

Assessing and Forecasting Facilities in Higher Education

PART 2

Section IV: Critical Facilities Issues

How the critical issues were identified. The premise of the Thought Leaders symposium is that facilities leaders have much to contribute to the major challenges facing higher education. This year, as they took a comprehensive view of the higher education environment, participants felt their contribution mattered more than ever.

Participants followed the procedure used in previous years to identify the specific challenges facing educational facilities and facilities managers. Eight issues were identified by symposium participants, along with critical questions. The questions are the heart of the exercise: **They are intended to guide facilities professionals and university leaders in the discussions at their own institutions.** A major goal of the Thought Leaders Series is to help individual colleges and universities assess where they stand and help them develop strategies for the future.

One critical point: readers of the previous Thought Leaders reports might notice some issues have been added to the list and others removed. This does not mean that issues not carried over from the previous years have gone away as priorities. Instead, the issues identified each year are those that arose in discussion as the most critical at this time.

1. Crafting an integrated strategic plan.

The Issue: Smart strategic plans give individual departments and institutions as a whole a framework for decision-making even in tough, unpredictable times.

Strategies:

- Create a strategic plan that will help your organization focus on its top priorities even during hard financial times.
- Focus on aligning your organization with the mission of the institution to ensure continuity of focus and direction.
- Confront the challenges of cost, access, and competition.
- Analyze your organization, structure, and financial

system for their long-term sustainability and economic viability.

Strategic planning isn't new at colleges and universities, yet many in the institution still see plans as meaningless exercises. In fact, effective strategic plans are powerful management tools. When they work, plans are the result of hard effort by teams that seek to understand the institution's goals and plot its future. After achieving buy-in from faculty, staff, trustees, alumni, and students, the plan becomes a bedrock document dealing with issues ranging from enrollment demands to curriculum shifts to fund raising goals.

Good institutional and organizational plans provide significant benefits. First, they can help the entire campus community get a sense of both its goals for the future and progress toward those goals. Clemson, for example, developed an annual report card that measures progress on 26 specific goals; the president reports quarterly on these goals to the Board. Second, strategic plans provide guidance during tough times by keeping the focus on agreed-upon priorities. The University of Central Florida, for example, points to its strategic plan as providing guidance not only during five years of rapid growth but also in the last three years of major budget cuts. The university's provost cited the plan as helping UCF retain its culture and priorities in the face of financial crisis.

Strategic plans play important roles for the facilities department as well as for colleges and universities as a whole. Savvy organizations craft plans that keep their efforts in alignment with the mission and vision of the institution. They address facilities issues in detail and can be critical in prioritizing the multiple challenges confronting facilities leaders every day.

Thought Leaders participants endorsed the importance of goals and suggested several critical elements of good plans:

- **Assessment.** Strategic plans need to provide an honest review of the institution's current situation—what is sometimes called “environmental scanning” by

professional planners. A facilities-specific plan will evaluate the overall status of the campus built environment as well as the organization intended to manage and maintain it.

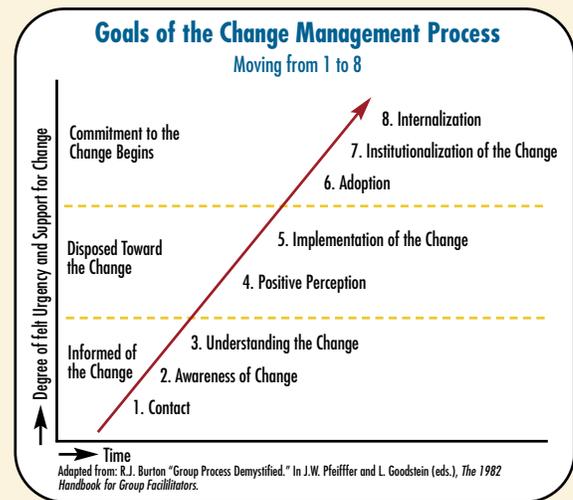
- **Mission.** Plans must include the mission and vision of the institution, a mission and vision determined by and agreed upon by the entire campus community. The facilities organization plan will address the mission of the department and ensure that mission is in alignment with that of the institution as a whole.
- **Communication.** Strategic plans are worth little if they're sitting on a shelf. Plans must be distributed throughout the campus community, and the community needs an opportunity to understand and buy in to the plan. The same goes within a department: staff need to understand the plan and their role within it.
- **Adaptability.** Plans provide guidance in times of change, but plans also need to respond to change. Some experts propose institutions rethink the timeframe of their plans from ten to five years to accommodate this era of transformation. In any case, plans need to be evaluated annually to determine what's working, what's not, what's irrelevant, and what's missing. Further, plans need to remain relevant even when the leadership of the institution changes. Similarly, facilities department plans should be regularly assessed to ensure they remain in sync with the institution's plans and goals and relevant to the current environment.

Questions for institutional dialogue:

- Does your organization have a usable and useful strategic plan? Is it a real plan, valuable to employees and relevant to management decisions?
- Is the plan in alignment with the mission, vision, and goals of the institution? Are resources aligned with the plan? What about metrics?
- Does your organization have a clear mission, vision, and goals?
- Does the plan include a process to promote awareness and acceptance?
- Is a process in place to assess the plan on a regular basis?
- How can you ensure the plan remains relevant if leadership transitions occur?

Data Point: Strategic planning
Steps of the change management process

Change isn't a one-step flipping of a switch—it takes time. Following is an overview of the change management process:



– “Strategic Planning in Higher Education: A Guide for Leaders” by the Center for Organizational Development and Leadership at Rutgers. Adapted from R.I. Burton “Group Process Demystified” in J.W. Pfeffer and L. Goodstein (eds.), *The 1982 Handbook for Group Facilitators*

2. Achieving financial sustainability.

The Issue: Facilities departments need to develop long-term strategies to make their organization more efficient and financially viable.

Strategies:

- Move beyond short-term cost-cutting to true financial discipline.
- Consider Total Cost of Ownership in assessing your facilities' value.
- Understand your value to your customers.
- Assess and enhance the Return on Investment of your facilities assets through higher utilization.

Higher education has been through tough times before. Today's institutions have responded to crisis in time-honored fashion by cutting costs and hoping times

would get better soon. Something is different this time. Around the industry—and within the Thought Leaders symposium—higher education leaders are questioning not just the short-term economic challenges but also the long-term financial viability of colleges and universities. Peter Stokes, executive vice president and chief research officer at Eduventures, Inc., noted the following in a recent article in *Inside Higher Ed*:

In our current circumstances . . . forward-looking universities read signs that the old ways of doing things may be approaching obsolescence. As a senior executive at one large, private university recently said to me, “We’re not persuaded that the business model or the economics of higher education are sustainable. We’re asking the question, ‘What if we were to start from scratch?’”

While the institution as a whole must examine revenue sources and make hard decisions about endowments, tuition, and public funding, individual departments need to buckle down and make some hard decisions themselves. What’s called for is financial discipline. Discipline is harder than cost-cutting, which primarily targets low-hanging fruit. It is short-term in nature, and it carries the assumption that items can go back on the budget when times get better. Discipline, on the other hand, means putting a permanent brake on escalating costs. It means eliminating line items that are a drag on the budget.

It also means thinking about facilities costs in a new way. Colleges and universities persist in pouring money into new buildings, often buildings designed to get the biggest bang for the buck up front with little consideration for long-term upkeep. At the same time, they short-change maintenance and renewal, allowing existing buildings to decline into inefficiency and ignoring small problems until they balloon into large (expensive!) ones.

Thought Leaders participants assert that the long-term financial discipline for facilities will require attention to Total Cost of Ownership (TCO)—that is, the total cost of facilities over their entire life cycle. TCO requires a balance sheet for facilities that includes not just the initial costs of materials and systems but also the continuing costs for energy, upkeep, replacement, and eventual decommissioning. Making TCO a key facilities

policy will go a long way in achieving financial discipline for facilities programs.

Another real issue is improving the Return on Investment (ROI) of educational facilities. Increasing actual revenue generation of the assets themselves comes from higher utilization. As in manufacturing, the institution can shut down inefficient buildings, invest in others to increase productivity, and realign staff as needed. Higher education has not fully caught on to this fundamental economic reality related to the efficient use of capital assets.

Data Point: Achieving financial sustainability

Cost, competition, and value in higher education

Colleges and universities have always competed for students, but the nature of that competition is changing. Previously, the major consideration in making the choice between institutions was quality, but increasingly, students are comparing cost and value. Peter Stokes quotes Jack Wilson, president of the University of Massachusetts, on this point:

“The last few decades, people have not thought about higher education as a place to look for value,” [Wilson] said. “But now, they’re going to be looking for quality institutions that offer a great experience, and a great value at a great price. There’s going to be a lot of pressure on higher education institutions to get their value propositions in place.”

As anyone who has purchased a car, a home, a major appliance—or even a pair of socks—knows, value doesn’t necessarily mean low price. Value is the extent to which a good or service is perceived by the customer to meet his or her needs or wants, measured by the customer’s willingness to pay for that good or service. Some students will find the greatest value in their local community college, others in a \$40,000/year private liberal arts college. The critical point for all institutions is to understand what value they offer and to whom.

Questions for institutional dialogue:

- How has your institution responded to the latest economic downturn—with short-term cost-cutting measures or long-term financial strategies? What would it take for the institution to achieve financial discipline? How could facilities help? What sorts of barriers would such an effort have to overcome?
- Do facilities leaders understand the concept of Total Cost of Ownership? What about leaders outside of facilities? What concrete steps could facilities leaders take to promote Total Cost of Ownership as a core principle of facilities construction and maintenance?
- For greater Return on Investment on campus facilities, do you have a policy to close or even demolish a building that is costing more than it is bringing in? Does senior administration consider innovative approaches to generating revenue for facilities assets? Does your institution view your facilities assets as an expense or an investment?

3. Creating change agents in facilities departments.

The Issue: Resistance to change remains a perennial problem within institutions and facilities departments, but organizations can develop leaders who will help promote change from within.

Strategies:

- Take advantage of the current environment to promote change.
- Create an open environment for dialogue about change and why it is needed.
- Develop an accession/succession plan to recognize and promote those willing to change and meet your new requirements.

One unexpected advantage of the current environment of anxiety about the future of higher education is that discussions of the need for fundamental change have never been more widespread. Complacency is no longer lulling members of the campus community into inaction. Leaders should take advantage of the situation by moving forward aggressively, creating a vision for change, and mobilizing commitment.

What will it take to succeed? Management experts say seven steps are necessary to make change happen and work well over time:

1. Have in place a leader who will champion change, build alliances, and support the goal.
2. Create and affirm the need for change within the organization.
3. Create and disseminate a vision for what the outcome will look like.
4. Mobilize commitment and support change with adequate resources.
5. Track benchmarks to monitor progress, uncover roadblocks, and guarantee accountability.
6. Finish the job by celebrating successes and spreading new skills and ideas throughout the organization.

Data Point: Financing green improvements

Revolving loan funds provide a means to pay for sustainability improvements

The recession is wreaking havoc across college and university budgets, making it particularly difficult to pay for green campus improvements. One model, however, has proven successful as a funding mechanism for sustainability projects: revolving loan funds (RLFs).

RLFs are created by setting aside a sum of money generated from grants, donations, campus fundraising, and student fees. Members of the campus community can then submit proposals for sustainability projects that will produce savings in energy costs. The board grants loans to the most effective projects, providing the necessary upfront costs, and the savings generated are paid back into the fund until the project is fully paid for. This creates a revolving source of capital for green projects.

Several institutions have used RLFs with significant results. For example, Harvard University's Green Loan fund financed 147 projects between 2001 and 2007 that reduce emissions by 33,227 metric tons of CO₂ and saved 15.5 million gallons of water. The average project return on investment was 26 percent. Today, numerous other colleges and universities are considering the potential of RLFs for their campuses.

7. Anchor the change in the systems and structures of the organization.

(Excerpted from Brien Palmer, *Making Change Work: Practical Tools for Overcoming Human Resistance to Change*, ASQ Quality Press, 2004.)

One point here is worth discussing in greater detail: the task of creating and affirming the need for change. To get others on board with the change agenda, leaders need to create an open environment in which dialogue about change is welcome. Staff can talk about elements of the organization where they see the need for change, and leaders can convey their assessment of problems and their vision for the future. It's important that everyone understands the forces driving change—remember that it's hard sometimes those in the trenches to have a sense of the big picture. Giving them insight into the pressures on an institution as a whole can clarify the need for change.

Finally, organizations need to seek out future leaders who are willing and able to drive change and meet the department's evolving requirements. Identifying promising staff members is a good first start, but it's only the beginning. Facilities organizations need to do a better job of growing their own leaders from within. That means establishing accession/succession plans that will help train the next generation of leaders with a commitment to positive, effective change.

Questions for institutional dialogue:

- Is your organization taking advantage of the current environment to promote needed changes?
- Where is your department in the process outlined above? Are leaders available and committed to making change work?
- Do staff understand the driving forces pushing change on the organization? Do leaders understand where staff would focus change? Is there opportunity for dialogue about change? Can you develop consensus on the need for change and a vision for the end result?
- Is an accession/succession plan in place to both identify and promote future leaders?

4. Addressing regulatory compliance.

The Issue: Institutions need to work to lighten the burden of regulations on higher education.

Strategies:

- Keep on top of the growing number of state and federal regulations that apply to your institution and organization.
- Advocate for streamlined regulations that are more relevant and less burdensome.

Most federal and state regulations are rooted in reasonable, understandable desires for safety, privacy, and fairness. It is hard to argue that campuses should have adequate security, that laboratories and dorms have proper fire protection, that students have their privacy protected, or that hazardous waste be disposed of properly. However, the result of all of these good intentions is a major burden on colleges and universities. In fact, higher education institutions face more regulations than almost any other type of organization. According to the Catholic University of America, which sponsors the Campus Legal Information Clearinghouse, colleges and universities fall into several overlapping categories of regulations:

- Laws that apply to any employer—e.g., ADA, HIPAA, nondiscrimination.
- Environmental rules that apply to most American industries—hazardous waste disposal, reporting of greenhouse gas emissions.
- Regulations that apply to financial institutions—e.g., the Gramm-Leach-Bliley act, Antiterrorist Financing rules.
- Rules that apply to research organizations—e.g., human subject research rules, animal regulations, patent law, etc.
- For public schools, requirements that apply to state agencies—e.g., purchasing and contract regulations.
- For private schools, laws that apply to non-profit institutions.

These regulations are in addition to all of the rules that apply to higher education alone, including those concerning immigration for students and scholars, financial aid, campus safety, student privacy, Title IX, and others. Catholic University estimates roughly 200 regulations from almost every federal agency—excepting only the Federal Trade Commission and the Consumer

Products Safety Commission—apply to colleges and universities.

Regulations wouldn't be so onerous if so many of them didn't seem outdated, inconsistent, unclear, duplicative, or an exercise in paperwork. The Campus Security Act, for example, requires institutions to post Campus Crime Alerts to warn members of the campus community about serious crimes—a simple task that has real benefit. As Catholic University staff noted in a statement to the Secretary of Education, at their best, regulations meet a real need and provide a real benefit.

At their worst, however, regulations can absorb huge amounts of time and waste scarce campus financial resources with little tangible benefit to anyone. The Campus Security Act's requirements for publication of crime statistics are burdensome yet of dubious value, with no substantial evidence to support that the information is used by prospective students and parents to make college choices.

Some higher education institutions and organizations have begun attempting to measure the cost of regulations to make clear their impact on college and university budgets. A study by the University of North Texas of 35 public institutions in the Lone Star state found they spent a total of \$6.5 million preparing and filing state reports to comply with purchasing and contracting rules.

How can institutions deal with the regulatory burden? The first step is to better manage existing regulations. It's not easy to keep up with all of the rules and requirements, but the job needs to be done consistently and carefully. Institutions can rely on resources both within specific fields—APPA, for example, includes in its training and professional development initiatives information on facilities-related regulations—and resources intended for higher education in general. Catholic University's Campus Legal Information Clearinghouse, seeks to provide up-to-date, detailed information on the shifting regulatory landscape.

Institutions may also choose to start measuring the cost of regulations as they keep track of their compliance. This won't be an easy task, but it may be the only way for their true cost to be known. Currently, the best estimates about the cost of regulations are only

that—estimates—and several are years old, or specific to one type of requirement. One industry observer in *Inside Higher Ed* recently urged institutions not only track the cost of regulations but also to go so far as to add a line item to tuition bills for a “regulatory compliance fee.” It's unlikely this proposal will gain much traction, but it's clear that frustration with regulations is growing and that tracking costs is the only real way to make their impact clear.

Finally, institutions concerned about federal regulations should consider some form of advocacy to make their point. Individual players in the federal government have expressed concern about the regulatory burden—Senator Lamar Alexander attempted to remove outdated regulations from the reauthorization of Higher Education Act, while U.S. Secretary of Education Arne Duncan recently told the Association of Public and Land-Grant Universities he was willing to work to cut red tape if institutions made progress on increasing student performance. However, it will take a sustained effort by numerous colleges and universities to have a real impact.

Institutions often have excellent relationships with elected officials on both the state and national level; they should leverage these relationships to reduce the burden of regulatory compliance. Higher education organizations are also organizing to make their position known. APPA's Code Advocacy Task Force, for example, recently collected input from APPA members on the development of the 2011 National Electric Code. APPA holds a principal voting position for the industry on Code-Making Panel No. 1 and used the information gathered from members to produce a voting position on behalf of APPA and its member institutions.

Questions for institutional dialogue:

- Does your institution/organization have a system in place to keep track of regulations?
- Who is responsible for ensuring the institution/organization remains up-to-date on changes to rules and regulations?
- Should the cost of regulations be tracked? What amount of effort would this require? Would it be worthwhile?
- Should the college or university advocate directly with state and federal governments to lighten the regulatory burden?

5. Facing the challenge of changing demographics.

The Issue: Colleges and universities need to understand how the demographics of their student body and workforce are likely to change and develop strategies to address that change.

Strategies:

- Assess the demographics of your region, your workforce, and your student population.
- Start addressing the changes that will be needed to student services.
- Understand how demographic shifts will affect your workforce and craft plans to help you recruit, train, and retain the staff that you need.

No one questions that the demographics of the United States are changing in unprecedented ways. What is unclear, however, is exactly how these changes will play out across different regions. General statements about the aging of the population and the growth of minority groups will have different relevance in different parts of the country.

For example, the Brookings Institution recently concluded a major study on the demographics of major metropolitan regions. In general, the report pointed to five new realities:

- **Population growth:** The U.S. recently passed the 300 million mark, and over the next decade will add another 28 million people.
- **Population diversification:** More than 80 percent of population growth between 2000 and 2008 was among nonwhites, and within 40 years whites will be the minority.
- **Aging of the population:** Metropolitan areas had a 45 percent increase in their 55-to-64-year-old population between 2000 and 2008.
- **Uneven higher education attainment:** Younger adults are less likely to hold post-secondary degrees than older adults, while African American and Hispanic groups lag behind white and Asian counterparts by more than 20 percent.
- **Income polarization:** Low-wage and middle-wage workers lost income between 1999 and 2008 while high-wage workers saw their incomes rise—with high-wage workers out-earning low-wage workers by a ratio of more than five to one.

Data Point: Addressing regulatory concerns

Higher Education Regulations Study seeks to identify unnecessary and burdensome regulations

A ray of hope for those concerned about the cost and impact of federal regulations on higher education is offered by a provision in the reauthorization of the Higher Education Act to create the Higher Education Regulations Study. The Advisory Committee on Student Financial Assistance has been charged with conducting a review and analysis to determine whether regulations affecting higher education are duplicative, no longer necessary, inconsistent with other federal regulations, and/or overly burdensome.

The committee began its task by creating a website that includes an area for the public to offer recommendations for streamlining regulations. In addition, the committee is supposed to convene at least two panels to review regulations and provide recommendations on streamlining. At the same time, the National Research Council of the National Academy of Sciences is supposed to conduct a study on all of the reporting requirements imposed on colleges, including an estimate of compliance costs and recommendations for reducing or eliminating them. Within two years, the committee is required to report its findings to Congress.

So far, the committee has held one review panel meeting, sought input from NASFAA, NACUBO, AAU, and the general public, and assembled a preliminary list of burdensome regulations. However, at least one element will likely be missing from the final report—the National Research Council hasn't received any appropriations to conduct its study. One hopes the irony of an unfunded regulation to review the cost of regulations isn't lost on the Department of Education.

However, examine the data closely and regional patterns quickly appear:

- **Population growth:** Some regions are seeing significant increase in their population—particularly Florida, Texas, Arizona, California, North Carolina,

and Georgia—while others have experienced profound population decline—particularly the Rust Belt.

- **Population diversification:** The Hispanic population is growing, but their numbers remain concentrated in a band from California to Texas, with significant growth in Florida, North Carolina, Georgia, and Virginia. Meanwhile, the largely white populations of New England and the Northwest have had little growth in minority groups.
- **Aging of the population:** The population is growing older in such diverse cities as Denver, Provo, and Raleigh while at the same time regions such as the South Texas Border and the Central Valley of California are seeing significant increase in the growth of the under-18 set.
- **Uneven higher education attainment:** While regions with the highest population growth are seeing a decline in those with post-secondary degrees—Texas and Arizona in particular—other regions, including the Northeast corridor from Washington, D.C., to Boston and south Florida—are experiencing an increase in the population with at least a bachelor's degree.
- **Income polarization:** While average incomes declined across most of the United States, a few regions had small increases in income, particularly San Diego, California, Worcester, Massachusetts, and Washington, D.C.

The point of this analysis is that demographic shifts vary widely by region, and no one demographic approach will make sense for all colleges and universities. Even within the same region, a private liberal arts college will be confronted with different demographic challenges than a large community college district. Colleges and universities need to closely examine the demographic changes in their own neck of the woods. A school in the Rust Belt confronting an aging, declining, largely white population will need to take different actions from one in Phoenix looking at a young, growing, increasingly Hispanic population.

Institutions also need to break their analysis down to consider the demographic changes to their student population separately from those of their workforce—the two could be very different. Institutions need to respond to the shift in student demographics both in terms of

student services and course offerings. Services might need to be expanded to provide increased support for minority populations as well as for those who speak English as a second language.

Shifts to the workforce are likely to challenge facilities departments in particular, since facilities groups employ not only highly educated professionals but also trade and craft workers and unskilled staff. Already, many college and universities are seeing their workforce age as older workers delay retirement. While older staff can limit promotions for younger staff and sometimes create friction, institutions have relied on expertise and experience of these employees; plans need to be put into place to ensure their institutional knowledge isn't lost when they eventually leave.

Others are seeing a marked increase in the number of Hispanic employees, a trend that will only continue in many parts of the country; language training will likely be needed for both employees and employers to meet the challenge of non-native employees in the workforce. Finally, it is clear that new generations of workers bring a new attitude to work, in an environment where it is rare to keep one job for more than five to ten years and career-shifting is expected. If institutions want to keep good employees and maintain their investment in their staff, they need to find ways to accommodate these trends. For example, is the institution prepared to help employees gain new skills and shifts between jobs and programs on campus?

Questions for institutional dialogue:

- Does your institution understand the demographic changes going on in your metropolitan area? How are the population size, racial and ethnic mix, age, and educational level predicted to shift?
- How are student demographics in particular expected to change? What will students need and expect from higher education in the next ten to fifteen years?
- How are workforce demographics in particular expected to change? What will workers need and expect from their employers in the next ten to fifteen years?
- How will human resources programs need to change to meet the needs of the new workforce?

6. Creating an environmentally sustainable and energy efficient campus.

The Issue: Colleges and universities must continue to make progress toward environmental sustainability and energy efficiency.

Strategies:

- Build a culture of sustainability on your campus.
- Develop and implement an energy policy to cut consumption, manage use, and reduce volatility.
- Make a business case for energy efficiency and sustainability.
- Ensure the facilities department is leading the charge for campus sustainability.

Sustainability and energy efficiency have been a priority of participants at the Thought Leaders symposium since 2006, but the importance of the issue has only grown. Energy costs have gone through extreme swings in the last five years at the same time concerns about global warming have exploded. The American

College & University Presidents Climate Commitment (ACUPCC) has gone from an idea to a movement with nearly 700 signatories. The majority of college campuses have created official sustainability policies and hired dedicated staff.

While concern about sustainability has grown, much remains to be done to achieve real progress on reducing greenhouse gas emissions, cutting waste, and improving energy efficiency. The first priority is to build a culture in which environmental awareness is widespread among students, faculty, staff, and administrators, and sustainability influences decision-making across the campus. Environmental action too often remains an “extra”—a separate effort that is given attention only occasionally or by certain people. Sustainability efforts have achieved results under this approach, but they will remain limited until efforts are integrated into the institution’s thinking from top to bottom. The Association for the Advancement of Sustainability in Higher Education (AASHE) calls this “whole-system thinking” and describes it as “a different way of thinking about buildings, utilities, perceptions, institutional

Data Point: Changing demographics

Dallas County Community College strives to meet the needs of the largest Nepalese community outside of Kathmandu

While most colleges and universities deal with large-scale demographic trends such as the increase of the Hispanic population, others must also address microdemographic shifts in their area. For example, the Dallas County Community College district—and in particular, its Irving-based North Lake College campus—has experienced a dramatic increase in the number of students from Nepal.

This land-locked country bordered by India and China and home to Mount Everest has 1,366 students enrolled in the community college district with 832 enrolled at North Lake, making up on average 5 to 10 percent of the North Lake student body. Irving, Texas has become a hub of the Nepalese population in the United State, and many students arrive there knowing they can find their favorite foods at local Nepalese restaurants, celebrate Nepalese religious holidays together, and get support from countrymen and women. Many

join the campus’s Nepalese Student Association.

North Lake faculty and staff have had to respond to the unique challenges faced by their Nepalese students. Students who learned British English in their homeland must adjust to American slang. Many need help learning to speak up in class, take part in discussions, and ask questions of their professors—unaccustomed activities in traditional Nepalese culture.

While few schools will need to address the specific challenges of a large Nepalese student body, others are likely to see their own microdemographic trends. Institutions in the Twin Cities, for example, have worked to provide services for the large Hmong population originally from Southeast Asia. Colleges and universities have a responsibility to know about the unique populations in their regions and should work to develop the potential of these students.

structures, and all the other components of the system that comprises energy and your campus.”

Campuses that embrace whole-system thinking are seeing the benefits. Cape Cod Community College, for example, has gone so far as to add a focus on sustainability to its mission statement; institutional commitment starts at the president’s office, where Kathleen Schatzberg has earned a reputation as one of the most outspoken advocates for sustainability among community colleges. Programs include cafeteria waste composting, solar-powered trash compacting, and xeriscaping (environmental design that uses various methods for minimizing the need for water use) on campus grounds. The college has invested significant time, effort, and money by making this level of commitment, but this is what true sustainability looks like.

A second priority according to Thought Leaders participants is the development of comprehensive campus energy plans and policies. These policies need to examine campus energy use, assess the associated costs of this use (both financial and environmental), and propose strategies to reduce energy across the board. Strategies should address all sectors of the campus including buildings, transportation, IT, and other elements. They should include plans for diversifying energy sources to include renewable power and for increasing energy efficiency and conservation. Such plans can have a significant impact on the institution’s long-term approach to energy. For example, the official energy policy of the College of the Atlantic is for the institution to be a carbon-neutral campus. To achieve this ambitious goal, the college’s energy plan includes a requirement to use 100 percent renewable energy as well as to design all buildings to be energy efficient, using passive solar heating and efficient lighting. The plan gives the college an overall policy directive as well as specific goals and strategies.

Despite the high profile of sustainability on college campuses, many institutions still struggle to get the support from the highest levels of the administration, particularly business officers. It remains important for colleges and universities to make a business case for sustainability and energy efficiency. As noted in the *Climate Neutral Campus Report* from the ACUPCC:

Even amid rising energy costs, colleges and universities can miss opportunities for

worthwhile energy enhancements because of a communications gap between senior administrators and engineering personnel. Facilities professionals recommending environmentally positive energy projects risk rejection of their proposals if they fail to communicate effectively. They cannot get their point across if they do not speak the language spoken and understood by decision makers or address the full range of issues that a president considers when evaluating a proposal. Communications gaps between leaders and the facilities team can condemn a solid energy recommendation to failure.

Part of the solution is to learn to speak the language of administrators. That means educating oneself about the challenges facing financial staff and understanding how they like to receive information. It means developing cost-benefit analyses for proposed sustainability initiatives that include a determination of the payback period and options for funding. It means building relationships with top finance executives and meeting with them prior to presenting proposals to achieve their buy-in. Making a business case is hard work, but fortunately resources are available to guide facilities professionals through the process, including the book *The Business Case for Renewable Energy* from APPA, NACUBO, and SCUP.

The final strategy recommended by Thought Leaders symposium participants is to ensure the facilities department is leading the charge for campus sustainability. Facilities have an important role to play in improving the energy efficiency and overall sustainability of campuses, with a direct effect on everything from the chemicals used to clean floors to the generation of power. Senior facilities officers should play leading roles in sustainability discussions, helping to shape policy as well as managing implementation. As APPA noted in its report *The Educational Facilities Professional’s Practical Guide to Reducing the Campus Carbon Footprint*, “today’s facilities professional must understand that today’s efforts to address climate change require campus-wide collaboration among many stakeholders. In this new environment, facilities professionals must be willing to serve in new capacities.” These capacities include acting as subject experts with unique understanding of the

issues surrounding sustainability, academic liaisons ready to help faculty and students fulfill academic goals relating to climate change initiatives, strategic administrative partners working to ensure the required resources are devoted to sustainability initiatives, and communicators and motivators promoting the importance of climate change initiatives on campus. Facilities officers need to assess their role on campus and see where they need to step up to increase their impact on the sustainability discussion.

Questions for institutional dialogue:

- Has your campus embraced sustainability within its culture? How do you measure the campus's commitment to sustainability?
- Is sustainability an overall policy priority for the institution? Is whole-system thinking in place?
- Does the college or university have an energy policy in place? If not, what would be required to craft and implement such a policy?
- Are communications gaps between facilities officers and financial administrators hindering progress in implementing sustainability projects? Do facilities experts need to make a better business case for their initiatives? What would such a case involve?
- Are facilities experts recognized as sustainability authorities on campus? If not, do they need new skills and resources to help them broaden their roles?

7. Managing the impact of technology.

The Issue: Colleges and universities must continue to address the shifting impacts of technology on campuses, as well as plan for disaster management and facilities integration.

Strategies:

- Assess how changes in Information Technology will affect all aspects of teaching, learning, research, communications, and the built environment.
- Develop strategies that will help the institution/organization remain nimble and flexible in the face of rapid technological change.
- Make the right investments to ensure IT resources can withstand disaster.
- Integrate IT and facilities planning to maximize success.

Information technology has already dramatically changed the university campus. Walk across any campus commons and you'll likely see the majority of students either on their phones—texting as likely as talking—or on their computers. Today's students couldn't imagine a library without a fully searchable database, journals in print only, classrooms without PowerPoint presentations, and courses without online resources.

Nevertheless, IT is likely to continue to change higher education. A recent global survey by *The Economist* for the New Media Consortium found that nearly two-thirds of respondents representing both the public and private sectors believe technological innovation will have a major influence on teaching methodologies over the next five years. The availability of online courses is likely to grow, along with research partnerships with corporations. Online collaboration tools and Web 2.0 technologies such as wikis and instant networking are expected to increase individually paced learning and provide opportunities to make teaching more outcome-based and student-centered. While these advanced technologies are expected to be critical, survey respondents believed an even greater impact is possible through the expanded access to reference resources.

Nevertheless, *The Economist* found that many institutions still face significant challenges to taking advantage of the potential of technology. The biggest concern remains cost—nearly 70 percent cited this factor as their greatest challenge. Entrenched organizational culture is another hurdle, along with IT's alignment with overall policy. Relatively few university CIOs have a role in setting institutional strategy, with only one-quarter of respondents stating their CIOs are on key decision-making teams. Finally, institutions need to overcome the disruptions posed by technology in the classroom; survey participants noted both an increase in plagiarism and cheating and problems keeping students focused in the classroom due to the distractions of phones and computers.

Participants at the Thought Leaders symposium stated that institutions need to keep on top of surveys such as the one from *The Economist* and track how changes in IT are likely to affect all aspects of teaching, learning, research, communications, and operations. Some change is likely to be incremental—technology that involves a step forward in increasing access to information, streamlines processes, or enhances learning.

E-readers represent this sort of technology; the recent explosion of devices from the Kindle to the iPad are attracting attention from higher education for their potential to transform textbooks from static, expensive printed books to dynamic, interactive educational resources.

While e-readers would change textbooks, they would be used in essentially the same way and wouldn't fundamentally transform higher education. Other changes might be what Josh Baron, Marist College's director of academic technology and eLearning, calls "disruptive." Disruptive change is, in his words, "change that nobody is necessarily expecting, that happens relatively quickly, is rather pervasive, and is driven by technology or at least facilitated by technology." Baron points to the example of ePortfolios—Web technologies that would enable students to showcase their accomplishments and demonstrate their mastery of content. ePortfolios have the potential, Baron says, to completely transform education by shifting assessment from tests to overall evaluation of a student's performance—they "can very effectively measure the authentic learning that students are engaged in, along with their ability to apply the knowledge that they're gaining to real-world problems." As a result, they have the potential to be a highly disruptive change since "we might not need the whole infrastructure we have at colleges and universities today for students to engage in learning and get credentialed for that learning."

Understanding potential transformations in campus technology will help the institution develop strategies to remain nimble. The pace of change in IT has always been fast, and it's only growing—in marked contrast to the slow pace of adaptation found at most colleges and universities. Everyone remembers the frustration of investing in "wired" classrooms where students could plug into the Internet only to have wireless technology render these classrooms obsolete. Senior IT administrators need the authority to make rapid decisions as conditions change as well as a role in the overall decision-making of the campus.

Institutions also need to invest in IT security. Risk management is an increasing priority for colleges and universities as they recognize how many critical operations rely on IT. Institutions need to take a comprehensive approach to security; strategies should address challenges ranging from physical theft to

hacking, viruses to natural disasters. The biggest concerns of IT staff, according to a recent survey by Amplitude Research, are securing remote access, keeping virus definitions up to date, patching systems, monitoring intrusions, and managing passwords—all relatively routine, although certainly significant, issues.

In addition, institutions need to plan for crises and catastrophes from fires and floods to massive security breaches, terrorist attacks, and on-campus violence. A crisis management plan is the right starting point, but colleges and universities also need to test their plans—a task that few complete, according to a 2010 survey by Academic Impressions. The study found that only 54 percent of institutions have tested their crisis response plans in the last year, while 23 percent have never tested their plans at all. As for why this is important, of those that did test their plans, only a third found them effective.

The most effective IT security plans are based on extensive analysis, including security audits. For example, when Meredith College in Raleigh decided to evaluate its network security, it hired an outside consultant who attempted everything from trying to hack the network, gain access to secure buildings, and get the student help desk to reset a password. The result was a comprehensive view of the risks to the system and a detailed list of tasks needed to secure it.

Finally, colleges and universities should work to better integrate their IT and facilities efforts. These two departments began as separate entities, and on many campuses they remain operationally divided, only teaming up for particular projects. But as IT's role grows to encompass every campus activity, the need for integration grows. IT is now perceived by students as a service just like running water and electric lights. Facilities departments are accustomed to meeting student needs 24/7 and have much expertise to offer IT personnel. On the other hand, IT's insight into what students, faculty, and staff want and need from technology is critical for facilities staff as they design new buildings and update old ones.

Questions for institutional dialogue:

- How is technology likely to change teaching, learning, research, communications, business operations and the built environment? Does your campus regularly assess

coming trends and analyze how they might affect you? Are disruptive changes considered along with incremental ones?

- Have you conducted security audits to understand where your system is most at risk?
- Does your IT department have a crisis management plan?
- How well integrated are your IT and facilities departments? Do the two groups work together routinely? What policies and mechanisms should be put into place to increase integration?

8. Addressing campus safety and security.

The Issue: Facilities departments can help not only to manage emergencies when they occur but also to prevent security threats in the first place.

Strategies:

- Conduct a building security audit to understand potential threats.
- Look to technology to help balance openness with security.
- Work with security personnel to develop a comprehensive communications plan.

Facilities departments play critical roles in campus safety, and savvy facilities professionals make security a major priority. Facilities experts can not only aid in developing and implementing emergency management plans on campus, they can also help minimize security threats in the first place. Clearly, no one can prevent all threats at college and university campuses. But, recent tragic events have brought home the reality that just because “it hasn’t happened here” doesn’t mean that it can’t. However, resources are available to help facilities staff understand their risks and make strides to minimize threats.

One critical step facilities departments can take is to conduct a building security audit. These audits look for threats that could disrupt a facility and its operations. Threats can include, but are not limited to, attacks on occupants, damage to facility components or systems that will affect occupants, and damage to the area around the facility that will affect the ability of occupants to safely evacuate the building. Different facilities will face

different threats. If a facility houses critical services, such as police or emergency medical services, it will have a different threat profile than a residence hall.

Audits pay particular attention to access points where a facility’s security can be breached. Some can be easier controlled than others—buildings with reception areas are easier to monitor and control than those with multiple public entrances. Other access points should also be evaluated, including windows, fresh-air intakes, utilities, roofs, and adjacent facilities. It is important to remember that security audits should not be static documents—buildings change in terms of their use, their systems, and their configuration, and audits need to be updated to reflect these changes.

New technologies are introduced every year promising to help secure campuses, and it’s easy to be overwhelmed by the options available. One way to prioritize technology investments is to consider them in the light of how they help the campus balance openness and safety. A campus is not a secure space—and deliberately so. Colleges and universities want to encourage an open environment in which people can explore and learn; residential campuses in particular cultivate a round-the-clock learning lifestyle. Technology provides a way to maintain that atmosphere while ensuring security.

Two types of technology are proving particularly useful: CCTV and access control. Originally closed-circuit TV systems acted simply as a deterrent; today they have evolved into tools to help security personnel identify, prevent, or interrupt security breaches. Intelligent video algorithms, such as sophisticated motion detection, can identify unusual patterns and alert guards to particular video screens. Access control systems keep facilities open to those authorized to be there but limit availability to those who shouldn’t. Smart cards have become a familiar item for many students and faculty and can combine the functions of student ID, meal card, library card, and building key.

When combined, CCTV and access control have even more power. For example, when a Yale University graduate student Annie Le disappeared, personnel quickly determined that Le entered a campus lab building but never exited; they also learned that the suspected killer had entered the same building and accessed her lab. This information allowed police to act quickly, reassuring the Yale community and allowing the campus to return to normal operations.

Finally, technology can also aid in communications when a crisis occurs. Research by the National Campus Safety and Security Project, including a survey of campus administrators and site visits on six campuses, pointed to the crucial importance of emergency communications. Systems that use e-mail, Web, text messaging, and voicemail to send out emergency notifications are growing increasingly common on campus, although not universal: 84 percent of public four-year institutions have such systems, but only 55 percent of public two-year institutions. However, high-tech solutions such as text-messaging systems are only one part of the puzzle.

The best communications systems strive for redundancy to achieve total campus community coverage—low-tech as well as high. For example, a simple poster informing occupants what to do in case of emergency can be as useful in a crisis as an e-mail: emergency instructions should be posted in all campus facilities. Similarly, alarms, sirens, and megaphones can be as critical in getting the word out about a crisis as text message systems. As for those high-tech notification systems: messages only work if individuals receive them. Many colleges and universities with such systems use an “opt-in” approach where students, faculty, and staff have to sign up to receive emergency alerts; experts recommend an “opt-out” approach instead, in which, for example, students are automatically enrolled in the system when they register for classes. Some campuses go even further and make enrollment in the system mandatory.

Questions for institutional dialogue:

- Have you conducted a security audit of your campus buildings? Are audits kept up-to-date as changes to facilities occur?
- How does the culture of your institution affect the balance between openness and security on campus?
- Does your institution have a modern CCTV system that uses technology to help guards identify threats?
- How is access controlled on campus? Where is access control appropriate, and where is it not?
- Are the CCTV and access control systems integrated?
- Does your campus have an emergency communications plan? What is addressed in that plan? Does it rely too heavily on high-tech solutions and ignore simple, low-tech strategies? Is there a diversity of communication options?
- Are emergency instructions posted in buildings?
- How easy is it for individuals to ensure they will receive emergency alerts? Are notification systems opt-in, opt-out, or mandatory? Which strategy makes sense for your institution and campus culture?

Section V: Developing the Role of Senior Facilities Officers

One of the goals of the Thought Leaders Series has always been to raise the profile of senior facilities officers within their institutions. APPA has been concerned for years that these highly experienced professionals do not contribute at full capacity, as their skills and expertise have not been well understood or applied. Facilities officers could significantly assist their institutions by ensuring that facilities professionals are considered when key decisions are made.

The entire Thought Leaders Series has been designed to give senior facilities officers tools to help them understand the issues facing presidents, provosts, chancellors, and boards as well as giving those administrators insight into the challenges and contributions of facilities. APPA believes the project has been successful at raising critical issues facing higher education and its built environment.

However, this year APPA decided to confront the challenge facing senior facilities officers directly. During the symposium, several exercises were held to assess the role and status of senior facilities officers within higher education and to craft action plans to further raise the profile of these officers within their institutions. This initiative is only the beginning of a long process to provide facilities managers with additional tools to help them achieve their full potential and provide the greatest benefit to their institutions.

Assessing the role and status of senior facilities officers within higher education

When participants at the Thought Leaders symposium were asked whether senior facilities officers were viewed as strategic partners within the institution, the general answer was no.

The reasons cited were interesting. Many participants pointed to the institution and its tendency to limit the senior facilities officer's role. In some institutions, facilities officers are seen not as problem solvers but as providers of a service. In fact, facilities are central to the

institution's mission. A well-planned, constructed, and maintained campus helps meet many of higher education's core goals: it offers a living/learning environment within dormitories; fosters learning and collaboration in classrooms; spurs research and development within laboratories; promotes student, alumni, and community engagement and supports student athletes through athletic facilities; and provides an iconic image of the institution itself with the campus as a whole. Senior facilities officers do much more than make sure that the lights stay on and the plumbing remains operational. They assess and interpret the mission and vision of their institutions and translate those intangibles into concrete, plaster, brick, and wood.

Data Point: Must-have traits of senior facilities officers

1. Cultural builder – makes his or her organization better, smarter, and faster.
2. Cultural traveler – reaches out to constituents and demonstrates interest in others.
3. Horizon thinker – looks out beyond the immediate situation.
4. Decision maker – makes the right choices at the right time.
5. Effective listener – knows when to stop talking and hear what others are saying.
6. Articulate communicator – asks good questions and can convey complex material quickly and clearly.
7. Expert translator – educates others on critical knowledge.
8. Creative leader – can look for solutions beyond the data and encourages others to demonstrate creativity in performing their jobs.
9. Qualities include self-awareness, trustworthiness, agility, multiple skill sets.

Adapted from "A Learning Agenda for Chief Business Officers," by Sanaghan, Goldstein, and Jurow, May 2001 NACUBO Business Officer.

So what steps can senior facilities officers take to promote their strategic value to the institution? Participants at the Thought Leaders symposium developed several recommendations:

- **Demonstrate competency.** Use your successful track record to show how skilled and experienced you are. Start monitoring your own progress so that you have credible data to prove your ability and worth.
- **Show value.** Competency is only the first step—the next is to show your value to the institution. Look for ways to add value to campus projects—and make sure everyone knows about your contribution.
- **Align facilities with the institution's mission.** Assess the programs of the facilities department and ensure that they are integrated with the mission, vision, and goals of the college or university. Make clear to administrators how facilities are supporting that mission.
- **Create opportunities for collaboration.** Reach out to others in the organization and propose collaborative projects. Seek out opportunities to be a partner.
- **Make clear the impact of facilities on the campus community.** Educate administrators, faculty, and staff on the many ways facilities shape the campus experience and support teaching and learning.
- **Understand others' needs.** Think outside the facilities box and work to understand what other stakeholders in the institution want and need. Communicate in their terms. Think of yourself as selling a product—the best salespeople speak the language of their customers.
- **Don't be the problem.** Overwhelmed, understaffed facilities officers can sometimes become obstacles instead of problem solvers. Budgets may be tight and resources scarce, but if you answer “no” to every question, no one in the organization will consider you a partner.
- **Insist on professionalism from your staff.** It won't do a senior facilities officer any good to be a model strategic partner if his or her staff is uncooperative.

Professionalism starts at the top, but it must extend throughout the facilities organization. Every member of the team needs to be seen as contributing to the institution.

Symposium participants also considered how individual facilities officers could enhance their own image:

- **Promote yourself.** Don't be hesitant to toot your own horn occasionally.
- **Be a go-to resource.** Build a reputation as someone who can solve problems and is ready to help.
- **Be open to compromise.** Rigid thinking discourages discussion and shuts down communication.
- **Educate others.** Explain your position and make clear why you're recommending a course of action. Help others make good decisions by providing good information.
- **Provide a range of options.** When choices are available, make them clear. Give others opportunities to contribute to design and planning decisions so they feel ownership in the process.
- **Be visible.** Don't shut yourself away in your office. Get out there, attend campus events, participate in campus organizations, and become recognizable to faculty, students, and staff.
- **Teach.** Build relationships and credibility by teaching at your institution.
- **Act like you belong at the table.** Have confidence in your ability to contribute. Help solve all problems—not just facilities ones—to establish your value.
- **Build your credentials.** Become certified to hone your skills and polish your resume. Make contributions to community and professional organizations—not only will these actions give you good experience, they also are respected by others in the academy.

APPA will continue to work with its members to develop tools and resources to help senior facilities officers enhance their status and improve their role as an institutional resource and partner.