The Space Between—and the Secret of Scale

Understanding how best to scale information technology is a challenge facing all segments of higher education, but perhaps the campus area most critically affected is administrative/enterprise systems. In the introductory article for this issue of EDUCAUSE Review, “The IT Service Organization for a Post-Enterprise World,” Tracy Schroeder writes: “The technology-service marketplace is increasingly focused either below the enterprise (i.e., on the consumer) or above the enterprise (i.e., on highly scalable, multi-enterprise, and often cross-industry IT services in the cloud).” Meanwhile, the “post-enterprise IT organization” exists in the space between—that is, in the layer between the consumer and the cloud.

The challenge of scale lies not only in finding efficiencies in the cloud: scaling can also mean personalizing services. Whereas many IT services require scale and the cloud to achieve affordability, such as aggregating enterprise services above the campus, consumerization joins the cloud as a driver of massive scale. Bring your own everything (BYOE)—devices, applications, and services—is possible only because of the cloud. Schroeder adds: “Consumerization has brought to students and faculty the capability to connect, collaborate, and compute at a level of quality and intensity that has rendered some campus-based services obsolete and has often overwhelmed campus networks.”

Administrative processes are thus being more closely scrutinized for efficiency and effectiveness—and cost. As the four co-authors of the article “We Built, We Bought, We Shared” ask: “Are there alternatives to spending another $5 billion?” They answer their question with a yes: “We have more than one option for addressing the cost challenges associated with enterprise/administrative systems. We have at least three: build-your-own; buy smart; share processes and software.” Each option can reduce the costs of administrative service systems, thereby allowing more resources to be applied redirected to the core academic missions of higher education: learning and research. Yet the authors caution: “How the software and services are acquired is not the strategic issue. The key is what leaders do with the software and services. The actual cost matters less than the value that an institution can drive out of the investment made.”

How can institutions find value? Reengineering administrative processes for efficiency may help. Schroeder notes: “Many campus processes and associated policies are organic or historical in nature and could be consolidated and streamlined.” She sees an IT opportunity: “This process analysis and optimization function is either absent or without a clear home in many institutions. The IT organization could move into this realm and make a significant contribution.” Writing in “The EDUCAUSE Administrative and Enterprise IT Program,” Betsy Tippens Reinitz agrees: “Most administrative systems are critically important to the operational work of the institution, but they do not provide a market-differentiating function. . . . Efforts to customize these systems and then maintain those customizations can add to system costs without adding value. The process of examining and redesigning work processes through [business process reengineering] can uncover opportunities for greater efficiency of administrative systems and processes.”

We thus return to scale, a crucial element in addressing the long-term resource challenges faced by colleges and universities today. In “Advancing Without New Resources,” Ron Kraemer articulates a tough reality for IT organizations: “No one is going to show up with a wheelbarrow full of money to address all of our institutions’ IT wants and needs.” He advises institutions to leverage “network, storage, identity, security, and platform services . . . beyond the physical campus.” Scale is the lynchpin to Kraemer’s view of the future. He predicts: “Future ERPs will be, almost exclusively, software-as-a-service ecosystems that are hosted and managed beyond any individual campus. They will still require
significant resources, but the *types* of resources will be pointedly different.

Even if the infrastructure and services reside elsewhere, “the enterprise IT organization still has a lot to do” in the post-enterprise world, says Schroeder. The interdependence of administration with technology means that no one has a more comprehensive view of institutional administration than CIOs and their staff—a view clarified by data and analytics. Kraemer writes: “We remain in the early stages of advanced analytics, but before long, every higher education institution will base its business decisions and strategies on sophisticated analytics.” Reinitz notes: “Business intelligence and analytics initiatives increase the degree to which administrative systems and the data they generate can inform academic and operational decisions.”

Clearly, IT leaders and organizations have a critical role to play. As Schroeder explains: “In the space between the consumer and the cloud, the post-enterprise IT organization can make key contributions, channeling technical possibilities in service to the institutional mission.” She continues: “Our institutions need our guidance and support. Our colleges and universities need us to make order of the chaos that is the tidal wave of IT services available today, to manage the total IT spend of the institution, and to help mitigate risks to the enterprise and the individuals who compose it.” The secret may lie in how we manage scale.

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