

Three Reasons Not to Build Your Own Space Utilization Solution

If you're considering a space utilization solution like Lambent Spaces, it's natural to consider whether it could be done in-house with data and resources you already have.

There are many reasons to consider a commercial SaaS offering over one you build yourself. The reasons to go with a proven solution like Lambent Spaces are even more compelling. Here are a few.

You can't just count devices. An in-house team might be able to export device data using familiar network management tools, but it takes more than a list of devices to understand occupancy in a space. Some devices are only connected occasionally; some are better indicators of a person's presence; some people carry multiple devices; and some people carry none. Additionally, some move quickly through spaces and some not at all. Lambent has the expertise in AI and experience with wireless systems to deliver a platform that can turn raw data about devices into consistently useful estimates of occupancy.

Lambent Spaces uses wireless metadata to estimate the number of people in physical spaces like buildings, classrooms, offices, and conference areas by passively detecting devices like laptops, mobile phones, tablets, and smartwatches through the signals they emit to stay connected.

This data includes when a device was seen, a unique MAC address, and sometimes details like device type, signal strength, connection properties, and device position. Wireless vendors use methods like trilateration based on signal properties to provide device position. When device positions aren't available in the collected data, they can be approximated using proximity.

Data is collected through an IT-friendly containerized connector with flexible on-premises or private cloud deployment, security controls and auditing, isolation from internal systems and networks, and built-in privacy protection and anonymization of all sensitive data.

Lambent Spaces feeds this data into proprietary machine learning models and algorithms to estimate occupancy based on device behavior, characteristics, and connectivity patterns. It preferentially considers only those devices most likely to be associated with someone occupying a space, such as wearables or mobile phones. Devices like desktop computers and printers, which are typically stationary, are not included in occupancy estimates. Lambent Spaces averages individual occupancy estimates over 5 to 15-minute intervals, smoothing out minor fluctuations.

Lambent Spaces is built by an engineering team with proven experience developing distributed streaming data and analytics platforms that meet the highest standards of performance, reliability, security, and scalability. Additionally, each deployment is

validated, and parameters adjusted to align estimates with directly or indirectly observed occupancy, and to accommodate differences in the number of devices people carry and adjust to characteristics of the physical environment. Our commitment to data quality and innovation in spatial and occupancy intelligence means you have data you can rely on.

You can't trust occasional data. Data-driven decisions need continuous data at scale. You might be familiar with the clicker studies, spot checks and anecdotal observations that have informed space planning decisions in the past.

You can't really understand how space is being used or make near and long-term decisions unless occupancy data is continuously available; human-gathered counts of people or machine-generated snapshots will only provide an incomplete (and potentially misleading) picture.

With Lambent Spaces, your occupancy data is always available: current, historical, and anticipated. This enables a wide range of space planning decisions. For example:

- Daily* Find a place to host an important meeting when all conference rooms appear to be booked but some are not actually being used.
- Short-Term* Adjust space assigned to teams each month based on when they come into the office and how long they stay.
- Mid-Term* Find swing space options to reassign departments during a renovation based on nearby underutilized space.
- Long-Term* Plan for capital needs and assets based on occupancy trends for different spaces such as commons, conferencing, and collaboration.

Historical data allows you to perform in-depth analyses such as change point analysis and test what-if scenarios. For example, you can look at occupancy patterns before and after a new hybrid work policy was rolled out to see if utilization is improved. Or you could quantify attendance trends on days when lunch was provided—and days it wasn't. Data-driven decisions need continuous data.

In Lambent Spaces, this continuous data comes through seamless and secure integrations with the wireless technology you have now—or might have in the future. And unlike sensors, Wi-Fi is essential infrastructure with broad coverage and high availability. With partnerships across major vendors including HPE Aruba, Cisco, Juniper Mist, CommScope, and Extreme Networks, you can be assured integrations continue to work even when vendors update features, change APIs, or introduce new integration solutions. Each integration is developed based on years of experience to accommodate often undocumented issues affecting reliability and quality such as duplicate, outdated, and missing data.

You can't make decisions without context. Effective space planning requires more than just occupancy data; it needs context and convergence with other information.

By combining data from facilities management systems (such as capacity, cost, size, category, and purpose) and context from operations and scheduling systems (like operating hours, staffing, resource availability, reservations, and events), Lambent Spaces delivers the higher-level metrics like utilization and opportunity costs that underpin planning. For example, Lambent Spaces reports exactly how actual attendance in classes compares against enrollment and classroom capacity across the entire semester—and can provide the underutilization costs associated with current plans as well as the blueprint for how to reallocate classroom space more cost-effectively.

The contextually comprehensive data is available through APIs and in an application tailor-made for space planners. The Lambent Spaces application lets users interactively explore how spaces are used from the portfolio level all the way down to individual rooms. Dashboards and reports let users see trends and heatmaps, drill into the reasons behind the data, define and track progress towards KPIs, and easily share information.

Organizations grow and change, and so do the spaces they use. There may be new space use classifications from reassignment or restacking. Or there may be a reconfiguration that changes the layout of rooms and seating areas. When there are changes in key data like cost per square foot, maximum capacity, hours of operation, and room schedules, you need an easy way to incorporate these updates into any view of space utilization. Lambent Spaces backs every deployment with a team of implementation specialists with the knowledge and tools to help organizations adapt to other changes to keep data relevant.

You can start managing spaces smarter. A decision to go with Lambent Spaces gives users the tools to manage spaces smarter, reduce operational and capital costs, improve staff and student experience, and build towards a sustainable future. This lets your organization focus internal resources and expertise on *your* mission and activities, not *ours*.