

Réinventer les Espaces de Travail

Track 2 : Future-Proofed Workplaces

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Mai 2025

80% of Employers are mandating Full or Partial return to office

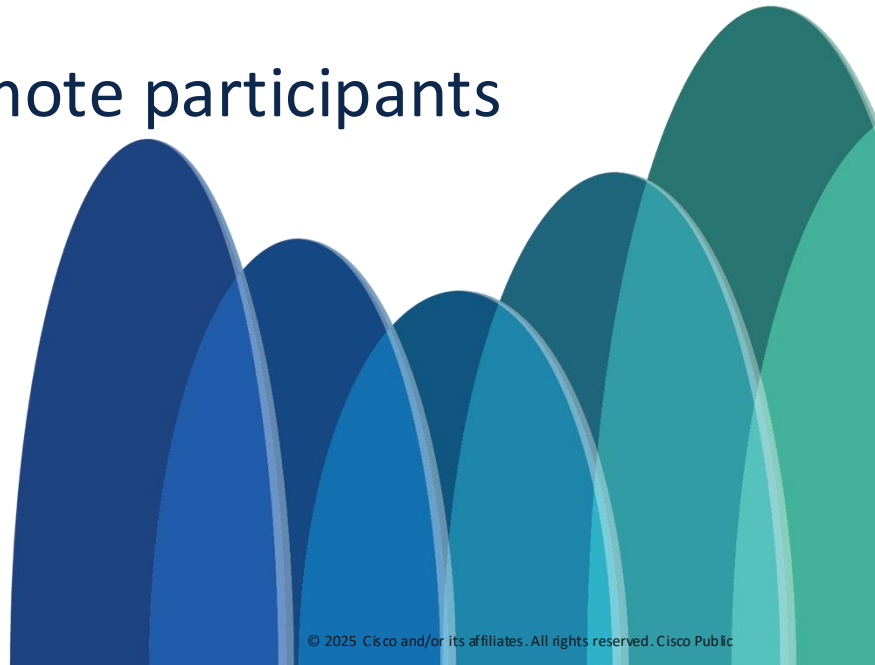
Webex Global Hybrid Work Study 2024

98% of meetings will include remote participants

Global Workforce Survey

Sustainability is a top-three priority for CxOs

Deloitte's CxO Sustainability Report



The Future-Proofed Workplace

Agile to support the evolving needs of modern business.

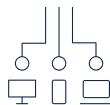
Resilient to adapt to an unknown future.



Amazing experiences
become the norm



Offices become
magnets



Technology
becomes integrated and
extensible



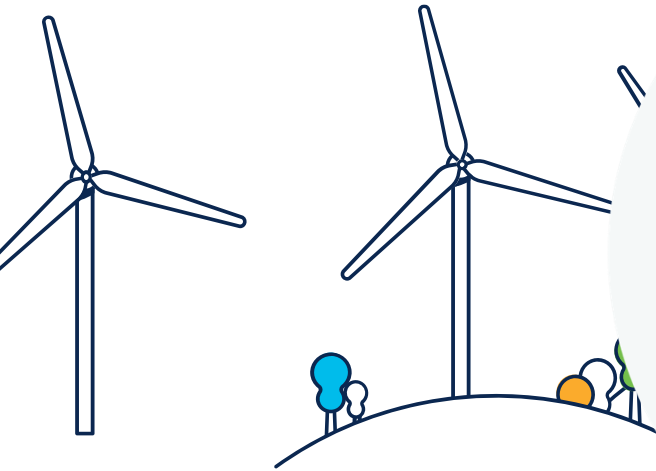
Collaboration happens
everywhere



Security is infused
from the start

The Future-Proofed Workspace Journey

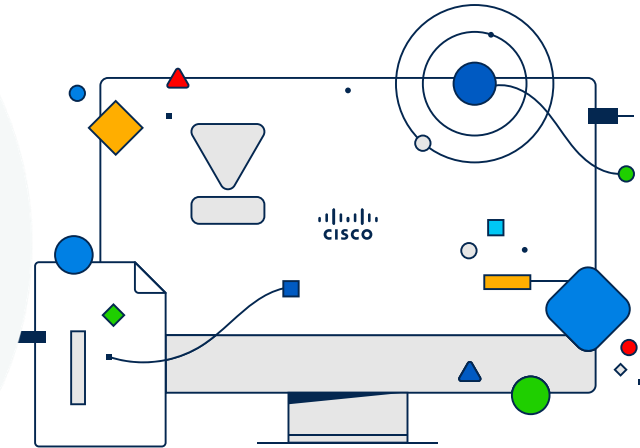
Sustainability & Resilience



Network Convergence

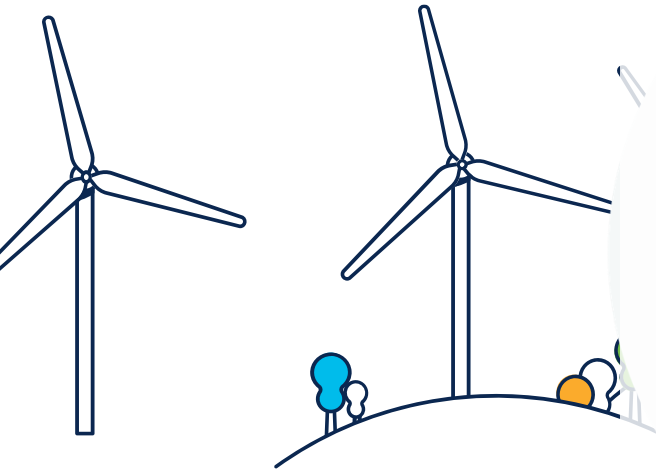


Smart Workspace



The Future-Proofed Workspace Journey

Sustainability & Resilience



Network Convergence

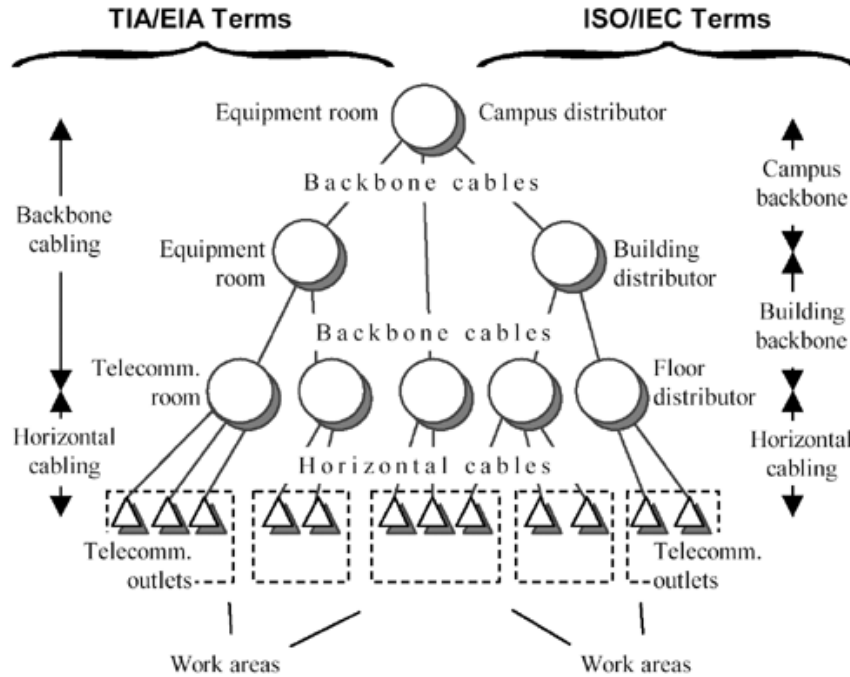


Smart Workspace



What we have done for years

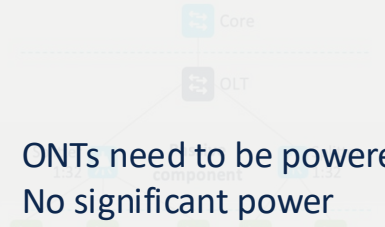
ISO/IEC 11801



No more communications rooms?

What are the options

PON

- 
- ONTs need to be powered
 - No significant power consumption gain
 - 2 times more Fiber consumption

- Min
- No Ethernet cable trays and supports
- Local power for each ONT; no cooling needed
- No Ethernet patch panels
- Central provisioning on OLT
- Simple and inexpensive maintenance

FTTO/Micro Switches

- Not inline with wireless first designs
- 2 times more power consumption per port
- Up to 80 times more Fiber consumption

FTTACP-EcoFlex'IT™

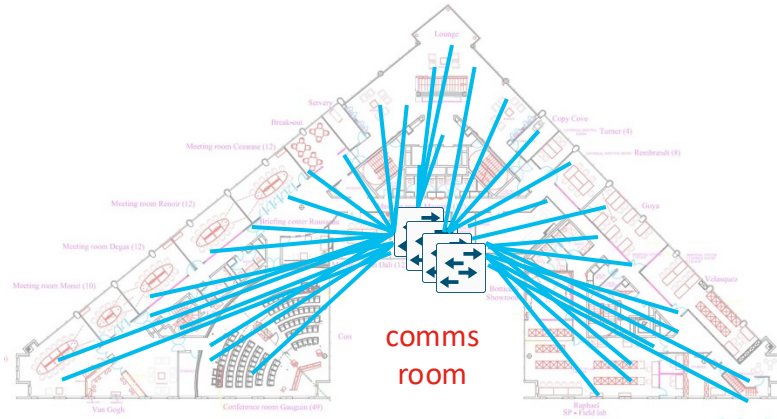


FTTACP (Fiber To The Active Consolidation Point)

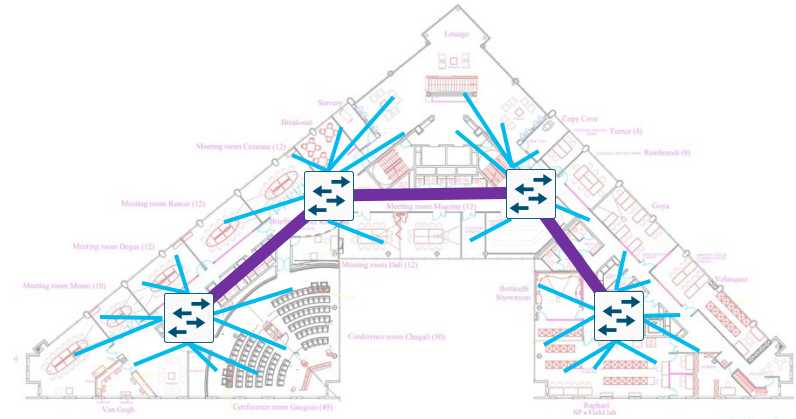
All use **5 to 7 times less RJ45** cable used compared to ISO
Building and cabling **savings can pay the network**

FTTACP-EcoFlex'IT™

What it looks like on one floor



Traditional deployment



FTTACP-EcoFlex'IT™ deployment

Vinci HQ – L'Archipel

FTTACP-EcoFlex IT™ + SD-Access = Programmable Campus

- **Approximately 5,000 people on-site** with a dynamic and mobile workplace.
- **430 m² increase** in floor area.
- **269 km less cabling** used in the installation.
- **50-ton reduction in carbon emissions** during installation.
- **50% decrease** in the network's electrical consumption.



Link to the [Public Case Study](#) and [Video](#)

Developing DC rather than AC

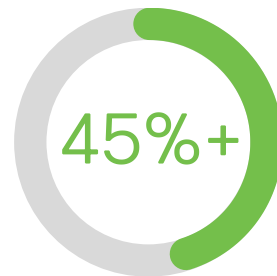
Making the workplace more sustainable & energy efficient

The traditional approach to power is wasteful

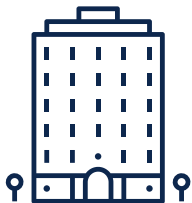


Of power wasted in conversion loss

Smart buildings save energy, cost less to operate



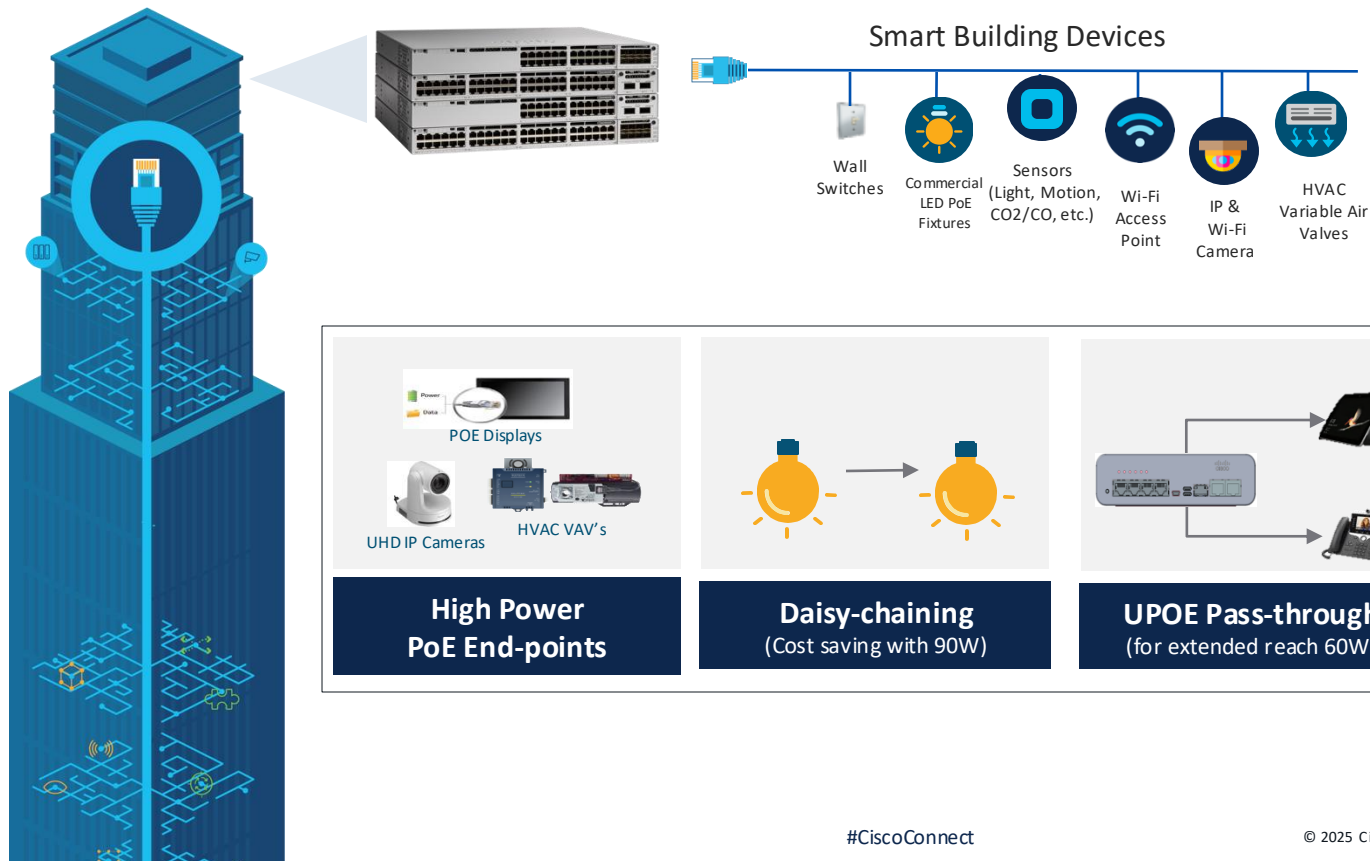
Reduction in energy waste by using DC power



In France, the building sector accounts for **43% of energy use** and **23% of greenhouse gas emissions**.

Network as the 4th Utility

90W UPOE+ Standard driving new IT/OT Use Cases



POE



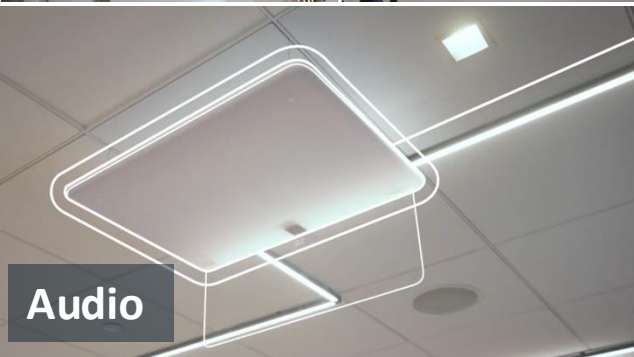
Network



Video



Audio



Security



HVAC



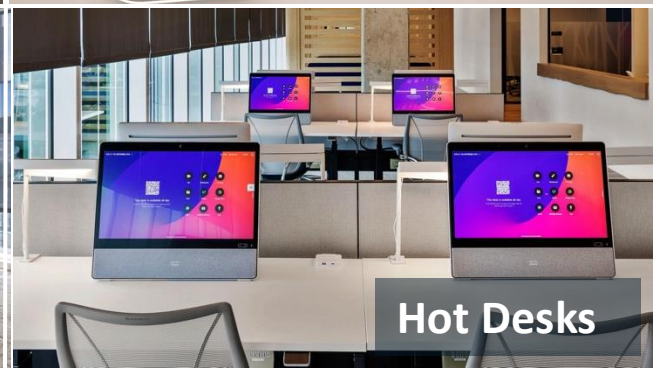
Lighting



Window Shades

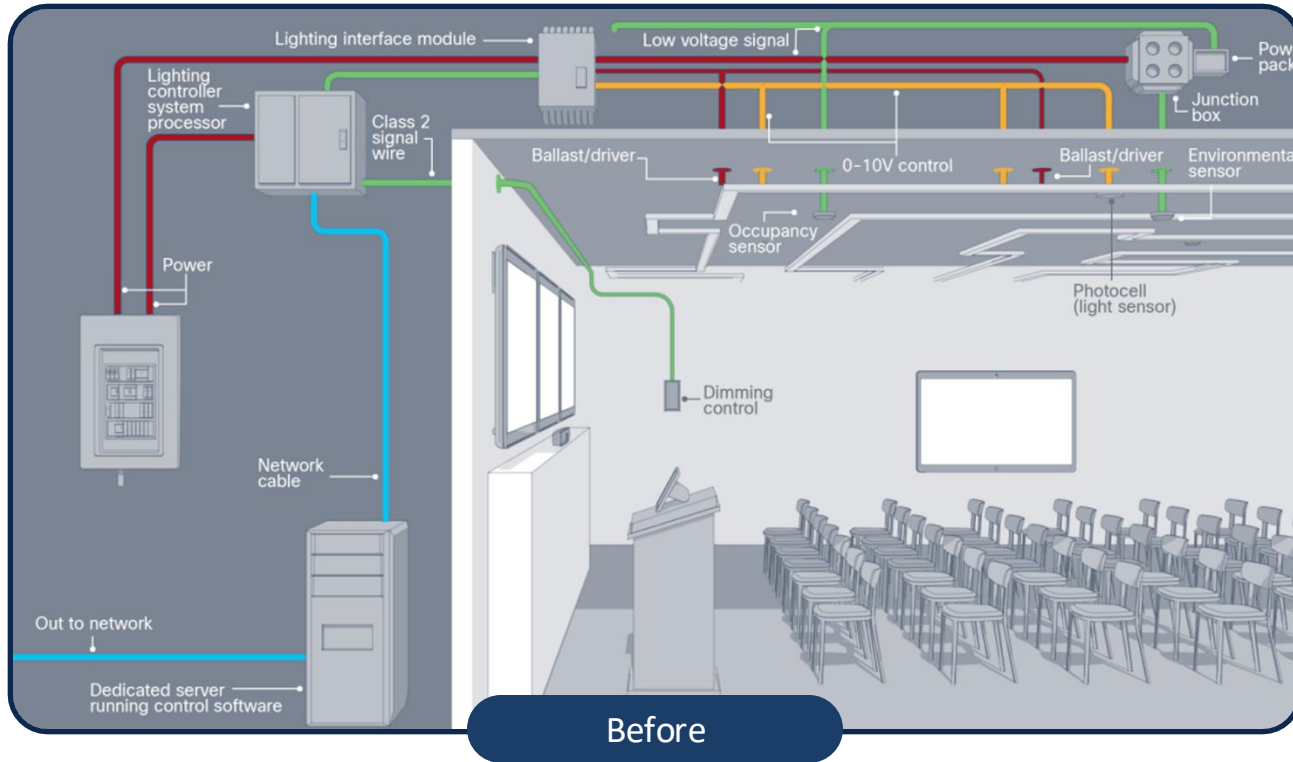


Hot Desks



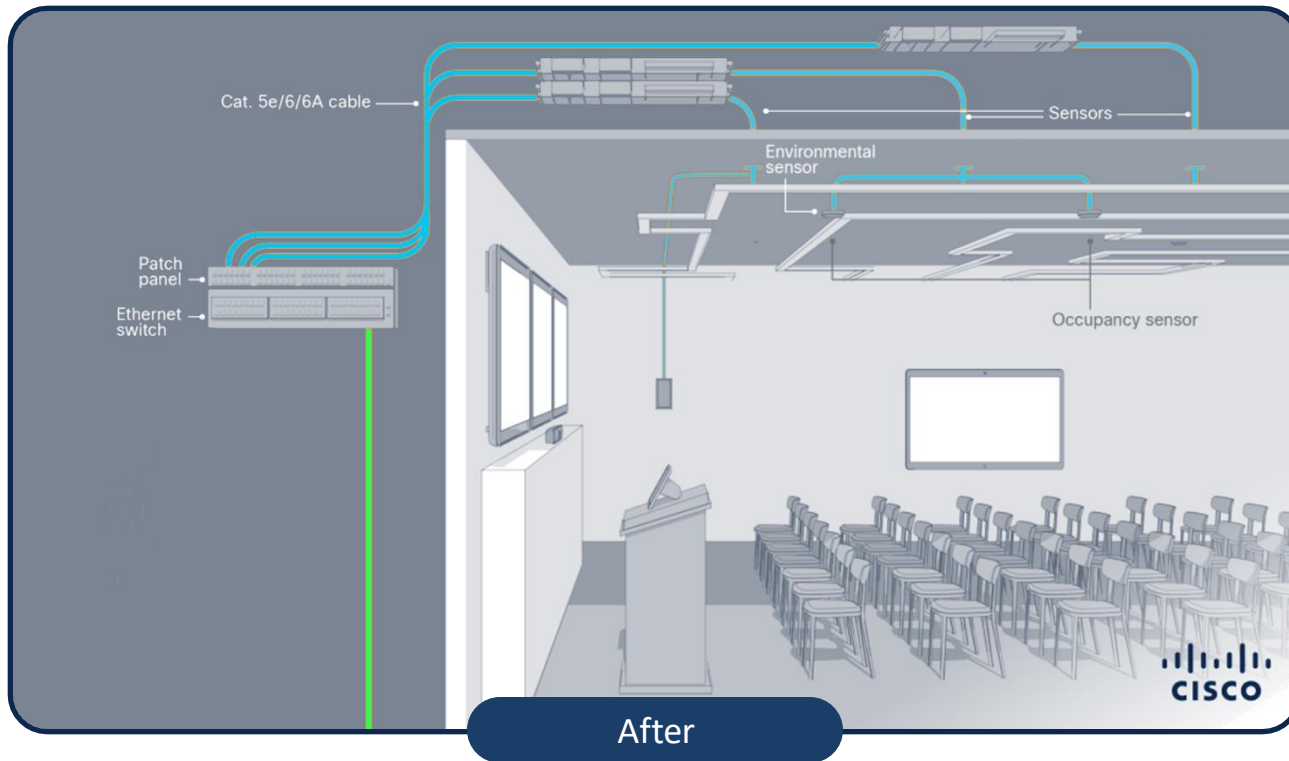
Traditional Model

Complex Cabling, More Materials and Cost



The Power of PoE

Simple Cabling, Less Materials and Cost



Highest power resiliency in Industry

Be ready for any situation



N+1/N+N Redundant power supplies

Use best suited power redundancy mode



Power available from AC + DC sources

Mix power sources for backup



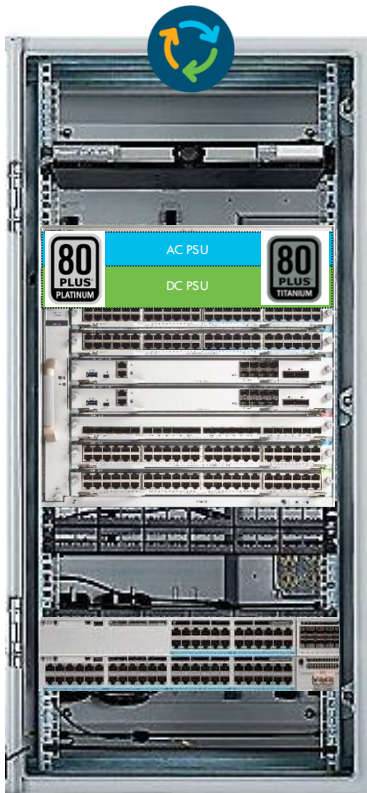
Perpetual PoE

End points powered during upgrades



Fast PoE

Restores power within a minute



Configurable POE Port Priority

Critical devices stay up during load shed



2-event Classification

Fast power negotiation without LLDP



1900W AC PSU on C9300

Platinum rated; 32x 90W, 48 x 60W ports



Cisco StackPower

Pay-as-you-grow architecture

Catalyst Switching Sustainability Innovations

Reduce the power consumption of your network

Auto-off LED

- Turn off unused System and Port LEDs to conserve energy
- Up to 20 watts savings with 256 x 20ma LED*

@ C9200, C9300

Enhanced Energy Metering

- Micro and Macro time-series record for System and PoE power consumption

@ C9200, C9300, C9400



Catalyst 9000 Switches

Auto-off SFP

- **Auto-sense physical SFP** presence and turn-off/on PHY to save power
- 5%+ energy savings** on fiber SKU's

@ C9200, C9300

Auto-off Stack PSU

- Auto-off PSUs based on stack power pool to load optimal ratio and full redundancy
- Up to 100W for a 8 switch stack***

@ C9300

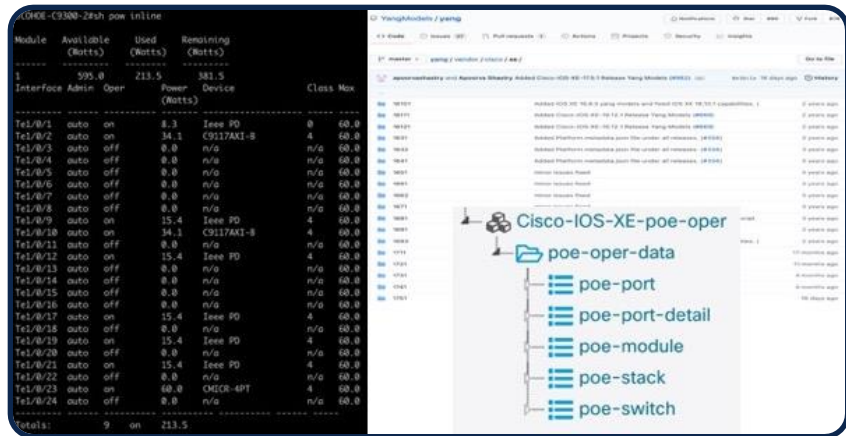
* Power savings estimated on 20ma port LED

** May vary by PHY speeds

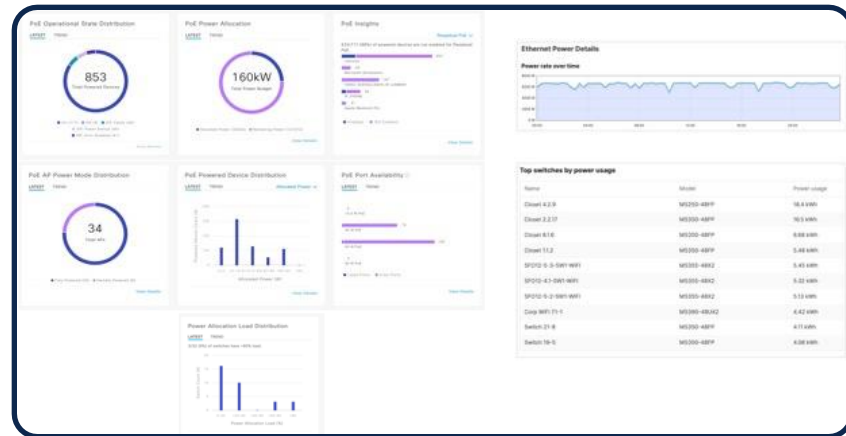
*** Stack-power enabled

Monitor and control the impact of your network

Get a complete view of your power consumption



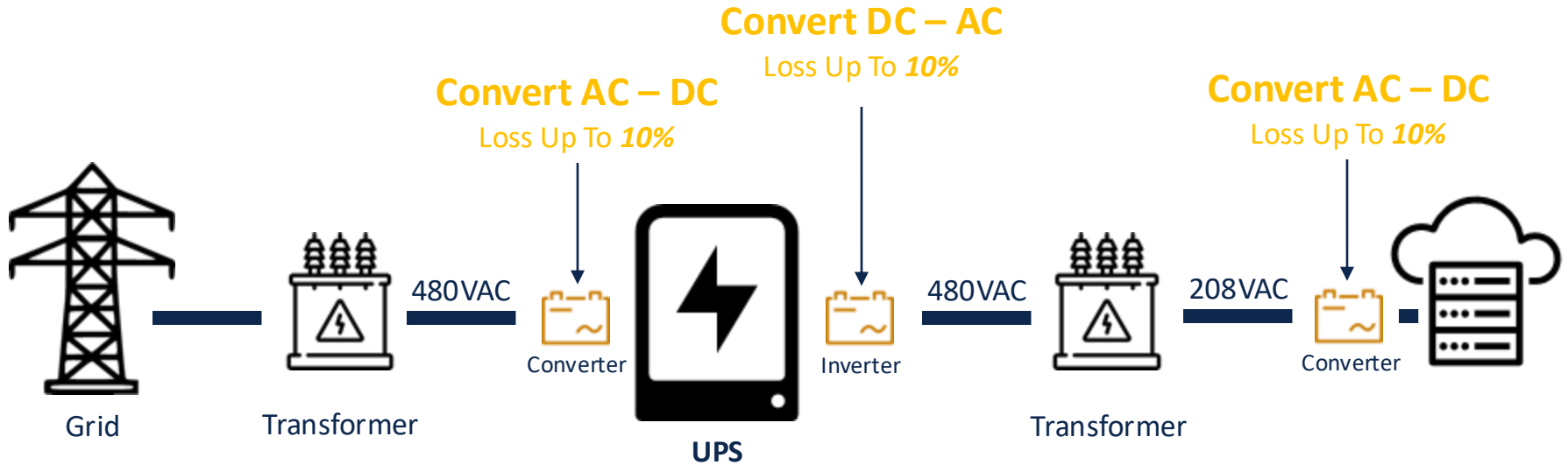
From switches (CLI/Telemetry)



From dashboards (GUI/APIs)

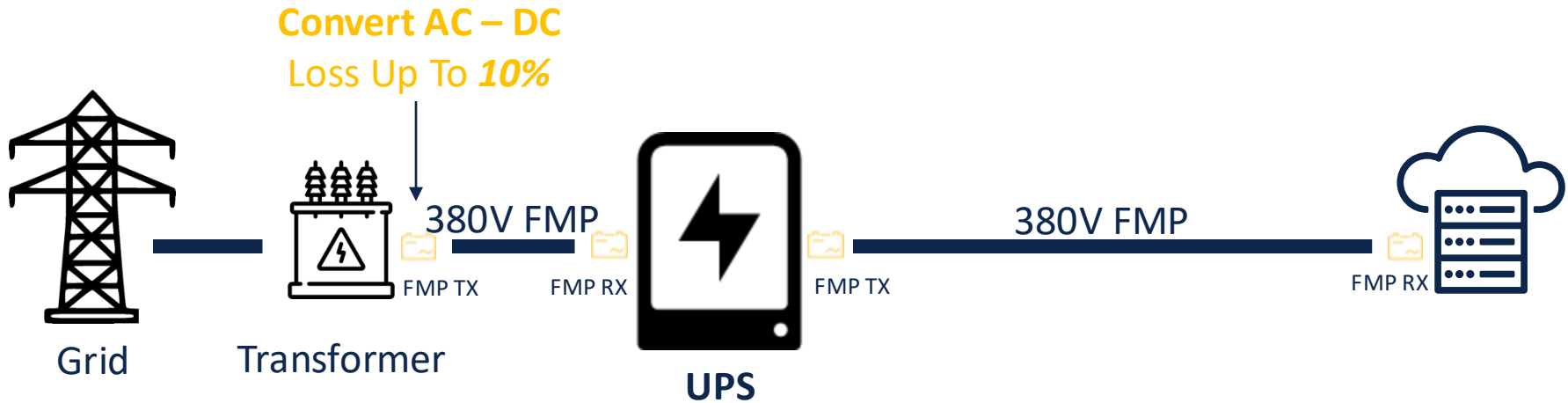
The Problem

Multiple Power Conversions



The **FMP** Answer

Reduce *Conversions* – Deliver Native DC Power



FMP – New Power Delivery System

Transports **Electrical** Current in a *Pulse Current Wave Form*



Delivers Short Bursts of **High Voltage** and *Limited Current*

FMP – Fault Detection

If Pulse Wave **Changes** - Fault Detected – *Power is Shutdown*



FMP – Cabling

Eight Twisted Pairs per FMP Cable



Why FMP



Up to **20%** Faster to Deploy
Up to **40%** Cheaper

Cisco owns 40 FMP Patents

Three Key Patents

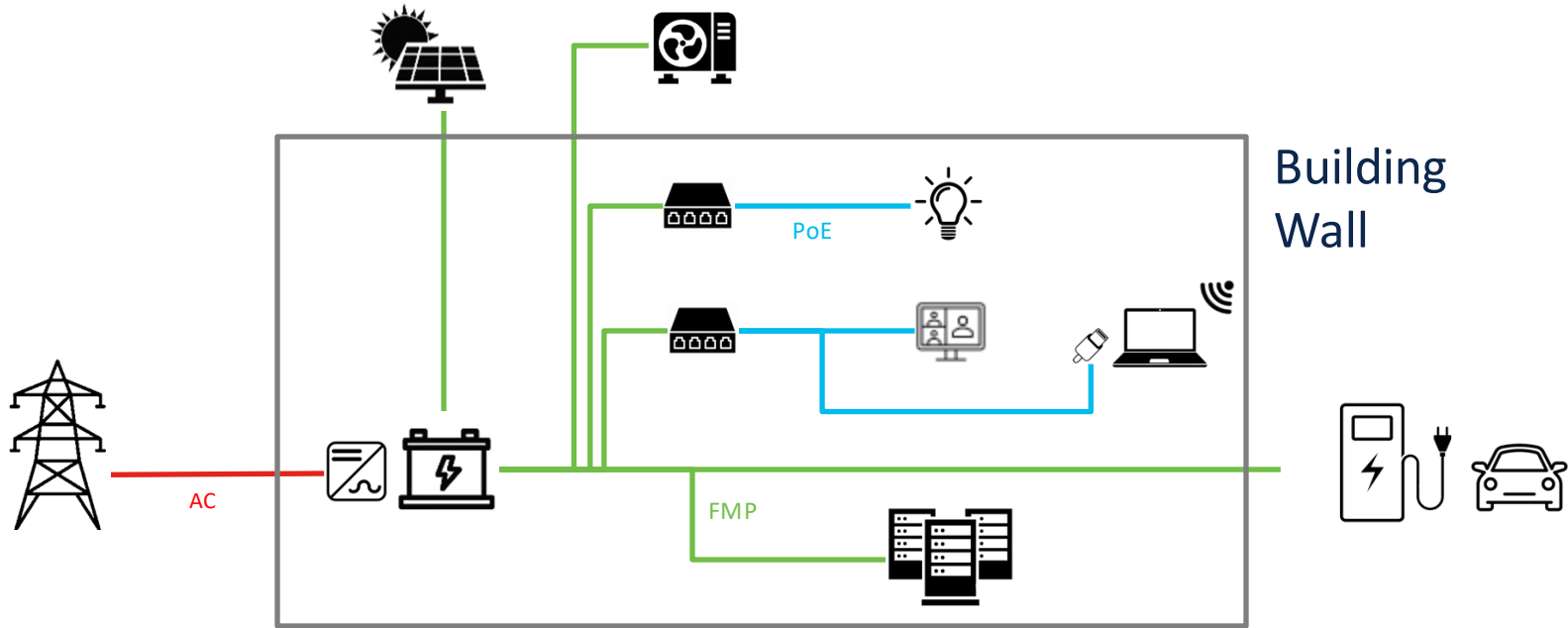
WO2022081778A1: *Fault managed power systems*

US20230223988A1: *Fault managed power with dynamic and adaptive fault sensor*

WO2023014595A1: *Fault managed power system*

Multi-Phase DC power distribution | DC-DC Conversion | HVDC connectors | Pulse Power | Fault Detection Techniques

FMP + PoE Completes an End-to-End Safe DC Microgrid



The Future-Proofed Workspace Journey

Sustainability & Resilience



Network Convergence



Smart Workspace



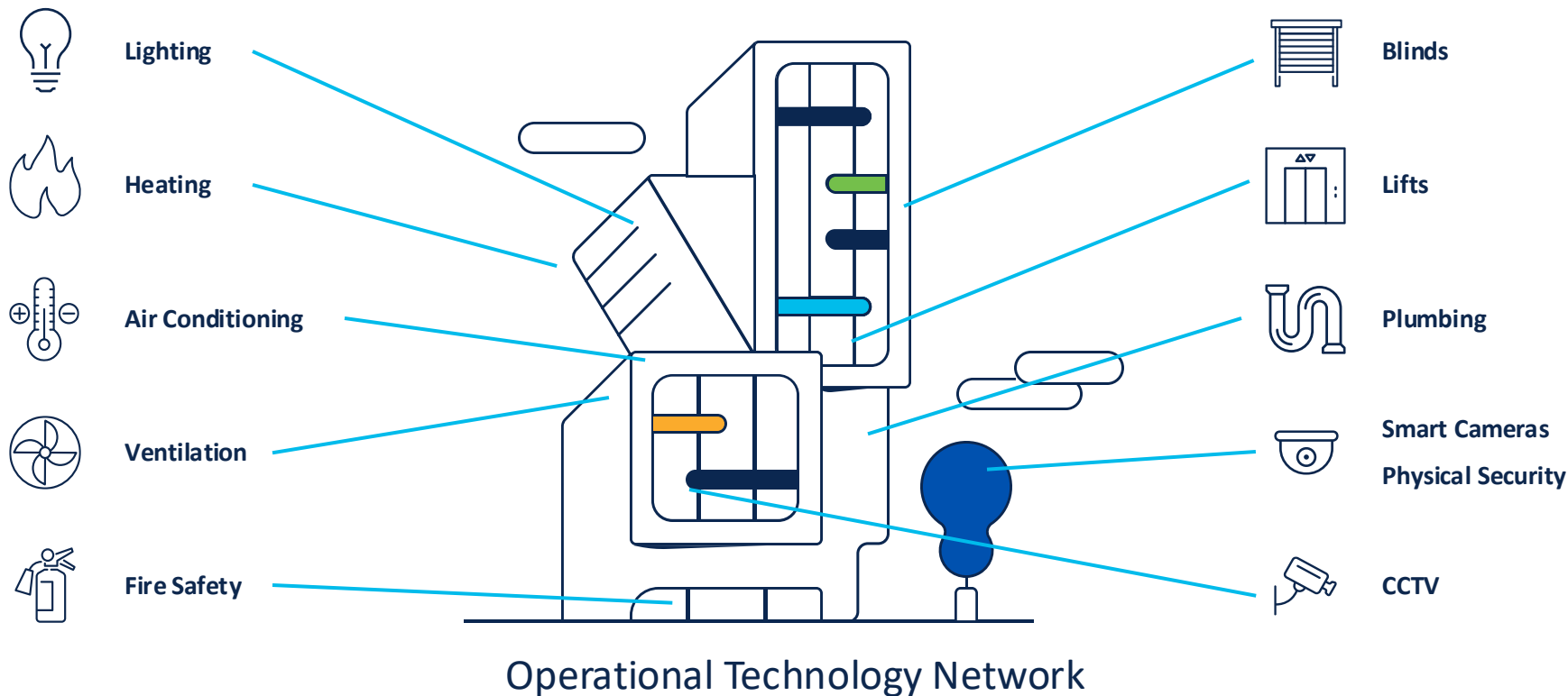
A Fragmented Approach is not Future-Proof

Leads to security holes, visibility gaps and experience breakdowns



A Fragmented Approach is not Future-Proof

Leads to security holes, visibility gaps and experience breakdowns

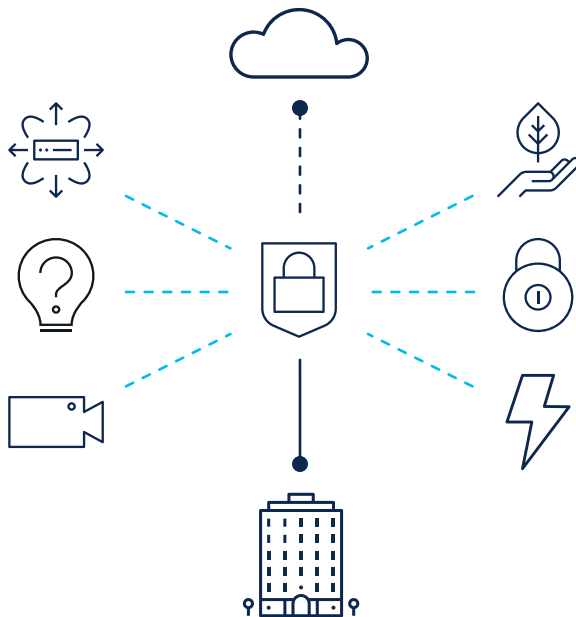


We must converge networks...

A Fragmented Approach is not Future-Proof

Integrated

- BMS
- Security and access control
- Life Safety
- Energy management
- Smart blinds
- Landlord Network

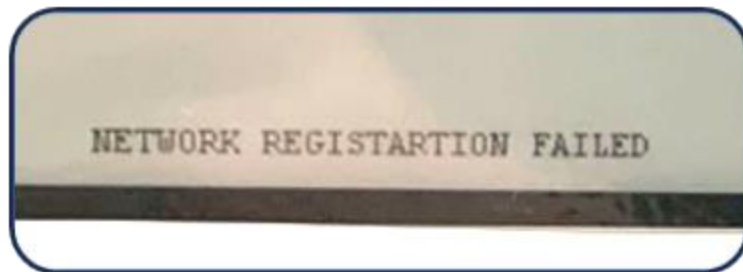


Delivered

- Visibility
- Automation
- Cyber Security
- Simple and Agile
- Sustainable

What we see on networks

Convergence enhanced the security



Why isn't it working?
Is it a network or application problem?



How is this device powered?
How can you control its consumption?

What is this device?
How is this device connected?
Is it secure (What/Where)?

What we see on networks

Convergence enhanced the security



I need to know **WHO/WHAT** and **HOW** connects to my network



I have **Visibility** so I can define my policies
I am ready for segmentation.

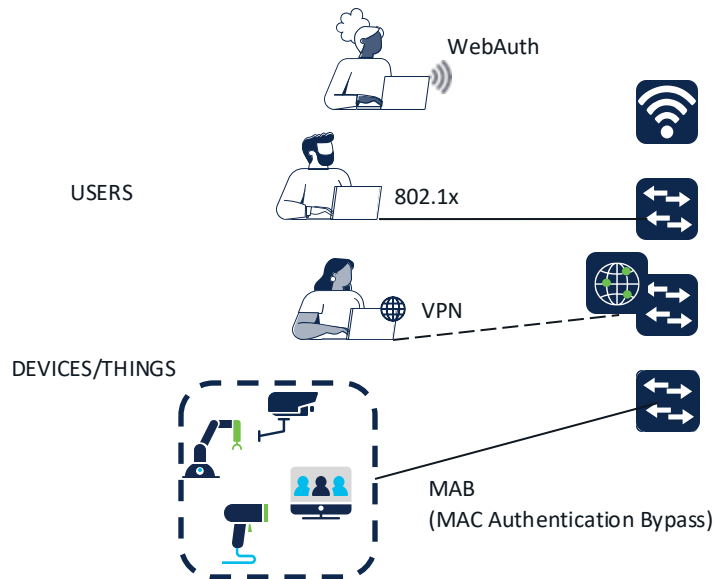


What we see on networks

Convergence enhanced the security

HOW

Authenticate



CISCO *Connect*

WHO/WHAT

Identify

IP add: 192.168.2.101	ID	Bob (Employee)
Unknown	WHAT	Apple iPad/iOS/11.0.1
Unknown	WHEN	10:30 AM
Unknown	WHERE	Floor-1, Amsterdam, Building 1
Unknown	Conn TYPE	Wireless
Unknown	APPS	Firefox, MS Word, Anyconnect
Unknown	HW	Serial No, CPU, memory
PROFILING		

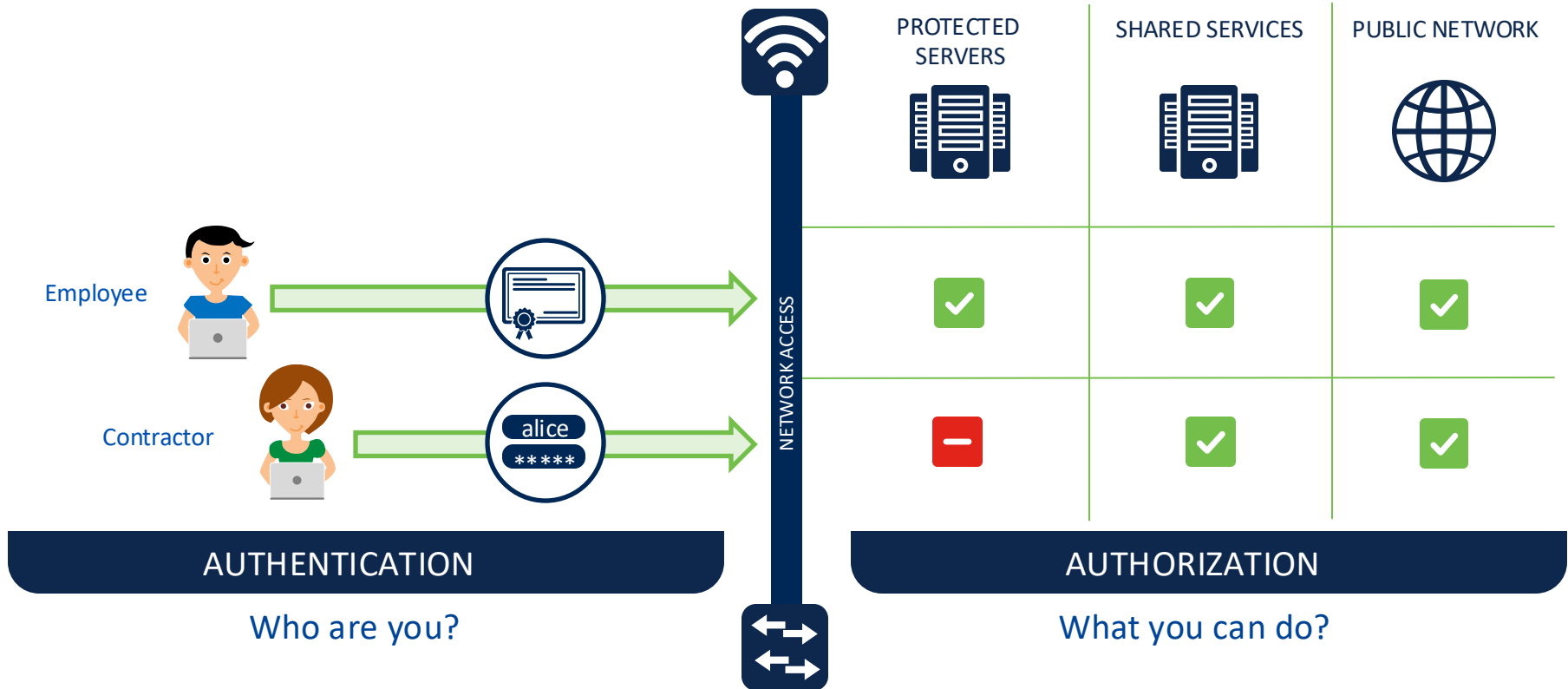
What we see on networks

Convergence enhanced the security

Identity service Engine - ISE helps you to learn
'HOW'/'WHO/WHAT' and much more...



Authentication and Authorization

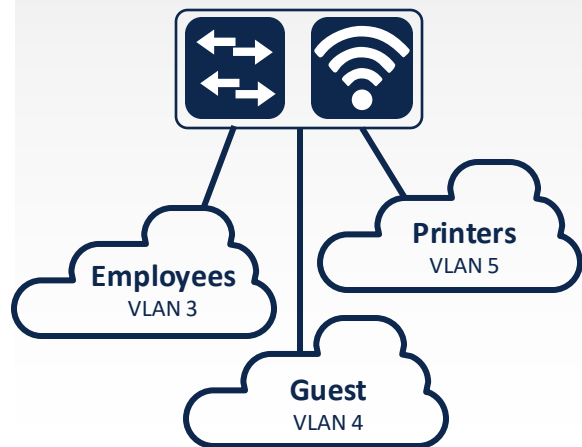


ISE Segmentation Options

Beyond RADIUS Access-Accept / Access-Reject

VLANs

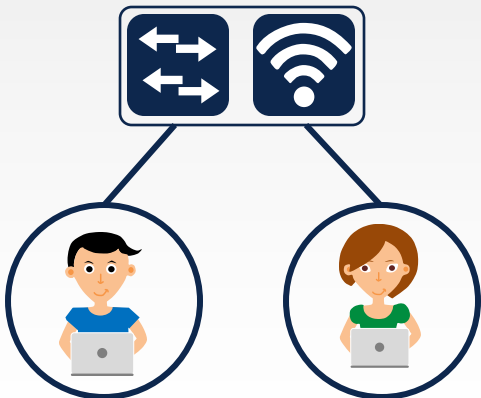
Dynamic VLAN Assignments



Per port / Per Domain / Per MAC

ACLs: DL, Named, DNS

Downloadable ACL (Wired) or
Named ACL (Wired + Wireless)



Employee
permit ip any any

Contractor
deny ip host <critical>
permit ip any any

Security Group Tags

Cisco Group-Based Policy



16-bit SGT assignment and SGT
based Access Control

The Future-Proofed Workspace Journey

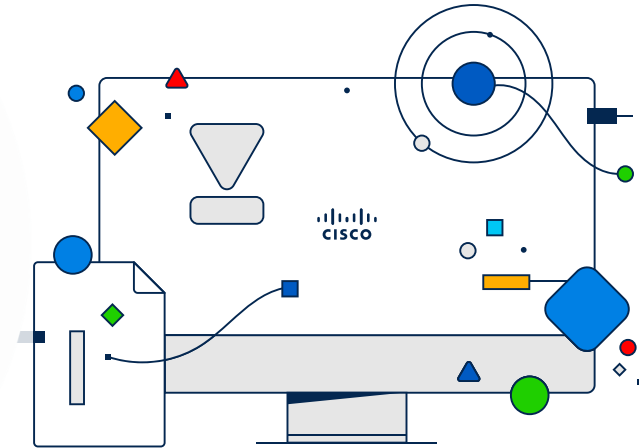
Sustainability & Resilience



Network Convergence



Smart Workspace



New use cases...

Energy Management

- Use the network to monitor **and** power systems
- Optimise consumption
- Data Center, LAN, HVAC, Lighting etc
- Micro grid

Environmental

- Use connected sensors to monitor temperature, humidity, air quality
- Integrate with other control and analytics systems inc BMS, HVAC
- Regulations

Efficiency & Maintenance

- Detect conditions like open doors, windows, abnormal heating/cooling, leaks, refuse, damage, compliance

Spaces

- Monitor and understand how space is being used

Monitoring

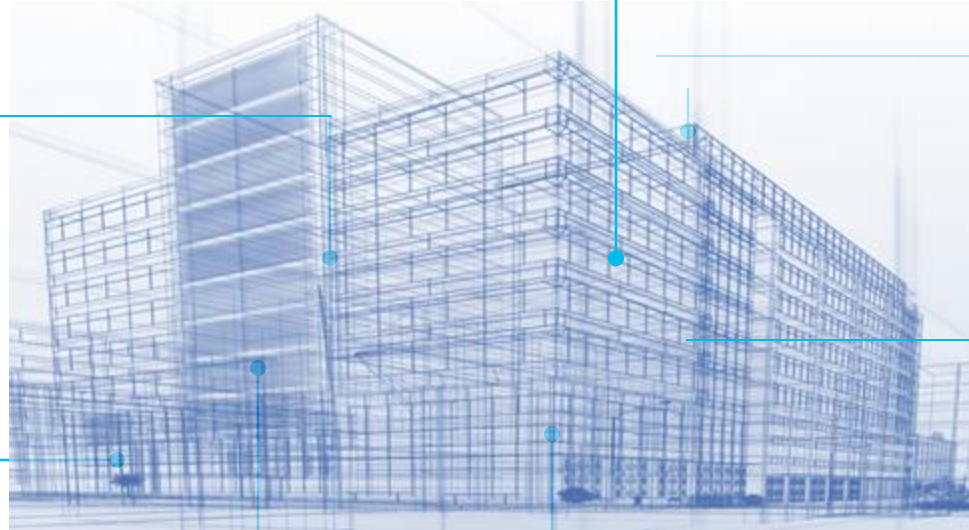
- Asset Management
- Safety, incidents
- **Structural integrity**
- **Critical Apps**

User Experience

- Collaboration
- Wayfinding
- Hot-desking

Connected & Converged

- Reduce Capex & Opex
- Integration & automation
- Security
- Expansion



Everything becomes a sensor

Sensor for people count and ambient noise

Sensor for occupancy

Sensor for light levels

Sensor for temperature and humidity

Your network becomes a sensor for smart spaces

with **CISCO**
SPACES



Board series



Room series and kits



Desk series



Access points



Switches



Meraki MT sensors
& MV cameras



Third-party
sensors
(wired and wireless)

Room occupancy

People count

Ambient noise

Room occupancy

People count

Ambient noise

Temp, humidity, IAQ

Room occupancy

People count

Ambient noise

Temp, humidity, IAQ

Occupancy

Location

Wireless IoT gateway

Occupancy

Wired IoT gateway

People count

Air quality

Temp, humidity

Co2

Occupancy

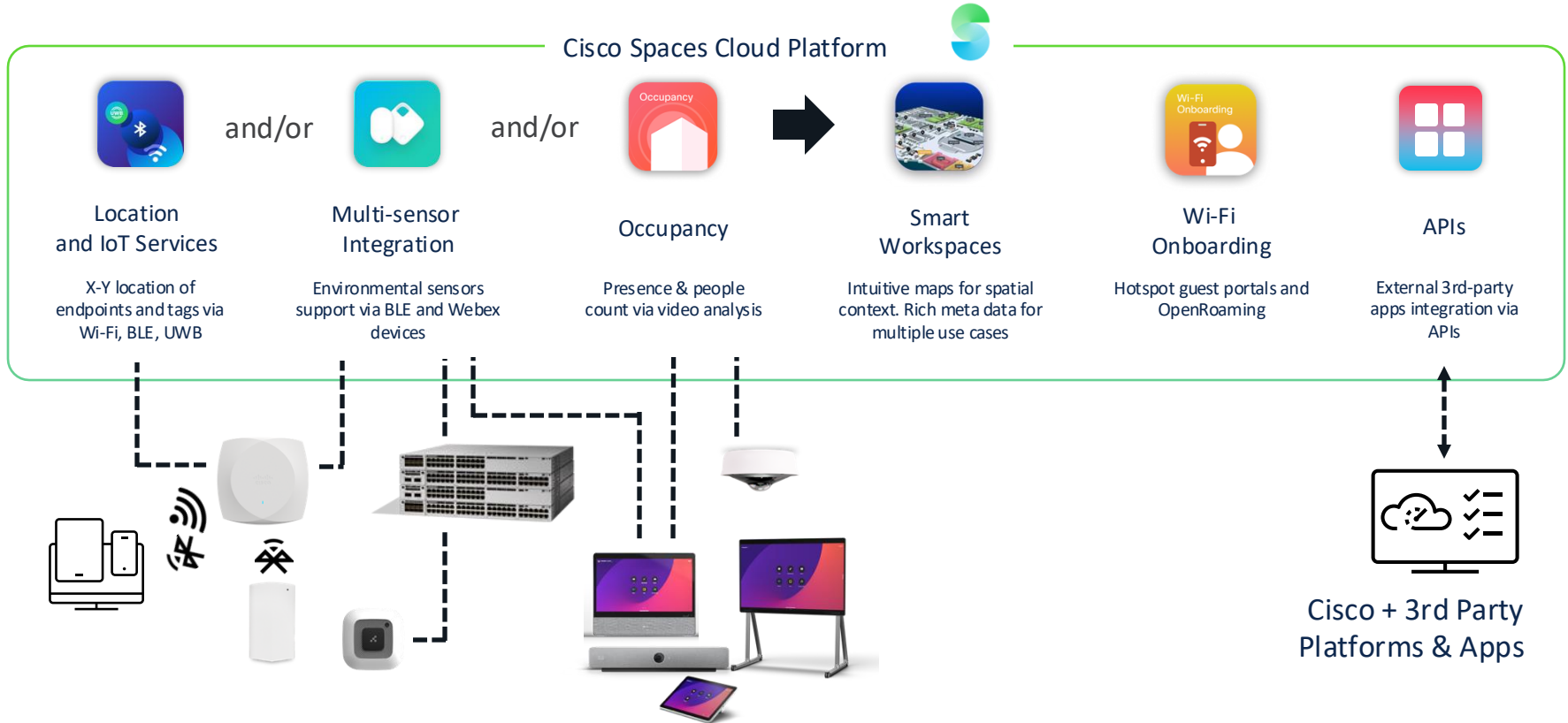
Air quality

Temp, humidity

Asset location

...and
more

Cisco Spaces: a cloud/SaaS platform



With Cisco's smart spaces suite

HARDWARE FOUNDATION

1. Turn your Network into a Sensor



With
**Cisco Networking & Collaboration
Devices**
as the foundation

SOFTWARE PLATFORM

2. Transform buildings Into Smart Spaces



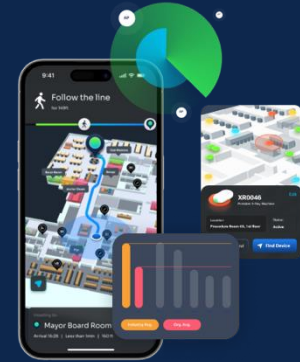
With
Cisco Spaces

The OS for smart spaces

AI-Maps | Indoor Location | Wi-Fi Onboarding |
Occupancy | Spaces API | Multi-sensor Connect |
Dashboard & Apps

OUTCOMES

3. Deliver Unmatched Experiences



With
Cisco & Partner Apps

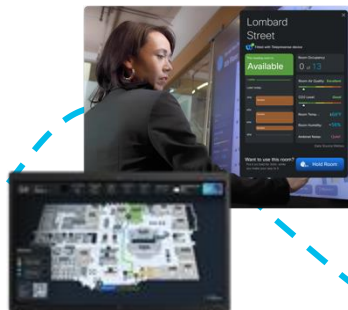
Indoor Navigation | Occupancy Analytics | Sustainability |
Asset Tracking | Employee & Customer Experience &
more

Smart Spaces Journey



Seamless Connectivity & Spatial Awareness

Meeting Room finder on Digital Signage



Analytics for Workplace Operations Center



Indoor Navigation

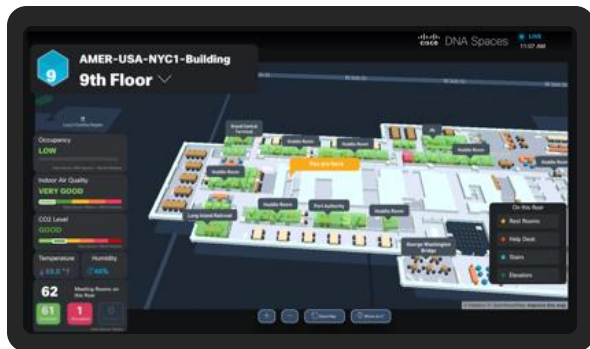
Smart Rooms for Wellbeing & Sustainability



So, what results have we achieved by adopting this Future-Proofed Workplace Strategy?

What did we achieve at Penn1?

Digitizing Workplace



Real-time
Space utilization



Real-time
5000 data pts/sec



92 Mixed type
Collaboration Areas



Meraki cameras
Floor occupancy
(macro floor plate loading)



Cisco Wi-Fi access points
People count, people's physical location to
track their journey through the office



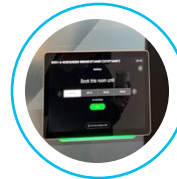
Air quality
Molex sensors for true air quality/
CO2, temperature, humidity, VOC



Occupancy
Molex sensors for people count



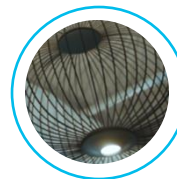
Cisco Room devices
People count, Ambient Noise



Cisco Navigator
Temperature, Humidity, VOC
(volatile organic compounds)



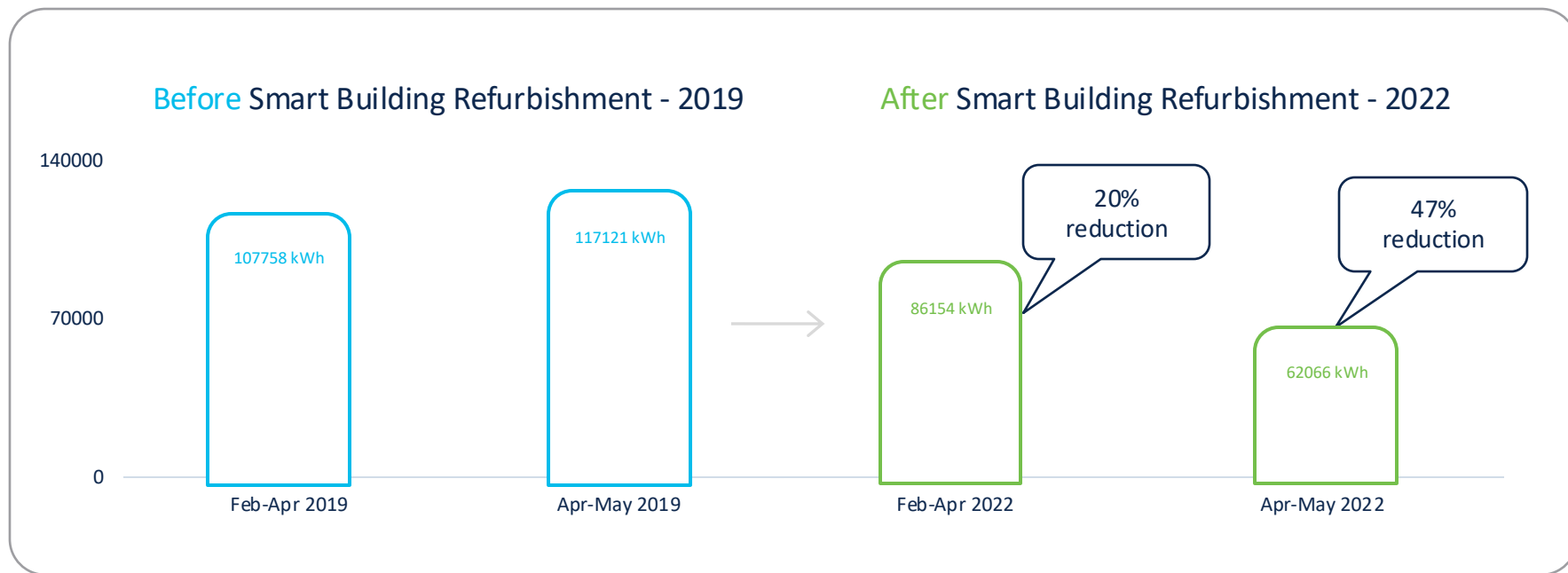
Shading
Mecho shading sensors for Lux level to
help maximize daylight and manage
visual comfort & heat load



Lighting
Low voltage lighting powered by PoE
can be is both more efficient and can
easily be powered via solar.

Energy reduction at PENN1

Power consumption before and after the refurbishment



Caveat: power savings is aggregated not considering changes in employee's behaviors

Forrester Total Economic Impact Study:

WORKSPACE NAVIGATION:



12 minutes time saved per meeting by helping employees navigate to meeting spaces easily, providing a productivity lift worth \$8.9 million over three years

OCCUPANCY ANALYTICS:



Workplace intelligence analyst at a financial services organization discovered that **25% of their meetings were zombie meetings** with occupancy insights provided by Cisco Spaces.

ASSET LOCATER:



10 to 15 minutes time saved by helping employees track assets like whiteboards or medical equipment

PERSONALIZED ENGAGEMENTS:



20% increased likelihood of customers activating a retailer-provided offer after a location-based push notification

1. Forrester Total Economic Impact Study is conducted by Forrester in December 2024 on behalf of Cisco Spaces to provide an unbiased, third-party assessment of return on investment across various organizations, considering a range of essential factors. The findings are based on a composite organization, that is a global organization with 95000 employees and 100 locations, comprised of interviewees with experience using Spaces.

The best workplace
experience puts
employees at the
center



Real estate

Space compression for reduction
in lease and utility costs

IT

Simplifying IT operations

Human resources

Attracting and retaining the best talent
while empowering teams

Intersection of **people, spaces, technology, and purpose.**

Meet us @World of Solution Booth

Go Beyond with Cisco CX !

Premium Support		Solution Attached Services		Lifecycle Services
Service	Case	Service	Use Case	Example Activities
<div>Smart Building Technology</div> <div>Make your workplace more secure and sustainable with networking solutions and insights</div>	Success Tracks Campus Network	Insights and observability for Campus Network including Catalyst 9k series, Campus Networking automation, segmentation, and programmability and integrations	<div>SAS Campus Networking *</div> <div>SAS Future-Proofed Workplaces Outcomes Program Management</div> <div>Receive insights, recommendations, and optimization for network security throughout the campus for switching, wireless, and Cisco Spaces. Assistance creating a digital networking plan.</div> <div>Aligning Cisco Spaces to business goals along with ongoing program management such as evaluations of assessed use case implementation, alignment to third-party activities, and integration management with other Cisco devices</div>	End-to-end visibility into energy consumption and automated power consumption management with Energy Optimization Management Service. Consultation on PoE infrastructure and guidance on leveraging data collected by sensors.

Thank you!

CISCO *Connect*

GO BEYOND

#CiscoConnect