SUBJECT  LEARNING TECHNOLOGY ENVIRONMENT RENEWAL PROJECT (WAS NGDLE)

SUBMITTED TO  Learning & Research Committee

MEETING DATE  April 7, 2020

SESSION CLASSIFICATION  Recommended session criteria from Board Meetings Policy: OPEN

ACTION REQUESTED  Please indicate requested Board action: No decision requested: for information

SUBMISSION DATE  March 17, 2020

LEAD EXECUTIVE  Andrew Szeri, Provost and Vice-President Academic, UBC Vancouver

PRESENTED BY  Simon Bates, Associate Vice-Provost Teaching and Learning (Vancouver)

SUPPORTED BY  n/a

PRIOR SUBMISSIONS
The subject matter of this submission has been considered previously by Learning & Research Committee on the following occasions:

1. June 14, 2017 Closed Session
2. June 14, 2016 (Open) – presented for information
   (http://bog3.sites.olt.ubc.ca/files/2016/05/1.5_2016.06_Next-Generation-Digital-Learning.pdf)

EXECUTIVE SUMMARY
The Learning Technology Environment Renewal Project (LT Renewal) sought to replace the core of UBC’s ecosystem of tools and applications to support teaching and learning, previously Blackboard (locally called Connect) with a system that takes advantage of improvements in scalability and usability.

This project took a very different approach to engaging faculty and students in the assessment of needs, by involving them directly in the project. Faculty members were hired (through course buy-out) to consult with their peers about their needs; likewise students were hired through co-op, to do the same. The consultations indicated that usability was the #1 priority for both groups.

After a multi-phase procurement process, UBC selected Canvas by Instructure, and on June 12, 2017, signed a three-year agreement (with renewal options). Canvas was made available to faculty members in July and to students on September 5, 2017. UBC completed the transition to Canvas by September 2018. Connect was permanently decommissioned on February 1, 2019.

In 2014, in a benchmarking survey, fifteen percent (15%) of UBC faculty members indicated that they were satisfied with Blackboard ease of use, compared to 48% of faculty at peer institutions (and 56% of all faculty who participated in the survey). At present, 72% of UBC faculty rated overall usability and experience as positive; more than 80% of students agreed.

The final overall project cost was $4.31 million, which was within the $6.0 million budget approved at Board 3 ($4.6M + 1.4M contingency).

SUPPLEMENTAL MATERIALS
1. Post-Completion Report Learning Technology Environment Renewal Project (LTE Renewal)
Post Completion Report
Learning Technology Environment Renewal Project (LTE Renewal)
LT Hub: Centre for Teaching, Learning & Technology and UBC IT

9/1/2019

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1.0 Executive Summary

The Learning Technology Environment Renewal Project (LT Renewal) sought to replace the core of UBC’s ecosystem of tools and applications to support teaching and learning, previously Blackboard (locally called Connect) with a system that takes advantage of improvements in scalability and usability.

This project took a very different approach to engaging faculty and students in the assessment of needs, by involving them directly in the project. Faculty members were hired (through course buy-out) to consult with their peers about their needs; likewise students were hired through co-op, to do the same. The consultations indicated that usability was the #1 priority for both groups.

After a multi-phase procurement process, UBC selected Canvas by Instructure, and on June 12, 2017, signed a three year agreement (with renewal options). Canvas was made available to faculty members in July and to students on September 5, 2017. UBC completed the transition to Canvas by September 2018. Connect was permanently decommissioned on February 1, 2019.

The final overall project cost was $4.31 million, which was within the $6.0 million budget approved at Board 3 ($4.6M + 1.4M contingency).

2.0 Business Outcomes

2.1 Background and Business Need

Learning technology is increasingly seen as a key enabler for teaching and learning innovation and enhancement. UBC faculty have been using a learning management system (LMS) since 1996, when WebCT was created by a UBC computer science professor. That product was sold to Blackboard in 2005, and Blackboard ended support for the product in January 2013. In 2012/2013, UBC implemented Blackboard Learn (called Connect at UBC) after a two year community evaluation process.

Stability and performance issues at the start of the 2013-14 academic session caused significant disruption to faculty and students, eroding trust in the application and its performance. Data collected six months later from the 2014 ECAR benchmark survey of faculty and technology demonstrated widespread dissatisfaction with the system, in terms of availability, response time and ease of use. A wide-ranging consultation with faculty further confirmed this dissatisfaction.

As a result, we undertook a short, focused Learning Technology Ecosystem Project (LTEP) to create a vision for learning technology at UBC, to provide clarity on the current state of tools and services, to envision what a future state might look like, and to outline a roadmap to achieve the future state. Replacing the LMS was the first item on the resulting three year roadmap.
2.2 Project Scope

The tools and technology used to support teaching and learning have changed dramatically in the last decade and have gone from being ‘nice to have’ optional extras to essential elements of modern pedagogy. Faculty have been reconsidering how to make the very best use of class room time, blending in-person and online activities and interactions with course content and assessments. Hardware delivery platforms have changed: mobile has become important and will soon become the dominant channel for interaction with learning content. Learning management systems have evolved and become digital learning platforms, environments that integrate a wide variety of other tools and applications that share data. Ease of access to the data generated in learning interactions in various systems, so as to be able see progress and make near-real-time adjustments, is becoming more of a priority for faculty and learners.

As a consequence, UBC sought a solution that contained the core functionality required. At minimum, the system was required to have the ability to store and provision access to content; tools for communication within a course, between instructor and students and between students; tools for assessment and grade management; and a framework for integrating third party tools.

The following functions were within scope of the LT Ecosystem:

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Design</td>
<td>* Planning and conceptual design of a course by working backwards from the intended learning outcomes</td>
</tr>
<tr>
<td>Learning Content</td>
<td>* Selection, development and management of learning content to be delivered in a course</td>
</tr>
<tr>
<td>Learning Sequence</td>
<td>* Development and delivery of the sequence of learning activities that take place during a course</td>
</tr>
<tr>
<td>Assessment</td>
<td>* Development, delivery and management of assessment methods and tools to measure students understanding</td>
</tr>
<tr>
<td>Interaction</td>
<td>* Formal and informal interactions between faculty and students as well as interactions amongst peers during a course delivery</td>
</tr>
<tr>
<td>Feedback</td>
<td>* Feedback delivered from faculty to students as well as feedback provided by students to faculty (not part of formal evaluation processes)</td>
</tr>
<tr>
<td>Evaluation</td>
<td>* Formal and informal evaluation of an instructor, course, peer and/or learning experience</td>
</tr>
</tbody>
</table>

☐ In scope of the LT Ecosystem Project  ☐ Out of scope of the LT Ecosystem Project
At the beginning of the project, we worked closely with the Student Academic Systems Initiative (SASI) team to ensure that there was no unnecessary duplication in functionality, and will continue to work with the Integrated Renewal Program during the Workday Student implementation. At present, the decision is that all assessment activities, as well as the grades associated with them, will be part of the learning technology ecosystem. The results of those assessments will be passed automatically, though the level of detail in the grades transfer has not yet been decided.

Activities within scope of the LTE project were:

- Transition courses from Blackboard to Canvas through migration or redesign;
- Provide training for transition of course content and use of Canvas;
- Establish a pipeline for the Student Information System (SIS) and Scientia to automatically accept add/drop of students, teaching assistants and instructors into Canvas;
- Integrate learning tools into Canvas via the Learning Tools Interoperability (LTI) standard; and,
- Decommission Blackboard.

All items within scope have been achieved.

### 2.3 Project Benefits

<table>
<thead>
<tr>
<th>Benefit</th>
<th>How was this demonstrated?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Able to take advantage of technological advances such as mobility and cloud.</td>
<td>Canvas has Student &amp; Instructor Apps for mobile delivery; it is cloud native.</td>
</tr>
<tr>
<td>Improves usability for faculty &amp; students.</td>
<td>Canvas was selected for usability. Survey results demonstrate that this has been achieved. (See below)</td>
</tr>
<tr>
<td>Provides easier access to data on learning events.</td>
<td>Canvas provides ability for student / instructor access to learning data and emits standard learning events in real time, which are consumed in a UBC learning record store for later analysis.</td>
</tr>
<tr>
<td>Supports and facilitates easy integration of a wide variety of tools and applications.</td>
<td>Canvas is extensible; keeping up to date with interoperability standards is a contractual requirement.</td>
</tr>
<tr>
<td>Supports emerging pedagogical priorities.</td>
<td>Canvas is flexible; where further flexibility is required, applications can be integrated easily to provide a seamless experience.</td>
</tr>
</tbody>
</table>
# 3.0 Change Management

## 3.1 Strategy and Plan

<table>
<thead>
<tr>
<th>Faculty, Department, Unit or Group Impacted</th>
<th>Number affected</th>
<th>Impact</th>
<th>High Level Strategy and Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Administrators</td>
<td>80</td>
<td>Low – Medium (depending on role)</td>
<td>High level communication and engagement through regular updates, as well as meetings with two of Jennifer Burns, Simon Bates, Claudio Pini or Marianne Schroeder; gave Deans ability to determine how courses in their Faculty would transition.</td>
</tr>
<tr>
<td>All faculty</td>
<td>6,057</td>
<td>High</td>
<td>Hire faculty to talk to their peers; these faculty became champions in the implementation. Communication through web, social media, through email at all levels, through town hall and ability to ask questions directly of shortlisted vendors. Ten active courses in pilot across the institution in both systems. Faculty representation on the RFP selection committee. Website tailored to their needs. Regular input, surveys, invitations to talk directly to the vendor. Professional development opportunities (formal, drop-in, 1:1). 24/7 Tier 1 support for 24 months following launch.</td>
</tr>
<tr>
<td>All students</td>
<td>64,822</td>
<td>High</td>
<td>Hire students to talk to their peers; hire students to assist with course migration. Student created videos for their peers. Communication through web, social media, through email at all levels, through town hall and ability to ask questions directly of shortlisted vendors. Ten active courses in pilot across the institution in both systems. Website tailored to their needs. Student representation on the RFP selection committee. Formal usability testing. Regular input, surveys, invitations to talk directly to the vendor. 24/7 Tier 1 support for 24 months following launch.</td>
</tr>
<tr>
<td>Teaching Assistants</td>
<td>~9,000</td>
<td>High</td>
<td>Communication through web, social media, through email at all levels, through town hall and ability to ask questions directly of shortlisted vendors. Ten courses in pilot across the institution. Regular input, surveys, invitations to talk directly to the vendor. 24/7 Tier 1 support for 24 months following launch.</td>
</tr>
<tr>
<td>Instructional support staff</td>
<td>~80</td>
<td>High</td>
<td>Participation in procurement activities. Formal monthly meetings, information communication channel (slack), formal communication. Website tailored to their needs. Representation on the RFP selection committee.</td>
</tr>
</tbody>
</table>

**Impact Legend**

*High* – significant change in process, technology or behavior affecting over 50% of the stakeholder’s job. Significant impact  
*Medium* – a change in one of the above areas affecting between 25 and 50% of the stakeholder’s job. Moderate impact  
*Low* – a change in one of the above areas affecting less than 25% of the stakeholder’s job. Minimal impact
3.2 Client Survey

In May 2018 (1 year after launch) we surveyed students, faculty and teaching assistants to determine whether they had a positive, neutral or negative experience with Canvas.

![Overall Experience Chart]

We also asked them to compare their experience to the previous LMS.

![Comparison Chart]

Approximately one year later we surveyed faculty and students again, this time requesting information about usability their overall experience, as well as satisfaction with frequently used tools.
4.0 Project Outcomes

4.1 Lessons Learned

*Use past learnings to Guide Strategy*

- Emphasis on technology and functional parity with existing system
- Input from faculty members and students limited to functional testing
- Implementation support focused on producing exact replicas
- Disproportionate input from technical and instructional support staff
- RESULT: end users were frustrated (15% of faculty were satisfied with ease of use)
With Canvas, the team took a new approach
• Emphasis on pedagogy and on the needs of faculty and students
• Input from faculty and students led by peers seconded to the project
• Implementation support allowed for pedagogical transformation
• Appropriate level of input from all stakeholders, with faculty / student needs paramount
• RESULT: end users are satisfied (72% of faculty & 83% of students satisfied with ease of use in first year)

Keys to Success
• Peer-to-peer needs assessment
• Faculty and student involvement in the formal procurement process
• Selection focused on usability in a system designed for interoperability
• Faculty members encouraged try new functionality
• Faculty Deans’ offices drove implementation priorities
• Aggressive timeline to ensure deployment appropriate to the academic calendar

Demonstrated Results
• Positive feedback
• Increased user satisfaction (for faculty from 15% to 72% in one year; 80% of students describe Canvas as usable)
• Unanimous agreement that engagement and user input of the project made it a success (and we “can’t go back”)
• Demonstrated that with resolve, projects can be completed on a short timeline
• Community-wide adoption of Canvas

4.2 What went really well
As indicated in brief above, the engagement of faculty and students in peer consultation made a significant and positive contribution to this project, in part because it caused change management to begin with the launch of the project. Through this process, we were able to engage faculty in departments previously inaccessible to us, and the seconded faculty members, even post selection, were advocates both for the process and for the product.

The functional footprint from a single learning management system has decreased over time, with the addition of integrated tools that provide additional capability or flexibility. Faculty desire a greater choice of tools, so the one with the best fit for the pedagogical purpose can be selected. In this project, we looked only for core functionality, required at the centre of the ecosystem. This included the ability to store and provision access to content, tools for communication within a course, between instructor and students and between students; tools for assessment and grade management, and a framework for integrating third party tools. Structuring the procurement this way enabled us to concentrate on what matters, and allowed for flexibility (i.e., it did not lock us into doing what we’ve always done).
In addition, the speed with which the project was completed contributed to its overall success. Though the university is not set up for rapid deployment of this nature, the project team delivered according to the milestones set in advance.

Though not anticipated, contractual negotiations were also successful in that we achieved UBC’s first SAAS contract in a relatively short period, and we were able to get some contractual language that benefits not only UBC, but all higher educational institutions. It is now standard language for almost every vendor contract in the learning technology space.

5.0 Sustainment

5.1 Governance
Governance for Learning Technology was established as part of the 2014 community consultation mentioned earlier. Responsibility for learning technology is shared between CTLT and UBC IT, with operational staff co-located to ensure continuity and consistency of service. The LT Leadership Team (Deans/Associate Deans) provides high level guidance; other committees provide input to improve current operations, or to plan for the future. Detailed information is available at lthub.ubc.ca/governance.

For issues which require additional input and advice (e.g., the LTE project) IT Governance processes are also engaged.

5.2 Data Governance
The LTE project began just as data governance was initiated at the University. Throughout the life of this project, as well as the learning analytics project, we have worked collaboratively within the university data governance framework. The Learning Data Committee is the acting steward for learning data, and the principles established by this committee have been endorsed by the University Data Governance Committee. See learninganalytics.ubc.ca/ethics-policy.

5.3 Ongoing Costs
Costs are in US dollars and exclude taxes.

<table>
<thead>
<tr>
<th>Description of on-going cost</th>
<th>Cost</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canvas Cloud Subscription Year 1</td>
<td>US$ 1,061,721</td>
<td>Project</td>
</tr>
<tr>
<td>Canvas Cloud Subscription Year 2</td>
<td>US$ 1,156,173</td>
<td>GPO</td>
</tr>
<tr>
<td>Canvas Cloud Subscription Year 3 (no Tier 1 24/7 support)</td>
<td>US$ 1,045,000</td>
<td>GPO</td>
</tr>
<tr>
<td>Canvas Cloud Subscription Year 4 (no Tier 1 24/7 support)</td>
<td>US$ 1,045,000</td>
<td>GPO</td>
</tr>
</tbody>
</table>
6.0 Outstanding Issues
None.

7.0 Outstanding Risks
None.

8.0 Project Performance

8.1 AEV - Aggregate Estimated Value

<table>
<thead>
<tr>
<th></th>
<th>Business Case AEV</th>
<th>Implementation Strategy and Plan AEV</th>
<th>Ongoing Costs AEV</th>
<th>Final AEV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal UBC Resources</td>
<td>4.6M</td>
<td>4.31M</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other Costs</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Contingency</td>
<td>30%</td>
<td>1.4M</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Total Project Costs</strong></td>
<td>6.0M</td>
<td>4.31M</td>
<td>0</td>
<td>4.31M</td>
</tr>
<tr>
<td><strong>Sustainment Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal UBC Resources</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other Costs</td>
<td>0</td>
<td>0</td>
<td>2.09M</td>
<td>2.09M</td>
</tr>
<tr>
<td>Contingency</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Total Sustainment Costs</strong></td>
<td>0</td>
<td>0</td>
<td>2.09M</td>
<td>2.09M</td>
</tr>
<tr>
<td><strong>TOTAL (no contingency)</strong></td>
<td>4.6M</td>
<td>0</td>
<td>2.09M</td>
<td>6.69M</td>
</tr>
<tr>
<td>Contingency</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>TOTAL (with contingency)</strong></td>
<td>6.0M</td>
<td>0</td>
<td>2.09M</td>
<td>N/A</td>
</tr>
</tbody>
</table>

8.2 Under-budget Amounts and Unused Contingency
The project was funded by internal loan.
8.3 Schedule

<table>
<thead>
<tr>
<th>High Level Milestones, Approvals, and Gates</th>
<th>Implementation Strategy and Plan Dates (mm/yyyy)</th>
<th>Change Request 1 Dates (mm/yyyy)</th>
<th>Change Request 1 Dates (mm/yyyy)</th>
<th>Actual Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hire faculty / students</td>
<td>07/2016</td>
<td>n/a</td>
<td>n/a</td>
<td>07/2016</td>
</tr>
<tr>
<td>Issue RFP Stage 1</td>
<td>10/2016</td>
<td>n/a</td>
<td>n/a</td>
<td>10/2016</td>
</tr>
<tr>
<td>Pilot (with live courses)</td>
<td>01/2017 – 04/2017</td>
<td>n/a</td>
<td>n/a</td>
<td>01/2017 – 04/2017</td>
</tr>
<tr>
<td>Issue RFP Stage 2</td>
<td>03/2017</td>
<td>n/a</td>
<td>n/a</td>
<td>03/2017</td>
</tr>
<tr>
<td>Decision</td>
<td>05/2017</td>
<td>n/a</td>
<td>n/a</td>
<td>05/2017</td>
</tr>
<tr>
<td>First courses offered</td>
<td>09/2017</td>
<td>n/a</td>
<td>n/a</td>
<td>09/2017</td>
</tr>
<tr>
<td>All courses transitioned</td>
<td>09/2018</td>
<td>n/a</td>
<td>n/a</td>
<td>09/2018</td>
</tr>
</tbody>
</table>

9.0 Future Plans

Current contract is for four (4) years. There is an option to renew (at fixed price) for two additional years. A re-evaluation is expected to occur during year 4.