

## A New Day Is Dawning

A wonderful speaker recently told the apocryphal tale of colleges and universities in the “olden days.” In the days that predated the electrical grid, colleges and universities generated their own electricity. The leaders of this work were important people—in fact, they were the deans of electricity! The deans of electricity worried about a vast infrastructure of hardware: generators, capacitors, resistors. They oversaw a distribution system of power lines and underground cables. They squabbled over standards, and they established governance. Being a dean was tough. The job required a great deal of technical knowledge, and service was both mission-critical and erratic. But since the electricity dean often performed heroic feats, nearly everyone admired the dean.

As time went on, electrical power became widespread—even commonplace. The socialization of standards and the improvements in hardware made service increasingly reliable. In fact, service became so reliable that outages were almost the only time the campus community thought about the dean of electricity. Soon, colleges and universities no longer needed to produce their own electricity and were able to tap into electrical grids operated by a faceless cadre of suppliers somewhere off-campus. The deans of electricity retired and were replaced by directors of facilities.

The shift from producer of electricity to director of facilities was profound. Whereas the deans of electricity were engineers, technical wizards, and tinkers, the new facilities directors needed to understand economics. They needed to understand energy markets and risk management, and they needed to develop a portfolio of relationships that would



ensure a steady supply of clean power at rates the campus could afford. They needed to understand a tangle of laws and regulations. They needed to understand the academic mission and what parts of the campus—such as the hospital or the particle accelerator—had specialized energy needs, so that they could manage the power supply to meet peak demands and provide redundancy and emergency backup. Electricity remained more critical to the campus than ever; it just became less exotic.

Is it now time for those of us who manage higher education’s IT infrastructure to experience a similar shift? Have we arrived at the time when it is no longer our task to produce and deploy computing cycles, data stores, help desks, perimeter defenses, backup and recovery sites, or enterprise systems? Not likely. But can we imagine that there may come such a time? Should we envision and plan for a new land of milk and honey?

Yes, and soon. Our computing is almost good enough. Our standards are almost widespread enough. Our networks are almost robust enough, fast enough, and ubiquitous enough. The consumer IT marketplace is compelling enough. We are learning to virtualize. Do we dare look up from the cab of our locomotive to see the jet planes flying overhead? Utility computing is coming fast—and with it related concepts and practices like SaaS and cloud computing. Hyped? Of course. Passing trend? Likely not. Managing an infrastructure that is operated somewhere else, by someone else, is not an act of faith. It is simply a different kind of management, with a set of issues different from those we have perfected over the past sixty years.

Like the deans of electricity, we will facilitate connections to the global grid. We will manage standards, and we will translate academic needs into specifications. We will keep assets safe by managing the institution’s place in a diverse and increasingly global ecosystem. And none of this will be easy. But unlike the deans of electricity, we will not necessarily be diminished. As our attention shifts away from producing computing power, we must become adept at helping others use this power to accomplish the purposes of the higher education institution while assuring them that their rights in cyberspace will be honored and protected. More than ever, we will need to understand those purposes and speak the language of learning and discovery, so that we and our institutions will not be lost in the clouds. It’s the dawn of a new day.

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