

The Myth about Managing IT

“The CIO Manages Information Technology.”

Information technology was initially used by scientists and engineers to store and analyze data. Mainframes, punch cards, and output bins dominated campus computing centers. As the PC appeared, as the Internet emerged, and as applications expanded, IT moved beyond the “glass house” to departments, faculty offices, and student computing clusters. Information became more accessible, and communication was streamlined. Memos gave way to e-mail. Photographic slides and transparencies were replaced by digital images and PowerPoint.

Today we have electronic information of all kinds: student information, financial information, research data, transactional records, donor records, medical images, climatological data, and so on. There is so much information that we seem to be drowning in it. The usefulness of the information is obscured by the sheer volume. To manage it all, we have chief information officers (CIOs). Of the top IT positions in colleges and universities in 2005, 35 percent had “CIO” in the title.¹ Whether officially in the title or not, “CIO” has been adopted to describe the head of a campus technology group. Yet although the word “information” is in the title, it would be naïve to assume that the CIO is responsible for all—or even most—of the information at a college or university. After all, the very purpose of higher education is to generate, codify, and disseminate information.

Information has minimal value in and of itself. It has greater value when it is shared, combined, analyzed, visualized, and used to make decisions. Sharing information, for example, involves more than the data and the technologies that make

it accessible; sharing information involves people and communication. IT facilitates this communication and collaboration. E-mail, instant messaging, mobile phones, and digital cameras have changed our notions of communication. In addition, many of these communication tools and technologies are now outside the purview of the institution. Likewise, collaboration involves much more than circulating documents. Technology enables the sharing of research instruments, the establishment of national and international virtual organizations, and the co-creation of new knowledge—thus transcending any single institution.

IT has great value for preserving the past, as well as for exploring the present and the future. Libraries and IT organizations are responsible for preserving the assets of the institution, whether those are audio recordings of a dying language, images of older manuscripts that are becoming too fragile to handle, or datasets collected over a lifetime of research. CIOs are being asked to do more than simply manage information technology—they are being asked to archive and preserve not just the assets themselves but also the historic applications and data formats that will someday be required to decode these archives.

CIOs and IT organizations exist within an institutional context, one influenced today by the public demand for transparency of information, accountability, and outcomes. Kenneth C. Green has highlighted a new role for IT. He argues

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that following the September 2006 Spellings Commission report *A Test of Leadership*, IT has a unique opportunity to help institutions address the increasing demands for more and better institutional data. “The question here no longer concerns *if* information technology has a role to play in the campus conversations and public discussions about assessment and outcomes. Rather, the issue before us in the wake of the Spellings Commission report concerns *when* college and university IT leaders will assume an active

role, a *leadership* role, in these discussions, bringing their IT resources and expertise—*bringing data, information, and insight*—to the critical planning and policy discussions about institutional assessment and outcomes that affect all sectors of U.S. higher education.”² This decision is not up to the CIO or to the IT unit but to senior administrators. However, CIOs may lead the discussion, explaining the value that IT brings and why it is important for IT to be a partner with other units.

Although only 6 percent of campus institutional research offices report to IT,³ there is a need for collaboration and synergy between institutional research and IT. Consider the implications of campuses using more data mining, data warehousing, business intelligence, and increasingly sophisticated decision-making and prediction tools to assess organizational performance. Deriving value from information requires that it be manipulated, analyzed, combined with different sources

of information, and modeled. Do IT organizations have the data management, cleansing, and analysis tools that will be required to develop these data marts?

The implications go beyond personnel or infrastructure. Who owns the data? For example, can a department refuse to share its data if it fears that the data might be used to make a decision about which programs to downsize? Can student data from a course management system—data that might be used to predict which students are at risk of failing a course—be used without the students' knowledge or permission? Or if the institution knows that a student is at risk, but it takes no action, is the institution liable for negligence?

In thinking about the CIO's responsibility for managing IT, the CIO and other members of the executive team should ask themselves the following strategic questions:

1. *Who is responsible for the preservation of information?* In a digital environment, preservation is no longer the sole responsibility of the library. Higher education cannot afford to lose the knowledge represented in the slide sets, original manuscripts, and collections of retiring faculty or others. How will the institution approach digital preservation of the unique assets that might bring knowledge and insight to the next generation of students and scholars?
2. *What will be required to address new regulatory requirements and accountability demands?* There is an increasing call for more institutional data to address accountability demands and government regulations. But what will be needed to respond? Although there is no universal student identifier that allows students to be "tracked" from one institution to another, the creation of a "unit record" may be mandated. If so, how can this tracking mechanism be meshed with the traditional higher education value of privacy? And how will such data be aggregated in an environment in which IT functions have migrated to individual units? Will data be recentralized? And if more data is required, what structures must be put into place to ensure that institutional information is valid, accurate, and au-

thoritative? What privacy and security protections need to be implemented? Who is responsible for those?

3. *Will we move from managing data to using it for decision support?* Although much of the justification for ERP systems was their role in decision support, few institutions have realized these benefits. Yet the pressures for institutional accountability make such information and systems even more critical. What is the role of IT in working with other units to develop institutional scorecards or to use analytics for modeling, prediction, and decision-making? Each of these techniques may be valuable in dealing with institutional challenges; what conversations must take place to ensure that the tools are not of interest only to the IT organization?
4. *Do we have the necessary intra- and inter-institutional partnerships in place to take advantage of today's analytical and decision-support possibilities?* Partnerships between IT and institutional research or between IT and enrollment management may lead to new insights for better recruitment and retention strategies. Collaboration among researchers worldwide may result in new discoveries and innovations. Is the campus leveraging IT to catalyze these relationships and insights?

Although managing information technology is important, that responsibility goes well beyond the CIO. Perhaps the more important role for the CIO is knowing what information will be needed, how to make it accessible, and ensuring that others derive value from that information.

Notes

1. Brian L. Hawkins and Julia A. Rudy, *EDUCAUSE Core Data Service: Fiscal Year 2005 Summary Report* (Boulder, Colo.: EDUCAUSE, 2006), 1, <<http://www.educause.edu/coredata/reports/2005/>>.
2. Kenneth C. Green, "Bring Data: A New Role for Information Technology after the Spellings Commission," *EDUCAUSE Review*, vol. 41, no. 6 (November/December 2006): 46, <<http://www.educause.edu/er/erm06/erm0661.asp>>.
3. Hawkins and Rudy, *EDUCAUSE Core Data Service*, 4.

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