

Light Up the Workplace of the Future



Value Statement and Overview

Today's businesses seek competitive advantage across operations. The physical workspace offers extensive improvement potential to both building owners and tenants. Traditional office environments are extremely inefficient: less than 50 percent of average office space is used, with current desk costs averaging \$10,000 per year. In daily business operations, 33 percent of meetings are unplanned, leaving workers challenged to find space quickly. As much as 20 percent of booked meeting rooms are not used. Finding a better way to manage workspaces can benefit both companies and workers.

What if your building infrastructure provided competitive advantage? Imagine a smart infrastructure that reduced energy costs by 50 to 80 percent. Imagine applying real-time data to maximize space usage and deliver year-over-year savings on rent and maintenance contracts. Imagine increased employee productivity and retention, based on an improved environment.

Smart buildings can be instrumental in workplace transformation, providing more flexibility, lowering operational costs, enhancing worker satisfaction, and creating new value for businesses. The lighting system provides a natural entry point for digital business transformation. Connected lighting systems use advanced technology to gather anonymous real-time data that can help businesses save money, make better use of their space, and improve the work environment.

Benefits



Create an attractive workplace that promotes well-being

- Customize and personalize workspace using a mobile app
- Increase employee attraction and retention by allowing workplace parameters to be set to individual preferences
- Experience an easy-to-navigate and flexible workspace supported by seamless, location-based, real-time booking for meeting rooms and individual workspaces
- Leverage key attributes such as flexible IT infrastructure, cost-saving technology, and workspace comfort to increase demand for office space



Increase operational efficiency

- Optimize building usage based on real-time, granular data provided by the connected lighting sensors and software
- Decrease lighting energy costs up to 80 percent
- Improve system efficiencies, saving up to \$8/100 ft² in condition-based maintenance and cleaning contracts
- Reduce renovation and upgrade costs
- Lower installation and maintenance costs



Be assured by industry-proven expertise

- Install a jointly tested and validated design
- Harness unrivaled power capabilities with Cisco Universal Power over Ethernet (Cisco UPoE®) delivering 60w, capable of powering a wide range of devices
- Benefit from Interact Office connected lighting system, built over the highest quality and best Philips LED luminaires
- Achieve guaranteed network performance with best-in-class cabling and connectivity
- Receive best in class global support
- Maximize connected infrastructure capabilities
- Streamline building development with an inclusive solution that removes the need for multiple vendors

Connected Lighting Target Installation

The Interact Office connected lighting system and software, combined with Cisco switches and Panduit structured cabling solution is intended for new corporate office buildings or as part of a deep renovation of an existing structure, because the cabling requirements are different from traditional wired lighting. Low voltage power, transmitted over Ethernet (PoE), runs the LED devices and transmits the collected data back to a central software dashboard. Each LED device can collect data about itself, its usage, and its immediate surroundings.

Lighting is an ideal framework to support a digital canopy of sensors in the workplace. The data is collected and consolidated, and various types of usage reports can be created. The Interact Office system coupled with Cisco switches and Panduit structured cabling not only illuminates, but creates new value in energy savings, building efficiency, space optimization, employee productivity, and well-being in modern offices.

Smart Lighting in Action

Figure 1 depicts the components of the Interact Office system architecture with Cisco switch technology solution. Each Philips LED luminaire receives a unique IP address for two-way communication with the building's IT network. An Ethernet gateway connects the luminaires with wall-mounted control panels. Onboard sensors in the luminaires gather and transmit data relevant to the illuminated space, such as occupancy, activity, temperature, and light levels.

Interact Office centrally hosted software dashboard captures all data from the luminaires and interfaces with the building management system. Data can be analyzed in combination with other non-lighting operational data from the site. The information collected can help both tenants and building owners improve how space is allocated and used.

The Interact Office connected lighting system and software, combined with Cisco switches and Panduit structured cabling delivers unrivaled flexibility and cost-saving potential, creating an intelligent infrastructure that unifies operations while lowering CapEx and OpEx. Workers can personalize and control their space. Real-time data links with other systems, such as heating and cooling, to drive down energy costs. Our solution brings greater synergies between building owners and tenants to enhance operations.

Offices of the Future Leverage Smart Infrastructure

Changing workforce dynamics are creating new expectations for facilities to be flexible and adaptive. By 2040, according to a report published by CBRE,¹ workers will become workplace consumers or “digerati,” who are “totally in control of where, how and when they work.” Companies seek to create environments that are centered on the employees, to attract and retain top talent.

Technology innovation brings intelligent devices into a building's infrastructure. This creates more comfortable work environments, drives down costs, and increases tenant satisfaction. Connecting devices such as lighting, HVAC, and security within one unified, secure platform can streamline vendor management, reduce cost, and lead to more efficient operations.

Connected LED lighting provides an entry point for Internet of Things (IoT) applications that integrate multiple aspects of the workplace. Offices become more agile, as real-time usage data can:

- Help workers find available meeting rooms or desks
- Inform HVAC systems to adjust temperatures in unused spaces
- Reduce cleaning cycles in empty rooms
- Provide input for longer-term space planning

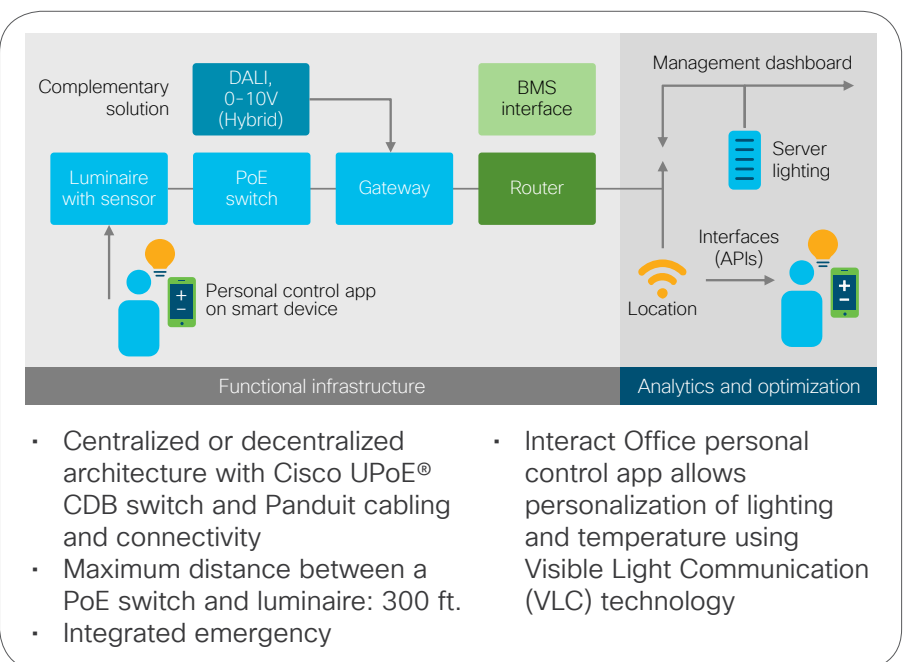


Figure 1 The Interact Office connected lighting system combined with Cisco switches offer a secure, tested and validated platform that unifies building operations and provides valuable usage data.

Detailed Components

Cisco and Signify have built an end-to-end solution with Interact Office wired, which is documented as a validated design (CVD/TVD), with the following components. The solution topology can support centralized, decentralized, and hybrid deployment.

Hardware	Software	Services
<p>Cisco</p> <ul style="list-style-type: none"> Access switches Aggregation and core Cisco UCS® 	<ul style="list-style-type: none"> Firewalls Applications/ APIs 	<ul style="list-style-type: none"> High- and low-level network design Installation and integration Day 2 support
<p>Signify</p> <ul style="list-style-type: none"> Interact Office Gateway Philips luminaires Philips sensors 	<ul style="list-style-type: none"> Interact Office management platform Applications/ APIs 	<ul style="list-style-type: none"> Installation SaaS elements Lighting design
<p>Panduit</p> <ul style="list-style-type: none"> Copper Cable Patch Cable Pathways Cable Management In-Ceiling Enclosures Grounding and Bonding 		



The Power of Connectivity

Cisco, Signify and Panduit are bringing together LED-based connected lighting systems and IT networks. With this solution, Cisco® technology connected with Panduit infrastructure enables Interact Office to become part of a secure network architecture.

Multiple installation options provide flexibility to building developers. Figure 2 depicts how the system's configuration can be centralized, decentralized, or a hybrid deployment, tuned to meet each facility's specific needs.

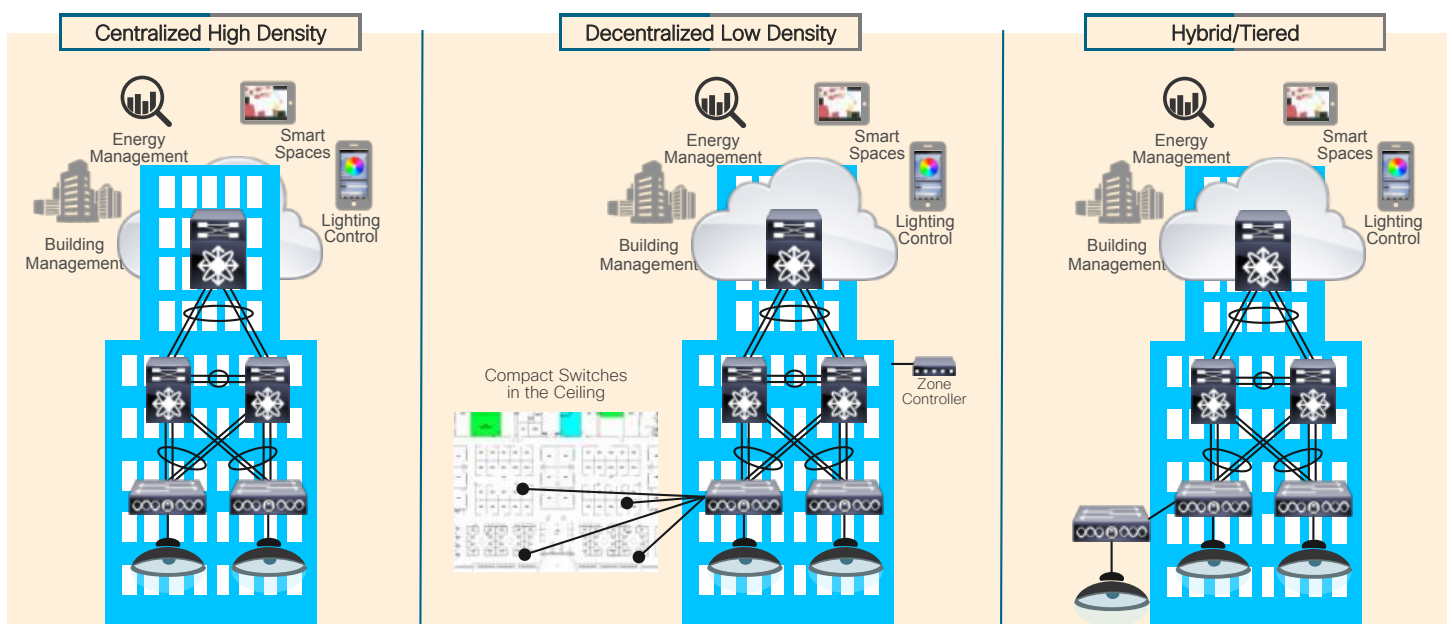


Figure 2 Multiple configurations provide installation options for building developers.



By 2040, workers will become workplace consumers who are “totally in control of where, how and when they work.”

(Smart Workplace 2040: The Rise of the Workplace Consumer. CBRE)

Smart buildings can be instrumental in workplace transformation, providing more flexibility, lowering operational costs, enhancing worker satisfaction, and creating new value for businesses.

Realize up to 80 percent energy savings from LED lighting, integrated sensors, and HVAC integration.

Use Cases

Industry	Description
Construction	WaterPark Place III earned Toronto’s first enterprise LEED platinum certification, with a smart building that lowered CapEx 10 percent, lowered OpEx 50 percent, and converged five networks into one (HVAC, metering, lighting, CCTV, access).
Technology	Intel India experienced high employee satisfaction and retention after installing Connected Lighting in 2016; innovative campus became the blueprint for facilities globally. Intel Technologies India reduced electricity usage 80 percent.
Utility	Alliander reduced costs more than 70 percent.
Consulting	Deloitte experienced a 4x increase in total applicants after integrating Connected Lighting in 2015. Deloitte Amsterdam projected \$4.2M savings per year.

Financing to Help You Achieve Your Objectives

Cisco Capital can help you acquire the technology you need to achieve your objectives and stay competitive. We can help you reduce CapEx. Accelerate your growth. Optimize your investment dollars and ROI. Cisco Capital financing gives you flexibility in acquiring hardware, software, services, and complementary third-party equipment. And there’s just one predictable payment. Cisco Capital is available in more than 100 countries. [Learn more.](#)

Financial and budget constraints no longer have to delay lighting improvement projects. Signify Capital offers low interest financing for energy-efficient lighting solutions—for both commercial and projects for the public sector. [Learn more.](#)

The Cisco Advantage

An alliance between three worldwide industry leaders has set the stage for driving the smart workplace forward, creating new value with energy savings, space efficiency, and workforce/user experience.

Cisco, the world leader in networking and security, offers a comprehensive set of IT services for connected solutions. Signify, with its iconic LED lighting brand Philips, and its IoT software Interact brand, is the number one lighting company in the world, able to service companies across the globe. Panduit is a global leader in cabling and connectivity, providing physical infrastructure for a connected world.

Maximize your connected infrastructure capabilities and streamline building development with the Interact Office connected lighting system combined with Cisco switches and Panduit structured cabling solution.

Begin Designing Today for Smart Building Success Tomorrow.

Lighting systems are necessary for any building space. The Interact Office connected lighting system and software, combined with Cisco switches and Panduit structured cabling solution brings significant cost-saving potential and a natural entry point for digital business transformation. This secure, end-to-end solution can help attract top companies and talent, minimize OpEx and CapEx, improve employee productivity and retention, and optimize building operations.

Take the next step toward realizing the full potential of smart buildings.

Visit [Interact Office](#), [Cisco Digital Building](#) or [Panduit Digital Building](#) to start this transformational journey.