Sierra-Cedar Implements Student Real-Time Lead to Conversion Process with Oracle BPEL PM at Heald College

® **Heald COLLEGE**

BACKGROUND

Heald is a non-profit, regionally accredited private career college with campuses throughout the western United States in California, Oregon and Hawaii.

Sierra-Cedar implemented a real-time integration between Salesforce.com and Heald's PeopleSoft Student Administration System using Oracle BPEL Process Manager. This integration project required the implementation of 22 BPEL processes, each process having an average of 50 steps. At the time of deployment, there were 3,600 transactions being processed each day. The project took approximately 12 weeks which included designing the business process flows, process development, custom user interface development, and full user testing. With Salesforce.com and Oracle BPEL Process Manager in place, Heald's lead to student conversion ratio improved which resulted in a dramatic increase in student enrollment and retention.

Industry	Higher Education
Stack	• Oracle App Server 10.1.2 • BPEL Process Manager 10.1.2 • JDeveloper 10.1.2 • PeopleSoft Adapter
Integration Components	Oracle BPEL PM 10.1.2
Endpoints	• PeopleSoft 8.21 • PeopleTools 8.21 • Salesforce.com • Microsoft SQL Server 2000 (Dehydration and Endpoint)
Oracle BPEL PM Deployment	Single CPU Windows Server 2000 for BPEL PM, Microsoft SQL Server 2000

SOLUTIONS

Student leads are received from Heald's public website, spreadsheets compiled during high school campus visits, and various other sources. The goal for the admissions recruiter is to contact student leads in 15 minutes or less, thus providing a warm follow-up and higher conversion ratio. Once the leads are received and loaded into Salescorce.com, the admissions recruiter works the lead until they have paid an application fee and agreed to enroll in courses. At this point, the student's demographic and application information is sent to the PeopleSoft Student Administration system, where the remainder of the student life cycle is managed. Any student information updates entered into PeopleSoft are sent in real-time to Salesforce.com, providing the admissions recruiter with up-to-date information needed for up-sell and follow up calls.

Using Oracle's BPEL Process Manager, Heald was able to:
- Gain greater visibility into the full life-cycle of current and potential students
- Streamline the business process of converting Leads into Students
- Eliminate duplicate entry of student information in various systems
- Provide real-time student enrollment information to improve customer service and provide additional sales opportunities for recruiting staff
- Achieve a single source of truth for student information
- Reduced production support costs by eliminating duplicate PeopleSoft Emplids and routing error notifications to the appropriate support staff in real-time

Three initial touch points were identified in the recruiting and admissions business processes that required real-time integration. These touch points are shown in Figure A.

Load data into Salesforce.com

The first touch point is the loading of student leads into Salesforce.com. Several BPEL processes were implemented to integrate with multiple data sources and transform the incoming data into a canonical format. Once in the canonical format, the student lead information is passed to another BPEL process that executes complex business logic and inserts data utilizing the Salesforce.com Web service API. This design offers quick and easy integration of new lead generation systems and the encapsulation of the complex business logic that provides for maximum service reuse.

Migrate student information from Salesforce.com to PeopleSoft

After the recruiter has contacted the lead and the lead has agreed to become a student, the student's demographic, application, test score, and program data is transferred from Salesforce.com into the PeopleSoft Student Administration system.

Figure A: Process flow for Real-time Student Lead to Conversion Process
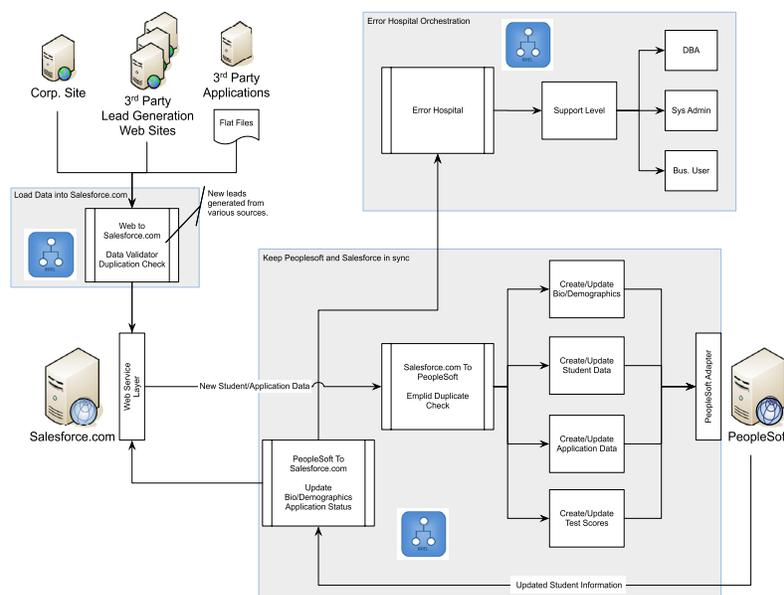
RESULTS AND BENEFITS

The automation of this process allowed Heald to determine the Additional Funds eligibility for all potentially eligible students and ensure those funds were disbursed to the students. Heald was able to provide their students with millions of dollars in additional financial aid assistance which would not have been feasible if these students were processed manually. Heald achieved a 600% ROI within a four-month time frame since it would have required over 150 additional personnel to process the loans in the same timeframe manually.

The solution created a framework of reusable services that will be used for further automation over the next few years, significantly reducing the cost of processing a student through the Financial Aid process. In addition, Sierra-Cedar's Exception Management System (EMS), which leverages Oracle Rules Engine, BPEL Process

Manager, and Human Workflow, was implemented. The EMS will be utilized at an organization level for all future web services.

In order to minimize development time and maximize the reuse of existing business logic within the PeopleSoft application, PeopleSoft Component Interfaces were created. The Component Interfaces encapsulate all of the business logic that is used by the PeopleSoft user interface to verify data input by a user is valid. The PeopleSoft Adapter is used to expose the Component Interfaces as Web Services to be consumed by the BPEL processes.

Several BPEL processes were created around the Component Interfaces to aggregate functionality into composite services, such as create student and update application, which contains additional complex business logic. For example, when creating a new student record the PeopleSoft system is searched for a match on the student's information before a new student record is created, thus preventing the creation of duplicate Emplids in the PeopleSoft system.

Keep PeopleSoft and Salesforce.com in sync
It's the recruiter's responsibility to monitor the student's enrollment status until the student has completed their first course. If the student doesn't attend their first class or drops out of an enrolled class, it is the recruiter's responsibility to contact them to determine the reason. This required keeping the student's information, now managed in PeopleSoft, updated in Salesforce.com so that the recruiter has access to the enrollment status and the student's most recent contact information.

Error Hospital
Heald's lead and student information is the lifeline of its business and delaying or losing this data between systems will seriously affect their business. Heald needed a way to properly moved data between systems without the need for constantly monitoring the integration layer.

An error hospital was created to centralize the handling of errors in the integration layer. The error hospital is designed to route errors to the appropriate support group and send email notifications that an error has occurred in a process. For example, if an error is the result of bad data, the error is identified as a business support issue and sent back to the recruiter who owns that record. The error hospital improves the support model and error response time by routing errors to the proper support groups.