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Fusion Facilities: 8 reasons to consolidate multiple functions under one roof

'Fusing' multiple functions into a single building can make it greater than the sum of its parts. The first in a series on the design and construction of university facilities.

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Texas A&M University–Corpus Christi's fusion facility combines academic departments—nursing (above) and kinesiology—with recreation and athletics programs, saving an estimated 7% on initial construction costs.

An emerging design paradigm is having a major impact on the world of university campus planning and design—fusion facilities. As the name implies, fusion facilities bring together two or more campus programs previously housed in separate buildings into a single location. Some pair recreation programs with student life services. Others add wellness programs to the mix. One unusual combination fused a recreation program with nursing and kinesiology departments. However they are configured, these fusion facilities offer a new model and a new perspective on

design to the nation's 4,495 Title IV-eligible, degree-granting institutions.

The most practical consideration fueling this nascent movement is initial cost. We estimate—and this can vary, depending on project assumptions—that building a single large-scale facility rather than multiple structures can save 10-15% on total construction costs: perhaps 5-10% from MEP savings, and another 5% from shared classrooms, conference rooms, and common spaces.

EIGHT SIGNIFICANT BENEFITS of fusion facilities

Fusion facilities can offer colleges and universities at least eight key benefits:

1. Elimination of redundant space
2. Increased utilization of the facility
3. Highly leveraged integrated technology
4. More flexibility to meet changing space demands
5. New revenue sources
6. Creative funding options
7. Student buy-in on fee referenda
8. Enhanced student recruitment and retention

But there is a much more overriding factor than cost savings at work here—although your client won't mind saving \$3-4½ million on a typical \$30 million project. As universities extend their reach to embody the entire student learning experience—mental, physical, and emotional—broadening the scope of their facilities to respond to that agenda makes perfect sense. Through the incorporation of fusion facilities, Building Teams and their university clients can take the long view and look at facility models from a broader vantage point, beyond immediate programming demands to a consideration of the diverse needs of today's students.

Consider the case of George Mason University, in Arlington, Va. Its new 256,000-sf Founders Hall takes in the School of Public Policy, a 300-seat auditorium, a 6,000-sf multipurpose room, a lounge, café, campus bookstore, 160,000 sf of parking, and a multistory campus library, as well as classroom space that it shares with the previously completed 140,000-sf law school.

Then there's Mesa (Ariz.) Community College. Two separate departments, nursing and exercise science, were bursting at the seams in inadequate facilities. When a couple of vacated buildings on campus became available, instead of putting each program in its own building, the college—on the advice of the faculty of both departments—opted for a “fused” interior fitout, renovation, and 11,000-sf addition. The Mesa Community College Health-Wellness Building is now helping to generate synergies between two previously disparate academic departments.

FUSING RECREATION AND STUDENT LIFE

One trend that is gaining momentum is the fusion between recreation and student life. Both are critical components of the student experience in that they provide activities to engage students beyond academic study; thus, their synthesis into one facility creates new opportunities for planned and spontaneous student interaction.

Combining such programs creates more shared space, reduces redundant program areas, and promotes cross-pollination between student life and recreation departments, encouraging students who arrive at the facility for one reason to stay and use it for another.

A related trend is the integration of recreation and wellness programs in a single facility. There is growing awareness of and concern for wellness and the mind-body connection at the nation's colleges and universities. As a result, higher education institutions have strengthened their commitment to providing students with wellness-focused programs to promote student health, disease prevention, and support for mental health efforts. Since one of the best ways to improve student education is to focus on the total student experience, paying close attention to these wellness factors is essential.

Beyond this obvious benefit, many college recreation programs are often intertwined with academic wellness programs like athletic training, exercise science, and biomechanics research. Fused recreation and wellness facilities are ideal for joint programming such as educational seminars, wellness fairs, group exercise classes, and medical testing. On-site commercial retail ventures like pharmacies and fitness retail are natural fits. Rice University's Barbara & David Gibbs Recreation and Wellness Center houses both massage therapy and acupuncture services.

The benefits of these hybrid facilities extend far beyond a simple combination of building programs.

1. ELIMINATION OF REDUNDANT SPACE

Fusion facilities allow multiple departments or activities to share typical "service" spaces like lobbies, lockers, foodservice, and lounges, eliminating the need for redundant areas in multiple neighboring buildings. Combined facilities also facilitate the creation of additional program areas that one department on its own might not be able to justify or afford for its own separate facility.

This phenomenon was recently borne out at Texas A&M University–Corpus Christi's new fusion facility. Originally slated only to house recreation, this 148,000-sf facility now supports recreation, athletics, nursing, and kinesiology. We estimate that combining these uses trimmed the amount of redundant program space roughly 7%: 4,000 sf in lobby space, 3,000 in joint instructional space, 2,000 in circulation space, 1,000 in MEP space, and 400 in walls and columns—10,400 sf, about 7% of this 148,000-sf facility.

But fusing these departments under one roof did more than just increase efficiencies: It actually made the whole greater than the sum of its parts. For example, due to budget and physical constraints, the original design for the single-use rec center did not allow for a running track for the recreation department. Adding the kinesiology department to the project meant that a running track and gymnasium had to be included in the budget, since kinesiology needed these facilities for its lab work, although it only utilized them half the time.

With the fused program, the recreation department gained access to the running track plus an additional gym and multipurpose rooms (when not in use by the academic departments). The result: valuable additional space for the recreation department at no added cost.

2. INCREASED UTILIZATION OF THE FACILITY

It may come as something of a surprise to learn that some college and university recreation centers struggle to attract students after traditional class hours, or lose critical mass at various points during the day. This was true for Pomona College, in Claremont, Calif. Its student center, originally built in 1999, was seen as dignified but unattractive to students; in fact, they literally walked around it to avoid walking through it.

A high-impact renovation transformed Smith Campus Center into a more youth-oriented space without abandoning sophistication or compromising its symbolic importance. Its multifaceted program included study rooms, a writing center, dining areas, a pub, a nightclub, and an outdoor amphitheater, making it a locus for student activity at all hours of the day.

The Pomona College case illustrates how a fusion environment can be alive and vibrant throughout the day. From breakfast in the dining room to a lunch study session in the lounge; from an afternoon workout to dinner with friends at poolside, then on to an evening at the campus nightclub, fusion facilities can literally provide a one-stop venue for enhancing student life.

3. HIGHLY LEVERAGED INTEGRATED TECHNOLOGY

The current crop of undergrads and graduate students expect technology, accessibility, online interaction, and social networking at all levels. Fusion facilities provide the perfect environment for this virtual interaction to occur. WiFi and Internet connections and group meeting rooms make the space optimal for studying. Exercise equipment that charges an iPod or iPhone or has built-in monitors facilitates multi-tasking. Lounges with flat screen TVs offer students a cozy place to relax. Gaming spaces allow students to participate in “exergaming” or multiplayer tournaments that foster student interaction and camaraderie.

At the University of Texas–Austin’s Gregory Gym, students requested more outlets for charging laptops in addition to wireless Internet access. With the shift in academics from individual to group projects, gym staff has seen a growing number of student groups utilizing these spaces for study sessions, not just for exercise.



FLEXIBILITY it’s the key at Central Michigan’s Events Center

At the Central Michigan University Events Center, in Mount Pleasant, spaces were designed with multiple functions in mind to encourage utilization by athletics, recreation, student affairs, and public groups.

The 72,560-sf venue features retractable seating on the lower level to allow the event floor to be expanded to accommodate additional guests or to modify the court layout to suit different sports or activities. Practice facilities located next to the arena can be booked by club, athletic, and recreation groups. The 15,200-sf concourse and lobby doubles as a banquet space. CMU officials agree that the key element in the facility’s success is the flexibility it offers through shared activity space and support areas. The multipurpose nature of the facility was a top priority. The Events Center currently supports concerts, speaking engagements, events, educational courses, recreation activities, summer camp programs, and graduations. It also serves as the primary practice and competition venue for men’s and women’s basketball, wrestling, volleyball, and gymnastics.

Since its opening in November 2010, more than 100,000 fans have attended athletic events there, and more than 5,000 prospective students utilized the facility in last summer’s camp program. Thousands of students and community members have participated in programs in the past year or so.

4. MORE FLEXIBILITY TO MEET CHANGING SPACE DEMANDS

Combining multiple services into a single facility can give user groups greater flexibility in the kinds of programs they can hold. Fusions can also enable the administration to accommodate ever-changing demand. Recreation facilities typically have large gyms or multipurpose spaces that can easily be adapted for other event functions, such as camps, commencement exercises, or concerts.

Designing these facilities with flexible multipurpose spaces as well as back-of-the-house preparation areas makes fusion facilities desirable to a whole new set of user groups. Therefore, the facility design must be able to readily accommodate changes in activities, groups, and settings. Creating this adaptability is critical to ensuring that the facility will be utilized to its fullest.

Having this kind of flexibility can have enormous payoff for the institution. For example, the University of Texas–Austin’s Gregory Gym started the 2010-2011 academic year with a speaking engagement by President Obama and concluded it by hosting 25,000 family and friends for various commencement activities. “In between those bookends, there were 5,500 reservations in the facility by 275 different on-campus organizations, very few of which dealt with recreation,” said Tom Dison, Associate Vice President for Student Affairs and Director of Recreational Sports at UT–Austin. Built-in space flexibility was critical in making these events possible.

5. NEW SOURCES OF REVENUE

Though campus groups are typically not charged for facility use, outside users have to pay a fee. Non-university-sponsored events, such as private summer camps or community-initiated programs, can generate revenue for fusion facilities. For example, Rice University’s recreation/wellness fusion center generates about one-sixth of its annual program budget from summer camps. Integration of events like these optimizes facility usage, especially during non-peak seasons like the summer, and creates additional sources of revenue.

6. CREATIVE FUNDING OPTIONS

Because some fusion facilities support various combinations of recreation, student life, and academic programs, they may be able to take advantage of creative funding options that might not be available for single-use buildings.

As noted above, Texas A&M University–Corpus Christi originally planned to build a new 70,000-sf standalone recreation center. Shortly after beginning the design process, the university introduced a second phase of 150,000 sf for the nursing and kinesiology programs. At that time, Phase II was in its infancy with no scheduled start or completion date.

Funding for Phase I was to be provided through a student referendum; with the addition of the Phase II academic component, however, the university was required to issue bonds to finance the project. A struggling economy, along with increased difficulty in passing bonds, led the administration to package the Phase I recreation center with the Phase II academic building under one bond. Fusing the programs into one facility enabled the university to obtain funding to move ahead with the design and construction of all programs under one roof.

7. STUDENT BUY-IN ON FEE REFERENDA

Fees to fund these kinds of facilities often come from fee increases approved through student referenda. Hybrid facilities typically garner greater student support than single-use facilities because they appeal to more constituencies. It is important to advise your collegiate clients to keep in mind the diverse needs of current students in order to rally more widespread support for

fusion facilities.



MADONNA UNIVERSITY fusion facility melds science and media

Madonna University's Franciscan Center for Science and Media takes fusion to the nth degree. The 65,000-sf LEED Gold center, which opened in October 2009, combines two fast-growing but seemingly unrelated curricula—science and broadcast media/cinema arts—neither of which could have afforded a new facility on its own. The comprehensive science program takes in biology, microbiology, genetics, organic and physical chemistry, quantum physics, and astronomy, with instrumental and computational research labs, classrooms, and seminar rooms. The broadcast media and cinema arts portion of the \$20 million facility houses digital radio and TV studios along with a video editing suite and a 150-seat lecture hall.

8. ENHANCED RECRUITMENT AND RETENTION

Many institutions of higher learning have begun to develop comprehensive recruitment and retention plans focused on the mental, physical, and emotional development of students. The plans go beyond the boundaries of standard textbook learning and seek to engage students more fully in campus life and thereby improve their overall satisfaction with the university experience.

For years, recreation professionals have struggled to develop outcome-based metrics to quantify the impact that campus recreation and student life facilities have on recruitment and retention. A 2006 APPA study by David Cain, PhD, and Gary L. Reynolds of nearly 16,000 students from 46 institutions across the U.S. and Canada showed that 32.3% of students rated recreation facilities as “extremely or very important” in the university selection process. Another 35.6% rated exercise facilities and 14.8% rated intramural sports facilities as “extremely or very important.” While “facilities for [one’s] major” (73.6%), the institution’s library (53.6%), classrooms (49.6%), and residence halls (42.2%) were deemed more important by prospective students, recreation and student life facilities were seen by many as significant factors in their selection of a college or university.

Students at Stephen F. Austin State University in Nacogdoches, Texas, certainly made that point clear to administrators. According Steve Westbrook, Vice President for University Affairs, “Students feel that recreation facilities are important to attracting prospective students to SFA in the future.”

This was a major reason the university moved ahead with the construction of a new 78,000-sf fusion facility, which, with its new Indoor and outdoor facilities—including basketball and racquetball courts, a three-lane track, climbing wall and bouldering cave, exercise and weight rooms, pool, diving well, and lounge—have made it a hub of student activity on campus.

FUSION BUILDINGS AS CENTERPIECES OF CAMPUS LIFE

Because they respond directly to contemporary student expectations, fusion buildings may provide institutions with a competitive advantage. The buildings respond positively to today’s students’ call for the latest technology and on-demand services, while also helping the administration generate much-needed revenue and promote social interaction and cohesion on campus.

Nearly a decade ago, Roy V. Viklund and David L. Damon, two designers at Sasaki Associates, predicted that “combining collegiate facilities for student life and recreation may be the wave of the future.” They noted that many students make up their minds about a college within the first 15 minutes of a campus tour, and suggested that the combined student life/recreation center would be a good place to start and end such tours.

Today, many campus tours still start at the institution’s recreation center or student union. In the future, the best place to start might be the campus’s new fusion facility.

A FEW WORDS OF CAUTION ABOUT FUSION FACILITIES

Although the benefits of fusion facilities can be substantial, you should consider three potential pitfalls—scheduling conflicts, security concerns, and utility allocations—before advising your university clients to embark on such a project.

Scheduling multiple groups. The hybrid nature of fusion facilities can lead to significant conflict over space sharing and scheduling. This is especially true when your building houses multiple departments like recreation, athletics, and academic affairs, each of which may have unique space needs and schedules. Plans must be developed to avoid scheduling conflicts.

It took the staff at Central Michigan University’s Events Center a while to realize that the change to a fusion facility might necessitate a change in organizational structure to accommodate scheduling difficulties. When the building first opened in late 2010, athletics, recreation, club sports, and event leaders were allowed to schedule the facility on their own. That proved chaotic, and now the departments must book the facility through a central office.

The new approach enables all user groups, including club sports, to have equitable access to the facility. “We would not have been successful had we not made this change in the way we operate,” says Stan Shingles, CMU’s Assistant Vice President for University Recreation, Events, and Conferences.

Dealing with security concerns. Security is a major concern on college campuses, but it becomes even more critical when institutions have facilities that are open late or that stay open 24 hours a day. Design considerations like lighting and building access become critical in making fusion facilities safe for students at all hours of the day.

To address security concerns raised by having multiple access points at the Texas A&M University–Corpus Christi fusion facility, the university installed controlled-access points between the recreation and academic programs. These access points close after a certain hour to force student traffic into the front entrance of the recreation facility.

Managing utility charges. Because certain components of fusion facilities—notably recreation—must pay their own way through student fees, the complex should be appropriately metered and its electricity use carefully monitored so that energy costs for pay-as-you-go components can be separated from the facility’s total billings.

At Texas A&M University–Corpus Christi, electricity metering made it possible for the recreation component’s bill to be calculated separately from those of the nursing and kinesiology programs. +

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ADDITIONAL RESOURCES ON FUSION BUILDINGS

["Rec Centers – Centers of Attention," Roy V. Viklund and David L. Damon, Athletic Business, November 2002.](#)

"Educating the Whole Student: The Growing Importance of Student Affairs," Arthur Sandeen, Change, May-June 2004, v36 no. 3, 28-33.

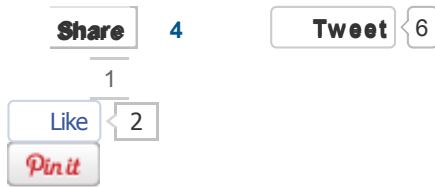
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["Fusion Building: New Trend with Some Old Roots," Craig Hamilton, Planning for Higher Education, January-March, 2009, v37 no. 2, 44-51.](#)

["Student Health, Student Rec Compatible Under One Campus-Wellness Roof," Jack Patton, Athletic Business, Nov 2009.](#)

["Recreating Retention," Jill Moffitt, Recreational Sports Journal, 2010, v34 no. 1, 24-33.](#)

"Hybrid Student Centers House Multiple Campus Functions," Paul Steinbach, Athletic



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Texas A&M Corpus Christi's indoor running track is used by all programs.



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