2015 Larry L. Sautter Award for Innovation in Information Technology

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Project Name
Instructional Cloud Computing Committee (IC3)

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Summary
As members and representatives of the UC Irvine community, members of the IC3 team work to provide a cloud software review process to promote instructional innovation while protecting the privacy and security of our students and campus community. Central to this effort is an open discussion of the challenges and opportunities of third party instructional technologies. Our review process and selection criteria reflect this goal as well as our guiding principles shared below:

- Engage in and provide a space for discussion around instructional technology
- Advocate for the needs, wants, and requirements of our students, instructors, and staff
- Ensure a safe, stable, and user-friendly technology environment
- Streamline the negotiation and procurement process

Problem
The use of cloud computing services at UC Irvine continues to grow at an increasing rate. This is a trend that is occurring at universities across the nation. Specifically, a variety of tools and services promise innovation and ease for instructors, a critical mission of the university. We found many instructors may not understand all of the risks of using these tools.

The ease of using or acquiring free- and low-cost services bypasses the established process for purchasing goods and services. The procurement process can include a comprehensive review of the item by Legal Counsel, Purchasing, the Office of Information Technology, the University Registrar, University Extension, and others as appropriate. This existing process cannot accommodate rapidly evolving cloud-based instructional technology, where individuals can immediately begin using the resource without any institutional input.

Instructors and staff can easily work outside the established process to identify and use cloud-based, free or low cost services that perform niche operations and market heavily to the academic community. Alternatively instructors are searching for tools that can perform specific functions, which are not provided by existing UC Irvine-developed services. Adoption of these tools tends to occur on an individual basis, and might coincide with a colleague adopting a different tool that promises similar functionality.

Instructors are increasing the liability for the University and potentially themselves, as often these services are being used with no contract with the University and no formal review of areas of risk such as privacy, security, and data integrity. Instructors informed us that they did not know where to get information about approved tools and indicated that, in some cases, the University did not provide the services and functionality they desired.
Solution
To address the problems stated above, the IC3 team has worked over the past two years to develop and mature a comprehensive review process and set of criteria for evaluating instructional tools. This required collaboration across multiple units and subject areas, as well in depth exploration of each tool and the associated click-through agreements to arrive at appropriate risk recommendations. To disseminate this critical information and to continue to gather feedback on needs and ideas, we developed a full website and are actively planning additional outreach events and presentations.

Collaboration
By bringing together representatives of different functional areas, along with subject matter experts, the IC3 process ensures a consistent set of criteria and review steps are taken with instructional cloud tools and services.

Process
The innovative review process was designed with a modular approach, which will allow the framework developed by IC3 to be applied to research, productivity, and more. The IC3 team began with the area of instructional technology because of the significant amount of instructional tools and the level of risk involved with implementation. Low cost and free cloud service providers are issues for all areas of the university and the review criteria can be re-used for areas beyond instructional technology.

Website (http://sites.uci.edu/cloud/)
A web resource was developed to educate the community on the process and review criteria, to provide a directory of services, and to solicit additional tools and services for the review process.

Award Criteria
IC3 helps to ensure student information is more secure, instructional technology is used with less risk, and more effective tools are used. By ensuring that lower risk tools and services are used in instruction, IC3 provides a mechanism for UC affiliates to interact with the broader academic community through free and low-cost services. In many cases, the free or low cost
service provides a mechanism to accomplish a complex and highly specialized function. The work of the IC3 group ensures that these tools are used in a lower risk environment. By reviewing and providing complete recommendations regarding these tools, IC3 increases the use of instructional technology, and informs instructors, teaching assistants and staff of the possible risk of use.

**Be innovative – present a unique, new, or different solution to a problem**

The IC3 process brings together a cross-functional team of technologists, risk managers, student data stewards, and instructors to find better tools and provide common solutions that elevate the university’s mission to teach. This process highlights and educates decision makers on different areas of risk of using cloud services and supports the procurement process.

**Improve operational efficiency and usability/accessibility**

The review criteria in use by IC3 ([http://sites.uci.edu/cloud/criteria/](http://sites.uci.edu/cloud/criteria/)) includes a wide variety of considerations, including operational efficiency and accessibility. If a functional expert identifies an area of concern with a tool, that is annotated in the review and published on the website. This helps to ensure that instructors understand the possible costs of using a tool, which could include accessibility, FERPA, security, and more.

IC3 maintains a prioritized list of tools within a queue that contains commonly used third party tools. The review process addresses functionality, ease of use, security, privacy, and legal risks. The formalized review includes a consistent set of questions and measurements for university service providers. IC3 increases the university’s ability to leverage low cost services while enhancing both the education experience and protections to students.

**Be shareable and readily implementable elsewhere at the University**

The materials developed by IC3 are modular, and can be implemented elsewhere. For example, the form that is currently used to review a tools has evolved into a Google Form, which could be shared then utilized by colleagues at other universities.

The documentation provided by the IC3 team is geared toward a variety of audiences, including instructors, students and vendors. The website includes best practices that are universally applicable. In addition, the documentation is currently presented in a WordPress site, which could be exported and imported by other institutions as needed.

**Demonstrate collaboration**

UC Irvine took a uniquely collaborative approach to the assessment of third party tools in instructional technology. The IC3 team combines individualized review of tools with a team discussion of the findings. This allows each member to contribute their own specialty, while taking advantage of the expertise of the entire team. Originally a collaboration of the Office of
Information Technology, Risk and Material Management, and University Registrar, IC3 has grown to include the Distance Learning Center.

Individual members of the IC3 team also contribute to systemwide groups, including the Educational Technology Leadership Group (ETLG), and Cloud Computing Task Force, which increases the collaborative nature of the group. In addition, IC3 is currently collaborating on the first contract with a free-tool provider, which will apply to all sites in the UC system.

Demonstrate assessable success criteria
The goals were to: create a repeatable review process, allocate collaborative resources to conduct reviews, create a directory of services, and educate the campus community.

The positive effects of the IC3 group have extended beyond the website and directory of tools and into a more engaged and informed campus community. As a first step, IC3 worked to clarify issues surrounding third party tools and cloud computing resources. Work group members uncovered specific questions of policy and practical limitations, identified conflicting definitions, and discussed the need for selection criteria and a review process. These discussions were informed by collaborations and participation in various committees focused on each of our functional areas.

In addition to each member informing members of our home departments, we took advantage of a number of outreach opportunities, including presenting at the Faculty Teaching Academy, sharing resources with the Office of General Council, and the OIT Directors.