# Roadmap

*TOOLS FOR NAVIGATING COMPLEX DECISIONS*

# Information Technology Funding in Higher Education

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## KEY FINDINGS

➤ Public institutions are experiencing deeper cuts in IT funding than private institutions and are substantially more pessimistic than their private counterparts about IT funding.

➤ Institutions that align IT spending with institutional priorities believe that they get more value from technology investments.

➤ While financial flexibility is critical to maintaining reliable IT operations and helps foster technology innovation, IT budgets are increasingly consumed by fixed costs.

➤ Nearly two-thirds of respondents report that their budget is not increasing sufficiently to cover the costs of maintaining new technology.

➤ Institutions that employ business cases, consistent evaluation criteria, empowered advisory groups, and structured decision processes to select IT investments report achieving greater value and competitive advantage from information technology investments.

➤ While CIOs and CBOs largely agree about the value and importance of technology, CBOs are more confident than CIOs that their institution is providing adequate funding to maintain technology.

### Effective IT Funding Practices and Success Drivers

| Practice | Percent of Respondents |
|---|---|
| Senior IT leader member of the cabinet | 44.6% |
| Senior IT leader member of budget committee | 45.7% |
| Adequate funds to research and experiment with new technology | 19.8% |
| Adequate funds to respond to new user needs | 22.0% |
| IT budget process aligns IT priorities with institutional priorities | 77.0% |
| IT budget process responds to changing environment | 58.4% |
| IT budget process based on set of well understood management principles | 45.8% |
| Senior-level advisory group prioritizes IT projects | 33.6% |

Funding information technology in higher education is a major concern not only for institutional chief information officers (CIOs) but also for institutional chief business officers (CBOs) and other executives. In today's challenging environment, reducing costs and obtaining adequate funding are major concerns. Years of economic downturns, shrinking state allocations, endowment challenges, and rising health care and energy costs have forced colleges and universities to examine all aspects of institutional funding, including those associated with IT. The EDUCAUSE Center for Applied Research (ECAR) study, *Information Technology Funding in Higher Education,* explores this critical issue with both CIOs and CBOs to provide an institutional assessment of IT budgets, funding, and investment decision-making practices.

ECAR's research finds that current IT fiscal circumstances could undercut higher education's longer-term ability to meet the rising technological expectations and requirements of students, faculty, and staff. Survey respondents report that the maintenance of current and legacy technology is increasingly consuming

*This ECAR Roadmap synthesizes 482 EDUCAUSE and 386 National Association of College and University Business Officers (NACUBO) responses to a July 2004 survey, as well as interviews with IT and financial leaders at 11 higher education institutions, and it summarizes the 2004 ECAR study,* Information Technology Funding in Higher Education, *by Philip J. Goldstein. To order the full study or to learn about subscribing to ECAR, visit the ECAR Web site at http://www.educause.edu/ecar/ or contact us at ecar@educause.edu.*

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## POTENTIAL IT COST-CONTAINMENT STRATEGIES

➡ **Across-the-board cuts:** Although across-the-board cuts are recognized to be a short-term solution to reducing costs, 41.1 percent of the institutions report using such cuts to control costs, making them the most frequently cited cost-cutting approach reported.

➡ **Minimize supported technologies:** By reducing the number of technologies supported, institutions can reduce human resource requirements and vendor maintenance costs.

➡ **Consortia or shared purchases:** Institutions are banding together to obtain significant discounts by jointly buying hardware and software.

➡ **Cut renewal and replacement:** More than 27 percent of survey respondents plan to delay needed renewal and replacement of hardware and software as a means of containing costs.

➡ **Use open source:** One-third of the survey respondents report considering the use of open source software as a way to contain costs; another 21.6 percent plan to implement open source software.

IT budgets and that future funding may not be sufficient, either to maintain existing technologies or to meet new needs. The study reveals several drivers and practices that facilitate successful IT funding efforts, including

➡ aligning funding and institutional priorities;

➡ creating fiscal flexibility to support innovation;

➡ constructing and facilitating a structured, transparent IT budget process; and

➡ making the CIO a member of the institution's cabinet and budget committee.

### IT Leaders Strive to Maintain Sufficient Funding Levels

IT survey respondents report a 5 percent mean growth in budgets from FY 2001 to FY 2003. While 25 percent of the respondents saw their budget increase by more than 10 percent during this period, another 44 percent report that their budget was flat or in decline. Public institutions report a significantly lower mean rate of growth in their IT budget (1.85 percent) than do private colleges and universities (5.25 percent).

When asked about the IT budget share of the institutional budget, 65 percent of respondents report that their IT budget maintained its share of the institutional budget from FY 2001 to FY 2003. Public institutions, however, agree to a greater extent than their private institution counterparts that their budget declined in proportion to the institutional budget.

On average, public institutions report that their funding level is not sufficient to meet their strategic objectives for administrative computing, academic/research computing, and instructional technology. When asked about the adequacy of current IT funding overall, respondents are most comfortable about the sufficiency of current funding for administrative computing and data communications to meet strategic objectives.

Respondents are less confident about future funding than current funding. They agree, however, that administrative computing and data communications are likely to be funded sufficiently to keep pace with investment requirements. Respondents from public institutions display less certainty than private institution counterparts about the sufficiency of future funding.

### Funding Flexibility Enhances IT Value

Overall, respondents indicate that 75 percent of IT spending at their institution comes from the central IT budget, though this portion varies by Carnegie class. Doctoral extensive institutions report the smallest portion (57 percent) of their IT budget coming from the central IT budget. Most CIOs do not feel that their institution is effectively managing either the central IT budget or distributed IT spending.

One of the key success factors identified in budget management is having the flexibility to move funds between operational and strategic areas. For example, respondents indicate that the greater their budget flexibility, the greater their confidence in their ability to maintain reliable IT operations. Associate and smaller institutions report the greatest flexibility in budgeting, and doctoral institutions report the least. It is likely that the smaller institutions use consultants and contractors as needed to augment their resources. Respondents with more flexible budgets also report that they are better positioned to respond to new user needs and to fund innovation.

Without significant growth in IT budgets or the implementation of significant cost-containment strategies, the challenge of funding maintenance will create future IT budgets that are even less flexible. Already, 64 percent of the respondents report that their budget does not increase sufficiently to cover the costs of maintaining new technology.

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## IT Investment Decision Making

ECAR studied how IT investments are made to determine what factors played a significant role in the decision making at the institutions. More than half of the respondents (59 percent) report that their senior IT leader approved all or all significant IT expenditures. However, at larger and presumably more decentralized institutions, IT leaders had less influence over some decisions than their peers at smaller institutions. This was particularly true in the areas of desktop computing, instructional technologies, academic/research technologies, and Web support services.

Fifteen percent of respondents report IT investment decisions based on a tailored process for evaluating IT investments. The majority of the institutions (63 percent), however, use the same process for IT decisions as for other major funding decisions. Fully 97 percent of the institutions prepare a business case for their IT investment requests. Overall, respondents think their business cases perform well in effectively identifying how to capture benefits, predicting benefits, and presenting one-time costs.

When asked about the criteria for IT investment decision making, more than 67 percent of the respondents report that the primary criterion is cost. This is followed closely by fit with institutional strategy (65.6 percent) and the potential to improve productivity (64.1 percent). IT projects identified in the institution's strategic plans are the easiest to fund, and IT projects are easier to fund if there is a business case prepared to support them.

## IT Cost Containment: No Easy Answer

Two-thirds of the survey respondents report that they face increasing pressure to reduce IT costs, with the pressure greater at public institutions (70 percent) than private institutions (56 percent). The primary factors driving the need to cut IT costs are institution-wide cuts (76.8 percent) and cuts in state allocations (49.8 percent).

ECAR's checklist outlines several IT cost-containment strategies currently under consideration by respondents: using across-the-board cuts (41.1 percent), using consortia or shared purchases (38.6 percent), and minimizing supported technologies (34.4 percent). Cost-management strategies vary by institution size, with smaller institutions more likely to use outsourcing than larger institutions. Larger institutions are more likely to pursue the elimination of duplicate IT organizations.

Respondents are generally not confident that outsourcing and external development firms have the potential to reduce IT costs. Fewer than 18 percent of the respondents agree that outsourcing can reduce IT costs, and fewer than 13 percent think that external development firms would achieve future cost savings.

When asked about new sources of revenue, 64.3 percent of the respondents cite pursuing external grants. Increased fundraising (41.7 percent) and higher student fees (35.1 percent) are also cited by many respondents.

## CBO and CIO Comparison: General Agreement Except on Money

ECAR surveyed CIOs and CBOs to gain an institutional perspective about IT funding, and at 63 institutions, both responses were paired. In general, CBOs agree with their CIO colleagues about the value of IT. They believe technology is a source of competitive advantage for their institution (74 percent). Other CBOs identify their institution as an early adopter of technology (52 percent) and say that their institution's identity is tied to technology (44 percent).

Yet CBOs are more optimistic about the adequacy of IT funding, with 67.8 percent of CBOs reporting that funding is sufficient to maintain IT operations reliably and 51.1 percent believing that the funding is sufficient to meet strategic IT objectives. This is especially true at the paired institutions, where CIOs believe their budget is not increasing adequately to maintain the new technologies they are implementing. This difference in perception in the life-cycle funding adequacy for technology is one area where CIOs will have to work with their CBO counterparts to establish the cost of technology renewal and replacement.

## RECOMMENDATIONS

The foreseeable future will witness rising IT costs, especially in the area of instructional technologies, IT security and identity management, and system maintenance. At the same time, IT budgets are expected to be flat. It is imperative that institutions find ways to do more with less. Based on its findings in *Information Technology Funding in Higher Education,* ECAR offers the following recommendations to meet the challenges of funding IT:

1. **Create a flexible and agile environment for IT. Some suggestions include the following:**
   - Institutions need to create a culture of agility in workforce and resource utilization. Workforce utilization needs to respond quickly to changing institutional needs. Strategies such as outsourcing to offshore or near-shore resources, shifting staff from operational to strategic innovations, and reassessing organization and staff utilization patterns need to be considered.
   - The IT architecture must be flexible and able to quickly adjust to changing conditions and challenges. Strategies such as using an ASP for applications systems; implementing a complete integration strategy; applying open source systems and components; and moving to a standards-based, "plug-and-play" infrastructure with modular design to reduce the complexity of integration and shared services can increase IT infrastructure agility.
   - Improvement in both business and IT processes are needed to respond to ever-changing conditions. IT budget policies need to be developed that enable campus leaders to quickly respond with innovation and enhance flexibility. Refining IT decision-making processes by adopting standard investment review processes, incorporating objective evaluation criteria, and empowering IT advisory groups to establish investment priorities will improve both agility and IT effectiveness.

2. **Focus on IT projects that contain institutional costs, align with institutional priority, and provide institutional differentiation.**
   IT organizations must become facile at quickly implementing targeted projects to respond to ever-changing institutional needs. Projects focused on institutional strategies and priorities can create opportunities for the institution to differentiate itself from its higher education peers. They can also improve IT value and reduce costs.

3. **Rethink sourcing strategies.**
   As new needs arise, institutions should consider the broadest range of sourcing options, including collaboration with other institutions, ERP or other vendor software, outsourcing, and open source technologies. Both one-time and ongoing support costs and benefits should be considered.

4. **Commit to total cost of ownership.**
   Institutions need to commit to a culture of assessment with a view toward total cost of ownership. To preserve future budget flexibility, institutions must adopt a policy to always evaluate the cost to maintain a technology once it is implemented. Only through continual evaluation and improvement can institutional IT needs be met without additional funds.

5. **Rationalize total technology spending.**
   Institutions need to focus on their total IT spending, not just the central IT budget, and take steps to promote collaboration and limit duplication of IT services across the institution. The choice is not simply whether to centralize or decentralize services. Rather, the need is to better coordinate IT spending and service delivery.

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