

# Getting the Green Light for IT Funding

Traditional return-on-investment metrics are important when CIOs at colleges and universities build their case for projects at budget time, but competitive edge and impact on educational experience are also considerations.

- Tangible and Intangible Benefits
- Must-have Technologies
- Successful Projects

Like any other complex enterprise, a college or university has to balance competing budget priorities. Those who speak for IT must come up with compelling arguments if they expect to win the funding necessary to carry their projects forward. Technology spending decisions in higher education are, however, much more likely to be influenced by intangible factors — such as students' expectations — than the standard return-on-investment metrics that might prevail at a similarly sized manufacturer or retailer, according to college CIOs. IT managers in higher education use hard costs, revenue and efficiency metrics when they make a budget case, but understanding less quantifiable benefits offered by a technology and knowing the competitive landscape are at least as important in the effort to secure funding.

## Tangible and Intangible Benefits

"It's different than most businesses," says M. Lewis Temares, CIO of the University of Miami. "We do things for student comfort, for safety. We do things because we get kids who come here with perfect SATs and are used to technology as a part of their lives, and we want to keep getting them. We do things because it makes us more competitive, or it makes us different or unique. But that doesn't mean that the budget process isn't rigorous. Everything has to be justified, whether in terms of tangible or intangible benefits."

College IT managers probably should be using ROI more extensively to justify their projects, but metrics are hard to develop in educational settings, says Dwight Fischer, CIO of Plymouth State University in Plymouth, NH. Decisions on technology investments are usually driven by other factors, most often by the desire to reduce risk and liability, the need to upgrade existing systems, or the pressure to gain a competitive advantage in recruitment, he says.

"What we do doesn't translate into ROI easily," Fischer says. "Even with an MBA, I haven't been able to figure out how to make ROI metrics consistently apply to our budget process. There are differences between education and business."

O'Neal Smitherman, CIO at Ball State University in Muncie, Ind., has risen to the challenge of quantifying some apparent intangibles. Providing an enhanced educational experience does, after all, have an impact on revenue sources such as student recruitment and alumni giving. Smitherman acknowledges, however, that he uses different ROI metrics for academic, as opposed to administrative, projects.

On the administrative side, the return on automating a process or upgrading a system can be measured in FTEs freed up, money saved or the project's contribution to the primary mission of recruiting or course revenue generation, Smitherman says.

# Build Your Budget Case

## Here are best practice tips for getting funding for your next IT project:

### **Let your internal customers make your case.**

Most IT proposals come directly from consultation with advisory committees about the needs of the campus community. It makes sense to bring customers forward to express those needs before budget talks, says M. Lewis Temares of the University of Miami. Back up the customer support with figures on potential personnel and other cost savings.

### **Develop metrics where you can.**

CIOs at colleges and universities have to get comfortable with hard-to-quantify goals such as enhanced educational experience, but they shouldn't get too comfortable, says O'Neal Smitherman at Ball State University. Finding ways to measure ROI provide powerful funding arguments during budget negotiations and allow IT to assess its own progress.

**Prioritize.** Be clear from the beginning which IT projects are urgent because they will meet pressing needs, maintain critical services or yield significant savings, Temares says. Be equally honest about projects that are worthwhile but can be deferred or funded in stages.

"Every year I make a proposal, and everything in it would help enhance IT services for someone," Temares says. "But the administration has limited money, and they have to count on me to tell them what it means to do or delay a project."

### **Understand the bigger picture and the funding competition.**

Timing can be everything when it comes to spending requests. Large capital projects, whether they're a new library or a new network infrastructure, don't materialize overnight. IT managers should make sure they know what other funding proposals are on the table and minimize competition for the college or university's limited resources.

"The year the major building project goes up for funding is not the year for IT to propose a major infrastructure initiative unless it can be tied to the building project," says Wayne Brown of Johnson County Community College.

### **Make sure your IT is aligned with business goals.**

This is one way that higher education is exactly like any other business, says Dwight Fischer of Plymouth State University. Considerations such as supporting student recruitment and services, business services and alumni outreach should drive proposed IT projects rather than technology.

"There's certainly a different set of paybacks for academic technology projects," he says. "Take, for example, providing wireless access all over campus. First you ask 'Is there an educational need that's met?' Then you ask if the project will provide a strategic advantage. What do we gain beyond having less traffic on the wired network?"

In the case of wireless access, the competitive advantage was a significant branding opportunity, Smitherman says. He and his staff went on to develop metrics tied to recruitment and tuition revenues.

"We like to create metrics where we can because it helps us make judgments rather than guesses," says Smitherman.

Standard ROI metrics are used when they are appropriate, but the budgeting process in higher education differs from that in business in significant ways, says CIO Joanne Kossuth of Olin College of Engineering in Needham, Mass. The need for particular technology investment often bubbles up from advisory committees made up of students and faculty, and the administrative power structure is less hierarchical than it is in the corporate world, she says. Decisions are made on a more collegial basis.

"You certainly can't buy technology for technology's sake, but a good way to justify an investment — maybe the best way — is to say, 'Here's how it will improve the student experience,'" Kossuth says.

The looser decision-making process in colleges and universities makes it imperative to "talk to the right people" about IT investment, says Wayne Brown, CIO of Johnson County Community College in Overland Park, Kan.

"I go to the CFO and the chief academic officer, and we talk about projects and needs on a regular basis," Brown says. "The CFO will ask about ROI, but he understands the other factors. I also seek out faculty input and leadership, and meet with faculty on a regular basis."

## Must-have Technologies

Regardless of a CIO's budget strategy, some projects are always going to be easier to sell to administrators than others. But that list of "must-have" technologies changes with the times,

Miami's Temares says. Besides unglamorous but essential projects such as upgrades to critical systems, the items on the list often reflect student — and to some extent — faculty expectations.

"Our customers are students — faculty and administration, too — but students are the reason we're all here," Kossuth says. "It forces you to ask the question, 'Are we giving students the best possible educational experience?' And we're forced to keep up with all the technology that they expect."

The "must haves" also include technologies that are perceived as a response to threats manifested by events in the news — anything from reports of a serious Internet virus to disasters such as Hurricane Katrina. It's often easier to get funding for a project when there's fresh evidence of the potential consequences of the technology not being in place, Plymouth State's Fischer says.

"You have to be an opportunist in a good way about bad things — we just installed a campus-wide messaging system and are planning a siren system," he says. "And we certainly talked about disaster recovery here before Katrina, but we're a lot closer to getting the money to do it after the hurricane."

The following technology areas are receiving a lot of attention — and funding — in higher education today, according to the CIOs interviewed for this white paper.

**Emergency alert systems.** Plymouth State University is certainly not the only school to implement warning systems recently. Temares notes that this year the University of Miami is implementing a broad-scale instant messaging system that he asked for three years ago, but couldn't get the funding for it then. Any kind of technology project that enhances the physical security of those on campus is likely to get a favorable response at budget time. The return on an investment in student safety can't be measured, but its value is hard to argue against.

**Compliance technology.** As the regulatory landscape becomes harder to traverse for colleges and universities, compliance technology promises to mitigate risks to both finances and reputations. News of scandals from the corporate world have gotten the attention

# Getting the Most From IT Dollars

Along with the struggle to find funding for new technology projects goes a continuing effort to squeeze the most out of every IT dollar. Managing vendor relationships, licenses and contracts are the most effective, if not time-consuming, ways to stretch IT dollars, say CIOs in higher education. Below are some specific pieces of advice along with other strategies to make the most of the technology budget.

of administrators, who understand the need to get their compliance efforts in order, Olin College's Kossuth says. This is an area in which Smitherman sees an opening to turn a pain point into an opportunity — a marginal increase in the unavoidable investment in compliance technology can lead to dramatic improvement in reporting throughout the organization.

**Disaster recovery.** The kind of redundancy that is necessary to ensure that systems stay up and running is expensive, but most institutions of higher learning are ready to begin investing.

"We all need to do something about disaster recovery, even in Kansas, where it's hard to justify in some ways," Brown says. "What's the chance that we'll be hit by a tornado? We depend so much on technology that there's no choice but to find ways to ensure that it will be there."

**Systems that enhance online services.** Teenagers are the prime prospects for any institution of higher education, and teenagers are accustomed to living part of their lives online. Any technology that enhances a school's ability to offer services and do business online provides a competitive advantage, Fischer says.

**E-mail and related messaging technology.** Perhaps even more than in business, everyone involved in higher education "lives or dies by e-mail, whether it's text or instant messaging," Kossuth says. Along with pointing to its central place in campus communications, it's relatively easy to bolster a case for new or upgraded messaging technology with hard figures measuring the number and speed of e-mails processed. This is a case where metrics and intangibles meet in a persuasive funding argument.

**Wireless networking.** In order to match the competition, building or extending a wireless network has to be a top priority for any campus without total Wi-Fi coverage. As of last year, 51.2 percent of all classrooms in U.S. colleges and universities had wireless broadband access, and that figure was rising quickly, according to the "2006 Campus Computing Report" by the Campus Computing Project. No school wants to be on the wrong side of that statistic when prospective students start weighing their admissions options.

"No one is going to come [to the University of Miami] because we have wireless, but we better have it to keep up in a competitive environment," says Temares, who notes that his school was one of the first in the country to install a wireless network that covered the entire campus.

## Successful Projects

The best way to understand how CIOs gauge the ROI on their technology investments is to take a look at some successful projects. Some of the returns cited are in hard cash and easy to count, but intangibles such as customer satisfaction are equally significant.

## Virtualization Serves Up Real Savings at JCCC

Until this year, the cost and headaches involved in deploying servers to meet the growing needs of Johnson County Community College were getting out of hand, Brown says. Because every new computing function on the campus, which serves about 38,000 degree and continuing education students, was put on a separate physical server, each of them was running at about 10 percent of its processing capacity.

At an average cost of approximately \$5,000 a server, the physical machines represented wasted money and computing power. There was usually a delay of several weeks between the time the need for a server was recognized, and the machines could be ordered and deployed. On top of that, physical servers radiated heat, as well as used up a lot of electricity and maintenance time, according to Brown.

As costs and inefficiencies mounted, Brown and his staff looked for a solution in the virtualized world. Over the past year using VMware, JCCC has created 115 virtual servers at a cost of \$933 apiece, with each taking about an hour to be up and running.

Brown calculates that JCCC has saved approximately \$468,000 in the cost of physical servers to this point. That figure will increase with the creation of each virtual server, and the savings will recur every five years when the physical servers would have been replaced. The college will also save about \$56,350 annually on electricity costs using the virtual machines, as

- **Collaborative negotiations.** Join with consortiums or sister institutions to pool buying power for better deals from vendors, says O'Neal Smitherman of Ball State University.
- **Review contracts and licenses often.** The cultivation of vendors has to be matched by relentless revisiting of the agreements made with them, says Wayne Brown of Johnson County Community College. Brown also advises being tough with vendors who don't live up to agreements, regardless of the relationship. The advice of CIOs is straightforward, but requires plenty of time and attention: opt for short-term contracts, unless there's a very good reason to be locked into an extended agreement; review cell phone plans every month; renegotiate Internet access frequently; and keep a close eye on service contracts.
- **Careful outsourcing.** Contracting for services is often less expensive than keeping them in-house, and the University of Miami outsources such items as telephone service and data recovery, says M. Lewis Temares. He advises, however, that outsourcing decisions be based on performance as well as cost. The service has to be "both more economical and more efficient" than it would be if it were done in-house.
- **Consider software as a service.** Increasingly software is available as a service online, says Dwight Fischer of Plymouth State University. Many schools are looking at student e-mail or even emergency alert systems as services that they can hand off to a vendor for less money than the cost of hosting them in-house.

well as the recycling costs for the physical servers.

Those numbers by themselves add up to significant ROI, but there are additional benefits to the virtualization project, Brown says. The virtualized environment is easier to manage than physical servers, providing a clearer view into computing assets. It also presents new options for disaster recover and reduces maintenance time and costs.

"I think this is a great project," Brown says. "It saves the college money and has so many other functional advantages, including saving time for the IT administrators."

## SAN Sense at Olin College

Three years ago, Kossuth and her staff at Olin College of Engineering started looking for the storage area network they knew the school needed. Just five years old at that point and with a technical focus, Olin had started out with a state-of-the-art converged network. Because of the college's cutting-edge infrastructure, Kossuth decided to go with an IP-based SAN.

Olin bought two EqualLogic PS100E units, with a total of about 7.5 terabytes of storage for less than \$100,000, Kossuth says. The SAN was set up in an hour. The speed and ease of implementation translated into immediate savings.

"We didn't need to hire a storage manager, and the college didn't have to pay for two weeks of contracted engineering support," she says. "We went into this project and purchase asking how we could support the technology without added cost and without added work."

The long-term infrastructure savings and benefits are significant. Because the SAN is IP-based, there is no limit to the number of servers that can be attached to it. The SAN freed up servers that would have been used

for storage space. It provides the foundation for remote data replication and for planned virtualization projects. Integration issues have been almost nonexistent, as the SAN has had no negative impact on the way Olin's applications perform.

Olin's sister institution, Babson College in Wellesley, Mass., also bought two of the EqualLogic units, and they are joined with a fiber connection, which provides disaster recovery and business continuity options for the schools.

"This is not a flashy project, but it shows that with due diligence you get real payback on things like TCO, interoperability and ease of management," Kossuth says.

## Pictures and Sound at Ball State

At Ball State University, connectivity and access to IT assets are a given. Liberally sprinkled around the campus are more than 21,000 computers — about one for each student — and every classroom has wired and wireless connections to the university network and the Internet.

But until late 2005, persistent problems with the multimedia presentation technology in large lecture halls were frustrating faculty and students and running the university's lean staff of support technicians ragged.

In order to remedy the situation, Smitherman and the IT department set out to streamline the management of the various media capabilities in the classrooms — sometimes faculty were juggling as many as eight switches or remote controls — and to bring help to struggling presenters without sending a technician across campus.

Over the past year and a half, Smitherman and his staff have installed audio-visual networking controller boxes in each of 17 lecture halls on campus and tied them to

touchscreen LED displays. This simplified management system allows one-touch control of an array of presentations, including DVD video, PowerPoint, sound, output from either of the two computers in each room, as well as connections to telephone lines and the university's Ethernet network.

Part of the installation included a new Epson projector for each of the lecture halls, with models varying in relation to the needs of classes typically held in the room. Miniature versions of the same system, using large-screen displays, are also being rolled out to Ball State's smaller classrooms.

Not only has the project made technology in the classroom easier to manage, but the network connection allows support technicians to fix many problems remotely. Since the system has been installed, more than 80 percent of problems have been resolved in less than five minutes, Smitherman says. The controller also automatically turns the system off when it's not in use and monitors it for problems.

The project has cost less than \$1 million, with each of the lecture halls coming in at about \$60,000, Smitherman says. Return on the investment comes in many forms — the most tangible are dramatically reduced downtime and staff troubleshooting time and longer life for equipment that's not left running, with significant savings even on simple items such as replacement projector bulbs. Frustration levels of faculty and students have been cut and, perhaps most important, there's also a significant education benefit, Smitherman says.

"We're providing an infrastructure that encourages faculty to use technology to enrich their teaching," Smitherman says. "Instead of stick figures drawn on the blackboard, they can have animation. They have so many more options."