  - Data Mapping (functional and technical)
  - Building of Values (functional and technical)
  - Testing (functional and technical)
  - Report Creation (functional and technical)
  - Security Classes (functional and technical)
  - Workflow (functional and technical)
  - Data Conversion (technical)
  - Data Integration with Banner (technical)
  - Mock Go Live Testing (functional and technical)

- **Close Out Phase**
  - Exit Interviews with team

The project plan includes duration of work days with both a low and high estimate. If the University wishes to expedite the implementation, it could do the following:

- Exclude data conversion
- Exclude Banner integration
• Collaborate on one single method of the curriculum management process across all 10 institutions

This would allow the University of Hawaii to begin using Kuali Student Curriculum Management on a faster time frame. Since these two items were imperative to the implementation, it is not recommended to remove this from the project plan.

**Suggested Personnel List**

- **Project Sponsor**
  - The Project Sponsor removes obstacles to a successful implementation, makes policy recommendations to the Executive Steering Committee, facilitates timely decisions on issues that need to be escalated to the Executive Steering Committee, and ensures that new systems and processes are designed and implemented in accordance with the project’s guiding principles and approved implementation plan.

- **Executive Steering Committee**
The role of the Executive Steering Committee is to provide executive level leadership for the overall project. The Executive Steering Committee is responsible for instituting the cultural, policy and organizational changes necessary to successfully implement the solution. This team would be presented with items that the implementation team may require guidance. (policy changes, decisions effecting multiple campuses, etc)

- Cross Organizational Leadership Team
  - This team facilitates the management of project participants across departmental boundaries during the planning and implementation of the solution. Members work with the Project Managers and Team Leads to establish project priorities and resource allocations. This team is comprised of a cross-section of functional users from various stakeholder offices. The team meets on a frequent and regular schedule to discuss project status and to identify cross-organizational issues and escalate those issues to the Executive Steering Committee where appropriate. This group provides the primary channel for cross-organizational communications related to the on-going implementation.

- Functional Work Teams
  - The Functional Work Teams are made up of subject matter experts and are responsible for configuring the bulk of the system based on the agreed upon project management methods.

- Reporting Team
  - The Reporting Team is responsible for creating go live reports based on the prioritized needs of the implementation team. This team, along with technical team, will exist past the implementation phase.

- Technical Work Team
  - Overseen by the Chief Information Officer, the Technical Work Team would consist of the Database Administrator, Programmers, and Business Analyst to attend to the technical needs of the system and implementation. This team would require backfill of current responsibilities during the configuration and testing period.

- Training and Testing Team
  - The Training and Testing Team is responsible for providing and overseeing the training of the campus regarding the use and maintenance of the system. The
team will also coordinate testing efforts across the various teams, as well as organizing the mock go live testing activity.

- **Data Standards Team**
  - The Data Standards team provides guidance in relation to values and practices that will be configured during the system implementation. This team can be the same team as the implementation team, or can members from the Banner® Oversight committee.

- **Project Management Team**
  - The Project Management Team oversees the day to day aspects of the implementation, managing timelines, goals, resource allocations, conflicts, and communication between all teams and committees.

### High Level Timeline

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<th>2013</th>
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<td>Security Configuration &amp; Testing</td>
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**DA&CM = Data Analysis and Conversion Mapping**

**PPC = Project Plan Creation**

### High Level Budget

rSmart has included a high-level budget estimate for implementation support services that might be considered to assist UH with the implementation of KS CM. This assumes that the above timeline is applicable. Further, these estimates assume that each of the 10 UH Institutions will...
desire to have individualized processes. These numbers could be less if the University is able to collaborate and select one central method for Curriculum Management. In that case, these number could be 30%-40% less.

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<tr>
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<th>Duration</th>
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<td>KCA Project Manager</td>
<td>17 Months (1/2 time)</td>
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<td>KCA CM Functional Consultant</td>
<td>17 Months (1/2 time)</td>
<td>$205,000 - $225,000</td>
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<td>KCA CM Technical Consultant</td>
<td>12 Months (3/4 time)</td>
<td>$216,000 - $230,000</td>
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<td>KCA Contingency</td>
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<td>*Estimate Total</td>
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*Plus travel expenses

KCA - Kuali Commercial Affiliate

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<td>UH Project Manager</td>
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<td>UH Business Owner</td>
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<td>UH Technical Resource</td>
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<td>UH Rice Technical Resource</td>
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<tr>
<td>UH Infrastructure Costs/Labor</td>
<td>17 Months</td>
<td>TBD</td>
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<tr>
<td>UH Reporting Specialist</td>
<td>12 Months (1/2 time)</td>
<td>TBD</td>
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Fees for UH personnel have not been included as rSmart does not have that detailed information. rSmart expects that UH will form a traditional project team and that many members of that team will be current UH staff. However, we are quite happy to work on a more detailed budget with UH should you choose.

**Technical Considerations**

- Data Conversion
  - Data will need to be converted from three databases (Curriculum Central, Local...
Databases, and Banner®) into Kuali Student Curriculum Management.

- Real time two way feed
  - As part of the implementation, Kuali Student Curriculum Management will be integrated with Banner® Student Catalog updating courses based on the parameters set by the University of Hawaii.

- Multiple RICE instances
  - Currently the University of Hawaii has multiple RICE instances for various applications. Prior to implementing KS CM, the team may wish to combine these into one RICE instance.

- RICE Upgrade
  - The University of Hawaii is currently on RICE 1.0. If the decision is made to not install another RICE instance, the upgrade to RICE 2.X (2.0 or higher) will need to take place due to KS CM is currently running on RICE 2.0.

- Reporting Tool
  - Kuali Student Curriculum Management does not have a report writing aspect within the database. Therefore, a decision will be needed to determine which report writing tool would best fit the needs of the University of Hawaii. This tool can be used in combination with other software utilized on campus. (ex. Banner®)

- Workflow Complexities
  - Depending on the business practices adopted by the University of Hawaii, workflow integration based on campus and college could be complex in nature.

- System Security
  - Due to each campus wishing to maintain its individuality, the University of Hawaii wishes to base field choices and views on security classes. This will add a significant amount of complexity to the system and considerations should be made on the staffing for such maintenance.

Conclusion and Next Steps

In conclusion and as mentioned in the Introduction, as a result of the rSmart engagement it is clear that Kuali Student Curriculum Management would serve as a suitable replacement for the current Curriculum Central application. Some of the benefits that could be derived by moving to
KS CM include:

- Comprehensive automated workflow
- Automated information exchange
- Safe reliable data using the most modern tools
- Multiple users collaborating on courses at the same time
- Reduced vulnerability due to a single system resource for the current system
- The addition of program management
- More consistent training around process and system use
- As a result of project of this nature, increased collaboration and communication in and amongst the various UH campuses

During the visit, rSmart observed complex and very individualized processes that the various institutions in the UH system employ to handle the curriculum and program management and approval process. These variations are clearly demonstrated in the various process diagrams. So, while KS CM is a very viable replacement, the University of Hawaii will need to determine if KS CM will be the system of choice and how to go about implementing the system. For UH to be successful with any replacement, this will require a thorough and thoughtful approach in order to understand and account for all of the unique business processes present across the UH institutions. Suggested next steps for the University may include:

- A review and discussion around a decision to move to KS CM
- A discussion around timing
- Budget planning
- Preliminary project and resource planning