

Overview

The Kuali Student Functional Team is responsible for redefining the functionality and design of the "next generation" student information system within the framework of Service-Oriented Architecture (SOA). SOA uses business processes, packaged as well-defined, self-contained services, to define the functional capabilities of the system. This approach underpins the development of a comprehensive and fully-integrated student "services" system that exceeds the richness and robustness of current ERP solutions without sacrificing flexibility at the institutional level.

The purpose of the Application Architecture phase was to identify and analyze the services that cut across business domains. The phase resulted in four significant outcomes:

1. Documentation of High-level Business Requirements

The high level functionality of the eight business domain areas originally defined in the Program Charter were explored and articulated. This process led to the re-definition of some domains to reflect the discovery of new functional concepts. The resulting business domains are Learning Management Unit (LUM), Scheduling (SCH), Enrollment (ENR), Program Audit and Evaluation (PA&E), Admissions (ADMS), Financial Aid (FA), Student Financials (SFS), and Person Identity (PI).

An important element of this effort was to identify concepts to support the vision of Concierge functionality that will allow users to achieve their desired results more quickly and efficiently without having to know all the rules.

2. Identification of Service Candidates

The business requirements defined for each business domain were broken down into descriptions of service capabilities. Common capabilities were grouped into an initial set of 33 service candidates. The service candidates will be continually tested and refined in future phases against increasingly detailed functional requirements.

3. Domain Partitioning

The service candidates were analyzed and refined to clarify which services cut across business domains. A matrix was created to map dependencies between domains and services and among services. The service candidates were separated into logical groupings that will allow them to be worked on incrementally. This will help to scope future releases of Kuali Student.

4. Scoping of Services for Release 1

The results of the domain partitioning were used to identify the common service infrastructure services and Learning Management services to be examined further in the next phase of the project, Service Modeling and Contract Design for Release 1.

The Application Architecture phase was completed over a seven month period following the agile development techniques and the Services-Oriented Analysis and Design (SOAD) methodology defined in the Planning Phase of the Kuali Student Project.

The process of completing the phase generated validations and learnings that were considered as valuable as the project outcomes. Specifically, Phase 1 validated that SOA is an appropriate approach for building student information systems as the group identified numerous common services that met capability needs in more than one domain. As well, the work confirmed that diverse requirements from different schools can be accommodated in a common system. The team was able

to map existing requirements to the application architecture as well as incorporate new innovative ideas. Additional valuable insights to the process have been captured in the Appendices for the benefit of future teams facing similar challenges.