



PURDUE UNIVERSITY CASE

Occupancy Analytics Leads to
\$14M Net Savings



AT A GLANCE

Challenges

- Commitment to keeping tuition flat and that means that doing more with less
- Managing office space with hybrid work
- Rapid student enrollment increases
- No true way to measure space utilization

ROI

- Building Divestment leads to direct savings of \$14M net cost avoidance.
- Multi-building computer lab restack project took \$760,000 off the Purdue IT books and gave back 3,500 square feet.

OBJECTIVES

Identify opportunities for improving space utilization of offices, classrooms, and other spaces on campus to be transformed to meet the Future of Work and growing enrollment needs.

With no space left on campus, underutilized spaces such as computer labs and offices needed to be given back to the university and repurposed for collaboration or study spaces.

SOLUTIONS

Measure Space Utilization in buildings where suspected underutilization or high costs for deferred maintenance present the biggest opportunity.

Lambent Spaces was deployed in the Heavillon Hall and Stanley Coulter Halls. Continuous occupancy data identified nine computer labs which were under 50% utilization and could be taken offline, giving back 10,651 square feet back to space reserves.

BENEFITS

\$14M Net Costs Savings

Purdue University understands that by spending money upfront restacking underutilized space, moving departments around to enhance campus flow, and taking buildings offline, they see a direct cost avoidance.

Increase in Donation Dollars

The creation of the new Language Hubs and bespoke Graduate study spaces provided students and graduates with a greater sense of belonging and drove an increase in donations from alumni.

Student Study Space Increases 8x

By restacking departments, managing hybrid more effectively, and releasing underutilized IT lab space back to campus, Purdue is able to achieve their master planning goals of increasing study space by 8x.

Densify Down Hybrid Office Spaces

To meet the newest needs of faculty and staff, Purdue is densifying down office space to accommodate hybrid roles. This modernization freed up space for building collaboration and flex space.



*"Purdue End User Experience team **gave back another 3,500 square feet** to the College of Liberal Arts for Fusion Labs and for Conference Services to move into Stewart Center.*

*Beyond positively impacting our faculty and students, this also **invigorates alumni/donor relations**, as many of the subsequent space renovations are sponsored through philanthropy."*

Corey Seliger

Purdue University - IT



UNIVERSITY OF TENNESSEE, KNOXVILLE

Enhancing Student Life on Campus with Improved Operations and Experience.



THE UNIVERSITY OF
TENNESSEE
KNOXVILLE

AT A GLANCE

Challenges

- Dining Halls overfilled at peak times
- No additional space for student groups
- Non-reservable spaces need furniture replacements
- Staffing inefficiencies

Benefits

- Improved student dining experience and new construction wins on campus
- Data-driven classroom assignments
- Improved operational efficiencies



"We have approximately 25 spaces here in the Union and we'll have groups say we're going to have 100 people and five show up.

*We have over 600 student organizations and they all want to meet in the building - and so trying to figure out and balance the needs and wants of all of our students can be hard. **And so we've been using Lambent to assist with some of that.**"*

Alison Ward

University of Tennessee, Knoxville

OBJECTIVES

The Student Union at the University of Tennessee, Knoxville (UTK) is one of the most heavily-trafficked buildings on campus. To better meet the needs of the students, facilities and space planning teams needed an unbiased way to capture actual occupancy.

Their goals included measuring utilization of reservable spaces and non-reservable spaces.

SOLUTIONS

Lambent Spaces deployed in the Student Union at the zone level, giving users the ability to map occupancy to space types they wanted to measure.

They integrated their scheduling software, AdAstra, in to generate reporting for reservable classrooms and leveraged that to understand patterns of use for specific classes and student groups.

BENEFITS

Historical Data Helped the Registrar Right-size Classrooms

Using the Reseved vs Occupied report, the Registrar is able to better configure classroom locations by patterns of occupancy. This freed up space for more student organizations and classroom usage.

Repair and Replacement Grants Increased

True occupancy reporting data allowed facilities to better prove utilization of non-reservable spaces. Using this data to enhance repair and replacement reports increased their win rate.

Improved Operational Efficiencies

Using historical occupancy data, UTK was able to better staff the Student Union for game days and other campus events. This operational efficiency can improve the student experience and reduce costs.

Improve Dining Hall Operations

Students were complaining about wait times and lines at the dining hall. Using actual occupancy data, UTK hired food trucks to support peak occupancy hours and have now approved the expansion of additional dining halls on campus, a significant construction project.



STATE REPORTING

Understanding Actual Occupancy
Compared to Expected Occupancy

AT A GLANCE

Manual, Static Counting

State regulations vary but most states require public colleges and universities to maintain a standard of occupancy by classroom type.

To do this work, colleges leverage space planning staff or hire contract workers to perform static, moment-in-time walkabouts.

These highly-manual efforts take away resources from maintenance or strategy work and prove to be less representative of patterns of occupancy than automated methods.



*"The functions of the Department of Education as it pertains to educational facilities [...] shall also establish, for postsecondary education classrooms, a **minimum room utilization rate of 40 hours per week and a minimum station utilization rate of 60 percent.** These rates shall be subject to increase based on national norms for utilization of postsecondary education classrooms."*

2023 Florida Statutes

Department and Board of Governors - Educational Facilities

CHALLENGES TO MANUAL COUNTING

Surveys and manual walk-about pose two levels of challenges to space planning teams. On the one hand, they use valuable time and people resources for small teams to measure the entire campus.

Secondly, single surveys or even month-long observational surveys only measure a single day or week. As life on campus fluctuates, this survey doesn't capture the ebb and flow of people through spaces. For example, surveying during a test would show increased attendance rate over an average day. Conversely, surveying during a rain storm would produce less occupancy than average.

SOLUTIONS

Lambent Spaces was deployed in classrooms at the zone level, giving users the ability to map occupancy to space types they wanted to measure. As the data continuously captures occupancy, it can be leveraged for state reporting to automate manual reporting, creating consistency and reliability.

When scheduling software like AdAstra was integrated, campus space planners could measure utilization by classroom types and understand expected occupancy as compared to actual occupancy.

BENEFITS

Automation Created Consistent, Unbiased Data

Capturing occupancy with Wi-Fi allowed facilities directors to report on actual occupancy, consistently across their entire campus. It eliminated margins of error from single surveys.

Right-size Classrooms for Better Utilization

With actual occupancy data, space planning and registrar teams are able to right-size classrooms so that utilization and capacity are more even.

Improved Operational Efficiencies

Valuable employee time was freed up from manual work like survey walk-about and data entry. These employees are now able to perform higher-functioning tasks and automation reduces the chance of errors made in calculation.