A few weeks ago, I had the pleasure of participating in a round-table discussion on “cloud-sourcing” led by Adrian Sannier, Arizona State University’s iconoclastic University Technology Officer. Although the picture that Sannier paints is not identical to the one drawn by Nicholas Carr in his recent book The Big Switch, the two nonetheless share some key similarities. Both suggest that powerful economic forces and technical transformations will drive internal IT organizations out of business. As Carr puts it: “In the long run, the IT department is unlikely to survive, at least in its familiar form. IT will have little left to do once the bulk of business computing shifts out of private data centers and into the cloud.” Sannier reinforces Carr’s prediction by being the first to move a major university to cloud-based e-mail service, courtesy of Google.

As I listened to Sannier’s description of how well this move has turned out—the hundreds of thousands of dollars saved, the users’ warm reception of the new service, the transcendence of potential integration problems—my thoughts wandered back to the prolific EDUCAUSE CIO listserv threads on Carr’s position posted a few months earlier. I was reminded of the passionate criticisms leveled against Carr, and as Sannier’s session unfolded, I found myself reflecting on arguments in defense of the continued existence of internal IT organizations.

**Historical Precedent**

Predictions about the inevitable demise of internal IT organizations are far from new. In the 1970s, the debut of minicomputers prompted many to assert that centralized computer centers (and IT organizations) would soon vanish. They didn’t. During the 1980s, mainframes and minis were eclipsed by personal computers. Once again, the cry went up that central IT was doomed. It wasn’t.

The 1990s saw a steady stream of technological transformations: the commercialization of the Internet, the appearance of the World Wide Web, outsourcing and offshoring, the arrival of PDAs, and many more. Once again, predictions about the disappearance of central IT organizations were rampant. And once again, the predictions were wrong. Colleges and universities expanded their IT departments, built expensive new facilities, and elevated their IT leaders to cabinet-level “CIO” status.

The past few years have largely repeated the pattern of the 1970s, 1980s, and 1990s: visionary thinkers like Carr point out that convergent devices, unified communications, all-you-can-eat cloud-based utilities, and a combination of inexorable economic forces are converging to seal the fate of the IT organization. With few exceptions, however, IT departments in higher education appear to be thriving.

**The IT Dialectic**

What history has repeatedly shown is that although technological (and associated economic) transformations may render customary tasks of internal IT organizations obsolete, they tend to spawn technical applications that require a wide range of new IT tasks. For example, the advent of mini- and microcomputers—innovations that promised to move computing power from central IT organizations to end-users—instead triggered an institutional need for campus networking that augmented the role of central IT. Likewise, the “user-empowering” development of the web spurred the creation of content management systems, digital asset management systems, and a host of other utilities requiring central IT resources.

Time and again, the very tools designed to liberate end-users from central computing organizations have instead prompted the development of new growth within IT. The power and flexibility of today’s cloud-based utilities may have a similar impact: users are apt to discover new ways of using technology and, as a result, will require IT staff to provide services that are as yet undefined. While Carr cites the history of the electric power industry to support his contention that IT organizations are doomed, the history of the IT industry itself provides numerous counter-examples. In fact, if we use historical precedent as a guide, IT organizations should probably be on the lookout for more space!

**Improving the IT Mission**

Of course, in this case, history may not be a reliable guide. Perhaps the forces now in play will cause IT services to disappear into the cloud without triggering a new mandate for IT organizations. This certainly appears to be true of generic software services like e-mail. But is it true of core services?

The use of instructional and research technologies can differ significantly from one discipline to another, indeed from one individual to another. Although general-purpose utilities such as e-mail may thrive as free resources in the...
cloud, the software that faculty require for research and teaching often involve content-specific, hand-crafted, or highly customized tools. Such tools are not easily mass-produced; hence, they do not provide good opportunities for achieving economies of scale. They are inherently labor-intensive, whether supported by the institution or by external providers.

If IT organizations divest themselves of commodity applications, they will be in an ideal position to improve their missions and to focus more attention on applications that are vital to teaching, learning, and research. By lowering the cost of non-core IT services, cloudsourcing, community sourcing, and other strategies have the potential to free up resources for addressing essential needs such as cyberinfrastructure development. Rather than eliminating internal IT organizations, the forces cited by Carr and others are likely to prompt a dynamic reorientation of IT department priorities, rendering their continued existence all the more important to colleges and universities.

**Asking the Right Question**

A few weeks after Sannier’s round-table, one of my staff members handed me a copy of Clay Shirky’s recent book *Here Comes Everybody: The Power of Organizing without Organizations*. Shirky’s observations about the socio-technical transformations that have taken place in the past few years do not directly address the question of whether IT organizations will be around a decade from now. But what Shirky does illuminate is the fact that we may be focusing on the wrong question. The important question is not how these changes are affecting those of us who are IT professionals. The right question to ask is: How are these changes affecting the people we serve?

Shirky points out: “A profession exists to solve a hard problem, one that requires some sort of specialization. . . . Professionals become gatekeepers, simultaneously providing and controlling access to information, entertainment, communication, or other ephemeral goods.” As long as a hard problem exists at the periphery, ordinary people are directly dependent on professionals. That’s why people in the nineteenth century had to rely on telegraph operators and those in the early twentieth century depended on telephone operators. As communications technology matured, problems at the periphery declined until professionals were no longer needed. As Shirky observes, a similar maturation process is taking place within IT. Ordinary people are increasingly able to use such technologies without the assistance of IT professionals. And this is exactly what we’ve been after all these years: the holy grail of our profession is for faculty and students to be able to use the most robust technological tools possible—with the IT organization nowhere in sight.

**Less Is More**

If we are fortunate enough to realize this vision, the role of the IT organization will arrive at a turning point. Future success will be measured not by how much strategic leadership IT organizations provide but by how well they enable strategic leadership to be exhibited by others. Of course, this potential invisibility of IT may be unwelcome to those whose career goals depend on the continued ascendance of the profession. How many aspiring CIOs will be energized by the slogan “manage to obscurity”?

Forty years ago I encountered my first IT organization. It consisted of one person, tucked away in the sub-basement of a corporate headquarters. The value of this single individual, though unknown to most people in the corporation, was immense. Since that time, I have watched IT organizations grow in size and prominence, providing countless benefits to their communities. If IT organizations are to continue to make valuable contributions to higher education, we need to apply our problem-solving skills to the challenges of reducing our organizational footprints, lowering our resource consumption, and liberating students, faculty, and staff from their dependence on us. In a word, we need to become minimalists. Are we ready for that? Or will the profession that prides itself on being transformative resist this transformation?

**Notes**


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