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Facilities Officers

Facilities Manager

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Ron Flinn

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From The Editor

Steve Glazner

Many of our readers already know Ron Flinn from one or more of the many roles he has played for APPA and MAPPA over the past thirty years. As APPA's current President, Flinn has already begun to implement the strategic initiatives for that stemmed from APPA's new vision and mission developed during the tenures of past Presidents Charlie Jenkins and Doug Christensen. You can find out more about Flinn himself and his plans for APPA in our profile that begins on page 14.

We are most pleased to share with you the insights of President Arthur Smith of the University of Utah, who spoke to APPA's Board of Directors last July on the outlook for higher education and some changes that are underway. Our appreciation to President Smith for allowing us to share his comments with all of our readers.

If you are thinking of outsourcing your motor pool or planning to renovate your residence facilities, you'll want to read our articles by Chris Jefferies and Paul Bottis, respectively. And we invite you to find out more about Clem Starck, a carpenter at Oregon State University who also is a published poet. His story is unique to Starck himself, of course, but it also reminds us that our trades people and administrative staffs often possess talents and skills far beyond those listed in their job descriptions. Acknowledging and nurturing those personal skills and desires can make for a happier workplace and improved service to your customers.

This edition of *Facilities Manager* marks the last issue of our twelfth vol-

ume year, and its last issue as a quarterly publication. In response to readers' requests, we will begin publishing *Facilities Manager* six times per year beginning with the January/February 1997 issue. Our new bimonthly schedule will allow us to provide you with a greater number of articles on a more frequent basis. As a result of this change, *Inside APPA* newsletter will become an on-line publication exclusively through APPA's home page on the World Wide Web. The newsletter has been available on-line since last January in tandem with the printed version.

APPA's newest periodical, *Regulatory Reporter*, is also now available at no charge on the Web site, or you can receive a printed version through paid subscription for only \$15 per year. A quarterly Canadian edition will be available soon.

Finally, we know that many of our readers are still upset that we eliminated job listings several years ago from *Inside APPA* and *Facilities Manager*; we have been publishing them in a separate, subscription-based bulletin called *Job Express*. We continue to publish the twice-monthly bulletin for those who wish to receive it in printed form, but we also now are posting all job listings on APPA's home page on a weekly basis.

We encourage you to visit our Web site at www.appa.org to review the new information provided on these and many other topics. Let us know what you think of our on-line publications. In the meantime, we'll see you in January with our new bimonthly *Facilities Manager*. ■

APPA News

Apel and Reynolds Receive Meritorious Service Award

Patrick J. Apel and Gary L. Reynolds are the 1996 recipients of APPA's highest individual honor, the Meritorious Service Award. The awards were presented by past President Douglas K. Christensen at July's annual meeting banquet in Salt Lake City.

Apel, director of physical plant at Maryville University of St. Louis, is a longtime member and supporter of



Richard Johnson

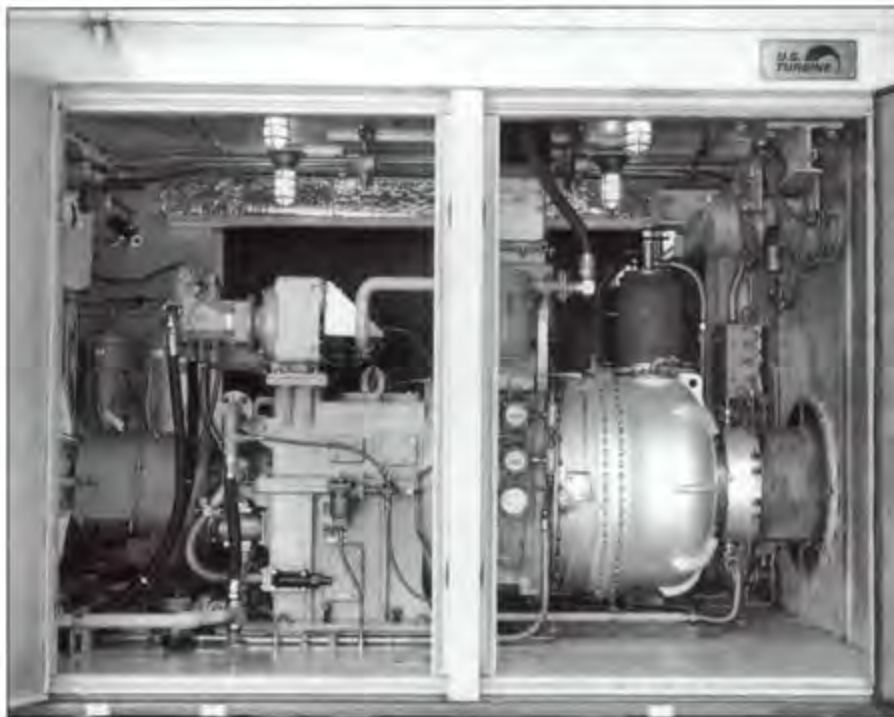
Gary Reynolds and Pat Apel received the Meritorious Service Award, APPA's highest individual honor, at the 1996 Annual Meeting in Salt Lake City.

APPA and the Central Region. He has served as CAPP President and was on both boards of directors over a number of years. Apel has presented papers at APPA and regional meetings, published articles in several magazines and

books, and he is a founder of a successful technology conference held each year in the Midwest.

Reynolds, director of facilities management at Iowa State University, has been active in APPA and the Midwest

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Region for many years. Currently serving as APPA's Vice President for Educational Programs, Reynolds recently was Subcommittee Chair overseeing the programming of the Institute for Facilities Management, and he is a longtime faculty member at the Institute. He is the author of *Building Quality: TQM for Campus Facilities Managers*, and he is a part coordinator and on the editorial board for the third edition of APPA's textbook, *Facilities Management: A Manual for Plant Administration*.

The Meritorious Service Award is presented to no more than three individuals each year by APPA's Awards and Recognition Committee, which this year was chaired by Randy Turpin of the University of Utah.

Merck, Jaroshevich Share 1996 Rex Dillow Award

William F. Merck II and Ksenia Jaroshevich were selected to receive the tenth annual Rex Dillow Award for Outstanding Article in *Facilities Manager*. Their award was



Ksenia Jaroshevich,
College of
William &
Mary



William F.
Merck II,
University of
Central Florida

announced at APPA's 1996 Educational Conference and 83rd Annual Meeting in Salt Lake City, Utah last July.

Jaroshevich, director for capital outlay at the College of William and Mary,

and Merck, previously at William and Mary and currently vice president for administration and finance at the University of Central Florida, wrote "Pre-Design Planning" for the Summer 1995 theme issue on planning, design, and construction.

The article was selected by APPA's

Information Services Committee from among fifteen eligible articles. Only articles written by full-time staff members at APPA member institutions are eligible for the award. Mike Besspiata of the Southeastern Region accepted the award for the authors, who were unable to attend the annual meeting. ■



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Salute to our Corporate Partners

APPA is proud to highlight a number of corporate sponsors who made outstanding contributions to APPA in the past year. Past president Charlie Jenkins and Doug Christensen presented these awards at the July annual meeting. Through their support of such educational

opportunities as APPA's annual meeting, the Facilities Management Institute, and special initiatives, they have helped to protect the \$400 billion investment represented by educational facilities in the U.S. alone. The organizations recognized here are truly APPA's global partners in learning.

25+ Year Exhibitors

APPA honored its Quarter Century Partners—exhibitors who have participated in the annual meeting for 25 years or longer—at its 1996 annual meeting held in Salt Lake City in July 21-23.

APPA's Quarter Century Partners are:



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Global Partner Contributors

The contributions of many organizations made possible special projects that helped to further the profession of educational facilities management. APPA thanks the fol-

lowing companies for their generous support. [Editor's note: Photos of American Management Systems, Marriott Educational Services, and Sallie Mae are unavailable because these companies were unable to attend the awards presentation.]

American Management Systems—Support of the Strategic Assessment Model.

Cutler-Hammer—Support of the Institute for Facilities Management retreat.

Marriott Educational Services—Support of the Foundations for Leadership Institute program.

Nalco Chemical Company—Support in publishing *Perspectives on Leadership*.

Sallie Mae—Support of the capital renewal/deferred maintenance research study.

Certificates of Appreciation

The following companies showed their support of APPA through donations for scholarships and other initiatives.

American Management Systems—Scholarship to the Institute for Facilities Management.

American Thermal Products—Scholarship to the Institute for Facilities Management.

Black & Veatch—Scholarship to the Institute for Facilities Management.

Honeywell—Support of the APPA Strategic Planning Initiative.

ISES—Support of the Upward Bound mentoring program.

Landis & Gyr—Scholarship to the Institute for Facilities Management.

Stanley Consultants—Support for the Institute for Facilities Management retreat.

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APPA's Partnerships in Training seminars are the result of members' requests for educational programs that are low-cost, convenient, short, and nearby. All of the drive-in programs are half-day sessions that can be held on campus and scheduled around participants' needs. Hosting a session is easy—sessions require a minimum of only 25 participants. Fees range from \$99 to \$129 per person.

Here's a description of the programs currently available. Look for more topics to be added through the year.

Environmental Training—Asbestos awareness, understanding the new OSHA, air compliance, hazardous waste, environmental checklist audit.

Facility Renewal & Asset Management Training—Convert nonperforming assets into cash, standardized facility auditing for everyone, life cycle purchasing, how facility renewal can result in space optimization.

Developmental Training—Coaching, conflict management, effective communication, successful customer service, teambuilding.

Custodial Operations Training—Establish and maintain custodial operations, identify tools to determine custodial needs, review management principles, explore effective training programs.

For more information on these new training programs, or to schedule a session, call APPA's education department at 703-684-1446 x 230.



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Executive Summary

Wayne E. Leroy

Reviewing the Top Issues

Each year two higher education associations conduct research initiatives to determine the important issues and trends facing higher education during the current year. The American Council on Education (ACE) recently released its *Campus Trends 1996*, and the Association of Governing Boards of Universities and Colleges (AGB) recently published *Ten Public Policy Issues for Higher Education in 1996*. Both of these reports, representing the views of college and university presidents and trustees, are indeed informative and enlightening. Many of the issues and concerns expressed in the reports have direct implications for facilities. Extrapolated from both reports are five issues and their significance for higher education facilities.

1. Financial Conditions and Productivity—Even though eight out of ten institutions reported budget increases in the current year over the previous year, the increases were barely above the inflation rate. Sources of funds are also becoming much more diversified, less from state sources, more from the private sector and cooperative efforts with business and industry. Statistics indicated that less than

one-third of all institutions reported a greater share of their institutional budgets being spent on physical plant than was being spent a decade ago. Pressure for enhanced productivity will continue, with the greatest pressure being applied to teaching faculty and support personnel. The greatest institutional advances made in productivity has been made due to increased strategic planning. Seventy-five percent of institutions reported a stronger institutional identity and focus than the previous years. Also, many institutions are developing linkages with other institutions for the purpose of enhanced productivity.

2. Governance and Privatization—In keeping with the general mood to shrink bureaucratic systems, higher education will continue to hear the cry "do more with less!" The pressure felt from taxpayers, political leadership, and the general population is to contain costs. These pressures will manifest themselves in a variety of ways; first the issue of governance. Many hours will be spent in the next few years debating how broad or narrow should the focus be for institutional governance. Most of the governance issues have a secondary issue attached to it, that being to control costs, and this seems to have centered in the last few years around privatization. Continued emphasis will be made to assess all options for providing services to the institution.

3. Research Issues—As balanced budget debates occur at the federal, state, and local levels, there will be fewer dollars for basic research, especially in the sciences. Research dollars will still be available in those areas where there is public concern such as in health and medicine, but research will evolve from basic to applied. More institutions will begin to tie their research efforts to the economic health of their local community. Research may become partnerships with local economic development efforts or with business and industry. As new paradigms develop for research initiatives, so also will changes need to be made in institution's overhead and chargeback rates.

We Want Your I.N.P.U.T.

APPA has identified the top ten issues facing today's facilities organization:

- Administrative support
- Appropriate information/research
- Deferred maintenance
- Environmental/regulations
- Education and training
- Financial resources
- New/emerging technologies
- Partnerships with stakeholders
- People/personnel
- Privatization/outsourcing

We invite you to help us prioritize these issues and share with us your Ideas, Notions, Proposals, Understandings, and Thoughts by filling out an I.N.P.U.T. form. The form is located on APPA's Web site at www.appa.org.

—W.L.

4. Distance Learning and Technology—All institutional constituencies are demanding technology enhancements, students, faculty, staff, and others. Almost 50 percent of all institutions reported the most significant change occurring on their campus in the last decade was technology. As student demographics change—the average age of students is now twenty-six years of age, and 40 percent of the enrollments are part-time students—they want access to the institution and faculty at times and places of their convenience. To accommodate these emerging demands institutions are installing miles of cable, new network systems, satellite dishes, and many other technology infrastructure components.

5. Regulations and Accountability—These two areas can be divided into two components, external and internal.

continued on page 12

Wayne Leroy is APPA's executive vice president.



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continued from page 10

First external; these are the types of regulatory efforts that have consumed facilities administrators for the past decade, such as clean air, clean water, hazardous materials, lead-based paint, code compliance, worker safety, and more. Even though there is pressure to downsize governmental bureaucracies, the pressure from environmental groups and the general population will remain strong for maintaining clean, healthy, and safe college and university campuses. Perhaps the biggest change will be the way regulations are enforced, with fewer resources for governmental agencies, compliance may become more self regulated than from external sources. The second area is internal and that is accountability. For years higher education institutions held themselves accountable through a process known as accreditation. For the

last few years this process has undergone extensive debate; a new structure is beginning to emerge. At this time it is uncertain what the specifics of the new process may be, but one thing seems evident; it is impossible to deliver high quality teaching, research, and public service without having high quality facilities to support those activities.

To meet these increasing demands being placed on institutional facilities managers, APPA has developed a variety of programs and services to assist in meeting future challenges. Some examples of services includes:

* **Research**—Published this month is the joint APPA/NACUBO/Sallie Mae study, *A Foundation to Uphold*. This study details the accumulated deferred maintenance on U.S. college and university campuses. A companion publication is a case study book highlighting institutions that can serve as models of

innovative approaches for reducing their deferred maintenance backlogs.

To receive a copy of *Campus Trends 1996*, contact ACE at 202-939-9300, or by fax at 202-833-4760. The cost is \$18.

To receive a copy of *Ten Public Policy Issues*, contact AGB at 202-296-8400, or by fax at 202-223-7053. The cost is \$4.95.

* **Education and Training**—Dynamic educational programs, such as those offered at the Institute for Facilities Management, regional meetings, or at the chapter/state level, provide high quality training to meet the demands of an ever changing workplace.

* **Benchmarking**—With the constant need for data and information, *Comparative Costs and Staffing Report* and the Strategic Assessment Model provide a way for institutions to look at themselves or compare themselves against peer institutions.

* **Regulations and Accountability**—*The Regulatory Reporter* provides an easy-to-understand and timely update to APPA members on regulatory and compliance issues. Institutional accountability can also be greatly enhanced by utilizing the Facilities Management Evaluation Program.

* **Partnerships**—A multitude of partnership activities have emerged in recent years, including leadership development with the Covey Institute, the Institute for Facilities Finance with NACUBO, Opportunity Assessment Workshops with the Department of Energy, and an educational facilities initiative that promotes cooperation between K-12 and higher education institutions.

Indeed the times ahead will be both exciting and challenging. However, with APPA's new vision of being a Global Partner in Learning, facilities administrators worldwide will be able to provide the leadership that institutions will be requiring and demanding. ■



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Focus on Management

H. Val Peterson

Combating Age-Old Stereotypes

In most groups, if you say the words "maintenance person" people form a mental picture in their minds: a person in an oil-spotted work shirt with buttons straining to hold together fabric stretched tight over a belly too large to stuff inside a belt which itself is straining to hold up a massive ring of keys. Some would say "a necessary evil." An unpleasant cost of doing business. Whereabouts: nowhere to be found or in the break room. Q: What is white, has wheels, and sleeps four? A: A physical plant van.

Within a facilities management organization you'd be hard pressed to find someone who hasn't come face-to-face with these negative perceptions. As with most stereotypes, there may be a grain of truth in these notions, but as the field of maintenance changes, they are far from being accurate or fair.

Today, most maintenance organizations include well-trained staff that operate and maintain sophisticated equipment and work to reduce operating expense in both maintenance and utility costs. At a college or university, most with a wide variety of classrooms, laboratories and equipment, this is doubly so. Typically, employees working in a collegiate environment are exposed to a wider variety of complicated equipment, machinery, and controls than almost anywhere else. To a great degree, many of our customers have come to recognize the crucial role of maintenance in the

overall success of college programs and operations. But still the stereotypes linger.

One of the reasons that the stereotype continues is the "public face" of maintenance. This is the aspect of maintenance most often seen by those we serve and which often centers on the so-called "dirty work" such as replacing light bulbs, moving furniture, digging trenches, cleaning toilets, and unclogging sewers. Our customers rarely see the more complicated maintenance functions, such as monitoring and adjusting HVAC equipment, operating boilers and chillers in a complex central plant, monitoring and controlling utility usage, generating building plans and drawings from a computer, and using high-tech equipment to produce campus signs. Then there are computer controlled irrigation systems, preventive maintenance programs, energy conserving programs built into campus-wide automation control systems, computer-governed building temperature controls, highly sensitive predictive maintenance techniques, and sophisticated space cleaning equipment. And the list goes on.

Most people have no idea what maintenance people do in a large and diverse physical plant organization. They are not around at night to see the response made to an emergency, or on the roof in a downpour to observe the unclogging of a drain, or in a mechanical equipment room where operational adjustments require a real pro. They never see the effort made to restore failed electrical power, or midnight irrigation shifts, or the emergency repairs made to a leaking boiler or chilled water coil, or the scramble necessary to replace a failed compressor.

But let the temperature rise a few degrees, or a waste basket not get emptied, or have a flickering light, and a crisis is in the offing. And when the maintenance worker takes a break, everyone assumes he or she is just goofing off.

When everything is working, the temperature is within acceptable limits, the buildings are clean, and the grounds are litter free, no one notices. But let anything go "off-normal" and there is a crisis to resolve, a letter of explanation to write, and ruffled feathers to smooth. But then, that is the way of life in maintenance. We are at our best when no one notices us.

In an ideal world, maintenance workers would be judged strictly upon the

quality of their work. Maintenance workers themselves can go a long way toward making sure they don't unwittingly reinforce the misconceptions that people harbor about them. What can we do? Consider the following:

- Dress and groom like a professional. This doesn't mean sporting a tie to fix the boiler; it just means making sure the clothes are neat and clean.
- Tell others on campus about maintenance successes.
- Keep customer service in mind. Remember that maintenance, like other support services, is customer driven. Treat other people on campus as you want to be treated when you are a customer.

If everyone within the organization will work together in a professional manner and opt to provide quality services at all times, the maintenance organization and the maintenance workers themselves will receive the appropriate recognition and support that is deserved. ■



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From Jack C. Dudley, PE, Editor and Co-author of the APPA Publication *Custodial Staffing Guidelines for Educational Facilities*, who has refined those methods through added research and on-site consulting. The software, featuring those refinements, has received many excellent reviews by users since its introductory offering late last year.

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Val Peterson is director of facilities management at Arizona State University, Tempe, Arizona. He is a past APPA President.

The Missionary Zeal of President Ron Flinn

by Alan L. Desso



RON FLINN remembers when APPA was a totally volunteer organization, with no office or staff. "Good things got done, but only when individuals committed themselves and their institutions to accomplish the particular task," he recalls.

Alan Desso is a freelance writer based in Bethesda, Maryland.

Photography by Harley Seeley, Instructional Media Center, MSU

Top: MSU's power plant was named for Flinn's predecessor, Ted Simon. **Bottom:** A view of the pool in Beal Gardens.

His boss at the time at Michigan State University, Ted Simon, was APPA President in 1972 when the decision was made to professionalize the association with an office and paid staff. "I was privy to the discussion of why, when, where, and who," says Flinn.

In at the beginning of APPA's professional growth, Flinn now is at the top of the ladder as the association's President. As assistant vice president for physical plant at Michigan State in East Lansing, he also occupies the position Simon held a quarter century ago, when Flinn was watching, listening, and learning about the industry.

Now Flinn is ready and eager to apply all the experience of a successful—and still continuing—career to APPA's leadership as the association implements its strategic plan to become a "global partner for learning."

He is a global missionary with a vision.

The strategic planning exercise that has been underway throughout APPA and its regions over the last two years has effectively identified APPA's primary objectives and highest priorities, Flinn says. The objectives are:

- Increase meaningful participation and involvement of APPA stakeholders.
- Provide all APPA stakeholders equal access (in terms of convenience, cost, time) to educational/learning opportunities.

The strategic initiatives to achieve those objectives are:

- Increase the effectiveness of education for APPA stakeholders.
- Forge stronger links between the regions and APPA.
- Expand the use of APPANet's electronic on-line services.
- Promote awareness of APPA among senior officers of the institutions served by facilities management personnel.
- Establish a process through which stakeholder needs can be identified and understood.

"My challenge is to provide the leadership to begin implementing these initiatives and to develop the continuous quality improvement procedure," Flinn declares. It's a tall order, he acknowledges, "but we're already underway with great enthusiasm on the part of our volunteer members and the APPA staff."

The willingness of APPA members to volunteer great amounts of time and effort to the association—to commit themselves and their institutions—"is what built APPA into the great organization that it is and continues to make it vital," says Flinn.

Flinn also plans to remind all APPA members that the colleges and universities in North America and throughout the world deserve an advocate for physical facilities who speaks with an unimpeachable voice, unfettered by special interests.

A Missionary Effort

That's also the commitment that APPA will continue to need if it is to grow and become even more effective, Flinn says. As the association implements its strategic plan, "we must also assure that we remain the association of choice for

all colleges and universities," Flinn declares. "It's my assessment that, at least to some extent, we have lost touch with the grassroots of our business."

Some smaller institutions in particular, he says, "don't see a big need" to join APPA. "That's something we need to look at," Flinn states. "It's not so much membership growth; we owe the world a missionary effort to be sure we're touching all the institutions of higher education."

Accordingly, he says, an immediate goal for this year is to advance the "global" concept by actually producing documents in other languages. "We have bilingual members who have volunteered to translate application forms and other documents and thus address that need for our international programs," Flinn says.

He cites the "magnificent job" of the Australasia Region in promoting APPA in its part of the world. "I am encouraging them to continue the missionary effort wherever colleges and



universities express an interest, such as South Africa," Flinn states.

But there's a need for missionary work at home as well, he adds. Although a majority of the colleges and universities in the United States are APPA members, many others are not. For instance, only 20 percent of community colleges across the country are members.

This causes concern, he says, about whether their physical facilities departments are keeping up with current management practices, changing technology needs, and ever-changing environmental regulations.

"This is where the local missionary effort is needed," Flinn asserts. "We all need to 'reach out and touch someone.'" Personal contact, he says, is "the most effective technique" to

spark interest in any organization.

But the experience of membership also must be worthwhile, according to Flinn. That's why he is encouraging the regions, states, and chapters to develop one-day, low-cost, drive-in seminars that are valuable to institutions with limited resources.



Flinn shares a roof's-eye view of the MSU campus. Hidden in the lawn behind him is an underground power substation.

Money also can be saved, he says, by tapping the expertise of experienced facilities managers who are willing to share their knowledge as speakers, panel members, and presenters. After education, this "experience exchange" is the second most important activity APPA provides, Flinn says.

It's important to deliver information quickly to APPA members. "When there's a hot topic, we have to be able to get the information out so that it's still timely. We've got to do it more quickly than we have in the past," he says.

That's where APPANet, the association's World Wide Web site, can play a vital role, Flinn says. "APPANet probably is the best thing that has come down the pike for APPA in a long time," he declares.

High Technology, Low Budgets

The learning and information that APPA provides can help facilities managers meet the principal challenge they face today, Flinn says. It is to install technological features into a campus fast enough to provide the "smart classrooms" and capability for distance learning that universities need to remain competitive and accessible.

The problem, Flinn says, is that "this technology enhancement requires a significant amount of dollars at a time when budgets already are under stress. We have to be creative in

keeping everything going and getting as much mileage as possible out of our facilities. But we also have to prod our administrations to recognize that additional funds have to be directed into this area. Computer-driven technology is useless without reliable electrical supply and air-conditioning systems."

Flinn is experienced at making the most from limited resources. At Michigan State, he says, "we've had to cope with devastating budget cuts, but we're still alive. We've continued to deliver an acceptable level of services at a very low unit cost."

A cogeneration concept that produces steam and electricity, coupled with a vigorous energy conservation program, has resulted in one of the lowest unit costs in the country at MSU, Flinn declares.

Also, persuading campus leaders to make facilities decisions based on the lowest life-cycle cost rather than the lowest first cost has allowed construction of long-life structures that can be maintained at low cost. Flinn says.

Flinn is "a quiet, effective administrator and an excellent steward of university resources," states Roger E. Wilkinson, MSU's vice president for finance and operations. "He makes decisions that are cost-effective on a life-cycle basis."

In 1989, Flinn's division received the U.S. Department of Energy's award for Energy Innovation for developing a new way of charging the pressurized system on its large buses that saved fuel and reduced hazardous diesel fumes.

This award, and numerous other recognitions, including the 1988 Midwest Region APPA Award for Excellence, confirm that MSU's physical plant team ranks among the best.

Flinn also is proud of other accomplishments during the thirty-nine years he has been at Michigan State—a period in which two-thirds of the university's current buildings were constructed. Preserving the appearance of the campus has been a high priority. "I am pleased that many of our building additions blend so well that they are not obvious," Flinn says. "This campus has a reputation as one of the most beautiful in the world, and in some small way, I think I have helped to keep it that way."

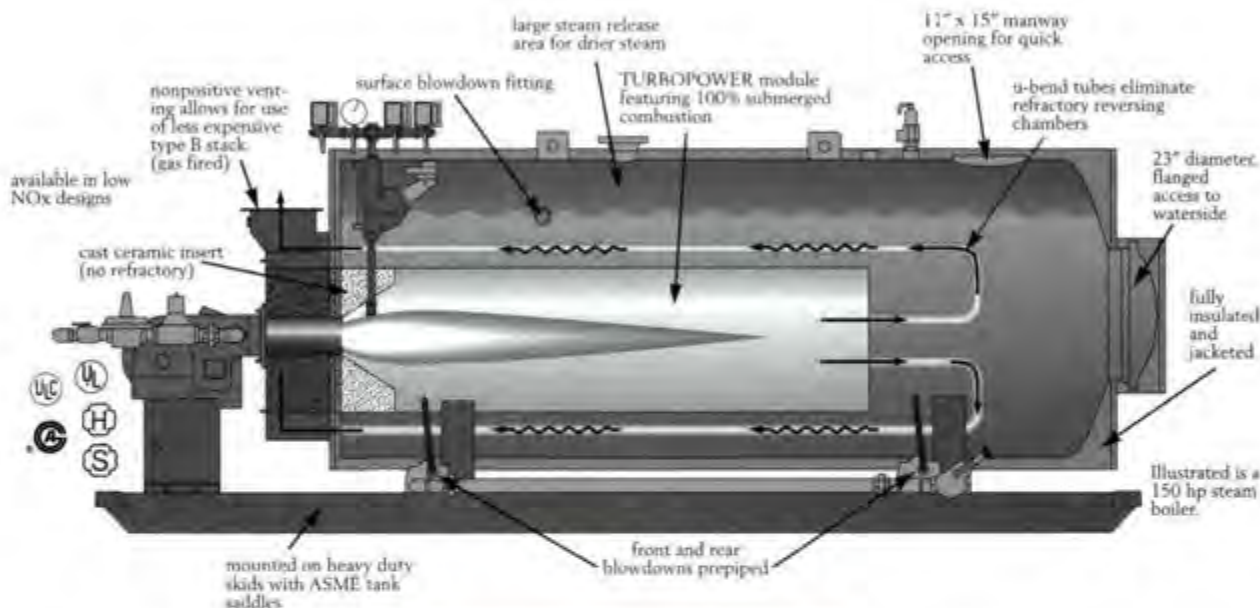
Secrets of Successful Leadership

Flinn describes his principal job responsibilities at MSU this way:

- **Get the money.** "Nothing happens without dollars," he says. "All too often in today's environment, it's fending off additional budget cuts."
- **Create an environment for success.** "If my entire team is not successful, I am not successful," Flinn declares.
- **Be the chief team cheerleader.** "We're the ones who create

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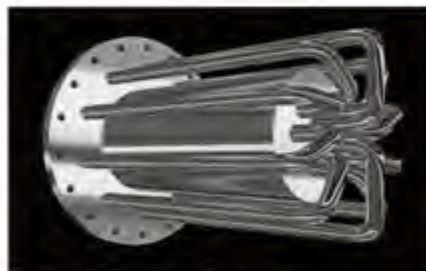


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Continued from page 16

and maintain the physical environment that allows the magic we call 'higher education' to flourish, and the staff must be recognized," he states.

Flinn says he tries to know as many of his "teammates" as possible on a first-name basis. "I meet every new employee and personally congratulate anyone who is promoted," he says.

It's important to be seen as fair, "but

you also must be able to be firm when necessary," he states. And, he adds, "I remind everyone that the Golden Rule didn't get that title by being untrue."

At Michigan State, Flinn says he makes it a point "to tell the physical plant story whenever possible." He schedules appointments to visit with new university officers and deans "to talk to them about *their* physical plant, and all the things we do and how we go about it." In those conversations, he also makes it a point to mention the budget cuts the university has experi-



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Doug Christensen, left, passes the President's Gavel to Ron Flinn at the Salt Lake annual meeting.

enced and their impact on the physical plant.

Always an Engineer

From childhood, on a dairy farm in New York State, Flinn seemed destined to become the engineer and manager that he is today. When he and his brother, a year older, were given toys, "my brother was quite content to continue playing with his, but within an hour, I'd have mine torn apart, trying to figure out how it worked," Flinn says.

As a high school junior, he helped install plumbing in the family's home. Growing up without electricity—"we didn't get it until after World War II, and that was only in town"—taught him how to cope in other ways, too.

Even today, he's a "Mr. Fixit" at home. "I suppose it's a personal thing," he says, "but if I have to call in somebody to fix something because I can't handle it myself, it's a little troubling." He concedes, though, that when the

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house needed a new roof, "my wife was right, and we contracted it."

Flinn still keeps his fingers in agriculture, too, on a 40-acre tree farm that he operates with his wife, Norene. Actually, he



Sparto the MSU mascot stands at the entrance of the athletic campus.

says, "Norene is the owner-operator and I'm the grunt; she says it's just an excuse for me to buy old farm machinery, and there's a lot of truth to that. I have a fair-sized garden and all the toys to do it just the way I want to do it."

Flinn's life-long experience of self-reliance carries over into his administrative responsibilities at Michigan State. "When we're looking for people to come into the physical plant operation, having the desire or ability to do things like a Mr. Fixit is a big plus," he says.

The same applies to APPA. "Sometimes we'll too quickly hire the latest consultant who is making the rounds, and we don't encourage the young folks who are coming up to present a paper on what they've accomplished on their campus," he says.

He recalls his first exposure to APPA, in 1967 at a workshop where members spoke about their experiences. It is

something he has done countless times himself at APPA meetings and other forums. "It's a great experience to get up and speak and showcase your campus and also show how you have added value to the institution," he says. "I'm a big believer in doing something like that ourselves rather than hiring an outside consultant to do it for us."

Flinn also credits a brief fling with journalism as "one of the most valuable experiences I ever had." He spent a year as chief of the staff of copy boys on the night shift at a daily newspaper in Buffalo, New York. For one thing, he says, he had to join a labor union, the Newspaper Guild. "I saw the union do some good things, humane things, and that has stayed with me," he says.

Watching journalists at work also taught him the importance of "getting information out quickly"—one of his priorities at APPA. "Every night they put articles together and produced a newspaper and got it out on a timely basis," Flinn says. "We just have to do whatever it's going to take to do it."

Supervising a dozen copy boys also was Flinn's first management experience. "If somebody screwed up, I had to face the music and take care of it," he says.

Flinn considered pursuing a career in journalism—"it was a wonderful experience; I was really torn," he says—but decided to follow the "game plan" he had developed in junior high school, to earn an engineering degree.

He already had an associate's degree in construction technology from Erie County Technical Institute (now Erie Community College) in Buffalo and transferred his credits to Michigan State because, he says, there were no low-cost engineering schools in New York at the time.

Always a Spartan

Flinn and Michigan State, whose teams bear the nickname Spartans, seemingly were a perfect match from the beginning. Fresh from his own spartan upbringing, Flinn arrived on the campus in 1957, intending to complete his degree in civil engineering and then move west to find a job.

His first view of the Pacific Ocean, however, came when he attended his son's graduation from U.S. Marine Corps boot camp in San Diego.

As a student, Flinn was selected by Simon to work part-time in the Physical Plant Division. "We picked the best out of the student class and offered them jobs," says Simon, now retired. Flinn received his Bachelor of Science degree in 1960, but Simon wouldn't let him leave. "We were impressed enough with him to ask him to stay full-time," Simon states. "He was my primary associate."

Under Simon's tutelage, Flinn began work as an associate engineer, while earning a degree in business management from LaSalle Extension University in Chicago. He progressed rapidly into positions of increased responsibility and was named assistant vice president for physical plant—the job he still holds—in 1984.

"He was talented technically and professionally," says Simon. "He had organizational capability, an excellent personality, and was able to select fine people. He was a very fine individual."

He still is, according to those who know him best. "He's very diligent, focused, and does his homework. He's really a



Flinn has overseen construction of two-thirds of the MSU campus.

great guy, professionally and personally," says William W. Whitman, associate vice president for facilities at Iowa State University, who has known Flinn for more than twenty-five years through APPA.

And he's still true to his "spartan" roots. "Growing up

cheap, on a dairy farm without electricity, where we had to do everything on our own was great training," Flinn says. "Then I arrived on a campus where they are called Spartans. That's the way we do things. Anybody can solve problems with unlimited dollars. But it really proves your ability to be innovative—to tackle a problem and solve it on a very limited budget."

Vision for APPA's Future

"Any person who partakes of the higher education experience," Flinn says, "is better equipped to serve the world and achieve personal goals."

However, he states, "as much of a zealot as I am on higher education, I remind everyone that if our K-12 system isn't effective, there isn't anything we in higher education can do for those youngsters."

That's why he expresses delight that APPA is opening its programs to K-12 facilities managers and planners as well. "He has a good vision of where APPA should be, and I agree with him," asserts Whitman.

Broadening APPA's outreach, internationally and at home, to all levels of education facilities management, is the underlying theme of Flinn's presidency. He is a global missionary with a vision for the industry he knows like the back of his hand, and loves. ■

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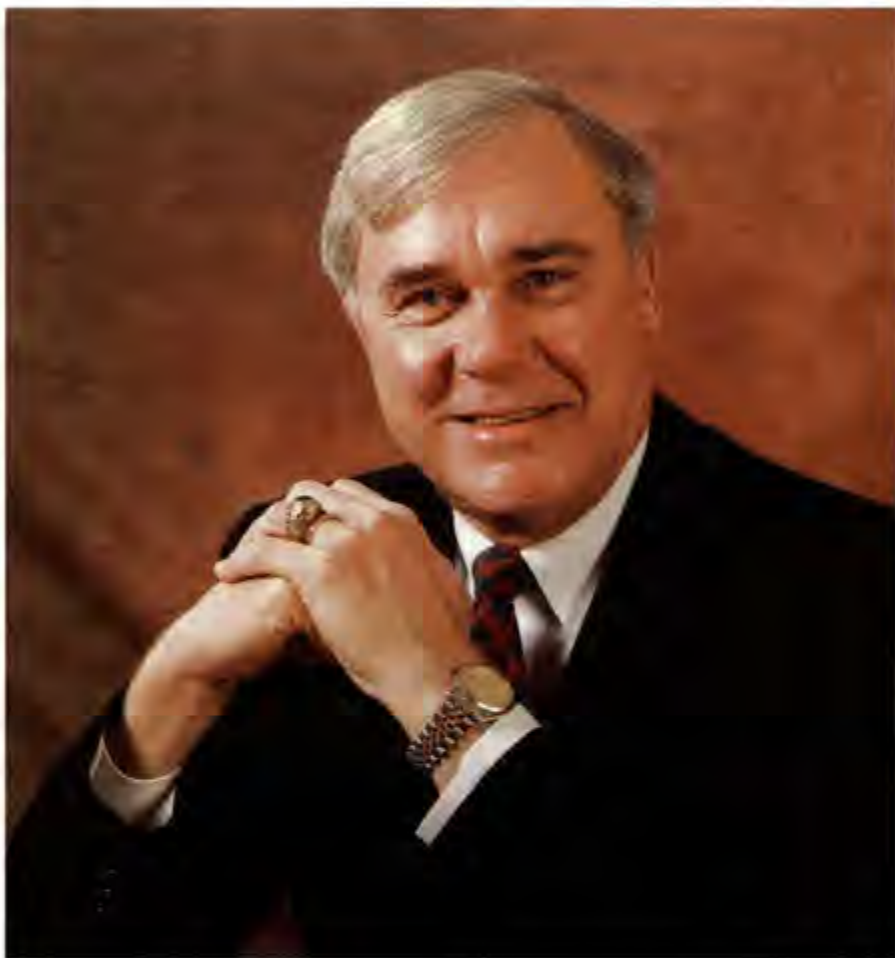


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A President's Perspective on the Causes of Unease in Higher Education

by Arthur K. Smith



I am truly grateful for the opportunity to contribute some of my thoughts to your deliberations. From the perspective of those who have leadership roles in higher education administration, the area of responsibility for facilities management and operations is vital, oftentimes crucial. Unfortunately, it is also sometimes invisible, at least to the eye of the public and, alas, occasionally to that of the faculty. Except when something goes wrong, such as when wastebaskets are not emptied in a timely fashion, for example, or when campus streets are not plowed promptly after a major snowstorm, or when the campus network gateway to the Internet becomes clogged with traffic.

Without question, the service you provide and the professionalism you reflect are *very visible* to those of us who know where to look. And I think you know that college and university presidents look to you quite often indeed.

Arthur Smith is president of the University of Utah, Salt Lake City, Utah. He previously served as the chief business and finance officer at Binghamton University of the State University of New York. This article is taken from President Smith's remarks to the APPA Board of Directors at its July 1996 annual meeting.

When I first came to Utah just over five years ago, as a candidate for the job I now hold, I asked for the opportunity for my wife and me to take an informal guided walk around the campus. This was a little tricky, because the presidential search at that time was very secretive, and the search committee was worried that word would get out that I was a candidate. But this walkabout was very important to me, because I know from long experience that if a campus doesn't look right and feel right, it's not going to be the right place for me.

I knew immediately during this walk that the University of Utah was a place that understood the importance of maintaining facilities well and of presenting the right appearance of its buildings and grounds. The lawns were lush and well mowed. There were beautiful flower beds in conspicuous locations throughout campus. I couldn't see any graffiti, and that told me a lot right away. The students and campus community respected the campus, and the plant operations department got rid of graffiti as soon as it cropped up. As all of you know, these things can become contagious very quickly. The buildings were clean and well maintained. I knew right away that, as we say in Utah, this was the right place!

We have an extraordinarily ambitious building program

underway, including a doubling in size of our main campus library, a new computational sciences building, a new biology building, and major renovations of several historic old buildings on Presidents Circle. As many of you know, our campus has been chosen as the site of the athletes village for the 2002 Winter Olympics, a 4,000-bed facility that will become our residence hall complex for unmarried undergraduate students. What is more, our football stadium will be the site of the opening and closing ceremonies for the Games, and we will be expanding it from 32,000 to 50,000 seats. We have a full plate of projects to occupy our attention, an array so ambitious that we are well along in a comprehensive, long-range campus development plan to make sure we get it right.

Pressures and Unease in Higher Education

We in higher education are in the midst of what might be called a pretty trying time for our institutions. In fact, it seems that we've *always* been confronted with major challenges of one kind or another. But the tenor of the current times seems a bit different, and the challenges deeper and more troubling. According to Cornelius J. Pings, president of the Association of American Universities, there are nine sources of unease in universities these days.

1. Decreasing appropriations from state legislators, with most states seeing a steadily decreasing share of annual state budgets going to higher education.
2. More federal pressure to reduce the costs of doing research, especially in recovery of direct costs.
3. Opposition on the parts of students and parents to rising tuition and fees.
4. Likely reductions of Medicare dollars that have been so important in funding medical education and biomedical research.
5. General public pressure for change in scope of government at local, state, and national levels.
6. Debate over whether too many Ph.D.s are being produced by our graduate schools.
7. Pressure for our faculty to do more teaching of undergraduates, and less research.
8. Excessive reliance on foreign students, foreign postdoctorates, and foreign faculty members, especially graduate teaching assistants.
9. Public anxiety that college is simply becoming unaffordable for many Americans.

To this list I would add several of my own:

- Pressure from governors and state legislators for our institutions to teach more students through technology-delivered means, including distance education.
- Related to technology-delivered education, pressure to reduce expenditures on new bricks and mortar and on the operation and maintenance of buildings, both new and old.
- Finally, some people are questioning whether a college education at the baccalaureate level is still worth—as was formerly the case—the expenditure of time, effort, and money to the student.

This litany of sources of unease is another way of pointing out that the world in which we work, and the society in which we live, are becoming more and more complex. And it's not a particularly gradual process. The rapidity of change within the overall complexity we deal with is itself accelerating. Our general knowledge base is growing exponentially, and our specific knowledge base is trying to keep up.

I am not alluding only to higher education, either. Other businesses and industries are rethinking the way they do their work. In the banking industry, for example, progressive leaders do not want to build more "branches" or to invest in additional bricks and mortar. Instead, they anticipate conducting many more of their activities electronically, through ATMs or in a "home banking" environment. Throughout our economy, in fact, the trends are toward rethinking, reengineering, restructuring, downsizing, and privatization.

While higher education has not yet felt the full impact of these trends, clearly it is heading our way, and I believe that it is gathering speed. Some members of our campus communities are still in a state of denial about this. They seem to believe that if we ignore our critics and the sources of unease that have mobilized them, eventually they will go away, and then we can get back to "business as usual." But to me it is unrealistic to believe that somehow we in higher education will be insulated from the fundamental changes that are occurring in the society and economy around us.

The Virtual University

You may be following the evolving concept of the "virtual university," which is being vigorously promoted by Utah's Governor Mike Leavitt, in association with fellow governors in other Western states. There is much to be said for this idea. But there is also much to be said *about* it before we launch ourselves full-tilt into a sophisticated information technology delivery system for higher education.

For one thing, it is not likely to be cheaper than what we are doing now, and where the money will come from to do it right is not at all clear. And certainly, whatever the upshot of the virtual university, whatever changes are made in our current system, and whatever the planning of the educational plant for the years ahead, the effect on the work of facilities administrators and how you conduct it will be momentous.

This is but one illustration of the forces that weigh on higher education today, although the concept of electronic delivery of education may represent other aspects as well. We are hearing from taxpayers, from parents of students, and from students themselves that it is time to take stock of ourselves and our product, and how we make it available. I certainly can't argue with that. As in any business, we in higher education should be our own toughest critics. We should be sensitive to the interests and the concerns of those we serve, especially our students. Perhaps we have not been as observant as we should, perhaps we have not listened well, and perhaps we have not reacted as quickly as we might to the growing expressions of dissatisfaction with "business as usual" on our campuses.

No Easy Solutions

If that has been the case, we had definitely better get tuned in today. From the public's perspective, academic administrators and faculty are the most visible targets for criticism. To

cite but one example, the productivity of faculty members has come under considerable scrutiny and is often used to "illustrate," if you will, alleged inefficiencies in higher education. It is not a new concern by any means; neither is it better understood today by those who criticize than in previous years. While I understand why such an issue arises, it is much more complex, and consequently much more difficult to respond to, than meets the eye. I would hate to see this become a populist issue when the stakes are so high—both in terms of how well our students are educated as well as in the outcome of professional careers. But this issue won't go away, and ignoring it simply won't work.

The movie *Field of Dreams* had a wonderful catch phrase: "Build it and they will come." That has pretty much been the rule of thumb in higher education—until now. Now "they"—that is, prospective students—are beginning to think, "Well, maybe. Maybe not." They have many more options available than they once did, and one of them, of course, is not to go to college at all. A recent report by the American Council on Education showed that the dropout rate after the first year of college has been steadily increasing in recent years. While this also is surely a complex phenomenon, we at the University of Utah are looking closely at our student base, at competing institutions, and at all the myriad factors that may affect the number of students we attract, admit, retain, and—it is to be hoped—graduate. You are probably doing the same at your own college or university.

At the same time, we are having to take a close look at the condition of our facilities and our equipment, and ask whether they are utilized to the fullest, whether they are outdated, or whether they have become unsafe or inaccessible by newly emergent standards. Our campuses all struggle to keep up with preventive maintenance, and we know that deferred maintenance is a short-term financial expediency that ultimately contributes to a deepening long-term problem. The costs of such neglect expand almost exponentially over time.

Many public institutions, especially where the facilities are fifty years old or more, are pleading for funds to remedy or at least mitigate the deterioration in facilities. They are not always finding a ready ear or a sympathetic audience in legislatures that are loath to raise taxes, and that are already strapped in covering a state's other financial needs.

But the importance of building new facilities, and of modernizing older ones, cannot be overstated if we are to continue to fulfill our institutional missions. Advances in technology simply won't provide all the answers to enrollment growth and to changes we are confronting in the mix of students and the programs they need to meet their higher education goals. We have had to become more creative about how new buildings are financed.

One notable example comes to mind—Connecticut and its UCONN 2000 project. The governor and the legislature have committed \$1 billion over ten years—\$100 million per year for its capital facilities. Otherwise, governors and legislators are getting much tougher to persuade on buildings financed through general obligation bond issues. At the University of Utah, this has meant much more reliance on private fundraising, and on finding campus-based revenue streams to amortize bond issues of our own.

We need new and modernized facilities if we are to respond effectively to the explosion of new knowledge. The level of sophistication these new buildings represent means that the professional expertise in operating and maintaining them, not to mention the requisite O&M costs, must rise accordingly. Of consequence, there is a related difficulty in attracting and retaining qualified support staff, as well as effective leadership. Overall, it's a situation that is, in a word, vexing, but at the same time it is a challenge we must work together to meet.

So where does APPA fit in this milieu of complexity and change? I'm impressed by APPA's admirable statement of vision, as articulated by its past officers, to be a "global partner in learning."

Global refers to the sense of being a worldwide association and having its members being involved in the critical planning and activities on the campus. *Partner* refers to institutions working together, being on the same page, as it were, and having APPA members become full partners in the decision-making process on the campus issues. *Learning* refers to the sense of providing a supportive environment and students to learn and a faculty to teach, and the discovery of new knowledge to research and of providing methods and opportunities to promote continued professional knowledge.

When you reduce to the essentials of what our institutions are all about, there are only three principal ingredients: students, faculty, and a place. A place is broadly understood to encompass information technology as well as facilities, where students and faculty can come together. You, the facilities professionals, are key elements in that third ingredient. How well, how creatively you do your parts will go a long way in determining the shape and quality of America's higher education in the future.

Therefore, on behalf of all college and university presidents who depend on you to help us be successful, and who from time to time complicate your lives unduly, thank you for all you do to help meet the litany of challenges listed earlier. While we in higher education have our critics, while we surely need to do some fundamental reengineering and reassessment of our priorities, the fact remains—and I think the rest of the world knows this very well—we do an effective job overall in providing the human resources and the new knowledge that drive the health of the American economy and the quality of life that we as a nation enjoy. ■

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To Outsource or Reengineer?

The Case of the Campus Motor Pool

by Chris Jefferies

A

lthough the prolonged global recession of the late 1980s and 1990s seems to be abating, higher education yet struggles with the difficult choices required to remain competitive, affordable, and responsive. Even with an easing of the recession and a gradual rise in tax revenues, state and local governments are quick to note that the colleges and universities they help support have survived lower revenue levels and are unlikely to increase funding to earlier levels.

Higher education's choices: continue to reduce costs, increase productivity and efficiencies, and downsize or cut programs that contribute only marginally to the institution's mission. With mixed success, higher education has been responding to these challenges by adopting many of the same management innovations pioneered and adopted in the private sector and, to a lesser extent, in government. The following are only three that appear to be working in higher education.

- Total quality management, emphasizing customer service, value-added activities, and process restructuring;

- Business process reengineering, reducing middle-management, flattening hierarchies, and redesigning processes;
- Entrepreneurialship, emphasizing use of business practices, such as outsourcing.

Conceptually, and supported by prevailing opinion, privatizing or outsourcing traditional university support functions such as building maintenance, landscaping, or motor pool operations results in lower operating costs, improved services, and significant savings in nonacademic areas that can be reallocated to direct education. Cost and service quality should be the determining criteria. Its use, however, comes with a price. Long-term employees may lose their jobs, management may lose the flexibility and control inherent with in-house operations, and the organization may become a "captive" of the enterprise providing the product or service.

As a result, reengineering is being looked at by many higher education institutions as an alternative to outsourcing; that is, rather than outsource to improve service and reduce costs, why not "reengineer" in-house enterprises to achieve the same results of improved services and lower costs?

This article is an exploratory, single-case study of the decision to reengineer rather than outsource a major research university's motor pool, a traditional higher education support function. It seeks information to help answer three questions: what role did lower operating costs and improved service play in the decision? What other factors, in particular participant perceptions and external "politics," influenced the decision? Is reengineering a useful alternative to outsourcing?

The Case

The university's Board of Trustees establishes the policies and procedures governing university administration and management. Resource management is of particular concern to the board; they must approve any university expenditure exceeding \$75,000. This requirement brings the trustees well down into the university's day-to-day operations. Although individual members come from a variety of backgrounds, most are successful businesspersons and are perceived to reflect a "corporate" perspective.

It was not surprising, then, that when the university began to experience declining resources and increasing costs in the late 1980s and early 1990s, the board approached the problems much as corporate America has during the recession—focus on the core mission, downsize or eliminate unprofitable enterprises, reduce overhead costs, and increase productivity and system efficiencies. The university was directed to focus on its three-fold mission of education, research, and public service and make efforts to get out of the business of "business."

Since the university is a public institution, the board argued, it is unlikely able to provide services as efficiently or at as low a cost as private enterprise. Translated, that meant to outsource or contract out the traditional in-house services that private vendors might be able to provide, leaving the university free to concentrate on its core missions. The chairman was particularly adamant about outsourcing and pointed to a number of university services and enterprises that were successfully outsourced: the bookstore, vending machine services, laundry services, an airport control tower, and, on one of its other campuses, printing services and office copiers. The motor pool, highly visible with many university-marked vehicles on and off campus, fell within the Regent's interest as an outsourcing candidate.

Two years earlier, the trustees appointed a new vice president for administration with strong administrative and management experience. With a Ph.D. in higher education administration, he was well familiar with prevailing management theories and practices promising to reduce operating costs and increase efficiencies, like TQM and BPR. Although experienced in outsourcing and recognizing its utility, he shares with many administrators the concern that perhaps outsourcing is being used indiscriminately in higher education as a "panacea" for management problems that might more appropriately be addressed by other means. With outsourcing's potential to disrupt careers, adversely affect employee morale, limit management flexibility in using resources heretofore available, and the difficulty inherent in capturing all tasks to be outsourced, he believes an in-house enterprise ought to have the opportunity to restructure its own operations and processes to become more efficient and reduce costs before becoming a candidate for outsourcing. The vice president concluded that reengineering promised to provide the mechanism to reassess, redesign, and restructure the motor pool.

Although the trustees had clearly articulated their desire to outsource the motor pool, the vice president hoped to convince them that a reengineered motor pool with reduced operating costs and improved services was a valid alternative. Moreover, he concluded, reengineering the motor pool would accomplish two additional objectives. First, it would

provide benchmarks against which motor pool performance could be measured. Then, if the motor pool was subsequently unable to achieve reduced costs and improved services, the benchmarks would be used to write performance specifications in a Request for Proposals to outsource. Second, it would establish a process that could be used to reassess and restructure other university enterprises.

To guide the reengineering process, the vice president constituted a steering committee of representatives from his directors staff, employee groups, and the faculty. To assist the committee, he employed a consulting firm to provide assistance in identifying analytical data, developing performance standards, identifying the processes to be examined and reengineered, and with the examination itself. Over a period of six months, the steering committee and smaller working groups, including motor pool employees, examined motor pool operations and processes. Processes were examined, and as a need for improvement was identified, changes were made.

As the working group compared motor pool maintenance with off-campus garages, it became clear the motor pool rates were higher by about \$50,000 per year. Analysis indicated the higher rates were direct results of lower mechanic productivity and higher administrative overhead costs. Typical of many in-house public university functions, the motor pool workloads had changed over the years, in some cases decreasing with consolidations and technology improvements, without corresponding decreases in personnel. Review of actual workload requirements indicated two mechanic positions and two administrative overhead positions could be eliminated without adversely affecting service response times.

The positions were eliminated, reducing costs by about \$80,000 per year and greatly increasing the productivity of the remaining employees. In addition, the working group recommended adopting a computerized management and accounting information system to streamline and eliminate several clerical functions that would, in turn, allow reducing by one more the number of administrative positions. These changes resulted in reduced costs that showed motor pool maintenance a lower-cost alternative to privatized maintenance by \$30,000 to \$50,000 per year.

Additional university-wide savings were generated by a policy change that reduced by 17 percent the rates charged to university departments for vehicle leases. Up to this point, vehicles were depreciated and replacement costs assessed over a life of 75,000 miles, and then the vehicle was retired. This figure was based on the generally accepted industry-wide assumption that beyond 75,000 miles maintenance costs began to exceed economic levels. Analysis of actual maintenance, however, indicated 90,000 miles was a more practical, realistic level. Adopting the higher mileage level, vehicle lease

"The decision to outsource or reengineer a campus enterprise is far more complex than a straightforward financial decision."

rates were lowered to match the longer depreciation and replacement cost rates. This step saves university departments about \$28,000 per year. Moreover, the motor pool now purchases one vehicle fewer out of five formerly required, thus reducing capital tied up in vehicles and allowing it to be put to other uses.

The committee, the consultants, the vice president, and even the university president, considered the reengineering effort a success. All but the trustees. They still seemed convinced that because the university and its motor pool were "public" enterprises, not driven by competition and bottom-line profit, they would not provide services as efficiently or at as low a cost as a private vendor. The motor pool reengineering effort was commendable, they concluded, but it was faulty because it never grappled with the essential element of free enterprise, competition. Would a private vendor, given the opportunity to bid, offer a motor pool at a lower cost than even a reengineered university motor pool? The only way to determine the answer, the trustees argued, was to prepare and release a Request for Proposals for a motor pool. Only then, with vendors required to put their money on the line, could it be determined which alternative was better. Their instructions: prepare and release an RFP for motor pool operation. The RFP was prepared in mid-spring and awaited release.

In late spring, and over the next six months, several events occurred that, though not directly related to the study and resulting RFP, nevertheless had great significance. First, the president announced his retirement to return to the faculty in the summer. Although he had acknowledged the efficacy of the motor pool reengineering, he nonetheless supported the trustees in their emphasis on outsourcing. Second, the interim president, designated to serve for about six months, deferred as many policy-related decisions as possible to the incoming president, including the decision to release the motor pool RFP. Third, the new president's much heralded arrival further delayed the release decision and resulted in a number of policy shifts that would affect a final decision. Most important, he vowed to reestablish the familial campus atmosphere of his own undergraduate days, and, to win support of the faculty, he declared he would reduce administrative staff levels and reallocate savings to faculty pay raises. Fourth, the chairman of the Board of Trustees, the member most adamant about outsourcing, announced he would be stepping down the following spring.

The cumulative effect of all these events and changes was, finally, a decision not to release the RFP to outsource the motor pool, but to let the reengineering stand. Absent board pressure to outsource, and after declaring a desire to reunify

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the campus "family," yet struggling with a disaffected administrative staff suffering low morale, the new president did not want to cause additional alienation and divisions by laying off motor pool employees. Reengineering thus carried the day.

Analysis and Conclusions

The growing use of outsourcing in higher education reflects a general consensus that it will avoid or reduce production costs, yet still provide an essential university service. It is increasingly advocated as a means to reduce operating costs and reallocate savings to more direct educational functions.

"Reengineering can be an effective alternative to outsourcing a campus function."

The use of business process reengineering as an alternative to outsourcing in-house services, however, does not appear to be as widely used. Is it a useful and valid method to achieve the same end? I find little in higher education administrative literature to suggest an answer.

While generalizing from this case alone may be risky, it nonetheless provides interesting and perhaps useful insights into the dynamics at work in the decisions and possible relationships between outsourcing and reengineering. Most important, the study suggests the process is far more complex than a straightforward financial decision.

In contrast to the committee's conclusions, it appears that cost and service were *not* the trustees' primary criteria in their decision that outsourcing was more appropriate. The motor pool reengineering clearly achieved lower costs and improved service. Indeed, the motor pool was a profitable enterprise before reengineering; increased efficiencies and lower operating costs made it more so. Cost and service were important, however. If the motor pool had not been profitable, and lower costs and improved services had not been achieved through reengineering, then outsourcing would have been the clear alternative.

More important to the process seemed the trustees' and the steering committee's respective perceptions of outsourcing and reengineering. The trustees reflected the perception that the business of a university is not "business," and that outsourcing is less costly and more efficient by its nature. These perceptions thus appeared to override the reengineered motor pool's demonstrated financial savings. In addition, the trustees seemed to have little concern for the mechanics and difficulties of preparing an RFP to outsource so complex an operation as the motor pool. Nor did they share the staff's concern that few private vendors were likely to have the ability or experience to provide a comprehensive motor pool operation like the university's. Another university in the same state had attempted to outsource its motor pool several years earlier without success; it could not find a qualified bidder.

From the steering committee's perspective, six of nine members were aware the trustees wanted to outsource the

motor pool. Significantly, all believed the final decision would turn on issues beyond financial considerations alone. Perhaps more important, all believed in-house operations were preferable to outsourcing unless there was convincing evidence outsourcing would reduce costs, increase service efficiency and quality, and would produce savings or additional revenues. However, none considered the motor pool a good outsourcing candidate. Based on informal criteria developed and used by the university's director of purchasing, a member of the committee, they judged the motor pool a profitable, customer oriented enterprise with stable, efficient management, high employee loyalty and performance, and not requiring any large capital expenditures. Most of these criteria would have had to be absent before any of the members would consider the motor pool an appropriate candidate to outsource.

On the other hand, all committee members were eager to try reengineering the motor pool. Interestingly, only two considered reengineering a legitimate alternative to outsourcing. The others viewed it as a useful step to determine if outsourcing was appropriate, or as a step to assist the motor pool become more competitive in responding as a bidder against off-campus vendors. During committee deliberations, some discussion focused on whether the reengineering process ought to include "test" RFPs to help determine if performance benchmarks were adequate, and if prevailing wage data used in the analysis were accurate. That is, limited-scope RFPs could be prepared and released, and the responses analyzed to determine adequacy and accuracy of analytical data.

Several members reflected that if the committee had done so, and if the results confirmed the committee's analytical data, then perhaps the trustees would have been more willing to accept reengineering. For practical and ethical reasons, however, none of the committee supported test RFPs. They believed soliciting bids intending not to award a contract reduces the integrity and credibility of the bid process. Moreover, they were concerned the process would unnecessarily lower the morale of employees likely to be affected by outsourcing. Additionally, preparing a bid in response to an RFP requires considerable time and cost; none thought it fair to require this of vendors deliberately with no prospect of awarding a contract.

In summary, the case study clarified several issues associated with outsourcing or reengineering a traditional higher education function. First, financial considerations were not the decisive criteria. While they provided a baseline around which other dynamics swirled, other factors and perceptions played more important roles. Most important was the trustees' belief that outsourcing by its nature was preferable to in-house operations in non-education support functions. That several university operations were successfully outsourced no doubt reinforced their perceptions.

Second was the committee members' belief that in-house operations are preferable to outsourced if the in-house enterprise can be restructured or reengineered to make it less costly, more efficient, and more responsive to customers. This does not mean they believed outsourcing is not useful to reduce costs and improve service. To the contrary, all inter-

viewed members acknowledged outsourcing is valid and appropriate under the right circumstances.

Third was their belief that the motor pool was not an appropriate candidate to outsource. While probably right, this belief led directly to the outcome the trustees found unacceptable.

Fourth, differing committee perceptions of reengineering's role may have complicated the process. For example, if all members had understood and accepted reengineering as a necessary step to allow the motor pool to compete as a bidder itself, then perhaps the process would have resulted in an RFP to outsource. Subsequent to the study, several committee members concluded reengineering would be more useful and appropriate for enterprises not likely to have a private-sector alternative.

And finally, the events transpiring from the time the RFP was prepared under trustee instructions and the final decision not to outsource, about a year later, confirm the role that campus politics, policy dynamics, and organizational processes can have on such a decision. Based on these perceptions and dynamics, I conclude that non-financial considerations were as important as financial, if not more so, in the outsource decision, and that reengineering can be an important alternative to outsourcing.

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Design-Build in Scholastic Residence Renovation

by Paul R. Bottis Jr.



A typical new kitchen, left, and a typical new quad living area, next page, at Clark University dorms.

One challenge that facilities managers face is satisfying changing requirements with aging facilities. Another is to accomplish these often complex renovations with increased fiscal restraint and within the limitations of the academic calendar. Facilities officers are further confronted with the need to meet students' increasing expectations regarding housing.

My staff and I were faced a few years ago with multiple challenges of bringing campus buildings up to modern codes and expectations on extremely tight budgets.

Four of our student residence halls, originally constructed in the 1960s and averaging 45,000 square feet each, were identified as the starting point in our renovation project.

Paul Bottis is director of physical plant at Clark University, Worcester, Massachusetts.

After more than thirty years of use, the problems plaguing these facilities were mounting. Decaying bathroom facilities were intended to support ten students per fixture, there were no kitchen facilities, and there were no modern telephone and computer data line capabilities. Poor quality original lighting did little to help the dark interiors, which were further dimmed by the energy initiatives of the 1970s. Original windows made the building inefficient, and 20 amps of electrical service per three rooms was no longer adequate for the six students sharing it. These out-of-date student residence halls simply were not meeting our students' needs.

Competition continues to increase between colleges and universities fueled by changing demographics, a fluctuating economy, and the spiraling cost of postsecondary education. This makes it more important than ever to be able to attract high quality students.

Our university remains committed to its uncompromising admissions standards and has elected to become more appealing to students by significantly increasing the utility, convenience, and attractiveness of our nearly 100-year-old campus. By renovating to meet the needs of our current and future student bodies, Clark has made a strategic commitment to stand above other campuses that also have strong academic standards.

Our financial resources were extremely limited. Rather than having the project examined to determine estimated costs, the university was forced to establish a budget first, then work backwards to find a solution that would achieve the best possible renovation with available funds. That was how the total project budget was established, and we began by knowing it was limited to \$3.5 million.

Further complicating the situation was the other major obstacle of scholastic construction—limited time. No one in the education industry can afford to take buildings off line. Renovation had to be completed during the three-month summer break.

With limitations mounting, it quickly became apparent that using the traditional project approach was simply out of the question. Determined to maintain its renovation schedule within the prescribed budget, Clark researched alternative approaches to the project. The research findings pointed to a nontraditional but cost-effective solution: the design-build delivery system.

Our research identified three major benefits inherent in design-build: improved efficiency, rapid delivery, and significant savings.

Improved Efficiency

In design-build, the keys to maximizing efficiency are careful planning, a highly systematic approach to the total process, and the resulting strong level of trust that the design-build system tends to foster between the owner and design-builder.

The design project manager, construction project manager, and building owner representatives come together as early as possible to establish firm project parameters. Most important are a schematic design that responds to the program and an order of magnitude estimate. Agreement at this point between representatives of the design-build firm and the building owner is crucial to the final cost of the project.

If the design or budget appear to be falling short, revisions made during the first stage will yield the most cost-effective



photos by Culler Associates

end results. If necessary, this is the cheapest loop to repeat.

The design-build delivery system ensures an ongoing sharing of information between all key players. Because continuously updated facts are available to all, high quality decisions can be achieved rapidly. This inherent design-build advantage is especially important in a renovation project where new problems are continually being uncovered in the field.

The success of your teaming is measured by your team's ability to take a construction or renovation project and maximize value for the owner.

Clark University selected as our partner a Worcester, Massachusetts firm heavily experienced in design-build and in working with educational institutions. The firm's design-build teaming approach yielded creative suggestions that achieved major cost savings to the university, increased single-room revenue, an appreciably upgraded living accommodations.

Our design-build team consisted of a design project manager, a construction project manager, our director of residential life, and me, the director of physical plant. In appropriate sessions we were joined by our chief financial officer. Each of these department heads also brought one or two staff members when needed for specific issues at hand.

Because of our strong teaming effort, extensive upfront planning, and ongoing shared communication, there were zero change orders due to design mistakes. In fact, the only change orders resulted from unforeseen problems such as hidden asbestos and rusted conduits.

Rapid Delivery

Fast tracking through a powerful system of teamwork is the foundation for design-build success.

Once the design and budget are agreed upon, the process moves into the design-development stage. Regulatory processes are defined and dealt with early. Working drawings are developed for critical areas of the project, key consultants and subcontractors are called in, and a guaranteed maximum price is established. Documentation is limited to only that which is required to build the facility or to complete the renovation.

It was not until April 15, 1994 that the design-build process was underway at Clark. It was that day that the design-build firm was selected and awarded the project.

To accommodate the summer schedule, the team assembly and design-development process began immediately so that the design-build team was ready to move into the linear phase of the process on May 20—the start of the physical reconstruction on our buildings.

In a traditional delivery scenario, the architect is not at the construction site every day. Contrastingly, design-build provides continuous accessibility to all key parties. Because design is enhanced every day, the design-build teams are able to make design changes in the field while maintaining a tight schedule.

Because the design-build team functions as an integrated unit, university personnel have a complete knowledge of the process at each decision point. When we hit a problem, we all

worked on it together. Normally, problems could be resolved in a matter of hours.

Significant Savings

The design-build delivery system enabled us to complete our four dormitory renovations of more than 155,000 square feet for under \$20 per square foot. This is compared to the cost of conventional renovation, which ranges from \$60 to \$100 per square foot.

Clark University now offers four modern housing facilities for up to 624 students. The residence halls include sixteen kitchens, twenty-seven suites, all-new bathroom facilities designed to support five students per fixture, 20 amps of electrical service for every two students, all new windows, a VAX/Internet connection for each student, a bright, well-lit atmosphere, new carpeting, paint, window treatments, and improved accessibility for persons with disabilities.

Prior to the renovation, we were faced with a declining occupancy rate in these residence halls. Now, they quickly fill to 100 percent occupancy rate. In fact, they became the most sought after housing units in the lottery for this academic year.

The design-build delivery system, with its powerful teaming approach, provided us with a renovation solution that truly maximized extremely limited resources. ■



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Carpenter-Poet Plies His Trade With Wood and Words

by Ruth E. Thaler-Carter

from "What We Are Doing"

What we are doing is hard to
explain.
It would take diagrams and curse
words, complicated
facial expressions
and lengthy descriptions of little-
known tools. It would be
like trying to explain quarks and
leptons

to someone who had merely asked
where the rest-rooms were.

However, to put it simply,
Davey and I
are on the fifth floor of the library,
working
partners, jockeying stepladders
back and forth in the narrow aisles
between the stacks,
not soaking up knowledge, but Pop-
riveting ceiling grid.



Davey has his ladder, I have mine;
each

of us has a small vise-grips.
From Microbiology to Astrophysics,
dragging our tools and our bodies
along with us,
we push on,
inexorably, zigzagging
through the Dewey decimal system.

All poems reprinted with
permission from *Journeyman's Wages*
by Clemens Starck, published by
Story Line Press in 1995.

Life is lively and intellectually fulfilling for one physical plant professional at an APPA member institution. He's a full-time carpenter dedicated to maintaining the physical well-being of campus buildings; he's also a published poet and world traveler who just returned from an exciting trip to Russia.

"I was a poet long before I was a carpenter," says Clemens Starck, a carpenter in the Department of Facilities Services at Oregon State University (OSU) in Corvallis, Oregon since 1986. "In fact, I became a carpenter to support my poetry. I loved reading books of poetry, so it seemed logical to write them, even though I didn't start until I was in my twenties."

Starck told a reporter once that creating with wood and words is much the same. "All the words already exist, they're all in the dictionary, strung out like a stack of lumber. In both cases you just have to put the right pieces together," he told the *Corvallis Gazette-Times*.

Starck's road into carpentry and facilities administration was a convoluted one. He went to Princeton University as a young man, became "one of the original dropouts of the 1950s," and, while hitchhiking in California, met a carpenter with whom he stayed in touch over the years. Returning back East, he worked as a journalist for a trade newspaper in the paint and coatings industry for awhile until receiving a writing foundation grant for a year in Taos, New Mexico. Starck then moved to San Francisco so his wife could attend school there and, thanks to his carpenter friend, entered a four-year carpentry apprenticeship program. He has stayed in that profession ever since, working in construction for twenty-five years before joining the Facilities Services department at OSU.

This brief history doesn't include other exotic activities—he has worked as a merchant seaman and ranch hand as well.

A Move Toward Security

Starck's move to OSU came about as a result of the recession that hit the West Coast in the 1980s. "For the first time in my life, I had trouble finding a job through the carpenter's union," Starck recalls. "I thought it might be time to look for more regular work, so I signed up for a state job. Then a construction job came through, but three or four years later, I got a call from OSU just as I was laid off. The timing was perfect." He's been at OSU ever since—"this is the longest job I've ever had."

Working in university facilities management is a genuine pleasure, says Starck. "It's very pleasant here, very different from regular construction work," he says. "It's steady work, although I always liked the fact that construction was not steady. We have 15,000 students, and a lot of buildings to maintain. There's always something to work on."

In addition to his work with OSU, Starck also functions as a visiting poet and part-time instructor of English at nearby Willamette University. It's through that connection that he has expanded his horizons further by escorting students on trips to exotic locales such as Russia. He was there on his own for three months in 1994, through an

Ruth Thaler-Carter is a freelance writer based in Baltimore, Maryland. She has written several profiles and features for *Facilities Manager*.



Will Crawford

Clem Starck

independent, non-school-affiliated program that arranged for travelers to stay with Russian families and benefit from in-country language programs.

"When I started there, the school gave me an office to meet with students [he used his week-day off from OSU for this activity] that I shared with a new professor who had just arrived in Oregon from Russia and couldn't speak much English," he said. "As a joke or whim, I suggested that I teach her conversational English in return for her teaching me Russian. When she left, she gave my name to a colleague. As a result, I had a wonderful succes-

sion of six or seven Russian speakers who took me on as a student."

Starck's interest in Russia and Russian studies may have originated in his teaching at Willamette, but he has been "intrigued" by exotic languages and cultures for years. "I've studied a number of languages," he said. "I was a French major in college and I've always been intrigued by Chinese poetry, which I studied on my own for years. When I lived in New Mexico, I was admitted to a Native American ceremony to greet the solstice."

Starck's trip to Russia in May of this year was an extension of his interest, "but a better deal," he said. It was funded through a Willamette exchange program with a university in Simferopol, Russia. "When the school sends U.S. students to Simferopol, they always need a professor to accompany the group," he explained. "Knowing I had some facility with the Russian language, a friend recommended me as chaperone for this trip. At OSU, our union contract says that we can ask for leave without pay every three years, so all I had to do was plead with my boss to go, since my 1994 trip was so recent and leaving could have put a crimp in the department's ability to keep up with our work." His boss, though, was quite supportive and gave him the go-ahead.

While in Russia, Starck saw links to his physical plant activities at home. In a postcard to colleagues, he wrote: "The physical state of the university is badly deteriorated. My teachers haven't been paid since December. The infrastructure of the city is crumbling—roads, buildings, services; the city of St. Petersburg is a maintenance disaster."

Starck found exciting and positive aspects of life in Russia, though: "There is a quality of reality here that you'll never find in America. It's hard to describe, but I can feel it. It's what stopped the German tanks at Stalingrad. It's a great experience."

A Lifetime of Writing

Starck has been writing poetry for most of his life. Over the past thirty years, he published a number of poems in journals and magazines, but didn't compile his first book-length collection until recently. "My friends bugged me to do it," he recalls. "It was a

from "Raising the Grain"

I am holding a hammer.
I am going to drive a nail.

But my hands, my hands are
smashed
and bleeding!
The knuckles are raw.

It won't be easy—
it's never as easy as it looks. . .

—"What are you building, a piano?"

And when I have driven the nail
I am going to clinch it.



"Slab on Grade"

At dawn the concrete trucks
are already there: revving their
engines,
rumbling and throbbing, one by one
maneuvering into position.
Enormous insects,
on command
they ooze from their huge revolving
abdomens
a thick gray slime.

Insects attending to insects,
the crew fusses over them, nursing
wet concrete
into the forms.

Someone to handle the chute,
a couple laborers mucking, one
pulling mesh, and two
finishers working the screed rod—
this is called pouring
slab on grade.

What could be flatter or more
nondescript
than a concrete slab?
For years people will walk on it,
hardly considering that it was put
there
on purpose,
on a Thursday in August
by men on their knees.

The book may be ordered from
Story Line Press, Three Oaks Farm,
Brownsville, OR 97317 for \$10 if
you mention that you saw this
article in *Facilities Manager*.

challenge—seeking out a publisher is a thankless job. It took me two-and-a-half years and almost sixty rejections, but I had faith in my own work. In fact, I was almost ready to self-publish when a publisher came through." His first

book, *Journeyman's Wages*, was published in 1995 by Story Line Press and won the 1996 William Stafford Memorial Poetry Award. Starck already is working on a second collection. "I'm still writing all the time," he

says. "To my surprise, I was even writing while I was in Russia."

Most of the poems in *Journeyman's Wages* focus on aspects of work, giving new reflections of physical plant activities. "Clem is a delightful, well-respected member of our staff," says Kathleen Mulligan, director of OSU's Facilities Services department. "His poetry reflects physical plant work in a new light. It's interesting stuff that offers another, perhaps unique, dimension to the 'facilities manager.'"

So, is world-traveling Clem Starck a poet, a teacher, or a carpenter?

"What I call myself depends on who I'm talking to," Starck notes. "I tell my students to call me anything they like except Professor. I've always felt like somewhat of a loner in both worlds and have always kept my two lives pretty separate." That has changed somewhat getting his first book published; the local newspaper wrote up his accomplishment, so his colleagues at OSU now know about his "other life" as a poet. In fact, it was Mulligan who suggested that he be featured in *Facilities Manager*; she also has made a point of telling colleagues about Starck's occasional readings on campus from his book.

Even though he has reached the writer's classic goal of publishing a book, Starck remains dedicated to the profession of campus facilities management, although he has an unusual perspective on that calling. Passionate about language and the meanings of words, "facilities management" is a little overblown for Starck's liking. "I still say 'physical plant'; it's still a good description of what we do," he said. "The academic side of the university is a mental plant, and we take care of the physical plant."

Starck finds inspiration in his work. "I like the idea of 'maintenance,'" he says. "It comes from the French, for 'hold in the hand.' It seems to have developed a derogatory or negative connotation, but I hold the word and the idea in very high regard. It's poetic justice that I'm working to maintain things. I enjoy the idea of fixing, repairing, keeping things going. It's a noble and worthwhile goal. Maintenance of the universe is the point of the world."

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Howard Millman

Products, People, and Politics: A Tale of Divorce and Litigation

Recently, a university I worked with two years ago asked me to serve as their expert witness in litigation against a CMMS vendor. A week later the vendor/defendant involved in the litigation asked me to represent them.

Aside from the mild euphoria over my temporary popularity, the requests caused a conflict. First, I had worked with the university so I owed them allegiance. Second, I knew the vendor sold a quality product. Third, what went wrong here had little to do with technology—the real culprits were people and politics.

I decided that if I sided with either I would honor the school's request—but not because they were "right." The reality is that schools often look to software vendors for advice. They assume that the vendor, with their greater experience in selling and installing maintenance management systems, have a superior insight into what works, what doesn't, and why.

In the less-than-rational world of computers, however, vendors do not fully disclose their knowledge because of competitive bidding pressures and

the customers' insistence for must-have features.

The Road To Oz

In November of 1994 the school requested that I help salvage a CMMS project originally envisioned as the digital equivalent of the Holy Grail. It would minimize paperwork, increase productivity, reduce maintenance costs, and cure an assortment of other amorphous ills.

Maybe this is another one of Murphy's Laws, and if it's not it should be: "It's easier to prevent a problem than fix it." The project went wrong from day one. The divorce between the university and the vendor (both who will remain nameless to protect the guilty) actually started a year earlier, in the spring of 1993, when the university first solicited bids for a CMM system.

The university started out following a classic model of a democratic selection process. The physical plant department's vice president appointed a research committee chairman, who in turn invited one representative of all interested and involved group to participate. However, as occasionally happens, some groups had much better



had none at all. As a result, the foundation that supported their project had a fatal flaw.

They collected opinions of supervisors, foremen, and senior management personnel, i.e., the people who would pull information out of the system. However, they also needed the participation and support of the seventy-five or so rank and file mechanics, who would put the information into the system.

From a technical perspective, the research team did its homework well. They investigated many of the available systems in their price range. They prepared a prioritized, comprehensive catalog of their automation needs and a

deployment timetable. They wrote a first rate bid document that complied with every one of the state's legal requirements. The school eventually purchased a quality, if overly elaborate system, at a fair price.

Overbuying was the second flaw. It is my experience that schools tend to overbuy technology. Driven by a concern that they might run out of road, many schools purchase a system stuffed with features they may never implement. Consequently these systems demand a greater capital outlay, more hardware horsepower, and more time for its care and feeding. To pay for the extras in this system, the university used up the money they had set aside for on-site training. Lack of training was flaw number three.

Of the three causes for the system's underwhelming performance, the first proved fatal. Overbuying and lack of training could be compensated for. The research committee's, and eventually the vendor's, tendency to emphasize the product's attributes and upper atmosphere politics, and discount the people factor, was a scar that would never fully heal.

Participation Brings Commitment

In my attempts to reach an out-of-court settlement, I retroactively tried to solicit the mechanics' opinions. I'm not sure I succeeded because no matter what I did, their inclusion was clearly an afterthought. Antagonism remained high. The mechanics felt that, by failing to invite their direct participation in the beginning, the school displayed an egalitarian "Father Knows Best" attitude. In addition, leaving someone out of the decision-making process implies that their opinion does not matter.

I fault the software vendor for this oversight. I contend that they should have seen the need to imprint on the research committee the importance of participatory planning for a successful deployment.

"It's like they told us that they know what's best for us. They never asked us what mattered to us; they only told us what was important to them," one electrician explained to me.

Howard Millman is a systems integrator who helps universities and hospitals implement facility automation systems. His firm, Data System Services, is based in Croydon, New York. Millman can be reached at 914-271-6883 or hmillman@mcimail.com.

You Call This Progress?

The mechanics reacted poorly. At first they shunned using the system, claiming (initially with some veracity) that they couldn't use the software and

it took them longer to do the same things using the computer than it did manually.

Eventually, they received the training they needed and that excuse faded. But

the downward spiral expanded to include small acts of sabotage. For example, portable barcode scanners were "accidentally" dropped or reported stolen from trucks. The university responded by assigning, and holding, the mechanics personally responsible for the equipment. A dramatic step never used with any other piece of university-owned equipment.

The sabotage progressed to switching barcode tags on equipment. The university responded by changing the barcode tags to tamper proof infrared construction. The mechanics responded by finding a solvent for the new adhesive.

I could go on, but by now you see what's wrong with this picture. The situation finally boiled over when the vice president, who had been promised specific savings and new functionality, demanded to know exactly what the school gained from their \$175,000 investment. Displeased does not adequately describe his reaction.

Unfortunately and ultimately, the school's "achievements" produced increased antagonism, multiplied more paperwork, and created considerable hypertension. Finally, someone called a halt to the hostility and suggested negotiating a truce. That's when they brought me in.

"Looking back, we see where the mechanics had issues we should have addressed early on," said the research committee's chairman. I asked him to define these issues. "Fear, mostly. The mechanics heard this talk about improved efficiency and production and thought we would start layoffs. The other reason, we think, was embarrassment, especially among the old timers. They were afraid they couldn't learn to use the computers and they'd be embarrassed in front of their coworkers."

To close the loop on my participation, I'd like to say that the university and the vendor have reached an understanding and ended the threat of the lawyer enriching litigation. I'd like to say that but I can't. What I can say is that, with me and a couple of lawyers in the middle, they're talking to one another. And as long as they continue the dialog, there's hope of ending the divorce proceedings with no winners and no losers. ■

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The Bookshelf

Book Review Editor:
Dr. John M. Casey, P.E.

The books reviewed in this issue might seem to cover disparate aspects of higher education in

general, and the facilities management profession in particular, but that is not the case. Each publication, one way or another, discusses the recurring theme of change, and, more importantly, the need to prepare for change. Two of the books are published by NACUBO, the National Association of College and University Business Officers; these are *change@ucsc.edu* reviewed by Jana Ducret of the University of La Verne, and *Organizational Paradigm Shifts*, reviewed by Dawn Dettlaiff of the University of Wisconsin Oshkosh. Dr. Eric Shawn of the Catlin Gabel School reports on another aspect of life in the 1990s in *Coping With Workplace Change*, and Barry Kelly of the University of Queensland discusses changing to a customer service model for delivering services in *Quality Facilities Management*. Finally, Fred Klee of Ursinus College reviews the assess-

ment workbook developed for the Baldrige Award in *Baldrige On Campus*. The information contained in all these publications conveys the new message for higher education: change or perish.

Readers should note that *Facilities Manager* will increase the number of issues to six per year, starting in January 1997. This will require more book reviews, and readers are urged to respond when requests for reviews are sent over APPANet. ■

Change Management

Change@ucsc.edu: Managing a Comprehensive Change Effort, by L. Edwin Coate. Washington, D.C.: National Association of College and University Business Officers, 1995, 80 pp.

Few readers are likely to remember when the automobile replaced the horse-drawn carriage as the common choice of transportation. The change was inevitable, despite detractors who jeered, "Get a horse!" One of the leading innovators of this century, Henry Ford, perceived the winds of change and began a managed process of overhauling common business practices of his time, "from the ground up." In so doing, he became extraordinarily successful by providing a product that would meet the changing needs and demands of the 20th-century consumer. Today, Ford's revolutionary approach to business practices might be called Quality Process Management (QPM). *Managing a Comprehensive Change Effort* tells a similar story.

This 80-page monograph discusses how the University of California, Santa Cruz, like Henry Ford did, redesigned its business practices. This five-phase process, begun in 1993, is a complete

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John Casey is manager, engineering department, of the physical plant division at the University of Georgia, Athens, Georgia.

overhaul, not a quick-fix. It includes radical changes engineered to meet the changing needs and demands of the university's customers as they move together toward the 21st century.

One might ask if a university's systems can truly be compared to industry's manufacturing processes. Whereas industry changes because there is a demand for different types of products, the author suggests that many universities owe their success or failure to their stability and their traditions. The "product" a university offers—higher education—has remained unchanged for generations. Nevertheless, as tuition costs rise, students (and their parents) are taking a closer look at the "product" they are purchasing and at the value they get for their education dollars.

Meanwhile, facilities managers and other administrators are often facing budget cuts or decreased staffing.

Today's universities are being asked to do more for less. The author makes a clear case for the need for change in many universities' administrative practices. Businesses adopted techniques such as QPM in the 1980s in order to compete in a changing world market. They are customer-driven. Coate submits that the time has come for universities and colleges to similarly overhaul the way they do business, to become customer-driven. Are these changes a threat to the traditions and stability of American universities? "Far from (it)" Coate advises. "... the concept of creating value and passing it along to customers is a management approach that can transform rigid institutions into responsive, world-class colleges and universities."

In making a case for change, Coate affirms that many universities have management styles built around an ear-

lier model. Old models focus on administrative functions, rather than on processes. These models rely heavily on paper and forms to document transactions and decisions. They feature specialization and complex organizational structures. They foster redundancy. They do not require a broad-based understanding of company processes by the employees. The "assembly-line" model often leaves modern institutions of higher education, like the old, cumbersome horse-drawn cart, mired in a rut.

What is needed is a change of focus. Coate suggests that there are more than 150 processes typical to colleges or universities. These are found in a number of departments, including those performing enrollment, purchasing, maintenance, and other auxiliary functions, as well as those performing the actual "business" of education. In traditional

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Recessed Steps

management models, there is a great deal of duplication of labor as each department tends to protect its traditionally-established boundaries without

knowing how the system works. The challenge to school administrators today is to examine the processes of their institutions and discard or redesign those

processes which do not add value for the customer.

Total Quality Management (TQM) has been useful to many colleges and universities in streamlining their operations. TQM, however, according to Coate, is a tool for continual process improvement. It can tune up systems, or make minor repairs. In many cases, however, systems are truly "broken." Money alone cannot fix them, neither can technology alone. For "broken" systems, the author recommends business process reengineering (BPR). BPR is a tool that will take apart broken systems and rebuild them "from the ground up."

Coate stresses the importance of support from upper management before embarking on the journey toward comprehensive change in administrative processes. Additionally, says Coate, "These processes are almost never confined to a single department, making it difficult to make meaningful changes without involving the entire organization."

UCSC did exactly that—involved the entire organization in the planning and implementation of radical change in their organization. Coate maps the course of UCSC's journey toward change, from its inception, beginning with what he calls "the discovery phase," when teams of campus staff saw a need for change and selected a leader, the vice chancellor for business and administrative services, who had experience in guiding this sort of change process.

The author follows UCSC through the examination of their "old" processes, development of a vision for change, and the selection of five core processes that provided opportunities for a major overhaul. He outlines the multiple processes involved in implementing UCSC's change and includes a case study of one process, materials acquisition, to detail how the new model works.

The author is frank about the challenges involved in navigating the road to change, and includes a chapter of lessons learned by UCSC through their change efforts. Perhaps the most difficult challenge is to change minds, and Coate emphasizes how important it is for a college or university not to underestimate its organization's culture.



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Henry Ford said, "My idea is that education is not just preparation for life, but is part of life itself—a continuous part." As providers of education, university administrators must recognize that just as education is a continuous part of life, so is change. *Managing a Comprehensive Change Effort* offers a clear and concise overview of one possible design for a vehicle engineered to carry higher education into the next century.

—Jana M. Ducret
Operations/Maintenance
University of La Verne
La Verne, California

Implementing Change With New Thinking

Organizational Paradigm Shifts, by the National Association of College and University Business Officers. Washington, D.C.: NACUBO, 1996. 117 pp., softcover.

Within higher education, many models or paradigms have been established over the years that have made our educational system successful. However, the recent atmosphere in the business of higher education has been one of tremendous change. Several outside forces are driving these changes, some of which include budget cuts, quality control, and customer satisfaction. These outside forces are causing a need for changes in our otherwise unshakable systems so that higher education may not only survive, but also grow and flourish in the future.

Organizational Paradigm Shifts is a handbook for implementing changes in institutions of higher learning as we enter the 21st century. The book is a collection of essays by people in various positions related to higher education, ranging from university presidents to chief financial officers and senior associates of higher education consulting practices. Each chapter looks at current trends that are forcing universities to

change to meet the needs of their customers up to and well beyond the year 2000.

Edwin L. Coate writes of his own experiences at Oregon State University and University of California at Santa Cruz. He tells of the emerging management paradigm and how to achieve change and manage change as it occurs. Coate states that change does not occur all at once, but in a sequence or series of steps. First, there is noted dissatisfaction by the customer with the way things currently are. This creates a poor public image. Second, to deal with the dissatisfaction and accomplish change, there must be creation of a new vision or goal. The institution must look at where they are and where they want to be. They must give the customer what they want and what they need to be successful. All employees must take responsibility for and ownership of problems. The num-

ber one job is customer service. Also, a shift must be made from the emphasis on tasks/employees/structures to the emphasis on processes. Changes must be made so that one person is completing a job from start to finish, not several people each doing a step of a process. This promotes accountability. Finally, they should identify processes that do not add value to the customer, analyze these processes, and redesign them through the use of Total Quality Management or Business Process Reengineering.

Mary Jo Maydew from Mount Holyoke College writes of her experiences with consortia among small colleges. She tells of the advantages and disadvantages of consortia relationships, and the different situations or areas where it is most successful. Consortia relationships allow small institutions to pool their expertise through joint

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departments and academic programs, and in turn offer more to the customer. It also allows for cost sharing and combined purchasing power, which leads to improved productivity.

Jillinda Kidwell of Coopers & Lybrand Consulting Firm and David O'Brien of Stanford University tell how process reengineering can make administration more efficient. Past economy could support administrative growth in higher education. However, falling interest rates, rising tuition and fees, and decreased federal, state, and local funding have painted a different economic picture in the 1990s. Due to these changes, a massive reorganization of administrative support services developed in the past was required at Stanford University. Where customers used to be the receivers of the end product, which was driven by administration

at the top, new processes are now driven by the needs of the customer. New systems are now designed to respond to customers' needs. Employees are directly responsible for a whole process and its end product, not just one link in the chain. Steps taken in this reengineering process include: 1) identify the institution's customer, and define the end product or output; 2) evaluate and categorize functions into core and non-core processes; and 3) decide what functions can and should be outsourced to save time and money and provide better service to the customer.

Myron S. Henry lists the top ten issues most recently addressed at Kent State University. Necessary restructuring involves doing more with less in order to survive in the midst of steady or declining resources. Employees must think in terms of "our work" instead of "my work." The institution must highlight unit productivity as it pertains to the university's mission. In addition, value must be placed on employees' university "citizenship" as well as their community associations.

Changes in response to the economy and customer demands in the area of student affairs is addressed by Paula M. Rooney of Dean College and P. Gerard Shaw of Coopers & Lybrand Consulting Practice. They give a brief history of the role of student affairs, the current role that is played, and what the student of the future will need. They state that incoming students' expectations are high because they are more aware of their role as a "customer," yet new students entering college are less prepared than those of past generations. Shaw and Rooney suggest that student affairs departments need to offer support services to first year students by integrating in-class and out-of-class life experiences to help ease their transition into their college career.

Patrick Keating and group outline the restructuring of the acquisition process. They tell of Carnegie Mellon University's organizational changes, the driving forces behind the changes, and the resulting improvements in customer service. The authors explain how the

new process was designed and implemented, and the reactions received. A good example is shown of how declining revenues and increased expenditures force institutions to take new approaches to fulfilling institutional missions.

James Duderstadt of the University of Michigan explains the core business of a university as a learning organization, and how current trends may jeopardize this by overdiversifying various functions and activities. He gives a history of earlier periods of societal changes and how they caused transformation in higher education. Duderstadt also reinforces the fundamental roles of a university: to create, preserve, integrate, transmit, and apply knowledge. He states that transformation is necessary for the survival of an institution, yet changes should be made with the above core roles in mind.

There will not be one model for change that will fit all colleges and universities. Various factors will determine what works for each. For example, the size of the school, the location, or the demographics of the student body are all factors that will determine what changes are to take place for future growth. The information in this book comes from the experiences of a diverse group of people from institutions of various sizes and locations. They write openly about what worked for their institution, and what did not. A common set of priorities does emerge which will affect the redesigning or reengineering of all institutions. One of the main characteristics of U.S.'s universities has been stability, but this stability has a downside, which is resistance to change; such change is necessary if we are to meet customers' needs and survive and thrive into the 21st century. *Organizational Paradigm Shifts* is definitely recommended as a worthwhile reference for managers in all higher education institutions.

—Dawn M. Dettlaff

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..... Adapting to Change

Coping With Workplace Change: Dealing With Loss and Grief, by J. Shep Jeffreys, Ed.D. Menlo Park, California: Crisp Publications, 1995. 85 pp., softcover.

Shep Jeffreys, a student of Elisabeth Kubler-Ross, is writing for survivors and the unemployed. He writes for all of us who live and work in the contemporary reality of workplace change. This is timely writing, likely to help many who supervise, direct, and manage educational facilities.

The world is changing at a rapid pace and the world of education is no exception. Budget cuts, fluctuating enrollment, and program realignment influence employment of faculty and staff at all levels in public and private schools. Curriculum is shifting. The regulatory climate is dynamic. Computer technology is reprogramming at lightning speed. Space changes. Equipment fails. Whole organizations are in transition. Visions are renewed. We adapt to new change daily. Today's culture has different expectations than yesterday's fresh routines, new ways of doing things, an evolving mix of new faces and old. We struggle to blend cultures new and old as our boat rides rapids of permanent white water. Loss of employment or shifting programs create new waves. Positive change in the form of new buildings and positions or renovations and curriculum also create new waves and contribute to the white water.

Jeffreys introduces the reader to concepts about grief in the workplace, teaches skills, and recommends activities. His purpose is to get us personally involved. His self-study format helps us understand each others' feelings, attitudes, and behaviors in the workplace. Our reactions to grief affect productivity. There is both personal and organizational cost to stored grief, anger, fear, shame, and guilt. Accumulated unfinished business filters into every aspect of our behavior. We carry unfinished business into every decision we make. When

the pool of stored negativity is too full, even a small crisis can result in overreaction and the lid blows off.

Jeffreys' work can help us cope with workplace change. *Coping with Workplace Change* takes up little room on the bookshelf but has potential for bearing abundant fruit. Loss and grief are unavoidable in the contemporary world of work. Dealing and coping with loss and grief are necessary skills for our time. I put Jeffreys' book in my tool kit.

—Dr. Eric Shawn, D. Min.
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..... Marketing Your Facilities

Quality Facilities Management: A Marketing and Customer Service Approach, by Stormy Friday and David G. Cotts. New York City: Wiley and Sons, Inc., 1995. 222 pp., hardcover.

As many readers are aware, Total Quality Management (TQM) grew out of the North American manufacturing market sector, pioneered by Dr. W. Edwards Deming. The Japanese, for one, came out of a war and launched themselves seriously into rebuilding and capturing a share of world commercial markets. They took Deming's philosophy on board, and before long started to teach American business leaders, and in fact, business leaders around the world, what they thought they knew best... customer satisfaction. The rest of the manufacturing world finally woke up to its increasing loss in market share in some sectors to intense Japanese TQM-driven competition, and TQM consulting became a burgeoning industry almost overnight with a few world recognized leaders emerging with similar philosophies. These philosophies converged on the common goal of bridging the gap between a business' capability and a customer's expectations.

In recent years, the TQM movement

spread to the service industry. However, almost all of the recognized "gurus," as Friday and Cotts describe them, advocated a costly, highly structured program which involved complicated processes designed to transform an organization, and one which not many service organizations can afford. Friday and Cotts both recognize and accept the core principles of the classical TQM philosophy, and their book tells us how to achieve the desired end.

One of the most significant contributions this book makes to the service industry is that it provides a clear and understandable road map to delivering top quality services without the labor and time costs associated with implementing a TQM program in its classical form. This book is about a return to time tested practices which resulted in satisfied customers long before TQM became fashionable. A particularly interesting

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section of this book is dedicated to customer driven quality programs "be they right or wrong." It contains some humorous scenarios and "How would you handle it" type questions designed to test your ability to recover from bad situations, or effect "damage control." Friday and Cotts also suggest ways to anticipate customer needs, and to assist planners who have overlooked a key element and you are in the position to do something about it even if it's not your job. However, you should be warned that there are no correct answers in the back of the book, but there are some useful exercises to stimulate thought and discussion.

You will especially appreciate the healthy sampling of best practice case studies and examples of accomplishments with respect to quality management covering a range of subjects to include contracting, customer satisfac-

tion programs, rightsizing organizations, and much more. Marginal notes are abundant, almost to the point of being distracting, which direct you to points of interest.

If you are a facilities administrator or someone who works in a corporate building, you probably don't have to be told that a facility manager's job ranks among the least appreciated. It was once said to me that "the best a facility manager can expect is to be taken for granted all of the time, and appreciated only during the next crisis." This book is a "must have" desk reference for professional facility management practitioners who seriously want to be appreciated all of the time, and to satisfy their customers' needs every time.

—Barry Kelly

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Grading Baldrige

Baldrige On Campus: The Assessment Workbook for Higher Education, by Donald C. Fisher. New York City: Quality Resources, 1995. 286 pp. \$24.95, softcover.

So your institution wants to check its operation against the criteria established in 1992 by the oversight group, the National Institute of Standards and Technology. At that time, standards for educational institutions were developed using as a base the seven basic criteria that had been used for many years to evaluate business and industry. In 1995, the National Association of College and University Business Officers (NACUBO) worked with the Donald Fisher to develop this *Baldrige On Campus* workbook to assist institutions to evaluate their operations.

The Baldrige Award Criteria for education addresses the following key

requirements for any institution to achieve quality, excellence and student focus as described in the workbook:

Category 1

Leadership: How does the senior leadership of the institution create and sustain a quality culture? Do they develop goals and plans to achieve quality leadership and management that promotes student successes, encourages partnerships with students, faculty, staff, administration and all of the other stakeholders of the institution?

Category 2

Information and analysis: What is the process for gathering quality information and then analyzing the data to support the overall mission of the institution? Are quality initiatives based on facts and data, which are integrated and consistent, and are communicated institution-wide?

Category 3

Strategic and operational planning: What is the effectiveness of systems and processes for assuring quality services and programs? Does planning involve all the stakeholders through the development of those systems? Is there an annual strategic and operational process review to focus on continuous improvement and serving students better?

Category 4

Human resource development and management: What is the development process to meet quality and performance objectives to use the full potential of the entire workforce by recognizing institutional diversity? Are problem solving methodologies established to reduce recurring problems and continuously train and develop the work forces?

Category 5

Education and business process management: What is the effectiveness of systems and process for assuring the quality of programs and services? How is the institution focused toward process improvement and cycle time reduction? Continuous improvement is part of the management of all systems to produce well designed and well executed processes.

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Category 6

Institution's performance results: How is the improvement of student and operational performance clearly demonstrated through qualitative measures. How are measurements made to monitor student achievement and encourage improvement on a continuous basis, sharing the data examining trends that show improvement is sustained?

Category 7

Satisfaction of those receiving services: What is the effectiveness of systems to determine student and stakeholder requirements, and can success in meeting them be demonstrated? Does the quality of processes meet the needs of students and all of the stakeholders of the institution? Does the institution use surveys and focus groups to determine student and stakeholder satisfaction?

In the first chapter, the author describes the use of the workbook. He then describes the preparation for the assessment and the selection of the team to do the assessment. In a large institution there may be one team for each of the categories listed above. In a small institution it may be possible to accomplish the same goal by having only one team look at all of the categories. In any case the author suggests the team members be made up of a cross-section of the employees, from the president to a staff person. The teams should also include students so that most of the internal stakeholders are included in the process.

In chapter two, he describes the scoring system used by Baldrige. It is based on three evaluation dimensions: approach, deployment, results. The approach is the methods the institution uses to achieve the purposes of the seven categories. The deployment is the degree to which the approaches are applied to the relevant programs and services provided by the institution. The results are how well the organization has changed because of the application of the assessment using some measurements and benchmarking with others. In this chapter he also describes in detail how team assessments can be rated and he gives the actual percent ranges the

team might use in the evaluation as they assess each of the responses to the Baldrige criteria.

In chapters three to nine each of the critical categories are assessed in depth. The teams are lead through the process, looking at the approach, deployment and results for each of the suggested questions in each of the seven categories listed by Baldrige. The author carefully suggests the difference between zero based institutions and world class institutions by drawing comparisons between each.

After the evaluations are completed, the author provides the information to compile the data into a scoring agenda that can guide the institution in developing programs that will make continuous improvement a fact and will lead the institution to achieving all of the goals developed for the Baldrige awards program. Later in the workbook, he includes a complete glossary of all the words commonly used in the Malcom Baldrige National Quality Award Criteria. He also provides a quick and easy institutional assessment format for the institution to measure itself or to benchmark against other institutions' Total Quality Management (TQM) progress.

The author describes the workbook as a way to clarify the Baldrige Criteria for education. It provides the guidance not only for the teams, but also for employees to rate their departments or institutions in sixty-three different areas. It also can be used to do some annual benchmarking for improvement, and can act as both a short- and long-term planning guide for the effects of TQM programs at the institution. This guidebook, while developed for the whole institution, can be modified to indicate the steps that individual departments within the institution can take to provide continuous improvement to all of the stakeholders involved. *Baldrige On Campus* is an excellent resource for all facilities managers, especially for those who concentrate on customer service and customer satisfaction.

—Fred Klee

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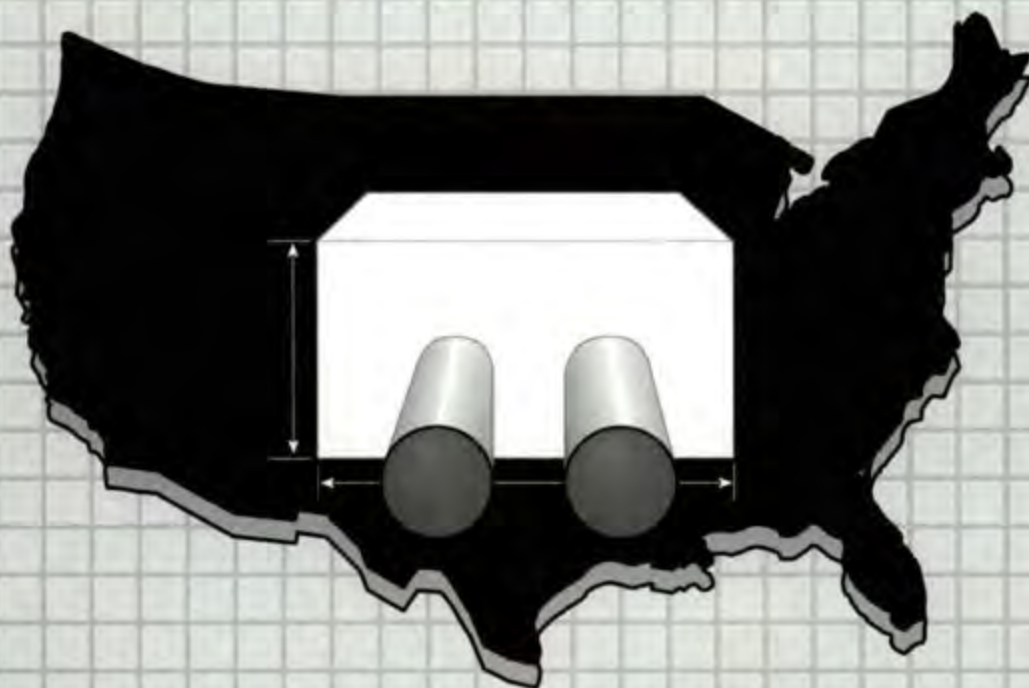
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