The Pendulum Swings

The following excerpt is based on an interview conducted at the EDU-CAUSE 2010 Annual Meeting in October 2010. To listen to the full podcast, go to <http://www.educause.edu/er/Gruter-Andrew>.

Colin Currie: Oliver, as a CIO for a major university, can you tell us about some of the issues and challenges that keep you up at night?

Oliver Grüter-Andrew: I’ve been CIO at the University of British Columbia for only about a year now, and this is my first time in higher education. My earlier experience as a chief information officer or vice president for information technology has been in other industries. I spent several years in the retail industry, years before that in the energy and utility industry, and before that, in financial services. So unlike many of the great people I’ve met in higher education since taking on this role, I’m not a “lifer,” if you will. And that brings different experiences and also a lack of certain experiences. Things that some of my colleagues take for granted, having professionally grown up in university space, are often new and in many cases downright puzzling to me.

There are some things that—though maybe not keeping me up at night—give me reason to think. UBC, like many other large research universities, has made a significant part of its reputation in research. Over the last ten years we have made big strides on the research side, building a strong reputation in a broad range of topics and attracting top-flight researchers. But research is only half the bill, of course; teaching and learning is the other half. And the teaching and learning side is more of a struggle. If anything keeps me up at night, it’s that side. As a public university, we have very broad appeal to the new undergraduate population. Even though there are many other good universities in the province, there is an expectation that we provide the postsecondary platform for the broadest base of our population.

On our Vancouver campus alone (we have two major campuses, one in Vancouver and one in the interior of British Columbia), we have more than 30,000 undergraduates. The province comprises many relatively small communities outlying in the northern and interior part of the province. We have a lot of very young people coming to UBC, situated on the edge of the Vancouver metropolitan area, and they’re downright bewildered when they come to our campus. I’m not saying we stand alone in this challenge, but for many new students, the university is bigger than the town where they grew up.

How do we get these students settled? How do we get them to understand what’s important? What’s not so important? What to worry about? What not to worry about? How do we help them get a grip on the myriad sources of help that exist but that are not always obvious? We also have a large contingent of international students, numbering approximately 3,500 and leading to a similar issue. International students come from very different backgrounds, very different experiences. How do we bring them in so that they can be successful?

The students arriving at the university now are very, very technology-savvy. They live on their smartphones. They have come out of a high school environment in which a lot of the learning is online and digital. They expect a certain set of information that’s navigable for them—not just about their courses but about life at the university. And I’ll be honest with you: we’re not there today. Putting the right information in the hands of the students at the right time—making it easy for them to connect the dots, find their way around, get answers to their questions—is a work in progress. And so as CIO, I find myself very challenged with how to enable that for the university. That’s where probably more than half my effort is focused right now.

Currie: Let’s talk about research for a little bit. What do you think research computing will look like in the next three to five years, as opposed to where it is now?

Grüter-Andrew: Right now the trend is to get away from the microcomputer and back into the big computer environment. That’s the pendulum swinging back. Thirty years ago, the emphasis was on the mainframe and the Cray supercomputing environment; then with the rise of the SPARC workstation and the Intel chip, attention moved to small, deskbased computing.

Today, a lot of researchers still design and buy their own Beowulf clusters made of their choice of chips and memory and hard drives. With the push for more consolidated computing, certainly in the Canadian university space, I think we’re going to see more use of the cycle time on generic machines provided by aggregators within the industry, such as Compute Canada (WestGrid being the entity for the western Canadian provinces). And we’ll see researchers buying more cycle time again.

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But I also think that research computing is not just about high-performance computing, about the big cycle times. At UBC, we’ve seen a few instances of more innovative uses of social networking tools, of connectivity abilities through the development of web and mobile applications, coming into research and the display of research. I think that’s a big difference now. Research is more than ever before breaking out from the lab and into the open. Researchers are looking for ways to promote their work through channels accessible to a much broader audience than just their expert group within their chosen field.

Currie: How is openness changing what you’re doing from an IT standpoint, and what can your IT organization do to foster that type of thinking and sharing across the institution?

Grüter-Andrew: I think there are three layers of openness. There is the technology layer of openness—the layer that we, as CIOs and IT leaders, are very familiar with and have grappled with for many years. But there is also a policy layer of openness, and beyond that is a human nature layer of openness. I think we need to start with the latter, with an information owner who is willing to say: “There’s no harm in my sharing this information. It doesn’t hurt my reputation. In fact, it will enhance my reputation if I make this freely available.” And from there the issue moves to institutional policy and then to technology implementation.

Like many other research universities, we’re trying to pick up on a greater willingness to display information, and then we’re trying to put the tools in place to make that happen. Very clearly, when you do that, you have to work on open standards in some fashion. You can’t have different products being custom-developed in proprietary manners, not talking to each other. The tools to display and share information, to engage in dialogue online—they’re all there, they’re all interconnected now. There’s still a lower-level discussion about proprietary technologies and source systems, but I think that increasingly there is more willingness—even by historically very proprietary vendors—to make formats more accessible and to collaborate. It’s simply a natural tendency in the industry.

So yes, I think openness is very important. It starts with the human aspect. And it’s followed by the policy and then the technology aspects.

Currie: Many institutions are looking at the maturation of cloud services as an opportunity, whereas others view it as a challenge. How do you expect cloud computing to affect UBC?

Grüter-Andrew: UBC, along with other British Columbia universities and other public-sector entities, is in a challenging position on this. Privacy legislation makes it very difficult for us to store large quantities of data outside Canadian territory. That’s historic, but it’s also a reality for us today. So there are two ways we are looking at this. First, we are viewing cloud computing more as a concept than as a technological or subscription service, and second, we are considering how we can use it within the Canadian higher education space. CUCCIO (the Canadian Association of University CIOs) and the western Canadian universities in particular are looking at self-provisioning around cloud services. And we’re working very closely with some of our vendor partners to find solutions.

That’s the specific challenge we need to overcome. But generally speaking, cloud computing services are not really all that new. SaaS used to be called application service provider services. For me, the main difference today involves the usability and the use cases that are different from what they were ten to fifteen years ago.

I don’t think the cloud is or will be any more of a silver bullet than any other technology solution has been. It will have its uses. It already has very clear uses today, and we hope to take advantage of more of them. But I think there is going to be another swing of the pendulum, ten to fifteen years from now, when a breakthrough in quantum computing will put more power in our mobile devices than we currently have in the whole cloud. And then the pendulum will swing back again. Regardless, I am happy to go with the pendulum whichever way it swings, so long as it serves the university.

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