Workplace Utilization Buyer's Guide

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Workplace Utilization Buyer's Guide

How to use this guide

This guide is designed to help you compare and contrast different workplace utilization solutions, so you can choose the technology that will empower you to make smarter decisions for you and your teams.

1. **The impact of space**: Space helps determine enjoyment, productivity, and experiences within the workplace.
2. **Why workplace utilization**: Basing decisions on how a space is used empowers real estate and workplace leaders to make smarter decisions that benefit their employees.
3. **How to choose products**: Identify what you're trying to achieve with space utilization technology.

The impact of space

Employees today demand flexible work experiences. This has created new (and exciting) changes for real estate and workplace decision-makers. How do you create, manage, and design spaces that deliver the best experiences for all your employees, when not everyone uses the office equally? How do you know what is the right mix of "we" spaces — like conference rooms, and "me" spaces — like phone booths?

The answers differ across companies, highlighting the need for individualized workplace strategies. Even within a singular company, space needs will change based on regions, departments, and teams. Understanding your needs can help you:

1. **Reduce Costs:** Determine what spaces are being underutilized, cutting excess spending.
2. **Real-time Data**: Take out the guesswork of workplace design with data that provides real-time insights.
3. **The Impact of Space:** Support decisions on space needs with accurate data that proves where change is needed.

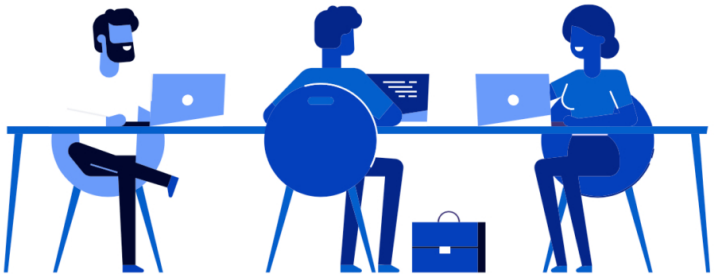


Why workplace utilization

A 'return to office' doesn't align with the current climate. Employees don't want to return to the status quo. They demand dynamic, connected workspaces that allow for collaboration, privacy when needed, and predictability – giving them the freedom to decide when and why to come into the office.

- Companies that prioritize transformation will create a competitive advantage.
- Workplace leaders can make smarter space planning decisions to benefit their employees.
- Real estate leaders can impact their bottom line with data-informed decisions.

1 in 3 employees would like flexibility to choose where they work



But how do you know how many employees come to the office and where they prefer to spend their time? By measuring space utilization.

This data can help decisions including:

- Whether to renovate or replace a particular area
- How to best configure existing space
- When to invest in additional real estate
- Whether to discontinue current space usage (e.g., not renewing leases)

What to look for in occupancy technology

Identify your goals

Before you consider any occupancy technology, you need to identify what you're trying to achieve. Only then can you begin to assess each product's return on investment. Answers to these questions can eliminate some products immediately, helping you to focus on those that serve your purpose.

1. Is your primary aim to save on real estate costs?
2. Or is it to create better workplace experiences?
3. Or like many, is it a combination of both?
4. How important is it to have your data consolidated in one dashboard?



With an increased reliance on computers and electronic communication to do business, technology has enabled employers to monitor much of their employee's activities throughout the day. Despite this, a desire for people to feel safe, secure, and anonymous continues to increase, highlighting the need for products to deliver without exposure.

> *60% of employees would have privacy concerns about camera-based technology in their workplace*

For decades, the popular framing around privacy has presented a zero-sum game: any gain or benefit introduced by technology comes at the expense of privacy. Today, there's no longer a tradeoff between technology and privacy. This binary view of the role technology plays is changing, yes through legislation, but also through an emerging class of space utilization technologies that are anonymous by design, meaning they provide immense functional value while ensuring the absolute protection of individuals' privacy.

When selecting a product for occupancy technology, it's important to clearly understand their stance on privacy, what data is collected, and how it's being done. These answers will help give reassurance to your teams who may be concerned with the invasion of privacy.



Determining which technology best suits your needs is just the first step. It's equally important to understand the buying, installation, and deployment processes of each potential product. This is where a company's customer success team plays a critical role.

One final note

Measuring a product's ROI in the abstract can only tell you so much. To really understand the value of a specific technology, you would ideally

deploy sensors on a smaller scale — say, your most popular floor. Then you can measure its value specific to your space. Some products offer you the option to "smart small."



Choosing the best technology for your needs

Depending on your role, your need for utilization data may vary from wanting to know when to acquire, repurpose, and allocate space to leveraging utilization data to continually improve the workplace experience. Below we outline the two most common use cases for utilization data.

> *Occupancy technology can tell you which spaces are most performant relative to a goal. That marks a fundamental shift in how buildings will be designed and used.*
>
> — ***Andrew Farah, CEO of Density***



Workplace

Creating a workplace environment that supports people to do their best work, whether individually or collaboratively, is the driving force for workplace success. Workplace teams use space utilization insights to determine the right mix of collaborative and individual spaces, and what those spaces should look like — i.e. the number of conference rooms, the size of each room, and how those spaces should be furnished and equipped.

Utilization data surfaces the demand of each space, allowing workplace teams to create the right amount of supply for each space based on demands. Teams also use utilization patterns to identify and repurpose underutilized space, and anticipate what type of spaces to expand or repurpose based on historical demand.

Some questions space utilization technology can help workplace leaders answer

1. Do people prefer chairs or couches?
2. Do I have enough collaborative spaces and enough private spaces?
3. How do we better serve our spaces based on actual usage patterns/trends?
4. Do I have enough food and supplies?
5. Do I have enough space allocated for each team?
6. What size meeting rooms are most popular and why?
7. How long do employees spend working at their workstations?

Commercial Real Estate

Teams unintentionally acquire and renew leases for more space than needed. As a result, they pay for buildings or floors that go unused. Or, teams are too conservative about headcount growth and underinvest in real estate. As a result, they run out of space sooner than expected.

Teams are forced to scramble to acquire temporary and expensive spaces which creates a disjointed experience for employees.

Corporate real estate teams can leverage occupancy data to identify underutilized spaces, proactively repurpose or in some circumstances they can terminate underperforming spaces, and accurately forecast the future need for space, all while keeping cost in mind. These insights can lead to more data-driven decisions about investments, including shorter-term leases, office neighborhoods, and better-designed spaces.

Some questions space utilization technology can help commercial real estate teams answer

1. How much space do I need?
2. How long until we need more space?
3. What does my global/regional real estate strategy look like?
4. How do I forecast an accurate amount of space I'll need by location?
5. Can I offload space?
6. Can the existing space support team growth?

Badge Systems



How it works

Data can be collected when an employee swipes a badge or security pass at entry/ access points, giving insight into how many people entered a space.

Cost: Low

Depends on the size of the building, but is a relatively inexpensive option.

Benefits

An inexpensive, effective way to provide a rough idea

Limitations

- Can't define peak occupancy because you don't know when people leave
- Only counts people that scan a badge, not how long they stayed, the spaces they visited, or how they utilized the space
- Archaic way of gathering any data
- Tailgating: When someone with a valid access card enters a building but is immediately followed by an unauthorized person before the door closes

Surveys





How it works

Corporate real estate teams or third-party consultants conduct manual counting to better understand how many people use a space.

Cost: Variable

Cost can range largely due to the size of the groups surveyed and the surveyors needed.

Benefits

Provide valuable human perspective

Limitations

- Quickly outdated data that only captures one moment in time, resulting in inaccuracies
- Difficult to scale info to use in multiple locations

Lighting Sensors



How it works

Some smart lighting systems have the ability to capture data when the light sensors are triggered by motion, measured as someone entering the space.

Cost: Low cost

Depends on current installation abilities but is relatively inexpensive.

Benefits

- Existing lighting systems in most spaces make installation relatively easy
- Can work effectively if installed in small spaces

Limitations

- Not detailed enough
- Shows people in space but no quantitative data
- Can't make quantitative decisions based on data collected

Wi-Fi & Bluetooth Tracking





How it works

When you arrive at the office, your phone or laptop will send out a radio signal called a 'probe signal' with a unique ID. This signal can be collected and used to count the number of people in the office.

Cost: Low

Higher cost when access and location abilities are added.

Benefits

- Low cost

Limitations

- These are tracking devices, not people counters
- Limits data accuracy because people's devices must be actively looking for Wi-Fi or Bluetooth connection

Cameras / Optical Vision Sensors



How it works

Some camera models can integrate software to count people and may include facial recognition. Some require an additional feed of video and some can store the data in the camera.

Cost: Variable

$250-$1,000 per camera

Benefits

- Cost-effective
- Accurate data

Limitations

- Privacy
- Security
- Limited in installation location

Seat Sensors



How it works

These sensors detect movement within a small space by analyzing a change in temperature. At a desk, these sensors detect the heat of a person, counting the desk being used.

Cost: Variable

Ranges from $10 per unit to $100s

Benefits

- Easy to install
- Cost-effective

Limitations

- Scale inefficiency
- Privacy
- Doesn't show space utilization only desk occupancy

Thermal Sensors



How it works

Thermal sensors use body temperature and software to determine a human movement. These sensors give a reading for how much heat is in the space and the path of the temperature throughout spaces.

Cost: Variable

The most popular thermal sensor is approx $1,500 per device.

Benefits

- Privacy, no PPI
- Passive data capture

Limitations

- Small range
- Data can be inaccurate based on devices with thermal activity
- Low resolution shows inefficiency in gathering actual behavior

Ultra-Wide Band Systems



How it works

These sensors require a transmitter and receiver to collect data. To measure people in an office, you would need to set up receivers throughout the space and give each employee a transmitter to wear.

Cost: High

Can be very expensive depending on the number of receivers (people in your space)

Benefits

- Highly accurate
- Captures people movement

Limitations

- Not passive
- Limited range

Ultrasonic Sensors



How it works

Ultrasonic sensors bounce inaudible sounds off people as they walk by. Each one has an emitter and a receiver.

Cost: Variable

$50-$100

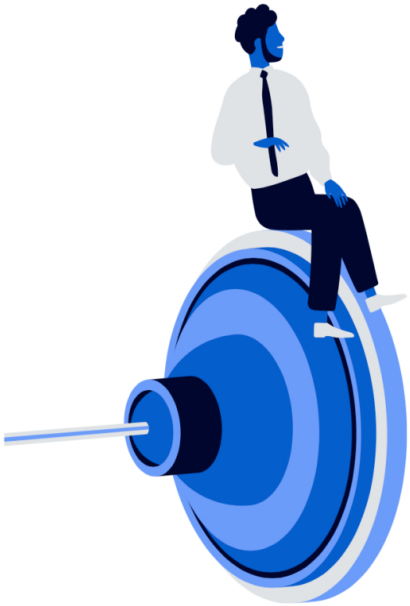
Benefits

- Lower power requirements

Limitations

- Inaccurate

Active Infrared (AIR) or 'Break Beam' Sensors



How it works

Break beam sensors have an infrared emitter and an infrared receiver. The sensors are typically placed on one side of a doorway (or both sides). Standard AIRs count the number of times infrared light is "broken" or passed through.

Cost: Variable

$50-$150

Benefits

- Inexpensive
- Anonymous
- Battery operated

Limitations

- Inaccuracy
- Privacy
- Complex data

People Counters





How it works

A sensor is placed at the entrance or exit of a space and counts the number of people entering or exiting the space. The technology can vary greatly, from simply tallying up the number of entrances/exits, to more in-depth sensors to ensure people are not counted twice.

Cost: Variable

$50-$1000

Benefits

- Accurate occupancy count & peak occupancy
- Anonymous

Limitations

- Only deployed in an entryway
- Limited range

Computer Vision Sensors



How it works

Similar to security, but are designed to measure space utilization insights. Algorithms are used with images to detect people and gather information.

Cost: Mid-range to high cost

Depends on technology and the number of sensors needed.

Benefits

- Passive data capture
- Highly accurate
- Long hardware shelf life

Limitations

- Limited coverage area
- Security and privacy risks
- Costly installations

Battery Powered





How it works

Many of these solutions can be battery powered vs. hard wired

Cost: Low

Battery operated tends to be a cheaper option

Benefits

- Easy to install and move around

Limitations

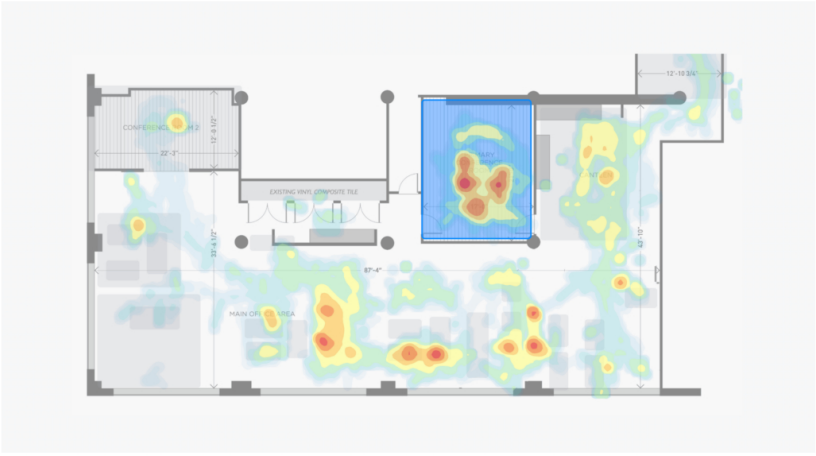
- High maintenance
- Not real-time data (periodically captures data to preserve battery life), data may be uncaptured if batteries die.

Density

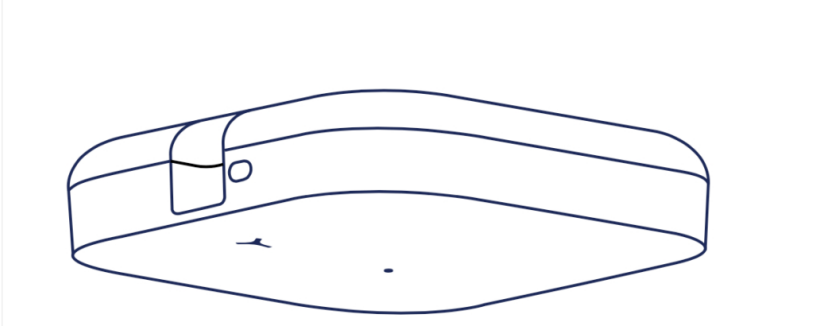
Density prides itself on being anonymous at the source, with technology that meets that standard. We believe in passive monitoring that gathers information in its truest form.

Employees are less likely to alter their natural behavior patterns if they know the data you capture is anonymous. Density sensors are not cameras, so they don't create visual images that identify personnel. Our GDPR-compliant sensors provide a real-time data set of the number of people in any individual space while maintaining 100% anonymity.

Our mission is to help you better understand the way your spaces are used, and to avoid investing in unnecessary spaces. By knowing how your employees use your space, you can design workplace experiences that improve productivity and overall satisfaction.



Open Area



How it works

Density uses depth data and machine learning to anonymously count people in open space.

Cost

Hardware fee and annual data fee, variable by volume.

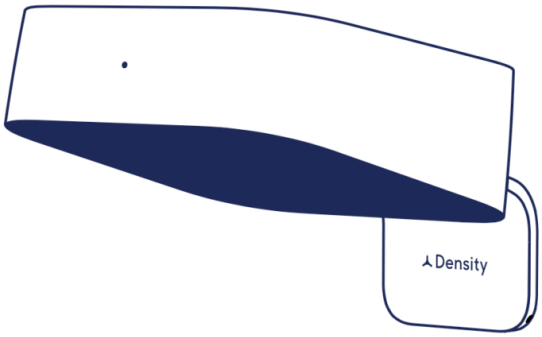
Benefits

- 100% anonymous at source (radar-based technology)
- Real-time (transmits data every seven-tenths of a second)
- 60% reduction in cost to deploy (vs. camera / optical alternatives)
- Up to 20-foot range, 40-foot effective diameter (4x coverage of alternatives)
- Historical occupant pathing and heatmap

Limitations

- No identity tracking
- Powered device(not battery operated)

Entry



How it works

Density uses depth data, machine learning, and computer vision to anonymously count people.

Cost

Hardware fee and annual data fee, variable by volume.

Benefits

- Anonymous data
- Designed for corporate offices
- Real-time API

Limitations

- No identity tracking
- Powered device (not battery operated)

Investing in the future of the built world

Our relationship with physical space has changed forever. There is no future in which we don't measure how people use and interact with our spaces. How much do those spaces cost? How much energy do they consume? Does the space improve productivity and personal well-being?

The built environment has needed an overhaul for generations — the pandemic has merely cast a spotlight on the problem. Before the pandemic, nearly 40% of buildings across the globe are paid for but empty. What's the number now?

> *There are hundreds of millions of square feet of space in the workplace that are completely unmeasured.*
>
> — ***Andrew Farah, CEO of Density***

Companies waste millions of dollars on spaces they never use. They do so while trying to reduce the outdated metric of square-foot-per-employee that has driven bottom-line cost savings for decades. The waste in these spaces is unintentional, historically difficult to identify, and increasingly harmful to an employee experience.

There's a better way. You can now anonymously measure how people use your spaces — from the single office to hundreds of millions of square feet. You can use this data to make meaningful decisions for your people — and the planet.