AE Initiative Summary Business Case

Space Utilization - Classroom

Business Sponsorship & Ownership

Project Name:	Space Utilization - Classroom
Team Members	Phillip Braithwaite, Rebecca Brauer, Chris Bruhn, Alice Gustafson, Nancy Kujak-Ford, Ed McGlinn, Scott Owczarek, Angela Pakes Ahlman, Doug Rose, Ken Shapiro
Business Unit(s):	Provost and Vice Chancellor for Administration – Administrative Excellence
Business Process Owner(s):	Space Management Office, Office of the Registrar, Schools and Colleges

Background

The Administrative Excellence (AE) Phase 1 assessment indicated that the University had the opportunity to generate savings by changing practices that effect classroom space utilization. In January 2012, the AE Steering Committee chartered a team to deliver detailed, action-oriented recommendations that will enable the University to more effectively utilize its classroom space. The specific objective, as articulated in the team's charter, was defined as follows:

> "Identify means to more effectively and efficiently use campus space to significantly reduce off-campus lease costs, which should include consideration of more enterprise-based classroom scheduling, implementation of a master calendar, and repurposing of underutilized or unutilized departmental space."

Specifically, the team was asked to develop an understanding of the current drivers and processes attendant to the utilization of classroom space and to use that knowledge to develop a plan for increasing the usage of or repurposing this space across campus. The team conducted its work over 18 weeks, recently presented its recommendations to the AE Advisory and Steering Committees, which were endorsed by the Administrative Excellence Advisory Committee and supported to move into next steps by the Steering Committee.

Approach

In order to understand opportunities for cost savings and/or quality improvement within the area of classroom space, the team: (1) developed a shared understanding of the project's scope and definitions related to "classroom" space and utilization; (2) collected and analyzed instructional space scheduling data; (3) identified, prioritized, and engaged stakeholders; (4) developed recommendations and quantified potential savings generated through implementation of those recommendations.

Scope and Definitions

Initially, the team found it important to refine its understanding of the scope of its work, as defined in the project charter, through the definition of the salient terms. The team defined "classroom" as "instructional space" to reduce confusion and ensure incorporation of both classrooms and class laboratories. Additionally, the team defined utilization metrics such as room utilization, the percentage of hours a room is in use, and seat utilization, the percentage of seats occupied when a room is in use, to help guide subsequent data discussions. Finally, the process of refining scope confirmed that instructional space has a large bearing on the student experience and faculty instruction, resulting in the team adding instructional space quality improvement as an important additional project goal.

Data

Due to the dispersed nature of space and scheduling information, comprehensive instructional data sets were unavailable; as a result the team allocated a significant amount of time to data collection and collation. Initially, data were pulled from the University curricular scheduling database, space inventory, and Campus Events Services and assembled into a single instructional space data set that contained scheduling and physical space characteristics for analysis. These data, however, were missing critical elements in areas such as non-curricular scheduling and detailed departmental room information. To address this, the team conducted "data walks" or physical inventories of space in nine buildings selected to be representative of university instructional space. This data supplemented the original data set.

Stakeholders

The team identified stakeholders with whom to engage on a range of issues related to classroom space including: 1) students, 2) instructional staff, 3) Enrollment Management, 4) the Space Management Office, 5) the Space Remodeling Policies Committee, 6) the Provost's Office, 7) departmental administrative staff, 8) departmental chairs and directors, 9) non-academic schedulers, and 10) Facilities Planning and Management.

To engage instructional (faculty, instructional staff, teaching assistant, and research assistant) and departmental scheduling (curricular representative) staff, the team distributed two surveys. The intent of these surveys was to understand: 1) why individuals choose certain rooms; 2) how individuals are booking rooms; 3) what features are desired in instructional rooms; and 4) what level of effort is expended on academic scheduling activities.

The team also met with representatives from Educational Innovation and the Office of Sustainability to receive input and discuss ways that all three initiatives can partner to meet the future needs of the University.

Recommendations and Savings

The team quantified the savings related to its recommendations by calculating the difference between the current state and (potential) future state costs of operating instructional space. The team developed two scenarios to estimate savings: 1) the University repurposes underutilized instructional space to help return off-campus leases to campus and decommissions any residual space; and 2) the University only decommissions underutilized space. Both scenarios are predicated on a proposed review that would investigate instructional spaces with room utilization of 40% or less. In both scenarios, the savings assume that all rooms reviewed could either be repurposed or decommissioned.

Estimated savings are a function of lowering operating costs (e.g. cleaning, maintaining, upgrading, and powering classrooms), lowering administration costs (i.e. scheduling and supporting classrooms), and returning off-campus leases to campus. Operating and administration costs were estimated by a common unit, square foot, which was then applied to the amount of space that could potentially be decommissioned/repurposed by this review. Lease savings were estimated using several leases that have been identified as returnable to campus. Repurposing classroom space to accommodate these leases represents a significant upfront investment for the University but one that will be offset by yearly lease avoidance.

It is important to note that potential savings were difficult to estimate given the dispersed and varied nature of instructional space data. To date, the University has not directly tied cost drivers to instructional space, which forced the team to apply general space costs to the financial model rather than specific instructional space costs. Because the characteristics of instructional space varies by room (i.e. age, state of repair, size, technology, features, etc.), potential savings gained from repurposing/ or decommissioning will also vary. Furthermore, while it is clear that instructional space does represent a large cost to the University, it is difficult to ascertain how much of this cost would be returned to the University if underutilized instructional spaces were to be decommissioned or repurposed. For these reasons, specific dollar estimates are not posted with this business case.

Observations

The University has not maintained enterprise instructional space data sets nor has it considered instructional space use form an enterprise perspective. This has led to the maintenance of numerous data sets locally. Survey results indicated that University schedulers use at least 18 different systems to schedule instructional space, none of which can provide or have access to instructional space data across the University.

Curricular data suggest that, when compared to benchmarks within higher education peers, instructional space is significantly underutilized. While many universities strive for 75% room utilization, typically based solely on curricular activities, and 75% seat utilization in their classrooms, the University currently averages room utilization of 39% and seat utilization of 63%. Data walks in departmental rooms showed that non-curricular usage accounts for, on average, an additional 26% in room utilization. Non-curricular usage data within general assignment instructional rooms are not currently collected by the University.

While it is clear instructional space across campus is underutilized, reasons for that underutilization are unclear. Anecdotal information suggests a variety of factors impact instructional space utilization, including changes in instructional demand over time, lack of modern equipment (i.e. technology), awkward room features, or other infrastructure limitations, but data do not exist to prove or refute these claims. Survey results indicated that inadequate technology and room features, faculty preference to teach near their home building, and uneven class distribution throughout the entire instructional day contribute to underutilization.

Instructional space plays an important role in the student experience and faculty instruction. It will be critical for the University to consider quality improvement, not purely cost reduction, when developing solutions for underutilization.

Survey results indicated that transparent and flexible scheduling is important to instructional staff who would like to play a more active role in scheduling instructional space.

Recommendations

The team identified seven discrete opportunities for cost reduction, quality improvement, and increased efficiency across the following categories:

Technology – The University should adopt enterprise inventory and scheduling systems which will allow it to obtain a comprehensive set of instructional space data. From the database, the University would be able to drive institutional data collection and reporting. To supplement institutional reporting and provide summary statistics for real-time decision making, the University should establish a reporting dashboard. Additionally, the University should provide scheduling transparency, flexibility and efficiency by migrating campus to a single scheduling system.

Scheduling – In order to support more efficient instructional space scheduling, the University should create a master academic schedule to help balance the priorities of the University, faculty, and students when determining the optimal academic scheduling balance. This schedule should reflect and balance the policy and process objectives of the institution. To more proactively manage space, the University should rethink the control of instructional space and how it is scheduled. This process would help increase utilization by granting controlled institutional access to departmentally-managed instructional space.

Review – To support responsible growth and allocation of space, the team proposes two review processes. The first would review underutilized classroom space for potential reassignment or decommissioning. The initial review would focus on classrooms with a room utilization of under 30% but would expand to rooms under 40% after one year. This initial review would help the University craft a process by which all rooms that fail to meet instructional space utilization standards could be evaluated. Additionally, the team proposes that the University design a process to review the state of instructional space across campus before any new construction is authorized. This review process would help the University avoid costly new construction, close obsolete instructional space, and increase instructional space utilization by making sure instructional spaces are being put to best use.

Funding – In order to support the repurposing of instructional space, the University should consider setting aside appropriations to create a central funding pool. Funds for this pool could come from several sources, including dollars dedicated to upgrading/repurposing instructional space. To determine where funding should originate, the University should evaluate current instructional space modernization program criteria and funding levels to ensure they complement institutional space needs and educational priorities.

In summary, the team made the following recommendations:

- Establish one comprehensive set of instructional space data
- Adopt enterprise inventory and scheduling systems
- Create a master academic schedule that reconsiders and redesigns the scheduling of instructional space
- Address the process of scheduling general assignment and departmentally controlled instructional rooms
- Institute a standard review process for repurposing underutilized instructional space
- Institute a standard process to review current instructional space data before new construction is authorized
- Consider setting aside appropriations to create a central funding pool to pay for instructional space upgrades and/or repurposing

By implementing these recommendations, the team believes that the University would substantially increase utilization, improve the stakeholder experience, and plan for responsible future growth.

Next Steps

The team proposes that the University launches five implementation teams to begin work in the summer of 2012. These teams would:

Team 1: Define data set and gather data to populate the enterprise inventory and scheduling systems with instructional space information

Team 2: Gather requirements; perform due diligence; and make a recommendation for an enterprise scheduling system

Team 3: Gather requirements for a master academic schedule and create a draft for leadership approval

Team 4: Engage in a pilot program(s) for allocating and scheduling instructional space and create an enterprise recommendation for this process

Team 5: Engage in a tiered review of underutilized space in order to create a standard review process. Initial review will focus on classrooms with a room utilization of less than 30%, but will subsequently move to a review of space utilized less than 40%

Customer Readiness and Change Management

The team suggests that the following be considered during implementation:

1. Clear and open communication with campus – rationalization for implementation of sustainability initiatives to campus, communication of ongoing expectations, and a feedback mechanism for campus input;
2. Clear and open communication with schedulers – communication of selected scheduling system to schedulers and a feedback mechanism where schedulers can give feedback;
3. Simple and clear processes/policies – policy language is unambiguous and policies are known across campus; and
4. Metrics to measure performance – create consistent campus-wide metrics that monitor increases in both cost reduction and quality improvement to assist with measuring initiative success, and with monitoring policy compliance.

Review and Approval

Advisory Committee	Endorsed	May 17, 2012
Steering Committee	Supported to move to next steps	June 5, 2012