Project Initiation Form

UAccess Research Service Major Version Upgrade

# Initiator Information

Mike Simpson  
Assistant Director, Enterprise Applications Technical Services  
UITS Enterprise Application Services  
mgsimpson@email.arizona.edu  
520.621.0152

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# Scope

## Rationale

The UAccess Research service is currently based on the Kuali Coeus 3.1.1 product line; the current Kuali Foundation release version is 5.2.1. The KC 5.x product line offers greater stability and additional functionality desired by the research business offices that use the service. Basing our local implementation on a current release will also make interaction with the Foundation code base (upstream fixes, contributions) more efficient, and enable us to exchange code with other KC 5-based partner institutions. Finally, we will take advantage of the upgrade to re-tool our system architecture, development processes, and release build/test/deploy automation, and then apply the knowledge and efficiencies gained to the intended future UAccess Financials (KFS 5.x) upgrade.

## Impact

The current primary user of the UAccess Research service is the Office of the Senior Vice President for Research (VPR), including Sponsored Projects Services (SPS), the Office of Research and Contract Analysis (ORCA), and the Human Subjects Protection Program (HSPP). Expanded functionality deployed as part of the upgrade will be used by several other compliance offices, including Conflict of Interest (COI) and the Institutional Animal Care and Use Committee (IACUC). Also note that the Proposal Development functionality is used campus-wide by UA researchers; future campus rollouts of other functions are planned by VPR post-upgrade.

## Partners

The UAccess Research service delivery staff (functional and technical) within Enterprise Applications Services (EAS) will be the lead group on the project; the VPR business offices identified above will contribute resources towards functional evaluation, requirements gathering, user acceptance testing, and report specification. Enterprise Information and Analytics (EIA) will participate in data warehouse and report development. Select staff from Infrastructure and Client Services (ICS) will be minimally involved in a technical consulting role early in the project. The Mosaic Environment Team (MET) will provide Oracle expertise, consulting, and integration with existing Oracle systems under the existing service agreement. Upstream code will be pulled from the Kuali Foundation, and bug fixes and enhancements will be contributed back to the Foundation as requested. Kuali development staff at partner institutions (e.g., Indiana, MSU, Cornell, UC-Davis, et al.) will be consulted on an informal basis throughout the project, either directly or through the Foundation-maintained support lists.

## Plan

* **Phase 1, Service Integration (0.35 AFTE, 2 months, 5/5/2014 – 7/3/2014)**
  + Prior to the beginning of functional development, a number of architectural and design issues need to be examined, and solutions implemented, tested, and confirmed. The build and deployment automation needs to be created, and upstream and downstream code integration with the Kuali Foundation planned. Initial environments need to be provisioned, and delivery support tooling (e.g. configuration management, quality assurance, environment management) needs to be established.
  + Milestones:
    - **M0** – Project Kickoff – 5/5/2014
    - **M1** –Service Integration Start – 5/5/2014
    - **M2** – Service Integration Complete – 7/3/2014
* **Phase 2, Module Delivery (6.55 AFTE, 10 months, 7/7/2014 – 5/8/2015)**
  + Primary development will consist of five overlapping delivery cycles (each cycle composed of requirements gathering, functional remediation, and knowledge management). The first three delivery cycles will upgrade existing deployed functionality; production cutover to the new system will occur at that point. Two final delivery cycles will delivery additional new functionality to the live service. Primary project-based development will be complete at the end of the fifth delivery cycle.
  + Milestones:
    - **M3** – Module Development Start – 7/7/2014
    - **M4** – First Delivery Cycle Complete – 11/21/2014
    - **M5** – Second Delivery Cycle Complete – 1/2/2015
    - **M6** – Third Delivery Cycle Complete – 2/13/2015
    - **M7** – Production Cutover – 2/13/2015
    - **M8** – Fourth Delivery Cycle Complete – 3/27/2015
    - **M9** – Fifth Delivery Cycle Complete – 5/8/2015
    - **M10** – Module Development Complete – 5/8/2015
* **Phase 3, Service Stabilization (0.70 AFTE, 2 months, 5/11/2015 – 7/10/2015)**
  + Following the completion of primary development, a two-month service stabilization period will allow for any remaining high-priority fixes or enhancements to be delivered. Once stabilization is complete, the upgraded service will transition into sustaining mode.
  + Milestones:
    - **M11** – Service Stabilization Start – 5/11/2015
    - **M12** – Service Stabilization Complete – 7/10/2015
    - **M13** – Project Wrap – 7/10/2015

# Value

## Improvement

This project **significantly improves** operational efficiencies, service reliability, or service availability.

Transfer of a significant portion of service infrastructure provisioning to the Amazon Web Services (AWS) cloud infrastructure-as-a-service (IaaS) offering will lower service cost (by using scale-as-you-go capacity rather than up-front purchasing), enhance availability (decreasing time and effort required to deploy additional environments or scale existing environments or service tiers, and providing expanded failover and disaster recovery scenarios), and increase efficiency (by using available AWS automation services rather than developing local solutions).

Upgrading to a current Kuali Foundation release line (KC 5.x), along with re-architecting current tools and processes for upstream integration, local build/test/deploy, and downstream contribution, will make all of these activities significantly more efficient than currently possible with the legacy code line (KC 3.x), and increase our ability to leverage development efforts at partner Kuali institutions through sharing of fix and enhancement code. Upgrading to KC 5.x will also increase service stability due to the increased maturity of the product.

## Enhancement

This project **significantly enhances** existing service functionality.

Functionality enhancements in the KC 5.2.1 release, as compared to currently-deployed release, include: enhancements and bug fixes to previously released modules (Proposal Development, Budget Development, Grants.gov S2S, Proposal Hierarchy, Institutional Proposal, Awards, and Institutional Review Board); additional modules (Conflict of Interest, Subawards, Negotiations, Report Tracking, and Institutional Animal Care and Use Committee); Kuali Rules Management Service (KRMS) integration; and upgrades to more-current versions of the underlying Rice workflow engine.

## Mitigation

This project **moderately mitigates** risk caused by inadequate systems or processes.

**Although the currently-deployed production service is meeting the originally-defined business needs, campus demand for the added functionality available in newer versions is increasing. In addition, as long as UA continues to base its service on an outdated KC code line, it will incur increasing efficiency costs as other institutions update to later versions, and new KC-based institutions come online: upstream fixes and enhancements will become increasingly difficult to integrate; downstream contributions will require more extensive redevelopment; and UA will lose opportunities to take advantage of ongoing development efforts at partner Kuali institutions.**

## Policy

This project **moderately affects** existing policy.

This project is in alignment with the UA strategic goal of improving productivity and increasing efficiency, and supportive of the goal of increasing achievements in research, scholarship, and creative expression. It aligns with EAS organizational goals of delivering agile, efficient, and effective services, and optimizing physical resources and virtual reach.

# Context

## Urgency

Although there are no hard deadlines for project start or completion, see above under “Mitigation” for details on the increasing impact of delaying a UAccess Research service upgrade.

## Budget

* **Labor:**
  + A 2.0 FTE increase in EAS headcount was requested and approved as a necessary condition for undertaking this project. In addition, 1.0 FTE of BSA and 1.0 FTE of developer staffing will be shifted from UAccess Financials to UAccess Research for the duration of this project.
  + Note that following the completion of this project, the additional FTE will be applied to the planned future upgrade of the UAccess Financials service, and subsequently to the implementation additional Kuali Rapid Application Development (KRAD) services.
* **Operational**:
  + The largest operational cost will come from the use of AWS IaaS services; these will gradually increase as operational tiers (OTs) and environments are added:
    - OT 0 (global resources plus POC/DSO environments), $250/month, $3,000/annual
    - OT 1 (add DMO/DEV/TST/STG environments), $1,500/month, $18,000/annual
    - OT 2 (add PRD environment), $2,500/month, $30,000/annual
    - OT 3 (add SUP/TRN environments), $3,000/month, $36,000/annual
  + Most software licensing costs are avoided, due to planned usage of primarily open source tools and service support components; there are several exceptions:
    - New Relic (application monitoring), $15,000/annual
    - Note that Atlassian Jira, Atlassian Confluence, Atlassian HipChat, and GitHub instances and services will be used by the project; the costs for these resources are shared across other EAS and campus teams and projects.
* **Capital**:
  + No capital expenditures are associated with this project.

(Project Management Oversight Team Completes Next Section)

# Action

Approved Not Approved

## Comments

(none)

### Project Director

Frank Feagans

### Project Manager

Mike Simpson