



New Zealand Productivity Commission  
PO Box 8036  
The Terrace  
Wellington 6143

5 May, 2016

Dear Sir / Madam

**Submission - new models of tertiary education inquiry**

Instructure is a United-States-based software-as-a-service (SaaS) provider to the global education market, including in New Zealand. Our key product is a Learning Management System (LMS) called Canvas which aims to make both learning and teaching easier for all types of schools, from primary to higher education.

We are pleased to make a submission to the Productivity Commission's inquiry into new models of tertiary education.

We have chosen to respond to three questions from the Commission's issues paper which are relevant to our area of expertise; specifically, the 'Trends in technology' section (see Section A – responses).

Some general comments are also included which the Commission may wish to consider (see Section B – general comments).

**Section A - responses**

*Q40 - How have providers' input costs and revenue changed over time? What are the implications of these changes?*

The education software market was previously based on the old model of expensive, restrictive licenses and ring-fenced, vendor-provided services from United States-centric vendors.

As technology has evolved, the market has moved to an open source and consumption-based fee model based in the cloud, with implementation / customisation services typically provided by a local third party in markets around the world.

As a true single instance, multi-tenant SaaS provider, our 'two-line price proposals' (i.e. an implementation fee and a subscription fee) are a completely new concept to New Zealand education software market.

In our experience, educational institutions' tender mechanisms have not caught up with this evolution and remain structured for the old model of complex software and service-based pricing.

Instructure invariably has to fill the entire pricing matrix with either 'not applicable' or 'included' and then add a single line item for each of our charges.

The implication of this is that the tender process copes very badly (if at all) with the true native cloud subscription pricing model which is fast becoming standard the world over.

*Q42 - What specific technologies should the inquiry investigate? Why?*

### **Single instance, multi-tenant architecture**

This architecture is the foundation of our product, Canvas. For vendors like ourselves the key advantage is that we only manage one version of the software, which means that the entire support team and the entire development team are focused on developing and maintaining only one version of the service.

This, in turn, means the customer is dealing with a much more focused, knowledgeable, consistent and responsive technical team.

### **True native cloud**

True native cloud offers almost perfect uptime and almost infinite demand spike management capacity. Good examples of this technology are Gmail and Facebook, which maintain stable uptime and consistent performance regardless of user volumes or demand spikes. In the Canvas world we have customers with hundreds of thousands of users whose demand spikes are potentially bigger than most universities' entire student populations, yet they have no performance issues or downtime as a result of sudden surges in demand.

Downtime, poor performance under pressure, and inconsistent support are very real, ubiquitous problems for those using other outdated technologies.

### **Agile development**

Although not a technology, agile software development practices mean that Instructure is able to maintain a regular product update regime. Regular (i.e. weeks rather than months) updates mean that the dreaded six monthly or 12-monthly upgrade disruption does not happen once Canvas is installed. The user experience is akin to Facebook and Gmail, where updates and upgrades go largely unnoticed, but the benefits from each gradual improvement are embraced by the user communities.

Some of our competitors' product updates can take up to five months for a large university to implement, and there may be two updates each year. The cost in fees and the diversion of internal resources is massive.

### **Open architecture and standards conformance**

Integrations to standards are upgrade-proof, because the standards do not change when an application is upgraded. Integrations to code often break after an upgrade and cause the institution significant disruption and cost. Our standards-based integration approach means that our integrations are as upgrade proof as possible.

- *Open APIs* - some of our customers are still engaging with other vendors who do not offer open APIs for integration. For example, there are Student Management System vendors whose offerings can only integrate with an LMS if the customer purchases or provides complex integration coding and code maintenance.
- *LTI* - Learning Tools Interoperability (LTI) refers to a specification, or standard, developed by the IMS Global Learning Consortium that enables the integration of internet-based learning applications with online platforms offered by learning providers. LMS LTI compliance allows the customer to choose their major toolsets for content provision, authoring, ePortfolios, conferencing tools, video services and much more. A non-compliant or partially compliant LMS can force customers to buy only the tools provided by the LMS vendor.

*Q43 – What parts of the tertiary education system are challenged by ongoing technological change? What parts can exploit the opportunities created?*

### **Challenged: procurement processes**

Procurement processes for New Zealand technical colleges / institutes tend to place more weight on price criteria than system usability. This potentially forces them to spend millions of dollars on a system that only 20 per cent of the institution will use, versus spending slightly more for a system that

over 80 per cent will use (illustrative numbers only). This in turn means that a desperate vendor with a poor service can win business by discounting to a point that creates an unsustainable, poor quality relationship for the duration of the contract.

As explained in our response to Q40 above, procurement processes do not accommodate a true subscription-based SaaS offering, which means that tender pricing templates can be completely unusable for true SaaS vendors like Instructure. True cloud-based SaaS is very different from simply outsourcing infrastructure, but contract terms and conditions often do not accommodate this.

#### **Challenged: IT Services teams**

The benefits of SaaS (application stability, 'infinite' demand spike management capacity, zero infrastructure headaches, continuous back-ups, almost 100 per cent uptime, device agnosticism, etc) are key to providing a consistent, high quality user service.

Established IT Services (ITS) teams can be very slow to articulate the benefits of SaaS to the institution's teaching and learning and academic audiences. These groups are often very mistrustful of ITS motives and capabilities, so look hopefully to the notion of putting service support and maintenance with a third party.

The opposite is true of a strategic ITS executive who will see SaaS as an effective way to remove a headache and to be seen as helping to improve service to the institution.

#### **Section B – general comments**

In our view, neither of questions 40 and 42 really address the very real issue of technology and education. The inquiry should focus not only on technology itself, but what technology enables.

The other part of the issue of technology in education is true adoption by teachers and students. True adoption is measured by genuine 'heavy' teacher and student interaction with the system. True adoption is enabled by 'intuitive' usability, which is in turn enabled by the technology (many of the established LMSs score low on usability, due in part to being based on much older, less accessible technology).

In our experience, unless the users - the students and teachers - are at the heart of the tender process, and are part of the testing experience, then the process quite often fails to find the right solutions for the right problems. The tender process becomes driven by price and maintaining the status quo, rather than adding value to the learning and teaching experience.

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Thank you for the opportunity to provide this submission. Please contact me if you require clarification on any of the above points, or if you have any questions.

Yours sincerely,

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#### **About Instructure**

Instructure, Inc. is a software-as-a-service (SaaS) technology company that makes software that makes people smarter. With a vision to help maximise the potential of people through technology, Instructure enables organisations everywhere to easily develop, deliver and manage engaging face-to-face and online learning experiences. To date, Instructure has connected millions of teachers and learners at more than 1,800 educational institutions and corporations throughout the world. For more information about us please visit [www.instructure.com](http://www.instructure.com)

#### **About the Canvas Learning Management System**

Canvas is Instructure's cloud-based Learning Management System that makes teaching and learning easier, from primary school through to higher education. Our tools are designed to be used online, on mobile and on tablet. The company's flagship client in New Zealand is the University of Auckland, which completed its implementation of Canvas in April 2016. For more information about Canvas please visit [www.CanvasLMS.com.au/](http://www.CanvasLMS.com.au/)