

How a global tech company stopped unauthorized building access with Density

with Chris Bauer, Physical Security Systems Architect



Background

Dropbox is a leading global collaboration platform that's transforming the way people work together, from the smallest business to the largest enterprise. With over 4,000 employees and contractors across the world, the company's mission is to unleash the world's creative energy by designing a more enlightened way of working.

Category: Corporate Real Estate

Use case: Physical Security

Office locations: 12

Challenge

Chris Bauer is no stranger to the world of physical security. As a consultant, he spent the better part of two decades designing and deploying security systems aimed at reducing risk and preventing loss for a range of corporate clients.

As Dropbox's physical security systems architect, a role he took on in 2014, Bauer was tasked with building out security programs and systems to support Dropbox's rapid growth—the company was opening multiple regional and international offices each year. Bauer and his team swiftly put in place guards, security cameras, access controls and other industry-standard equipment.

Despite these best practices, the system wasn't foolproof—and Bauer knew it. The weakness? Tailgating. Anyone could gain access to Dropbox's facilities simply by following an employee who swiped their badge at an entrance. Throughout his career, Bauer had sought a solution to mitigate tailgating. But nothing he found was accurate enough, scalable enough, or cost-effective enough to work effectively. After a number of tailgating incidents—one of which resulting in the theft of seven laptops—Bauer tried once more to find a solution.

That's when Bauer met Density.



“Everybody knows that tailgating is a problem... it’s just been too hard of a problem to solve. And now with Density, it’s solved.”

– Chris Bauer, Physical Security Systems Architect at Dropbox

Solution

After seeing a demo of Density’s people-counting technology, Bauer was instantly optimistic that it would greatly reduce—if not eliminate—his tailgating problem. As part of a proof of concept, Bauer installed Density’s Depth Processing Units (DPUs) at all primary entrances at Dropbox’s San Francisco HQ.

Integrated into the building access control system via API, Density’s solution began anonymously tracking every person who

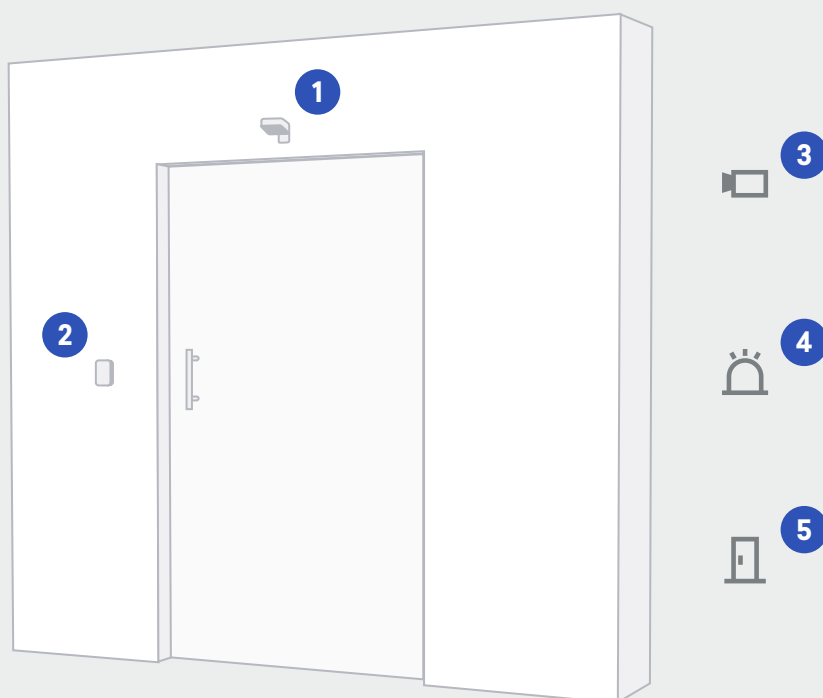
entered the building. With on-device machine learning and processing power, Density analyzed data in real time, automatically identifying discrepancies between the number of person-entrances and the number of door badges.

When an exception was identified, Density’s solution sounded a soft alarm and sent a notification to Bauer’s global security team, who could then pull up security feed to review the incident.



How Bauer's team deploys Density:

1. Density's DPU device is mounted above the entrance and integrated with the building's access control
2. When the number of people entering exceeds the number of badge swipes, Density instantly sends an exception notification to the access control.
3. The access control triggers the video camera closest to the door to time-stamp the incident, which is then searchable and immediately available to Global Security Operations Center (GSOC) staff.
4. A soft "chirp" alarm sounds at the door, raising awareness among employees that they've tailgated. Security guards can be dispatched in real-time to check on door, if required.
5. In the future, a secondary door will lock automatically during an incident, so if someone tailgates on the main door, they can't enter the work area.



“Density is the first device that is actually intelligent enough to count for all the people that are authorized and alarm when people are not authorized.”

– Chris Bauer

Results

Results to date have been phenomenal. After analyzing the preliminary data, Bauer and his team determined that Dropbox HQ on average was experiencing 20 tailgating events per day. With Density in place, the team could now review and respond to any incidents that merited a security response.

Unlike other solutions that Chris and his team had tried—such as break-beam sen-

sors and cameras—Density’s solution isn’t fooled when employees roll bikes or carts into the building, or enter in a big group. These other solutions not only failed to accurately identify tailgating events, they also had an unacceptably high false positive rate. Finally, unlike turnstiles, Density’s solution is significantly more cost effective and helps Dropbox maintain its welcoming, open-office design.



“ We’ve pulled in carts, we’ve tried to sneak people in right next to a person... a shorter person behind a taller person. We’ve tested it for hours at the door and we could never get it to fail. ”

– Chris Bauer

What’s Next

Bauer and his team are rolling out Density to cover all doors at headquarters, after which they will begin setting a plan to expand to other Dropbox locations globally.



About Density

Density is the new occupancy analytics platform. Using proprietary sensors and software, the platform accurately measures foot traffic throughout buildings. Enterprise teams use density to eliminate underutilized real estate, deliver exceptional workplace experiences, and strengthen physical security. 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 at density.io

