Find the Hidden Space on Your High Density Campus

We all know what high density feels like: no open tables in the dining hall, bumping into a student as you round the corner heading to class, or sharing an office with another faculty member that barely fits your own furniture and reference materials.

Other than the occasional meal “to go” due to lack of available seating, what is the effect of a high campus density? At the simplest and most sharply evident level, a high density campus experiences more wear and tear on the facilities, shortening life cycles and an increased demand for capital resources to maintain and upgrade the more rapidly degenerating spaces.

Thus appears the first edge of the high density sword: the carpeting that should have lasted seven years lasts only five; the desks that get rearranged for 10 classes a day, instead of six, lose their “feet,” and therefore their stability, faster. With the shortened life cycles of multiple components, the need for more frequent and more extensive renovations plagues the dense campus. However, once the resources are available for these renovations, the second side of the high-density sword makes an appearance. Where do we put these programs while renovating?

Unlike the campuses on the low end of the spectrum, a high-density campus often cannot identify the swing space needed to relocate programs during renovations. But it is there. Every campus, no matter how dense, has some under-utilized square footage. Let’s examine three approaches to identifying under-utilized academic space to help dull the double-edge sword of renovating a high-density campus.

1. Take back the space – For some programs, it makes sense to have a single department control the room schedule. After all, who wants to teach a music theory class in a biology lab? In recent assessments, Sightlines has found that departmentally “owned” general purpose rooms, such as classrooms, lecture halls, and seminar rooms, hold fewer courses per semester than the centrally controlled general purpose spaces on campus (see chart).

   Passing the scheduling reins for these spaces from the departments to the central scheduling office will allow multiple course subjects to utilize this square footage. Assuming that the average departmentally controlled space holds 60-75% of the course load of centrally controlled rooms; centralized scheduling of these spaces will release 25-40% of the square footage of these spaces for “swing space.” With an average campus’ general purpose teaching space inventory comprised of 30% departmentally controlled spaces, there are often significant opportunities to improve the utilization rates of these spaces and “find” the swing space needed for modest to major renovations.

2. Right-size the rooms – If you are lucky enough to have had your academic space constructed entirely in the last five years, feel free to skip this section. If you are like the majority of institutions, the teaching spaces on your campus were designed 15, 20, even 30+ years ago and are no longer ideal for modern teaching pedagogy.
and class sizes.

Many campuses are pushing to decrease the average course size and therefore improve the professor-student ratio without assessing how well the teaching spaces are designed to handle this shift. Whatever your faculty-student ratio may be, it has no doubt changed from 20 years ago while the capacity of available teaching spaces has stayed fairly constant.

Understanding the distribution of room capacities compared with the distribution of course sizes will likely reveal that the number of small course enrollments is proportionately larger than the ratio of correctly-sized rooms to hold them, as the historic trend has been to decrease course sizes. This translates into rooms that are larger than needed; empty seats and un-utilized space.

Suppose that three adjoining 45 person classrooms (approximately 900 square feet each) are each holding a maximum course size of 25 students – reconfiguring these spaces during an interim session to form 3 spaces, each of which hold 25 students (approximately 500 square feet each), can maintain scheduling the same course load and release 1,200 square feet of space.

3. Re-assess the course schedule – Few self-respecting seniors would willingly sign up for an 8 a.m. class, let alone one that meets on Fridays. In fact, many faculty members are equally unhappy about early morning or late afternoon courses. Typical institutions see room utilization rates before 9 a.m. and after 1 p.m. drop drastically from the mid-day peak periods.

This uneven distribution of scheduled courses throughout the day requires a larger inventory of teaching spaces to accommodate the volume of courses taught during the peak hours. Referring to the example at right, which details campus-wide teaching space room utilization rates from 8 a.m. to 3 p.m. (blue line); we see a peak utilization of almost 80% with significantly lower rates before 9 a.m. and after 1 p.m. The orange line represents the resulting utilization rate when this same course schedule is distributed throughout the seven hour period, resulting in a 60% rate. With this redistribution the inventory of teaching spaces can be reduced by 20% and still support the same quantity of courses. Even minor reallocations of courses outside of current peak hours can result in the release of significant square footage.

Identifying under-utilized square footage is by no means an easy task, and the process of capturing that space requires cooperation and trust from the campus community (Which, we should mention, is a proportionately larger community than a same-size, less-dense campus. A third edge to the sword, perhaps?). The reality of a high-density campus is that any space not utilized to full potential will be taken over by someone or something. The three approaches outlined in this article will help identify the under-utilized areas to ensure that the improved utilization of these spaces benefits not just a single individual or department, but has larger campus-wide effects.

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Tips & Case Studies for Finding Under Utilized Square Footage
One of our long-time members contracted with us to analyze the use of their academic classroom and lab space on campus. The analysis focused on 80 centrally scheduled teaching spaces, excluding only 16 rooms classified as small conference rooms and department-controlled spaces.

To get the data they needed, we used our Space Utilization Solutions and its three distinct steps. First, we evaluated the teaching spaces, collecting condition and technology data for each room. Second, semester by semester scheduling data was gathered and analyzed. This allowed the institution to uncover both campus-wide and room-by-room opportunities. Third, this information was contextualized and compared with similar institutions and evaluations conducted across the country.

Upon completion of the space study, we made a number of recommendations to the institution’s facilities and finance leadership regarding opportunities to improve their space utilization.

During the review of the data, it was discovered that, compared to peers, this school’s classrooms have less space per student. However, many courses are taught in rooms with capacities far larger than the enrollment requires. Nearly 98% of the institution’s classrooms have space for 31 or more students while over 60% of the courses in each semester enroll 30 students or less. This is creating a misalignment of courses to room sizes and forcing smaller courses into larger rooms, which are only two-thirds full. Finding each room’s “functional capacity” is the key to maximizing both student comfort and position utilization moving forward.

Our client’s classrooms are well used, falling into “best practice range” based on Sightlines’ extensive database, but a discrepancy was noted on Monday/Wednesday use. No-class blocks on Monday and Wednesday could be eliminated or moved to less “high demand” times which would allow for the institution to become one of the highest-performing in Sightlines’ database regarding classroom utilization. With a 64% average room utilization rate for classrooms from 8 a.m. to 4 p.m., this school has the opportunity, by increasing this rate, to extract further value from their space. Raising this utilization rate to 70% could “activate” an additional $3.8 million of this asset’s value into use.

Find the Hidden Space on Your High Density Campus
Case Study

No need for new classrooms; utilization study unlocks space by realigning current rooms

Faced with a growing demand for academic square footage, a west coast institution partnered with Sightlines to answer three core questions: Are the teaching spaces configurations consistent with its program? How effectively are the teaching spaces utilized? What are the comparative conditions of its teaching spaces?

To answer these questions, Sightlines’ analysis focused on three core analytical efforts: a field assessment of each classroom and its components; a utilization analysis and a review of institutional scheduling policy.

Sightlines interviewed faculty and students to evaluate the changing expectations and requirements of classrooms. These focus groups helped to align needs and uncover best practices for classroom designs and layout. Sightlines then reconciled these insights with a review of course scheduling and a physical inventory of each classroom. Utilization was assessed both on the basis of room and position usage.

Based on Sightlines’ recommendations, campus leaders made significant changes to the scheduling process to release hidden value in their teaching spaces. The initial study indicated that the vast majority of courses were scheduled in rooms larger than enrollment dictated. To align the room inventory with enrollment, Sightlines suggested that more teaching spaces with a capacity of 20 or be added to support smaller classes and to more efficiently utilize square footage. The recommended changes could be performed within the context of the condition analysis enabling this university to coordinate renovations with those rooms with the highest backlogs of needs.

Aside from the physical recommendations, Sightlines analysis provided the administration with the data needed to reorganize and improve their block scheduling process. Now, armed with a better understanding of actual capacities and faculty preferences, more classes are scheduled at peak times making the scheduling process significantly more efficient for the administration and less divisive for the faculty.

As a result of Sightlines’ work, this institution saw an increase in space utilization of over 30%. This new found efficiency released hidden value and eliminated the immediate need for a new classroom facility.

About Sightlines

Sightlines gives colleges and universities the independent data and perspective they need to make critical decisions about their most valuable assets - their facilities. Sightlines has compiled the industry’s most extensive, verified database, allowing us to benchmark facilities against universities and colleges across the nation. More than 400 campuses rely on Sightlines to help make the most of finite resources. We are reinventing how facilities are managed in higher education.