

Product Overview

Improve space utilization by understanding how every room, floor and building is used in your portfolio.

At over \$6 trillion, commercial real estate represents nearly 10% of global GDP. And yet, answers are elusive to even the simplest of questions. How many workstations do I need? How many conference rooms are booked but not used? Does my building have enough or too much square footage for the next five years? Answers to these seemingly straightforward questions are, in fact, the keys to unlocking vast amounts of potential in your business's two most valuable assets: people and real estate.



Businesses use Density to:

- ✓ Set new sq ft standards
- ✓ Simplify space planning
- ✓ Inform workplace design
- ✓ Manage operating expenses
- ✓ Transition to an agile workplace
- ✓ Ensure safe return to office
- ✓ Identify utilization trends at scale
- ✓ Quantify underutilized space

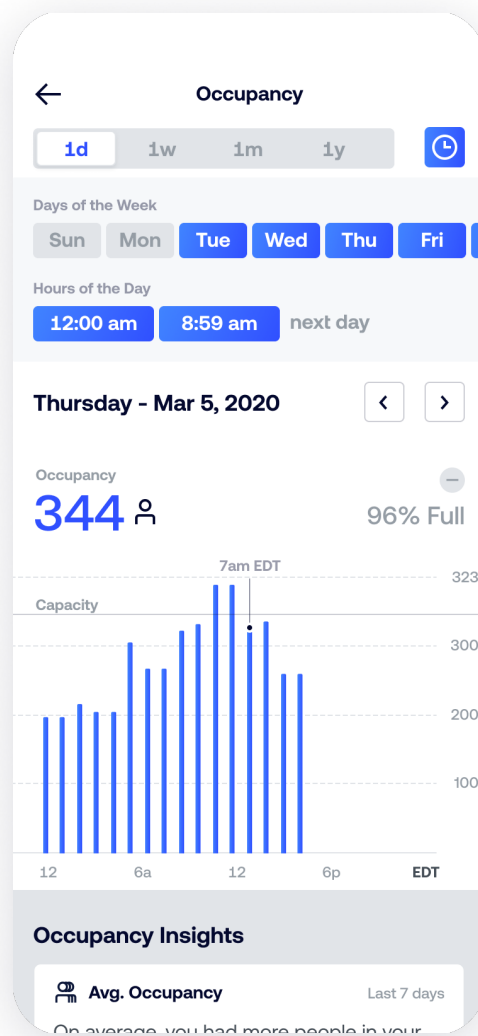


About Density

Density was founded in 2014 to give business leaders the data they need to make safer, more cost effective decisions about their space with accurate, anonymous, real-time people count.

Our focus:

- Build sensor analytics technology that improves the cost efficiency, health and safety of our customers' buildings and real estate
- U.S.-Based HQ, Factory & Support Team
- Offices in San Francisco, CA and NYC with factory in Syracuse, New York
- Our manufacturing line was developed in-house to support large scale production
- Density is capacitized for hundreds of thousands of units per year and currently ships to 32 countries
- Provide team-wide, instant access to utilization insights portfolio wide
- Tens of millions saved in cost avoidance on new leases and CAPEX workplace enhancements
- Millions saved in operational costs
- Better workplace experience - Know not only how much space, but what type of space and where it should be located



Most common pain points

Data-starved teams

Largely guessing at workstation ratios, space planning, and workplace experience.

- Massive waste
- Risky, uniformed decisions
- Cannot adapt to meet change
- Frustrated employees

Data-curious teams

Manually munging badge, booking, wifi and space study insight.

- Insight is reactive, delayed, and inaccurate
- Inefficient use of space results in waste
- Slow to adapt to change
- More reactive versus proactive decision making

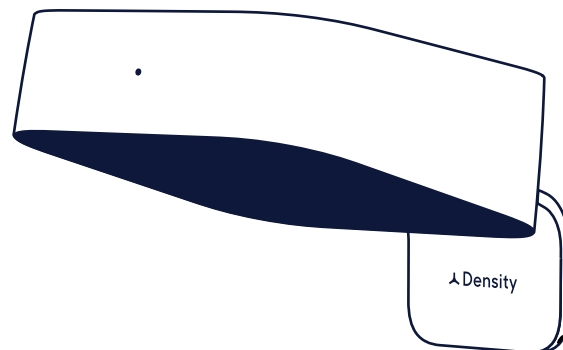


How Density Works



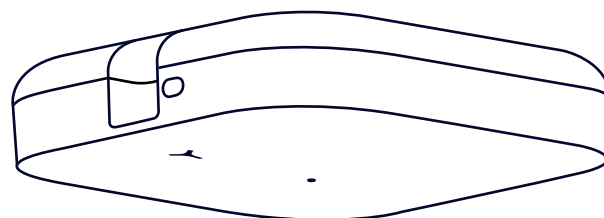
Entry sensor

Entry sensors count foot traffic through doorways by determining the flow of people across a pre-determined boundary. This allows customers to easily and inexpensively measure thousands of square feet with few sensors (e.g., entire floors or entire building occupancy and utilization).



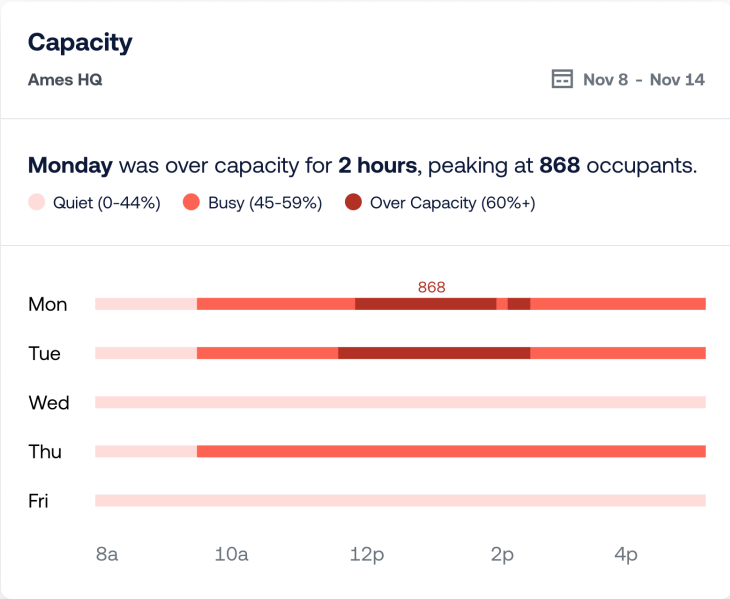
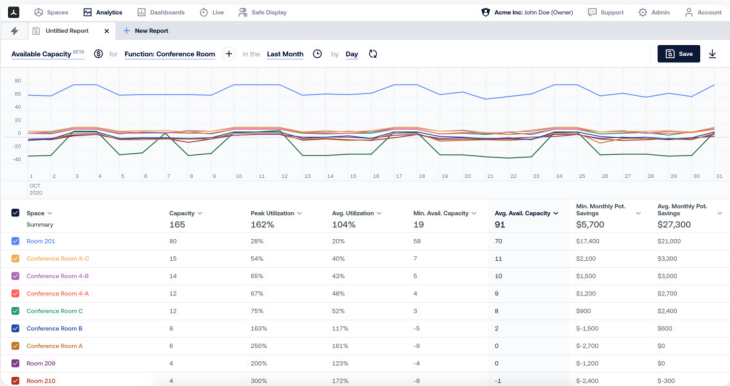
Open Area sensor

Open Area sensors detect presence and activity across an open space, utilizing advanced radar technology. This allows customers to measure utilization more granularly (e.g., workstation, seat or furniture occupancy and utilization).



Software

The Density software takes the combined data across all installed sensors and provides analytics at the space, floor, building, or portfolio level. Teams are able to access real-time and predictive data—as well as rich analytics and report—in the Density Dashboard, mobile applications, and via API. With Density Dashboard, teams can identify waste and get insights into the best and worst performing spaces—whether comparing whole buildings, departments, or even desk utilization from a single platform. In addition, customizable reports are used to provide the key intelligence needed to renovate, relocate, or repurpose asset types.

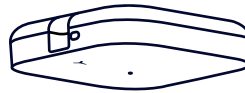


Key differentiators



Entry sensor

- Density Entry sensors use depth data, machine learning, and computer vision to anonymously count people. The technology uses depth-sensing technology that is completely anonymous by design. No personally identifiable information (PII) data is ever collected. The technology also complies with General Data Protection Regulation (GDPR) guidelines.
- Unlike cameras—which are less accurate because they rely on pixel-based methods for detecting motion and scene changes—Density's technology uses depth data. The Entry sensor uses infrared lasers to actively scan the area underneath the door where it's installed, capturing hundreds of thousands of depth readings every second. Machine learning algorithms process this data in real-time, precisely measuring human movement and ignoring non-human activity.
- The Entry sensor achieves industry-leading accuracy by learning from its environment over time. As its machine-learning algorithms process information, Density updates its depth models. Density is also the only provider that validates its platform's accuracy.
- The Entry sensor upgrades itself via automatic firmware updates, and continually learns from its environment to increase accuracy over time.



Open Area sensor

- Open Area is designed to support all the space in-between points of entry with extraordinary detail—without ever invading privacy. Using millimeter wave technology, Open Area is designed to measure performance of open seating, desks, and rooms.
- A single Open Area sensor can be installed up to 20 feet off the ground and intelligently understand more than 1,325 sq. ft of space. With twice the range and 4x the coverage of camera-based alternatives, Density Open Area is the most scalable, cost effective system on the market.
- Up to 60% reduction in deployment costs, more flexible coverage, and features a single platform for count and presence: historical occupant pathing and heatmaps, desk and room availability (or release), touchdowns and dwell time.



Key differentiators (Cont.)

Density can be deployed where cameras often are unwelcome—either for aesthetic reasons or because of concerns around occupant privacy. The device's industrial design and small form factor make for unobtrusive installations. And because the device never captures PII, people are unaffected by Density's presence—be they employees, tenants, visitors or customers.



Privacy

Density's GDPR-compliant sensors are anonymous by design. They can't capture any personally identifiable information (PII).



Scalability

Density is future-proofed with a PoE entry-based and open area solution on a single platform. No need to manage a fleet of batteries, hidden costs, and risk losing valuable data.



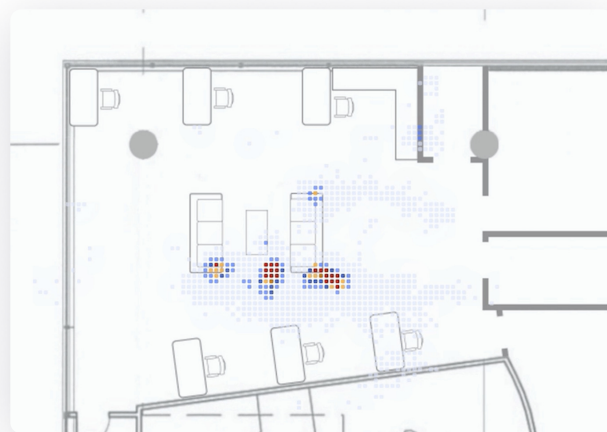
Cost Effectiveness

Density requires fewer sensors and has 3x the coverage of camera-based alternatives. Density will also match the price of any vendor relative to the cost quoted to cover same sq ft.



A.I. that learns

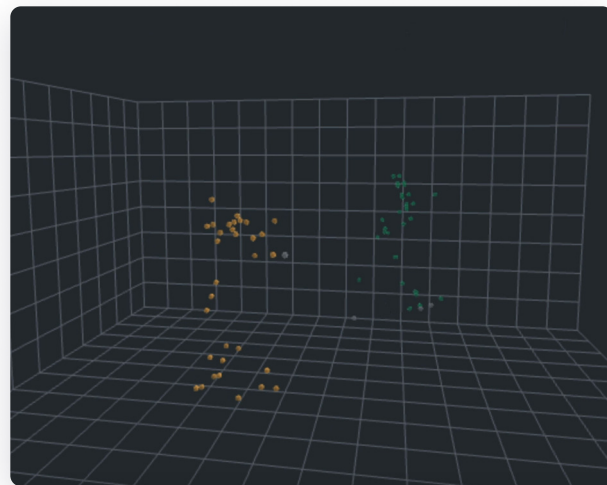
The Density sensors achieve unparalleled accuracy by learning from its environment over time. As its machine-learning algorithms process information, Density updates its depth models. Density is also the only provider that validates its platform's accuracy. As part of an initial device calibration period—and periodically thereafter—the sensors conduct an accuracy audit process. During an audit, the device sends a raw data sample to Density's cloud environment, where it's processed and graded for accuracy. The results are fed back into the sensor's algorithms and are shared the results with customers upon request.



Anonymous by design

Density believes that ensuring occupants' privacy is critical to capturing accurate and comprehensive data in all space types. Accordingly, Density sensors are not cameras, and use depth-sensing technology that has industry-leading accuracy and is completely anonymous at source. At no point does the Density device collect personally identifiable information (PII) from the environment where it's installed. As a result, Density can be deployed to measure utilization in conference rooms, work stations, lobbies—even restrooms—without infringing on occupant privacy.

Solution providers are as secure as the data that they produce. When considering any sensor technology, it's important to ask, "What do your sensors see?" Density's custom depth data is not only less invasive than a camera, it's more accurate.



Enterprise security

Density's technology is built with the industry-standard best practices for data protection and security. Every element of Density's service—the sensors, APIs, cloud-hosted infrastructure and software—is designed to ensure that data is captured, processed and transmitted in a secure manner. Regular over-the-air (OTA) firmware updates are included as part of Density's service, ensuring that every device has the latest capabilities and security enhancements. The platform automatically logs metrics on system health, performance metrics, hardware diagnosis, and user-access logs. Our platform is designed and maintained by experienced teams with a proven track record building secure technology systems for enterprise customers.

HTTPS/TLS 1.2 encryption (data in transit)
AES 256-bit encryption (data at rest)
Automatic firmware and security upgrades

Easy to manage at scale

Designed for enterprise deployments, the Density sensors integrate with standard corporate IT networking equipment. The devices are most commonly deployed on any Power over Ethernet Plus (PoE+) capable switch, though when paired with a PoE+ injector it can also be deployed over Wifi and 4G networks. Network configuration with Density is straightforward. The device makes only outbound connections via Port 443, and data is encrypted at all times: HTTPS/TLS 1.2 is used for data in transit, and AES 256-bit encryption standards are used for data at rest. In a steady state, the device uses approximately 35 kpbs, for an average of about 50MB per 24 hour period.

Secure outbound connections via Port 443
Plug-and-play provisioning
Standard PoE+ networking equipment



Technology landscape

Alternatives	Why Alternative Doesn't Work	Density
"Bed checks"	 Paying people to monitor space use is expensive	 Cost-effective; non-imposing design
Break-beam sensor	 High false positive rate — can't measure multiple entrances and exits	 Not fooled by groups and multiple entrances
Camera with facial recognition	 Invasive; less accurate than depth data	 Highly accurate and anonymous
Desk/seat sensor	 Not accurate for utilization of room, floors, buildings	 Scalable for every room, floor, and building



Smart building integrations

avigilon

Genetec

 **CONDECO**

Google Calendar

tesm

 **slack**

 **interlogix**

tyco

Robin

 **Outlook.com**



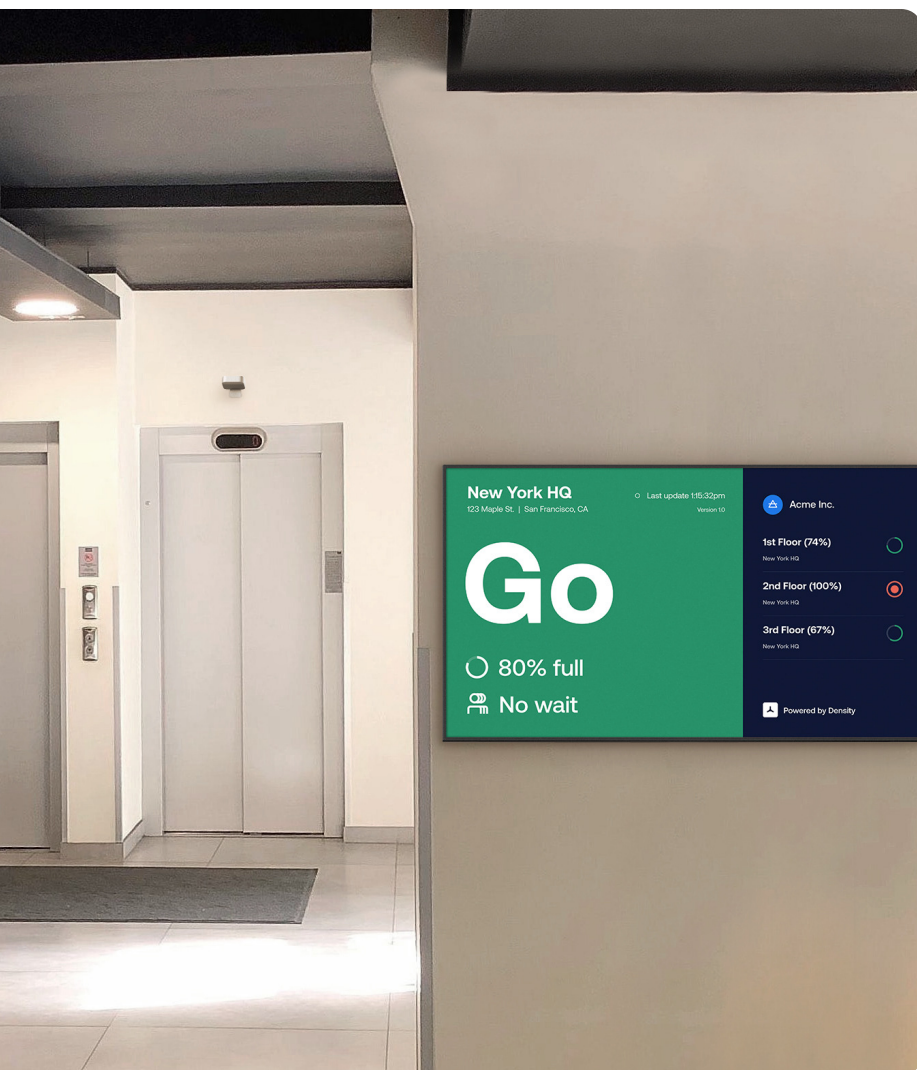
Use Cases



Health & Safety — *Ensure a safe return*

USE CASES

Safe is designed to help you re-open workplaces sooner and keep your teams, employees, and visitors safe without invading privacy. Safe has three key features — Display, Analytics, and Alerts.



Display

This makes safety visual by showing any room's occupancy limits and real-time occupancy. Ease employees' anxiety over a return to work by showing real-time occupancy and clear wait/go instructions — so everyone knows when it's safe to enter.



Analytics

Continuously measure and monitor occupancy and people-density per sq. ft. across locations. Identify chronic over-capacity problem locations.



Alerts

Automatically alert staff when occupancy reaches unsafe levels and unlock key use cases surrounding the safe operation of space in real-time such as usage-based cleaning.



Density helps enterprises maximize workplace performance for their people and the space they use. Use Density's analytics to collect comprehensive utilization data and understand how employees interact with the changing work environment. Workplace teams ensure that janitorial, culinary, workplace, and facility teams optimize amenities and services based on actual usage.



Be responsive

The future workplace is flexible. Adapt to significant changes in work approach and culture.



Adjust services

Adjust your workplace amenities to actual usage, and improve services from catering to cleaning.



Validate designs

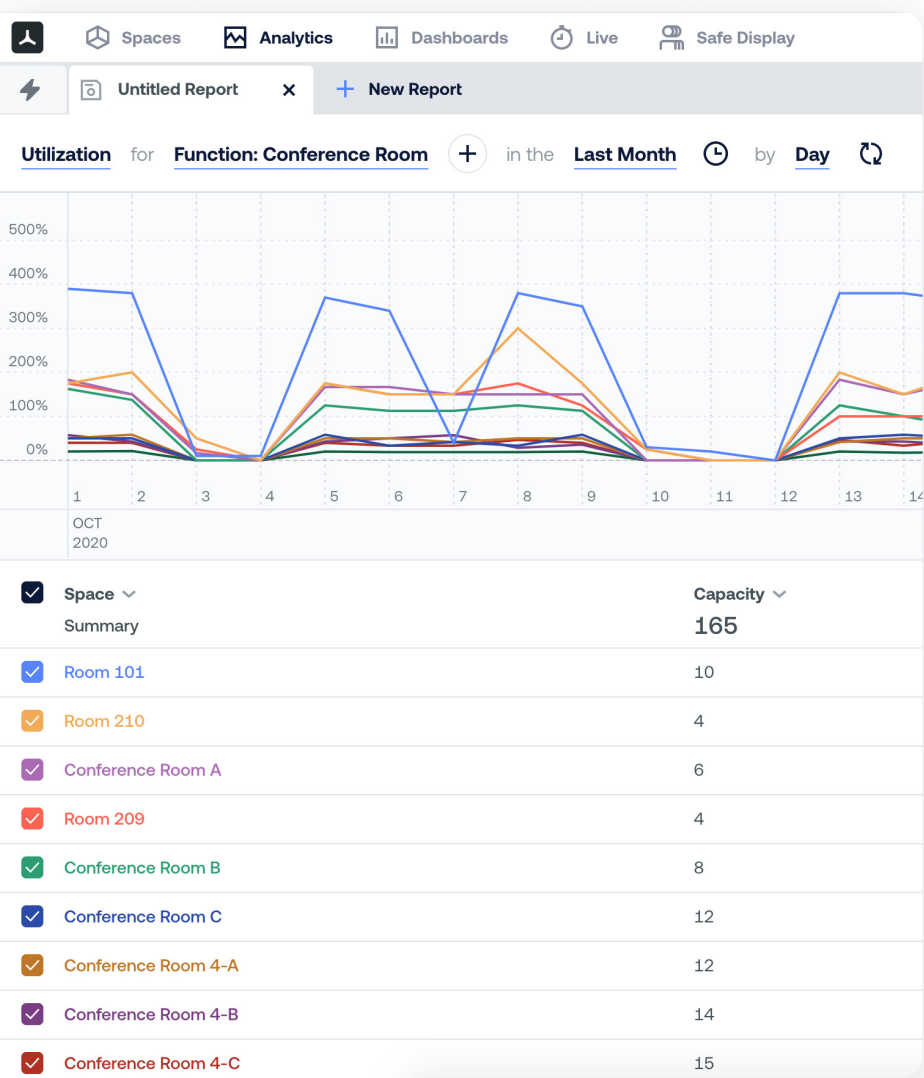
Understand the reasons your employees are coming in and test space types to match the workplace experience to new employee needs.



Space Planning & Optimization

USE CASES

Workplace and real estate teams use Density to gain portfolio-wide visibility into how square footage performs based on utilization benchmarks. Density is a single platform for count and presence: historical occupant pathing, heat maps, touchdowns and dwell time. Teams can access a central dashboard with utilization metrics or integrate the data into their Integrated Workplace Management System (IWMS) and workplace applications. Result: teams can eliminate guesswork and get the key intelligence needed to renovate, relocate, or repurpose asset types.



Reduce costs

Quantify underutilized space to consolidate square footage or avoid waste in future programming.



Validate needs

Set efficient growth standards that increase space efficiency of future leases.



Avoid costs

Avoid or delay leasing new sqft you don't need based on accurate utilization data.





Density is using the most advanced technology to optimize space decisions. Using proprietary sensors and software, the platform accurately measures true utilization throughout buildings. Enterprise teams use Density to eliminate underutilized real estate, deliver exceptional employee experiences, and ensure a safe return to the workplace. Unlike alternatives—which are either invasive or imprecise—Density is both anonymous by design and the industry’s most accurate system. Together, Density’s customers manage over 100 million square feet of corporate real estate. Density was founded in 2014, with offices in San Francisco, New York City, and Syracuse, New York.

Want to learn more?

Get a Demo

