

## Prompt

Submit a one page document outlining the challenge, solution, learning impact outcomes, and return on investment;

## Challenge

The University of New Mexico began the move from Blackboard Vista to Blackboard Learn in the fall of 2010. UNM had leveraged Vista's built-in capabilities to support real-time integration with Ellucian Banner for many years. To achieve parity between our existing system and our proposed Learn deployment, UNM New Media & Extended Learning (NMEL) investigated integration options and discovered that no comparable integrations existed.

## Solution

Blackboard announced their Service Pack 6 product soon after UNM started its Learn SIS integration study. Among other features, Service Pack 6 implemented a new integration framework with support for the IMS Enterprise XML 1.1 format. This is the same format used by the Banner LDI to communicate course listings, faculty enrollments, and student enrollments. Further research uncovered that the Banner LDI implements the well documented and supported JMS standard to transfer messages. Because Learn and Banner implement their SIS communications using open and documented standards, the resources to achieve a dual integration of Vista and Learn were readily available. I implemented and open sourced the LDI to Learn Bridge, a plugin for the Learn system that connects to the Banner LDI. The service consumes messages containing integration data via JMS, filters the messages according to business rules, and pushes them to Learn via the included integration framework.

## Learning Impact Outcomes

The LDI to Learn Bridge allowed NMEL to integrate with the University's SIS in a manner that is as good, or better, than that originally provided with the Vista application. Moreover, as a result of the LDI to Learn Bridge, the University of New Mexico was able to support a dual integration where both Learn and Vista are simultaneously integrated. This allowed NMEL to continue implementing the Learn product while maintaining the high level of service The University of New Mexico has come to expect.

## Return on Investment

UNM's initial investment in the LDI to Learn Bridge came in the form of a trip to the Blackboard World 2011 developer conference, and approximately 120 additional hours of research and implementation. The following returns resulted from this investment:

- ***Novel Dual-System Integration:*** The University of New Mexico now has real time integration for both of its production LMSs. By using infrastructure already in place, NMEL was able to implement an integration with a new LMS with minimal planning hours and without any additional purchasing or consulting. Without the LDI to Learn Bridge NMEL would have needed either costly consulting or a time-consuming manual process. The time savings over a manual process or consultation allowed development and implementation to continue with Learn while maintaining high quality with existing services.
- ***Rapid Response to Shifting Requirements:*** The LDI to Learn Bridge has facilitated NMEL's quick response to changing requirements. Without the plugin, changing

requirements require either a lengthy engagement with the vendor or time-consuming reworking of processes. Instead, with the LDI to Learn Bridge, adapting to changing requirements has only ever taken NMEL eight to sixteen hours. Moreover, because business processes remain largely unchanged even when requirements change, NMEL staff are able to continue implementing and supporting the LMS with little-to-no interruption.

- ***Increased Presence in the Blackboard User Community:*** By open sourcing the plugin, NMEL responded in the spirit of openness that made it possible. NMEL benefited from this openness because at least eight other institutions in the US and Canada choose to adopt, test, and report issues with the LDI to Learn Bridge. These institutions have benefited by being able to achieve their own Learn/SIS integrations while NMEL has saved dozens of hours in testing and development thanks to their input. The collaboration of the Blackboard community has resulted in a better product achieved more quickly than if it had been developed by NMEL alone.

As a result of all parties implementing open standards such as IMS Enterprise 1.1, UNM New Media & Extended Learning has been able to implement a robust and flexible solution to integration issues between Ellucian Banner and Blackboard Learn.