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## What's magnetic, digital, and green all over?

Three guiding principles shaping the Future of Workplace at Cisco

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***Return to the office mandates! Workforce reduction initiatives!***

***The collapse of the commercial real estate market!***

You get the idea—you've seen the headlines. Every day it seems that there is a barrage of new articles directly related to—or adjacent to—the evolving role of the workplace.

The reality is that most organizations are just trying to figure out exactly what the workplace should be in today's new distributed work reality. From understanding what types of space should be provided to determining exactly how much space is needed today, next month and a year out, there are plenty of reasons why companies have been slow to react to broader strategic portfolio rebalancing initiatives.

Couple that with internal and external pressures for investment in sustainability initiatives, and it could be easy to understand why corporate real estate leaders may be struggling to take action.

# The underlying impact of distributed work.

While it may seem like a more recent workplace strategy, the concept is nothing new. Cisco, for example, has been implementing and enabling a distributed workforce for over 15 years. Today, many organizations have settled into following a similar approach, rebalancing their portfolios in response to distributed work, while simultaneously modernizing select locations to assess what the “right” future of space needs to be to best support their workers, culture, and business objectives.

Prior to the pandemic, Cisco began rationalizing its own portfolio—23M sq ft at its height—with a compression strategy that reduced their footprint down to approximately 18M sq ft by 2020.

Since then, Cisco has formally adopted a “divest to invest strategy”, which is focused on further reducing its real estate footprint, investing that savings into modernizing spaces within the core portfolio.

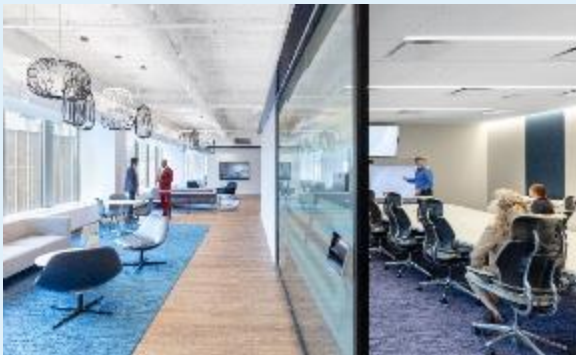
From a business case perspective, Cisco’s approach has paid off, resulting in significant reductions in Capex investment and Opex spend.

*Cisco reported a savings of \$25/sf—an 8% savings—in materials and labor during construction and has realized up to 36% reduction annually in energy consumption.<sup>1</sup>*

In addition, their decision to design with low voltage upfront resulted in an accelerated build out and speed to value.

## A closer look at Cisco’s modernization strategy

### Penn1



Sustainability, collaborative tech & intuitive spaces

The first modernization project under this new strategy was the PENN1 office in NYC, which compressed seven separate office sites down to one office while increasing the number of individual and collaborative workspaces. It allowed for a seamless user experience to ensure space was a “magnet not a mandate”, while accelerating several enterprise goals including a net zero journey.

**Location:** New York City, New York

**Headcount:** ~1700, including employees living in CT, NY, and NJ.

**Results:** The retrofit of Cisco’s office space at PENN1 in NYC, reopened in 2022, combines sustainability building principles, Cisco collaboration technology, and hybrid work principles to create an intuitive and inviting workspace.

### Atlanta CODA



Reduced number of offices, increased headcount capacity

The second modernization project was the Atlanta office, where eight office sites were compressed down to three while increasing total headcount capacity. At the heart of this project was the selection of the CODA building right across from Georgia Tech.

**Location:** Atlanta, Georgia

**Headcount:** ~1100 Cisco employees with capacity considerations for an additional 700 future engineering and operations roles.

**Results:** In April of 2023, Cisco opened a new LEED & WELL Platinum designed office (certification pending) where connected components and data sets deliver constant insights. The space also was designed to allow for collaboration with the Georgia Tech Engineering Department through a networking lab and energy center of excellence.

# Three guiding principles for the future of work

As Cisco contemplated how to realize their objective for setting a new standard for the future of workplace within their own portfolio, there were three guiding principles that were woven throughout their workplace strategy, design, and execution of both PENN1 and Atlanta:

1 The workplace that is **Human Centric**—designed around the end user experience from prearrival through departure

2 A workplace that is **Sustainable**—thoughtfully engineered, adaptive to real world conditions and exceedingly efficient to operate

3 A workplace that is **Digitally Enabled**—leveraging a vast collection of Cisco and partner technologies providing critical insights to building health and occupant comfort

Leveraging Cisco's PENN1 and Atlanta CODA offices as a backdrop, we will explore how the Human Centric, Sustainable, and Digital Enabled guiding principles were realized at each of these locations, and how they are providing the framework for future Cisco workplace initiatives.

# Guiding principle #1

## Create a Human Centric workplace

### Key Questions

- How has technology changed the way we think about our organization's workplace strategy, both in and outside the office?
- How is our hybrid work strategy influencing the purpose, design, and use of our physical workplace?
- With an ecosystem of physical and digital spaces to do work, how can we provide a frictionless experience for our workforce, especially when the way we currently use offices is riddled with pain points?





Like many organizations today, the competition for talent is something that is top of mind for Cisco. This is evident by the reporting change of Cisco's Real Estate Dept into their Chief People, Policy and Purpose Officer, during the pandemic. In addition to providing workplace flexibility, Cisco views space as a way to attract and retain the best talent while emphasizing culture, brand, and development.

Cisco's policy today for return-to-office is a remote-first approach that leaves the decision up to the front-line manager and recognizes opportunities for in-office collaboration. They recognize that what will drive employees to the office is a seamless experience with technology at the forefront. That is why Cisco has deployed extensive digital tools and made video conferencing pervasive throughout the space.

***Mainly, because their research shows that while an employee is in the office there is a 98% chance that their meetings will include at least one virtual attendee.***



# Cisco Human Centric Case Study

Human Centric Workplace Themes	Enabling Technologies	Results
Flexibility in workplace design	<p>The pandemic demonstrated that designing spaces that were fixed and single-use in nature, created challenges for changing conditions. That is why today Cisco has built flexibility into their infrastructure and physical settings. Power over ethernet (PoE), helps facilitate this in particular; since power changes are no longer needed, this opens the door to allow spaces to be easily rearranged.</p> <p><b>PoE height adjustable desks:</b> To realize both wellbeing and agility goals, Cisco worked with a furniture manufacturer to develop PoE height adjustable desks. Not only did this provide an opportunity to avoid extensive core drilling and infrastructure normally found in line voltage (which resulted in a \$360k cost avoidance); but it allows for improved accessibility and more cost effective add-moves-changes.</p>	 <p>PENN1 NYC saw a <b>160%</b> increase in post-pandemic unique badge IDs per month driven in part by the reimagined office experience.<sup>2</sup></p>
The intersection of technology and physical space	<p>In today's hybrid world, understanding and predicting workplace demand has become difficult. This is why Cisco realized the need to achieve dynamic operations of its building sub-systems to automatically respond to occupancy. By stitching building sub-systems onto a converged OT network, Cisco can use occupancy as a way to regulate and control lighting, shades, HVAC and other user experiences within the space. Features such as managing ambient noise, framing the speaker in the conference room, and keeping track of how many people are in attendance, allow for enhanced meeting equality across remote and in-person participants.</p> <p><b>Cisco Desk Series:</b> In hot desk mode, upon scanning a QR code the user interface is refreshed to display the individual's personal preferences and calendars.</p>	 <p>Avg cost to move 2-line voltage desks is <b>\$5k and it takes 1.5 days</b> compared to moving PoE enabled desks with investment of <b>\$1.5k and 4 hours.</b></p>
Technology to support employees	<p>Cisco utilizes both a common video conference platform and hardware for both working at home and in the office. Therefore, the transition is intuitive and seamless for the employee.</p> <p><b>Webex Assistant:</b> Control every aspect of your meeting experience using your voice and create custom controls like changing the room temperature or lowering the blinds. That said, you likely do not need to control anything — lighting, blinds, and air filtration systems are automated based on the time of day, natural daylight patterns, and number of people present in the space.</p> <p><b>Cisco Smart Workspaces:</b> Provides a real time user experience for employees as they enter the office and can reserve spaces, while understanding environmental conditions (as part of the WELL standard)</p>	 <p>Before the recent modernization project, Cisco's Penn 1 NYC office saw mostly sales personas routinely badging in, whereas <b>today, there is a strong split of sales, engineering and operations personas in that office.</b></p>  <p>HVAC and lighting automation, and the frictionless integration of employee workstations, encourage productivity by <b>allowing workers to focus on their work, and not the environment.</b></p>

## Guiding principle #2

### Create a workplace that is Sustainable

#### Key Questions

- What aspects of sustainability are top of mind for our employees?
- How can technology help our organization achieve our sustainability priorities?
- Will these decisions and actions improve the lives and experiences of our customers employees, both currently and in the future?



#### Today, sustainability is more of a priority for corporations than ever before.

This is evidenced by the fact that leading businesses are incorporating ESG metrics into their organizations. 94% of CEOs report that diversity, equity, and inclusion are strategic priorities for their roles.<sup>3</sup>

#### The financial implications of sustainability are also evident.

ESG focused organizations had, on average, 4x higher EBITDA valuations<sup>4</sup> and inclusive companies were more likely to hit their financial goals by up to 120%<sup>5</sup>.





From an energy cost and emissions perspective, the as-built environment is said to contribute 40% of the world's GHGs, with other sources pointing to the fact that buildings consume 40—70% of a city's energy costs.<sup>6</sup>

As organizations accelerate their net zero journey, decarbonizing the as-built environment is a key goal for Real Estate, Architecture & Design firms, and General Contractors.

*The demand is also clearly there as **74% of CRE leaders say they would pay a premium for leasing a green building.***<sup>7</sup>

Given that 80% of buildings that are in use today in mature cities will still be in use by 2050<sup>8</sup>, a key part of Cisco's real estate strategy is to accelerate their net zero journey and to utilize key design considerations and outcomes such as LEED. In fact, both the New York and Atlanta Cisco offices have been designed with LEED in mind. Organizations such as Cisco also know that ESG plays a key role when it comes to attracting and retaining the next generation of talent. Forty percent of Millennials have accepted one job offer over another because that company was perceived to be more environmentally sustainable<sup>9</sup>, and by 2029 Millennials and Gen Z will make up 72% of the world's workforce<sup>10</sup>, so this information is particularly important to consider when making sustainability decisions.

# Cisco Sustainable Workplace Case Study

Sustainable Workplace Themes	Enabling Technologies	Results
Utilizing LEED design principles	Many companies today utilize LEED design principles as part of their projects. From a Cisco perspective this includes using technology to potentially realize greater point contribution, such as the requirement around Optimize Energy Performance.	 <p>At PENN1, a Cisco office retrofit in New York City, Cisco eliminated the need for <b>3,000 lbs. of steel and 1,000 lbs. of copper wiring material</b> by deploying POE infrastructure.</p>
Deploying PoE infrastructure	As part of Cisco's effort to reduce embodied carbon in the construction process, they deployed PoE infrastructure. This also allowed them to utilize DC power to lower energy costs and provided the ability to automate the building systems based on occupancy and utilization.	
Digital collection of data for sustainability insights reporting and action	<b>Cisco DNA Center:</b> Administrative view to see all connected devices and energy consumption by asset class.	 <p>In Atlanta CODA, <b>20% of the furniture was reused</b> from another Cisco site.</p>
Providing workplace occupants with real-time insights on air and environmental health conditions	<b>Air Quality:</b> Cisco and third-party sensors measuring air quality (CO2, temperature, humidity, VOC).	
Maximizing employee comfort and minimizing energy usage	<p><b>Shading:</b> Mecho shading sensors to help maximize daylight and manage visual comfort &amp; heat load.</p> <p><b>Lighting:</b> Molex and Igor lighting provide adjustable brightness and color temperature; lights are only on when people are present.</p> <p><b>HVAC:</b> System designs for upcoming workplace projects are becoming more interconnected. This would involve the HVAC turning on 10 minutes before a booked meeting, and if no one shows up and the room is released back into the booking system, the HVAC would reduce until the room is rebooked, or someone enters the room.</p>	 <p><b>36% energy savings</b> resulted in reduced energy expenses.</p>
Leveraging direct current and low voltage power sources throughout the workplace	<b>PoE:</b> Lights, window shades, thermostats, and sensors are powered over the network with low-voltage connections, significantly reducing power consumption.	 <p>Achieved <b>well building standard certification.</b></p>

## Guiding principle #3

### Create a workplace that is Digitally Enabled

#### Key Questions

- What benefits can we achieve from viewing workplace technology as an ecosystem, rather than separate discrete systems?
- How can we leverage technology to better target investments?
- What data would help us make more informed decisions about how to utilize our office space?

Corporate Real Estate (CRE) leaders are facing pressure from CXO's to identify savings throughout their portfolio based on the realities of today's workplace occupancy and utilization trends. Many CRE leaders are likely struggling to make informed decisions due to the lack of access to data required. Historically, organizations have measured space effectiveness at a per person/sq ft calculation. In addition, actual utilization was measured through facilities or CRE personnel doing physical counts (bed-checks) throughout the day. The pandemic highlighted the need for real-time understanding of space utilization.

As a result, many CRE teams are investing in workplace technologies to help them aggregate data in real time to provide new insights into the way their workplace is being used, from the types of spaces people engage with (individual workstations, team rooms, open seating areas, etc.) to how different business teams are co-locating within a floor plate (marketing teams sitting adjacent to engineering professionals). While in the past CRE leaders have managed technologies in the silo of the business functions that they served (i.e., facilities management vs. lease management), recently they are increasingly recognizing the value of a comprehensive real estate tech strategy that includes not only workplace systems, but also smart buildings, broader enterprise technology and data sets.

With an increasing focus on deploying generative AI applications across the enterprise, comprehensive data sets relative to the CRE function will be essential in enabling AI solutions relative to workplace.

***Cisco has been ahead of the curve*** by measuring space utilization through various proxies such as connectivity on their wireless access points (APs).

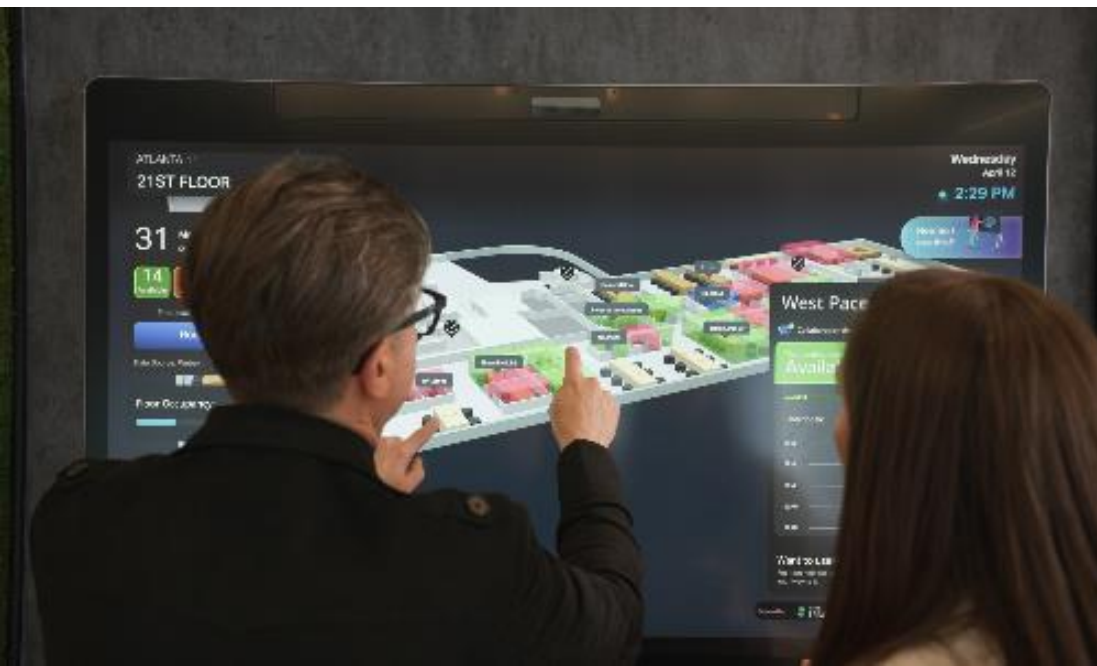




# PENN1 & Atlanta CODA

## Cisco Digitally Enabled Workplace Case Study

Digitally Enabled Workplace Themes	Enabling Technologies	Results
Collecting data to understand space behavior and utilization	<p>Cisco is using four (4) data points to measure this. The journey begins through the use of security cameras with built in visual trip wires, wireless access points, their POE lighting platform, and cameras within their video conference units.</p> <p><b>Cisco Wi-Fi access points:</b> Used to people count and track how people move around a building as well as supplement temperature, humidity and air quality using inbuilt sensors.</p> <p><b>Cisco cameras and sensors:</b> Occupancy and environmental data including temperature, humidity, and air quality.</p>	<p>An incredible amount of data* is tracked across the workplace, providing deep insights to overall workplace health and operations.</p> <hr/> <p><b>PENN1 NYC</b> <b>5k</b> data points per second</p> <hr/> <p><b>Atlanta CODA</b> <b>7k</b> data points per second</p>
Compiling data from discrete systems into user friendly displays	<p><b>Cisco spaces:</b> Digital display easily allows employees to understand current occupancy of the office, see what spaces are available and reserve them, and view current air quality and temperature.</p>	<p>Cisco Video Devices: <b>350</b></p> <hr/> <p>Cisco Networking: <b>2874</b></p>
Integrating devices onto one consolidated network	<p><b>Cisco catalyst:</b> Network switch providing high speed data and up to 90w power in a single connection.</p>	<p>Sensors: <b>3,000+</b></p> <hr/> <p>Cisco Cameras: <b>25+</b></p> <hr/> <p>At PENN1, the new hybrid work design allowed Cisco to better optimize use of space, so post retrofit the office occupied just the 9th floor, <b>which reduced the office square footage by 25%.</b></p>



\*Data is anonymized and viewed at the aggregate level.

# Call to action

Today, Cisco's PENN1 NYC and Atlanta CODA offices act as living laboratories for the company to analyze workplace behaviors, evaluate their portfolio of evolving smart building technologies and identify the next major opportunities for workplace transformation for future office renovations and expansions. As with these two locations, Human Centric, Sustainable and Digitally Enabled principles continue to guide Cisco's investment in new projects.

**As proven out, the business case is there, and the benefits are real:**



## Attract & Retain Talent

Cisco's attrition rate of 11% is half of the industry's average<sup>11</sup>, which is influenced by both the distributed workforce strategy and flexible workplace strategy. In addition, already 105 out of the 700 planned roles for the Atlanta office have been filled with new hires from Georgia Tech and surrounding Historically Black Colleges & Universities



## Financial Benefits

Compared to traditional build out costs, building with Cisco Technology has saved the organization a minimum of 8%; in conjunction with the annual utility savings, this presents a strong business case for other organization to follow a similar strategy

Cisco is not alone in prioritizing workplace investment, especially when it comes to technology. The number of smart buildings worldwide is projected to climb from **45 million** this year to **115 million** in 2026, an increase of more than **150%**, as demand grows for secure, energy-efficient developments.<sup>13</sup> The same systems that aggregate data for real estate operations are also often integrated with digital workplace and energy management solutions, providing full visibility into workplace impact—on people, on place and on the environment. Organizations are beginning to understand that without reliable data, it's virtually impossible to make informed strategic decisions on short term and long-term real estate portfolio requirements.

# Conclusion

A technology-first workplace strategy provides a better way to design and construct—reducing Capex and Opex while providing a better user experience and business outcomes. However, it requires real estate, facilities and technology teams working in lockstep as site programming and planning decisions are made early in the design process.

**So where to start?** It can be overwhelming no doubt. Unless you're a startup looking to sign your first lease, the reality is that your organization's real estate portfolio has a variety of physical, digital, people and business drivers informing how you've invested in workplace. A smart building journey can take many different forms; as simple as a single digital transformation initiative or as complex as a ground-up headquarters campus. For Cisco, it started with a vision of what the future of workplace could be—and now there's a validated business case to back it up. What's your vision? What's your business case? Will your organization's future of work be the next case study?

## Source citations:

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4. Source: [Milano, Tomlinson, Whately & Yigit The Return on Purpose](#),
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