



Administrative Excellence Classroom Space Utilization Business Case

Business Case Summary

Project Name:	Space Utilization – Classroom	
Project Summary:	Identify policies and means to improve the quality and utilization of campus instructional space. Opportunities to upgrade and/or repurpose instructional space may exist through the use of enterprise-wide classroom scheduling, implementation of a master calendar, more policy compliance, and creating incentives for more strategic decisions regarding space.	
Business Process Unit(s):	Facilities Planning and Management, Office of the Registrar, Schools and Colleges	
Preliminary Cost Savings:	Scenario 1: \$6,965,995	Scenario 2: \$5,376,530
Preliminary Cost Estimate:	Scenario 1: \$6,013,600	Scenario 2: \$0
Proposed Next Steps:	Five implementation teams starting work in summer 2012.	

Key Messages

Proposed 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

Next Steps:

Create five implementation teams to begin work in the summer of 2012:

- 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%

Review and Approval

Advisory Committee	Endorsed	May 17, 2012
Steering Committee	Approved to move forward with next steps	June 5, 2012

Business Need or Opportunity

This project started as a review of space utilization for classrooms with the assumption that a shortage of effectively utilized space causes the University to build or lease in order to support new growth. Concurrently, it assumed resources that could be better used elsewhere were instead dedicated to cleaning, maintaining, and providing utilities for underutilized space. It was noted the University had never re-evaluated its space usage at an enterprise level to determine if it is optimally allocated.

It was hypothesized that the needs of the campus could be met by more effectively redesigning and repurposing underutilized space, and at the same time, improve the quality of the space. Making better use of the footprint would improve sustainability by alleviating some of the need for future construction and decreasing energy consumption.

As work progressed in this area, the team began to understand the intrinsic connection between classroom space utilization and the process for scheduling instruction. While attempts have been made to schedule classes as efficiently as possible, the average classroom room utilization rate during normal instructional hours remains 24%. Opportunities exist to explore the use of enterprise-wide instructional space scheduling, the implementation of a master calendar, repurposing of underutilized and/or unutilized space, greater policy compliance, and creating incentives for more strategic decisions regarding space. Using all, or a combination, of these strategies could help the University alleviate current perceived constraints while also allowing for responsible future growth.

Definitions

The following terms are important to understand when reading this business case:

Term	Description
Room Utilization	Definition: Percentage of hours a room is in use
	Calculation: (Number of Hours in Use) / (Total Room Hours of Instruction)
Seat Utilization	Definition: Percentage of seats occupied when a room is in use
	Calculation: (Number of Seats in Use) / (Number of Seats Available)
Room Utilization Rate	Definition: Percentage of total seats in use
	Calculation: (Room Utilization) x (Seat Utilization)
Total Room Hours of Instruction	Definition: The total number of hours each week that classrooms or class laboratories are used for regularly scheduled classes (the University has set this at 45 hours/week)
Instructional Space	Definition: Total space that is used for instruction (comprised of classroom and class laboratory space)
Classroom	Definition: General purpose classrooms, lecture halls, recitation rooms, seminar rooms, and other rooms used primarily for scheduled non-laboratory instruction
Class Laboratory	Definition: Rooms used primarily for formally or regularly scheduled classes that require special purpose equipment or a specific room configuration for student participation, experimentation, observation, or practice in an academic discipline
General Assignment	Definition: Rooms managed by the Registrar's Office
Departmental Assignment	Definition: Rooms managed by departments
Class Sections	Definition: Events that are listed as for-credit instruction within ISIS
Course Related Special Events	Definition: Special Events (midterms, reviews, conferences, movies, speakers, etc.) that are related to a course
Non-Course Related Special Events	Definition: Special Events (conferences, non-credit instruction, movies, speakers, student organization meetings, etc.) that are not related to a course

Proposed Recommendations

The team identified opportunities for increased efficiency through four main categories of recommendations: technology, scheduling, review, and funding. Specific recommendations include:

Category	Proposed Recommendations
Technology	Adopt an enterprise instructional space scheduling system
	Adopt an enterprise space inventory system
	Establish one comprehensive set of instructional space data
	Establish a customizable instructional space reporting dashboard
Scheduling	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
	Establish pilot program(s) for scheduling general assignment and departmentally controlled instructional rooms
Review	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
Funding	Consider setting aside appropriations to create a central funding pool to pay for instructional space upgrades and/or repurposing

Recommendation Detail:

Technology:

The University should **adopt enterprise inventory and scheduling systems** which will allow it to obtain one comprehensive set of instructional space data.

- From the database, the University will drive institutional data gathering and reporting. Reports will:
 - Provide activity metrics for enhanced decision making by University leadership
 - Help identify opportunities for improved instructional space use
- To supplement standard reporting, the University will establish a customizable reporting dashboard by which users can track instructional space activity metrics
- A single scheduling system will help provide transparency to the scheduling process and help stakeholders identify instructional rooms for use
 - This will eliminate redundant systems, eliminate extra effort supporting the scheduling process, and capture comprehensive instructional space scheduling data
- To the extent this integrated system can be broadened to other categories of space would be beneficial

Scheduling:

The scheduling of instructional space should be reconsidered and redesigned through the **creation of a master academic schedule**. A master academic schedule needs to reflect and balance the policy and process objectives of the institution.

- The appropriate level of departmental autonomy and faculty flexibility needs to be recognized and established. This will account for the expectation of faculty to teach effectively, to advise students on independent study, to conduct research, and to participate in administrative, service and outreach activities.
- The quality of the student's learning experience, learning effectiveness, availability of required course offerings, mutually exclusive course/section offerings, and time to degree should be strongly considered when creating a master academic schedule.
- The instructional space resource considerations include the instructional space inventory, the location of instructional space, the authority over the instructional space, the efficiency of scheduling models, practices and parameters, the available instructional technology, the sustainability of the instructional space and technology, the instructional space utilization objectives, and the potential policies and models for achieving instructional space utilization rate objectives.
- The goals of educational innovation and the future academic environment need to be recognized. The master academic schedule will consider and incorporate as appropriate, pedagogical changes, curricular requirements,

non-credit activity that is “credit worthy”, and people coming to campus to benefit from academic outcomes inside and outside the instructional space setting.

- Create an environment that enhances the ability for departments to coordinate their scheduling needs, as it relates to degree requirements. Providing the opportunity for this type of coordination and planning will create fewer scheduling conflicts for students, reduce time-to-degree, and increase the University’s graduation rate.
- Provide a mechanism for departments to obtain data created from student records and the degree audit reporting system to allow for course demand analysis as it relates to outstanding degree requirements students need to complete.

To support the master academic schedule, the University should **rethink the control of instructional space and how it is scheduled**. Instructional space is an important institutional resource and scheduling needs to promote optimal utilization. In order to meet University instructional space utilization standards, the scheduling process needs to be modified to reflect campus priorities by increasing campus access to departmental instructional space, with appropriate financial consideration. To that end, we propose that the instructional space scheduling process follows the steps outlined below:

- Step 1: Departments are given initial assigning responsibility for departmental classroom space for a defined period of time before assignment responsibilities are given to the general assignment process
- Step 2: The general assignment process is run for a defined period of time, with access to all classroom space, to assign any Class Sections that remain
- Step 3: Assigning responsibility for departmentally controlled instructional space returns to departments for the balance of the term
 - Departments assign Course Related and Non-Course Related Special Events
 - Non-departmental users can view space in departmentally controlled classroom space but must obtain permission from the department before assigning any Special Events in these spaces
 - Permission will be obtained through an electronic work flow to minimize turnaround times

While we believe that this approach will be the most effective in promoting higher space utilization, the University should consider piloting this recommendation before finalizing its decision.

Review:

The team discussed at length the issue of **potential reassignment of underutilized classroom space** for other purposes and a process by which to make those decisions. It is clear there are underutilized rooms, both departmental and general assignment, across campus. However, the reasons for that underutilization are unclear. Anecdotal information exists that suggests a variety of factors are at work, including: changes in instructional demand over time, lack of modern equipment, awkward room features and other infrastructure limitations.

In order to create an informed policy on reassignment, the team suggests that a subsequent team look in depth at classrooms that are utilized less than 30% on a weekly basis. The team could work with appropriate schools/colleges to better understand use patterns for this most significant group of low use rooms. The effort could later expand to investigate rooms in the 40% per week usage category.

In addition to understanding use patterns, this team will help the University understand the range of repurposing options available to help best meet the University’s objectives. While an investment in underutilized space to improve the conditions/equipment may help encourage higher demand and utilization, this investment also has the ability to meet substantiated needs in other areas of the department or the school/college. Furthermore, repurposing of underutilized space can be used to address justified, unmet needs of other university units or schools.

Appropriate space repurposing has the potential to alleviate the need to seek off campus leased space and their associated annual financial obligation or offer possible solutions to consolidate dispersed university functions and programs. Under some limited circumstances this space may also provide an alternative to expensive new construction. On a temporary basis underutilized rooms could be used as swing space during renovation projects to support short term program relocations. Finally, in the absence of an immediate identified alternate use, the space could be temporarily inactivated (decommissioned) to save ongoing operating and maintenance costs.

With this information, the team believes a sound reassignment process could be developed and implemented. Refer to the Appendix for a first attempt at what the reassignment review process could look like.

In addition to creating a process to review underutilized instructional space, the University should institute a formal **process to review current instructional space data before any new construction is authorized**. With additional clarity into university instructional space activity metrics, leaders will now be able to more effectively determine where additional instructional space needs can be met with current university resources or where current instructional space should be taken offline. This review process will help the University avoid costly new construction and/or close obsolete instructional space while increasing utilization and making sure instructional spaces are put to best use. This process should include an institutional review of instructional space to determine the best mix of instructional rooms for new construction and/or renovation of existing buildings.

Funding:

In order to support the repurposing of instructional space, the University will have to consider setting aside appropriations to **create a central funding pool**. Funds for this pool could come from several sources, including existing funds 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. Several programs exist now which are funded to enhance existing or to create repurposed/new departmental instructional spaces and general assignment classrooms. The University should consider if a portion of this funding in conjunction with limited additional funding, perhaps, could more explicitly require criteria that would promote increased room utilization rates, improved time-to-degree, or deferred building expansion, for example. This process could follow a campus-wide competitive grant process, with awards determined by a campus-level unit or group of individuals. Proposals would allow academic units the flexibility as to how to best meet these criteria while encouraging those units to leverage other funding sources (gift funds, departmental collaborations, etc.).

Alternatives Considered

The team identified numerous alternatives to the recommendation set. For various reasons these recommendations did not make the final proposed recommendation set but merit recognition. These alternative recommendations are:

General:

No Action: The University could choose to take no action and continue current instructional space scheduling, allocation, and utilization policies.

Class Laboratory Space: The group proposed not including class laboratory space within the review because class laboratory space has different utilization expectations than classrooms space and is closely aligned to the equipment and classes required at the departmental level.

Organization:

Zones: The group proposed offering classroom space in zones to allow for ease of access into types of spaces needed at all times. Four zones for classrooms were proposed – East Campus (includes Bascom Hill area), South campus (includes Engineering), West Campus (includes Agriculture) and Far West Campus (includes Health Sciences) and each zone would offer space for every type of classroom (i.e. classrooms, lecture halls, recitation rooms, seminar rooms, and other rooms) and would include technical features with all appropriate technology. To support these rooms, central administration would provide technical support at no cost to the academic units.

Process:

Baseline Standard for Features: The group proposed setting a baseline standard for features within each general assignment classroom room in order maintain continuity and reduce single instructional room requests.

Internal Space Consulting Team: The group proposed that the University create an internal space consulting team to offer advice on space utilization. This consulting team would act as a regulating body that identifies areas where instructional space can be returned to the general assignment pool and delegates instructional space to units with documented instructional space needs. This team would work with university leadership to find other uses for unneeded instructional space.

WeTrade Expansion: The group proposed an expansion of the WeTrade program in which instructional space turned over to a central point (could be general assignment) is eligible for refurbishment at no charge to the school/college.

Incentives/Disincentives: The group discussed the use of incentives and disincentives to drive improved instructional space activities. Four basic types of incentives were discussed but the team did not pick a specific incentive to use.

- Four basic incentives discussed were:
 - New Space Request Utilization Hurdles - Units or individuals that request additional instructional space must first demonstrate that they are utilizing their current instructional space well

- Underutilization Penalties - Disincentives given to units that don't meet their utilization targets (financially and/or non-financially)
- Upgrades for Standards Adherence - Upgrades for standards adherence type incentive focuses on giving units or individuals better instructional space for meeting set standards
- Unit Level Cost Allocations - Distribute some of the actual costs of using instructional space at the University to the units as a part of the budgeting or review process

Base Building Reductions: The group discussed the idea that Departments and/or Colleges could be given a task to reduce their base building instructional space(s), similar to how budget reduction tasks are delivered. Unlike budget reductions, the department/college would receive a financial reward after meeting their minimum goal. The University could establish a minimum reduction to target the “low-hanging fruit”; then incentivize further reductions through budget credits.

Instructional Space Allocation and Assignment Policies: The group considered several space allocation and assignment policies as our recommendation before ultimately deciding on recommending one. The following processes were considered:

- 1) All instructional space is classified as institutional (subject to the general assignment process); departmental instructional spaces no longer exist. The general assignment process is used to schedule all curricular activities in instructional spaces.
- 2) All instructional space is institutional but departments have priority scheduling rights for Class Sections in instructional spaces that historically have been theirs.
 - a. Step 1: Departments are given responsibility to assign Class Sections in instructional space near their department for a defined time period before assignment responsibilities are given to the general assignment process
 - b. Step 2: The general assignment process is run for a defined period of time, with access to all classroom space, to assign any Class Sections that remain
 - c. Step 3: After the general assignment process has run, assigning responsibility opens to the entire campus for assignment revisions and Special Event planning
- 3) All instructional space is institutional but departments have priority scheduling rights for both Class Sections and Special Events in classroom spaces that historically have been departmentally controlled.
 - a. Step 1: Departments are given initial assigning responsibility for Class Sections near their department for a defined time period before assignment responsibilities are given to the general assignment process
 - b. Step 2: The general assignment process is run for a defined period of time, with access to all classroom space, to assign any Class Sections that remain
 - c. Step 3: Assigning responsibility returns to departments for a defined period of time to assign any Course Related Special Events in departmentally controlled classrooms
 - d. Step 4: After departments have assigned any remaining Course Related Special Events, classroom assigning responsibility opens to the entire campus for assignment revisions and any remaining Special Event assignments
- 4) Institutional and departmental classroom spaces remain separate but the general assignment process is run first before scheduling authority is returned to the departments
 - a. Step 1: The general assignment process is the first to initiate, with access to all classroom space, and runs for a defined period of time
 - i. Only Class Sections will be assigned during this process
 - b. Step 2: After this period is over, all departmental classroom space returns to the departments who have exclusive scheduling rights.
 - i. Scheduling of any events that were not assigned by the general assignment process occurs at this time
- 5) Scheduling responsibility for departmental classroom space is originally given to the department, is then transferred to the general assignment process, and finally shifts back to the department.
 - a. Step 1: Departments are given responsibility to assign Class Sections in departmentally controlled classroom spaces for a defined period of time before assignment responsibilities are given to the general assignment process
 - b. Step 2: The general assignment process is run for a defined period of time, with access to all classroom space, to assign any classes that remain
 - i. Only Class Sections will be assigned during this process
 - c. Step 3: After the general assignment process has run, assigning responsibility for departmentally controlled classroom spaces returns to the departments who have exclusive scheduling right

Impact

Categories	Description
Business Functions	<p>Business Functions affected by this process include:</p> <ul style="list-style-type: none"> • The Office of the Registrar <ul style="list-style-type: none"> ○ The Office of the Registrar will play a larger role in the scheduling process due to the recommendations of this team. Policy and system decisions will affect the process by which they schedule. As they will manage the enterprise scheduling system, reporting on utilization metrics may become a more important part of their role. • Space Management <ul style="list-style-type: none"> ○ Space Management will be significantly impacted by the recommendations of this team. Use of INSITE will expand and, as utilization reporting duties may decrease, space inventorying may become a more substantial part of its workload. • Space Remodeling <ul style="list-style-type: none"> ○ The Space Remodeling Policies Committee will be provided with additional data to make more informed remodeling decisions. Additionally, policies recommended by this team will help guide remodeling and utilization decisions. • Departmental Scheduling <ul style="list-style-type: none"> ○ Departmental scheduling practices will be impacted substantially through the use of an enterprise scheduling system. This new system will allow all units to practice similar scheduling processes and will give departments the ability to increase utilization in their instructional spaces. Additionally, departments will now have the ability to view instructional space outside of their locally controlled instructional rooms to obtain better spaces for instruction. • Campus Planning <ul style="list-style-type: none"> ○ Campus Planning will benefit through greater instructional space data transparency and reporting. Enhanced reporting will allow Campus Planning to have a more accurate understanding of the campus' needs as they make future designs. • Madison Budget Office <ul style="list-style-type: none"> ○ Consideration of new funding sources or models, such as a central funding pool, or implementing changes in criteria used to evaluate current instructional space modernization program projects would impact the work of this office.
Technology	<p>The University will need to implement the following technology to accomplish the proposed recommendation:</p> <ul style="list-style-type: none"> • Enterprise Scheduling System <ul style="list-style-type: none"> ○ An enterprise scheduling system should be deployed to capture data on all activity in instructional spaces and provide transparency to the room scheduling process ○ There are several systems (R25 and EMS) owned by the University that can support this recommendation but a review process should be conducted for all systems before transitioning to a single system. • Enterprise Space Inventory System <ul style="list-style-type: none"> ○ Building information database should have the ability to collect: room size, room location (zone, building, floor, and room number), room capacity, room features, room use, and any known room associations (i.e. employee, department, grants/gifts, costs, etc.) ○ The University recently purchased a system with the capacity to maintain an enterprise space inventory (INSITE) but has yet to fully implement it. This database will need to be populated before it can begin to undertake this purpose. • Information Dashboard <ul style="list-style-type: none"> ○ The University will need to build the infrastructure to support a dashboard that provides real-time feedback and reporting

Interfaces	<p>The University will need to interface the following systems to accomplish the proposed recommendation:</p> <ul style="list-style-type: none"> • Scheduling System <ul style="list-style-type: none"> ○ An integrated scheduling system will allow the University to track utilization metrics along with creating visibility into instructional space for campus • Inventory System <ul style="list-style-type: none"> ○ An integrated space inventory system will help the University tie room information to utilization metrics • Human Resources System <ul style="list-style-type: none"> ○ An integrated HR system will help university leadership understand who is using instructional space • Budgeting System <ul style="list-style-type: none"> ○ An integrated budgeting system will help tie cost elements to instructional space as well as prepare the University to use unit level cost allocations
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Impact on Other Initiatives

This initiative will have far reaching impacts on numerous initiatives around the University. The most notable initiatives impacted are:

Education Innovation

As we think about the campus landscape for classroom utilization today, it is important to be cognizant that the work in the Educational Innovation initiative is actively considering how that landscape will look in the 21st century.

Educational Innovation will force us to think differently on how UW-Madison thinks about instructional space, and how students and faculty use it, in the future. Two main foci have been expanding the online learning and blended learning programs, as well as self-paced learning. As an institution we have also already experimented with a more innovative approach in our WisCel labs. These state-of-the-art classrooms combine deliberate choices of physical environment, technology that supports both peer-collaboration and self-paced learning, and software, which provides immediate feedback to students on assignments and exams and allows increased instructor time with students.

These new approaches to how we teach will require us to re-think our policies and guidelines around instructional space scheduling to be more transparent about how our instructional spaces are being used and make it easier to request instructional space on a dynamic basis. It will also drive the demand for a single campus service for instructional space scheduling with automated approval workflows.

Online Learning:

- Provides the University with the ability to reach a far wider audience, enhancing their ability to generate revenue.
- Online learning will enable universities to teach more students while lowering their physical campus footprint.
- Online learners that are also in residence may need to use instructional space for group/team meetings. To support this, the University may need to create a mechanism for them to request and reserve instructional space.

Blended Learning:

- Technology is beginning to enable universities to provide a mixture of online and in class learning experiences.
- This will create the need for our faculty, students, and staff to dynamically request instructional space, instead of having a single specific instructional room reserved for the entire semester.
- This will also require the development of policies and guidelines that allow instructional space to be requested for certain sessions of a class, without conflicting with other courses that a student may be enrolled in.

The Office of Sustainability

Utilization of instructional space has a large impact on the University's ability to provide education in a sustainable environment. This effort can partner with the Office of Sustainability to promote the reduction of the University's footprint, reduced waste associated with maintaining underutilized classrooms (i.e. energy, cleaning, and maintenance), and providing more green spaces throughout campus. This team can benefit from a partnership with the Office of Sustainability through promotion and increased campus awareness. Additionally, efforts to increase classroom utilization could benefit through the experience of the WeTrade program and, if agreed upon, could help expand the reach of WeTrade through enhanced campus exposure.

Anticipated Benefits

Benefit Categories	Description
Improved Productivity/Efficiency	<ul style="list-style-type: none"> Eliminate the amount of time spent trying to schedule instructional rooms <ul style="list-style-type: none"> For both class instruction and other uses throughout the semester Support services for instructional space provided centrally to maximize economies of scale <ul style="list-style-type: none"> If instructional space is returned to the institution, these services would be provided at no cost to the instructional staff
Reduced Costs	<ul style="list-style-type: none"> Closing underutilized instructional rooms will significantly reduce the University's operating costs (utilities, maintenance, custodial, and administration) associated with instructional space Reduced scheduling administration (systems and people) costs Possible reduced leasing costs (both returned leases and future leases avoided) New construction avoidance
Improved Service/Product Quality	<ul style="list-style-type: none"> Students offered classes in better instructional space, better times for instruction, or instructional space more aligned to their education Faculty teach in instructional rooms more aligned with their method of teaching Faculty may have an easier time securing instructional space preferred for teaching Departmental staff may spend less time responding to requests for use of instructional space
Engaged Employees	<ul style="list-style-type: none"> Opportunity for coordinated academic/curricular planning since units will have access to an enterprise view of instructional space Allows for planners to think about instruction without being "place-bound" Visibility allows for discussions about how to eliminate bottleneck courses
Mitigated Compliance Risk	<ul style="list-style-type: none"> Appropriate safety training and equipment in labs Better understanding of who is using University instructional space and for what purpose
Enhance Sustainability Initiatives	<ul style="list-style-type: none"> Better usage of instructional space will allow the University to decrease their footprint Better usage of instructional space will allow the University to decrease utility bills and other operational costs such as custodial and maintenance costs

Alignment with Strategy

University Strategy	Degree of Support
Strategic Framework	Strategic Priorities and Initiatives: <ul style="list-style-type: none"> Integrate technology into the delivery of course content Improve the quality of undergraduate teaching among faculty, staff, and graduate students Create the physical space and technology infrastructure to support enhanced teaching and learning Our Guiding Principles: <ul style="list-style-type: none"> We are committed to being responsible stewards of our human, intellectual, cultural, financial, and environmental resources.
Source: "University Strategy For Wisconsin and the World, Campus Strategic Framework (2009-2014)" at http://www.chancellor.wisc.edu/strategicplan/docs/strategicplan.pdf	
Strategic Plan: 2009–2014	Resource Stewardship: Improve services and clearly demonstrate to campus customers and the public that resources are used responsibly by: <ul style="list-style-type: none"> Improving process efficiencies in order to enhance services and responsiveness to campus customers as well as identify cost savings and improve the institution's financial performance.
	Supports the Strategic Plan by: <ul style="list-style-type: none"> Improving the efficiency of both the instructional space allocation and scheduling processes Realizing significant cost savings through bringing off-campus leases back to campus, reducing operating costs, and avoiding new construction costs

Source: "STRATEGIC PLAN: 2009–2014, Office of the Vice Chancellor for Administration" at http://www.vc.wisc.edu/vca_Strat_Plan_Web_2010.pdf

<p>The Office of Sustainability</p>	<p>The University of Wisconsin-Madison aligns research and education on sustainability (our purpose) with campus operations (our practices) in the service of environmental, economic, and social responsibility to people and the planet.</p> <p>Be responsible stewards of our resources:</p> <ul style="list-style-type: none"> • Align resources with priorities • Make our administration and governance more effective, efficient, and flexible • Promote environmental sustainability on and off campus • Improve our technology infrastructure • Assess our progress and make our assessments available to the campus <p>Facilities Efficiency Efforts:</p> <ul style="list-style-type: none"> • Buildings: Sustainably manage our building inventory to assure existing facilities are utilized efficiently and that existing buildings are remodeled, reused, and reprogrammed to extend their useful life into the next century prior to building additional new space. 	<p>Supports the Office of Sustainability by:</p> <ul style="list-style-type: none"> • Minimizing the campus' physical footprint • Streamlining the scheduling process • Lowering operating costs associated with instructional space • Helping the University better understand its current usage of instructional space • Providing a forum for underutilized instructional space to be repurposed • Possibly compressing current instructional space to provide room for other activities and, in the process, helping the University to avoid new construction
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Source: "Office of Sustainability, Your Campuswide Resource" at <http://sustainability.wisc.edu/>

<p>WE CONSERVE</p>	<p>Program Goals & Strategy:</p> <ul style="list-style-type: none"> • To instill the spirit of environmental stewardship in the community's consciousness • To reduce campus energy consumption and environmental footprint by 20 percent by year 2010 (The 2010 goal was accomplished; new reduction targets are being planned) • Align with We-Trade Program to exchange underutilized assets for something of greater value 	<p>Supports We Conserve by:</p> <ul style="list-style-type: none"> • Minimizing the campus' physical footprint and reducing operating costs associated with instructional space • Providing a larger forum for We-Trade as this initiative partners with it going forward
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Source: "UW Conserve Home Page" at <http://conserve.wisc.edu/>

<p>Center for Sustainability and the Global Environment</p>	<p>Examine the connections between natural resources, technology and policy, human health and security, and changes in the global environment.</p>	<p>Supports the Center for Sustainability and the Global Environment by:</p> <ul style="list-style-type: none"> • Helping the University re-examine its use of existing instructional space
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Source: "SAGE, Nelson Institute for Environmental Studies, University of Wisconsin - Madison" at <http://www.sage.wisc.edu/index.html>

<p>Educational Innovation Committee</p>	<p>Online Learning:</p> <ul style="list-style-type: none"> • Provides the University with the ability to reach a far wider audience, enhancing their ability to generate revenue • Online learning will enable universities to teach more students 	<p>Supports the Educational Innovation Committee by:</p> <ul style="list-style-type: none"> • Helping the University better understand its current usage of instructional space • Providing general instructional space for repurposing into
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	<p>while lowering their physical campus footprint</p> <p>Blended Learning:</p> <ul style="list-style-type: none"> • Technology is beginning to enable universities to also provide a mixture of online and in class learning experiences • With increasingly flexible learning environments, students will spend less time in class listening to lectures and more time problem solving • Instructional staff will rethink historical teaching methods by offering more lectures online and spending class time collaborating with students <p>Flexible/Collaborative Space:</p> <ul style="list-style-type: none"> • To that end, instructional space needs to become increasingly flexible in its design • This flexibility will allow instructional space to be more collaborative where desks can be moved to accommodate group breakouts, instructor coaching, self-paced opportunities, etc. 	<p>flexible/collaborative instructional space</p> <ul style="list-style-type: none"> • Providing more comprehensive instructional space data • Providing more appropriate policy for: <ul style="list-style-type: none"> ○ the master academic schedule ○ classroom space scheduling ○ instructional space utilization
<p>Source: "Education Innovation" at http://edinnovation.wisc.edu/</p>		

Stakeholders

The team identified numerous stakeholders early in its work. Included are:

Rank	Prioritized Stakeholders	Prioritized Customers
1	Students	Enrolled Students
2	Instructional Staff	Instructional Staff
3	Enrollment Management	Departments (staff meetings, lecturers, speakers, other paid services)
4	Space Management Office	Student Groups
5	Space Remodeling Policies Committee	
6	Provost's Office	
7	Departmental Administrative Staff (Enrollment and Curricular Representatives)	
8	Departmental Chairs (Academic) and Directors (Professional)	
9	Non-Academic Scheduling	
10	Facilities Planning and Management	

Surveys were sent to instructional (faculty, instructional staff, teaching assistant, and research assistant) and scheduling (curricular representative) staff to begin to understand how they view instructional space. The intent of this survey 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. We received 163 responses (a response rate of ~61%) to the curricular representative survey and 568 (a response rate of ~11%) to the faculty survey. Some interesting findings from this survey include:

- 1) The two most important factors when booking instructional rooms are having a location in their home building and having the technology/features they need
- 2) Overwhelmingly, instructional and scheduling staff want data/video projectors in their instructional rooms (this goes for all types)
- 3) Within classrooms, instructional and scheduling staff want free standing seating options to promote collaboration
- 4) Most instructional staff pass their instructional scheduling activities to their scheduling staff
 - a. These scheduling staff members have identified at least 18 different systems by which they reserve instructional space
- 5) Of the departments surveyed, on average, departments have at least 2.5 people scheduling instructional space in some capacity
 - a. Often most of this effort occurs in short periods of time during the initial scheduling period
- 6) Instructional staff would like more visibility into the instructional space scheduling process and would like to have more responsibility for their assignments
- 7) Instructional and scheduling staff believe technology will be important as the future of instruction shifts to a more online and blended learning environment

(See survey results in Supporting Documents.)

We were not able to schedule time with the students through ASM in the window of time presented for this team's work. Additional efforts will need to be made to share the recommendations and connect with students next fall during implementation.

Implementation

Proposed Milestones and Timing

Start Date	Launch Five Implementation Teams:
Summer 2012	Define data set and gather data to populate the enterprise inventory and scheduling systems with instructional space information
Summer 2012	Gather requirements; perform due diligence; and make a recommendation for an enterprise scheduling system
Summer 2012	Gather requirements for a master academic schedule and create a draft for leadership approval
Summer 2012	Engage in a pilot program(s) for allocating and scheduling instructional space and create an enterprise recommendation for this process
Summer 2012	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%

Change Management Plan

In order to begin the change management process, presentations will be given to the following groups:

- Advisory committee
- Steering Committee
- Administrative Council (**completed**)
- VCA Directors
- Space and Remodeling Policy Committee (**completed**)
- University Committee
- ASEC
- CNCS
- LMAC
- Sustainability Advisory Committee

Depending on the audience, presentations may take the following forms:

- Campus forum
- Web Chat
- Website
- Inside UW-Madison

Most of these efforts can be managed with the support of staff willing to make presentations and provide the communication support from the APR office and University Communications. There is great value in team members serving as the spokesperson to campus.

Assumptions

The following assumptions are inherent in our recommendations:

- The work of this team needs to support rather than lead the educational mission of the University
- There will be significant resistance to many of these ideas
- Staged rollout, pilots and phasing may assist in campus acceptance of ideas
- Institutional instructional data and visibility to this instructional data is the single most significant recommendation coming from this team
 - Many of the other recommendations are dependent on the implementation of this recommendation
- Other areas of campus instructional space utilization are similar to what has been discovered in this team's work and the data will be necessary for teams looking at office, research and other types of space
- A shortage of optimally utilized instructional space causes the University to build in order to support new growth and that resources (custodial staff and utilities) are being used to support underutilized instructional space
- As a result of the above, units are sometimes forced to meet their space needs by seeking off-campus leased space, holding onto instructional space at a departmental level and/or investing in new construction
- The general assignment assigning process is more utilization-effective than processes used in scheduling non-general assignment instructional space
- Departmental assignment of space may facilitate departmental instructional objectives and allow closer control over wear and tear
- Owners of instructional space want that space utilized more effectively
- Closing instructional space saves the institution money
- Incentives will need to be available for departments to be willing to support the ideas of offering instructional space to general assignment or having others use the instructional space maintained by the department
- New policies will need to be drafted and supported for the proposed recommendations to be successful

Project Risks

The team identified several risks in the current state and reduced the reach of the recommendations in deference to perceived resistance from campus. These risks are:

- Departments will be unhappy relinquishing control over their instructional space
- It will be costly to upgrade the classroom space to baseline expectations and, given the unknown learning environment of the future, it may not be worth upgrading classroom space at this time
- Thoughtful consideration should be given before students are offered the ability to self-schedule instructional space in the evening and on weekends
- Attempting to schedule instructional spaces during non-peak hours may impose too large of a burden for the benefits realized
- Local control over instructional space is necessary to regulate occupation of rooms and may prove difficult and/or expensive to build into a system
- Potential cost savings depend on the characteristics of each underutilized room, and hence the aggregate data used to model the financial savings is a rough prediction and may not represent actual savings

Criteria for Measuring Success

The following performance indicators will be used to monitor progress and to inform future projects:

Financial:

- Measure the total cost savings related to instructional space operating costs (utilities, custodial, maintenance, and administration)
- Measure the total amount of avoided new construction and off-campus leases
- Measure the total savings of off-campus leases that are brought back to campus
- Measure the total reduction in costs of operating multiple scheduling systems

Operational:

- Measure the total reduction in FTEs dedicated to scheduling classrooms (both centrally and departmentally)
- Measure the total increase in utilization of instructional spaces

- Measure the increase in data-driven decision making in class offerings, scheduling and other instructional space usage
- Measure the total reduction in the number of scheduling systems on campus
- Measure the total number of instructional rooms that have been identified for repurposing

Customer Service:

- Measure the improvement in satisfaction from students and instructional staff in educational experience and comfort in the classroom
- Measure the improvement in satisfaction in the process for scheduling classes

Data

The following data was readily available via databases or was collected via interviews and surveys:

- Some instructional space data was available via databases. These sources include:
 - ISIS
 - Trirega
 - Event Management System
- However, the departmental information contained within the ISIS database was incomplete and the group was tasked with collecting targeted missing data via data walks and interviews
 - Data walks were conducted for 9 targeted buildings (Birge Hall, Chemistry Building, Education Building, Engineering Hall, Grainger Hall, Health Sciences Learning Center, Psychology Building, W J Brogden, Veterinary Medicine Building, and Vilas Communication Hall)
 - Gaining representative examples from these 9 buildings was helpful but gathering complete data is essential for future initiatives
- At the same time, the University space inventory (Trirega) contained incomplete instructional room information
 - While the team was collecting departmental scheduling data, they were also tasked with completing the instructional room feature inventory for the selected buildings

The following data/data links would have helped develop our business case but was not available:

- The University does not maintain a link between the HR system and the space database (Trirega)
 - Without this link it is difficult to ascertain locational relationship of instructional space utilization
- The University does not maintain a comprehensive, enterprise-wide instructional space scheduling system
 - As a result, departments use a variety of methods to track their scheduling data
 - The consequence of this dissemination of information is an unclear view of enterprise-wide utilization
- The University does not maintain a link between its instructional scheduling systems and its space database
 - As a result, instructional data was collated to the best ability of the group
 - Important instructional room data was often missing
- The University does not currently maintain a comprehensive catalog of instructional space
 - Many important departmental room features are not captured within the current system
- The University does not maintain a catalog of costs associated with operating instructional space
 - Without this data, it was difficult for the team to accurately represent the financial repercussions of underutilized space

Metadata

The following data structures were used to capture data within the scope of the work team:

- R25/ISIS
 - Curricular scheduling data for both General Assignment and Departmental rooms
 - R25 and ISIS provide an adequate mechanism to capture curricular data but need further consideration when moving towards an enterprise, comprehensive scheduling system
 - Current reports derived from ISIS are insufficient to report on activity metrics
- Trirega/INSITE
 - University space database
 - The Space Management Office is in the process of transitioning to a new space database called INSITE
 - INSITE has the capabilities to provide a comprehensive space database and collect information virtually
- Data walks
 - Used to capture instructional room features and non-credit instruction activities for nine targeted buildings
 - Data walks are not a sustainable practice

- Budgetary information from the UW Budget Office, FP&M, and Enrollment Management
 - Used to estimate costs for the financial model
 - Costs gathered were not always directly linked to instructional space

Data Accuracy

The team encountered several issues within the process of collecting and verifying scheduling and spatial data:

- Data to capture full departmental instructional space utilization was not readily available and/or, in some cases, completely unavailable
 - Given the limited time frame of this work team, complete departmental instructional room information was not collected
 - The team collected targeted instructional room data in lieu of complete data
 - Furthermore, gathering departmental scheduling data was often difficult and time consuming as departments use a variety of methods to schedule and record instructional data
- The University space database does not contain feature information for departmental classrooms
- The University does not allocate instructional space costs directly causing the need to generalize costing data

Data Recommendations

- The University should maintain a single, enterprise scheduling system to increase the accuracy of its scheduling and utilization data
- The University should begin to interface systems to enhance spatial decision making. These systems include:
 - ISIS/R25/EMS (until an enterprise system is obtained)
 - INSITE (space database)
 - HRS (human resources)
 - The University budgeting system
- The University should move towards more accurate cost allocation in the future
- The asset module may need to be purchased to supplement current space inventorying system to provide asset tracking and room characteristic data
- The University should move towards a more virtual, departmental driven model to capture current room data in the future

Supporting Documents

The following supporting documents are attached to this business case:

- Appendix
- Stakeholders List
- Change Management Plan
- Financial Model
- Survey Results
- Room Data Summary Reports
- Data Analysis Summary Reports