

Modernizing and Securing Industrial Networks

With Cisco Industrial Internet of Things



Industrial IoT Product Management

Extending IT to Industrial Environments



Campus & Branch

 Warehouses

 Distribution Center

 Parking Lots

 Airport

 Port

 Factories

 Utility Substations

 Roadways

 Defense

 Oil & Gas Refinery

 Mines

Consistent Network and Security Architecture
IOS-XE, Catalyst Center, SD-WAN Manager

What Manufacturers are telling us

Results from our Voice of the Customer Survey with 1000+ participants



89%

Describe cybersecurity compliance as critical for their operational network¹



48%

Say AI will have the greatest impact on industrial networking over the next 5 years¹



41%

of IT and OT teams are working independently¹

1. Cisco, Cisco 2024 State of Industrial Networking Report, 2024

AI Use Cases in Industrial



Machine vision

Making machines smarter
Improving production quality & safety
AI models to see beyond visible



Industrial control virtualization

PLCs and RTUs in virtual machines
Decoupling machine software and hardware to save opex and capex



Industrial data collection

Digital twins & Predictive models
Preventative maintenance
Quality & Sustainability goals



Tele-remote operations

Operating remote machines in harsh environments (mines, ports, oil & gas)
Increasing safety & productivity



AI robotics and cobots

Using AI to control robots
Moving CPU/GPU workload to datacenter for elasticity and scale



Autonomous vehicles

Enhancing productivity in mines, warehouses, manufacturing, etc.
Operations scalability & agility

The Infrastructure is Key to Unlocking AI Potential

Brains
in the data center



VIRTUAL ROBOT
CONTROLLER



VIRTUAL
PLC/RTU



VIRTUAL
COMPUTE

Nervous system
is the network

Network

Physical components
in the field



ROBOTS, VEHICLES



FIELD ASSETS



SENSORS

Cisco is the Industrial Networking Market Leader



#1 Market Share
Global Industrial Edge

Industrial
Switching

24% | 37%
Layer 2 | Layer 3
#1 Market Share

Industrial
Routing

34%
#1 Market Share

Industrial
Wireless

57%
#1 Market Share

Source: OMDIA, calendar year 2024



Industrial IoT
Company of the Year 2025

Bringing the best of IT and OT together

Industrial Grade

Purpose built for operations

+

Enterprise IT Grade

Best of IT innovations



Catalyst Center



Cisco IOS® XE

Enabling OT modernization has become an IT priority

Announcing 19 new switches joining Cisco's leading portfolio

DIN-rail Portfolio



IP67 Portfolio



Rackmount Portfolio



IE3500 Series Switches

Base



IE-3500-8T3S

8x 1GE ports
3x 1GE SFP ports



IE-3500-8P3S

8x PoE/PoE+
3x 1GE SFP ports
360W PoE Budget

Advance



IE-3505-8T3S

8x 1GE ports & 3x 1GE SFP ports
HSR/PRP/DLR



IE-3505-8P3S

8x PoE/PoE+ 3x 1GE SFP ports
HSR/PRP/DLR
480W PoE budget

10G/4PPoE



IE-3500-8T3X

8x 1GE ports
3x 10G SFP ports



IE-3500-8U3X

8x PoE/PoE+/4PPoE (90W)
3x 10G SFP ports
480W PoE budget

Expansion Modules



IEM-3500-6T2S

6x 1GE ports
2x 1GE SFP ports



IEM-3500-8T

8x 1GE ports



IEM-3500-8P

8x PoE/PoE+



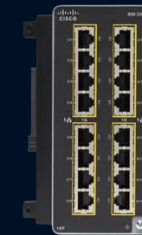
IEM-3500-8S

8x 1GE SFP



IEM-3500-14T2S

14x 1GE ports
2x 1GE SFP ports



IEM-3500-16T

16x 1GE ports



IEM-3500-16P

16x PoE/PoE+



IEM-3500-4MU

4x 2.5G
PoE/PoE+/
4PPoE (90W)

IE3500H Heavy Duty Series Switches

PoE



IE-3500H-14P2T

2x 1GE ports
14x 1GE PoE ports
240W PoE Budget



IE-3500H-12P2MU2X

2x 10G SFP
2x 2.5G PoE/PoE+/4PPoE (60W)
12x GE PoE/PoE+
240W PoE Budget

FE w/ GE Uplinks



IE-3500H-12FT4T

12x FE D Code ports
4x 1GE X Code ports



IE-3500H-20FT4T

20x FE D Code ports
4x 1GE X Code ports

Full GE



IE-3500H-8T

8x 1GE port
M12 X-Code



IE-3500H-16T

16x 1GE ports
M12 X-Code



IE-3500H-24T

24x 1GE ports
M12 X-Code



IE-3505H-16T

16x 1GE X-Code ports
HSR/PRP/DLR

IE3100 Series Switches

IE3100 Base



IE-3100-4T2S

4x 1GE ports
2x 1GE SFP ports



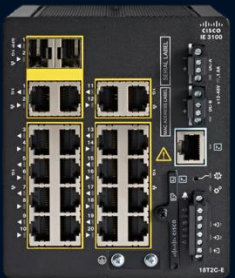
IE-3100-8T2C

8x 1GE ports
2x 1GE Combo ports



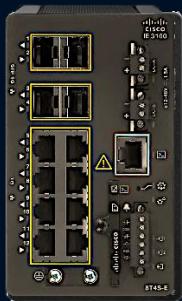
IE-3105-8T2C

8x 1GE ports
2x 1GE Combo ports



IE-3100-18T2S

18x 1GE ports
2x 1GE Combo ports



IE-3100-8T4S

8x 1GE ports
4x 1GE SFP ports



IE-3105-18T2C

18x 1GE ports
2x 1GE Combo ports

IE3100 PoE



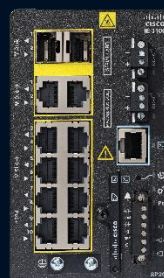
IE-3100-4P2S

4x PoE/PoE+
2x 1GE SFP ports
120W PoE Budget



IE-3100-3P1U2S

3x PoE/PoE+, 1x 4PPoE (90W)
2x 1GE SFP ports
120W PoE Budget



IE-3100-8P2C

8x PoE/PoE+
2x 1GE Combo ports
240W PoE Budget



IE-3100-6P2U2C

6x PoE/PoE+, 2x 4PPoE (90W)
2x 1GE Combo ports
240W PoE Budget

IP67



IE-3100H-6FT2T

6x FE ports (M12 D-Code)
2x 1GE ports (M12 X-Code)



IE-3100H-8T

8x 1GE ports (M12 X-Code)

New IE9300 Series with Mixed Ports



Comprehensive connectivity

8x 1GE SFP plus 4x 10G SFP uplinks
16x 1GE with PoE/PoE+



High performance networking

Enterprise-grade Cisco silicon for fiber
ring aggregation and high throughput



Cyber resilient

Cyber visibility, zero-trust enforcement,
and observability built-in

The most versatile rugged rackmount switch for industrial settings where copper and fiber are needed

Leverage your IT investments to gain efficiencies in OT



Industries need ultra reliable, low latency wireless



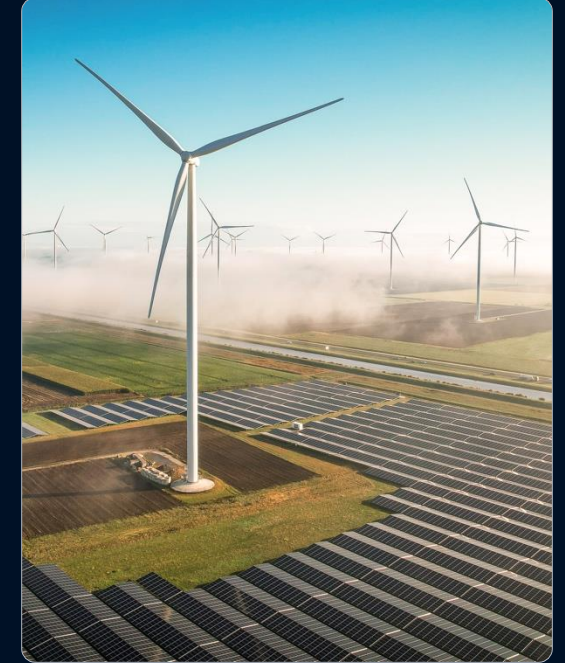
Automated Guided Vehicles (AGVs) and cobots



Tele-remote operations in mines and ports

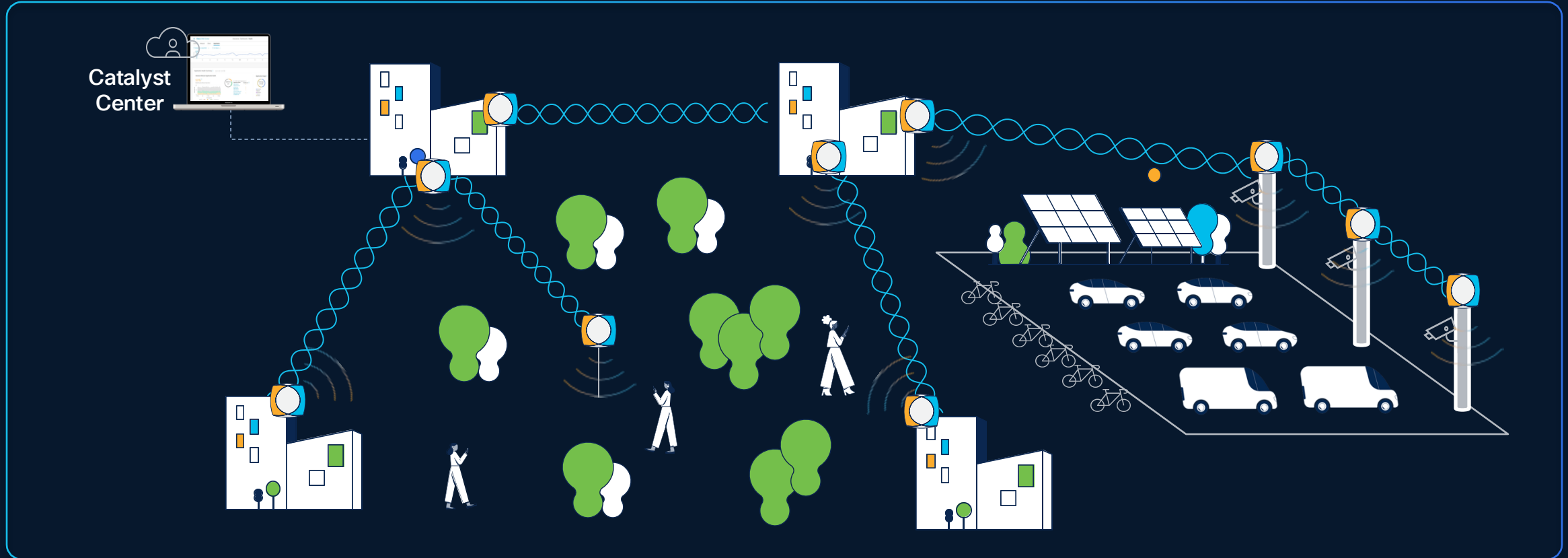


Communications-based train control (CBTC) in rail



Connectivity where wired options unavailable or prohibitively expensive

Industrial Wireless in Extended Enterprise



✓ Outdoor Wi-Fi connectivity

✓ Building-to-building connectivity

✓ Video surveillance for public safety

✓ Connected parking lots

Indoor, Outdoor and Industrial Wireless

Wi-Fi 7



CW9176I,
CW9176D1



CW9178I

Wi-Fi 6E



CW9136I



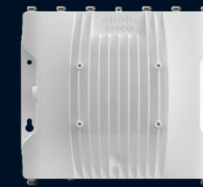
CW9166I,
CW9166D1



IW9165E



IW9165D



IW9167E
IW9167E-HZ



IW9167I

Wi-Fi 6



C9130
(AXE, AXI)



C9124
(AXE, AXI, AXD)

Complete Industrial Routing Portfolio

Optimized for securing remote critical networks

Utilities: Distribution
Automation, Roadways,
Oil & Gas

Utilities: Substation,
Track/Railside

Utilities: Advanced
Metering Infrastructure

Catalyst
IR1101



Catalyst
IR1800



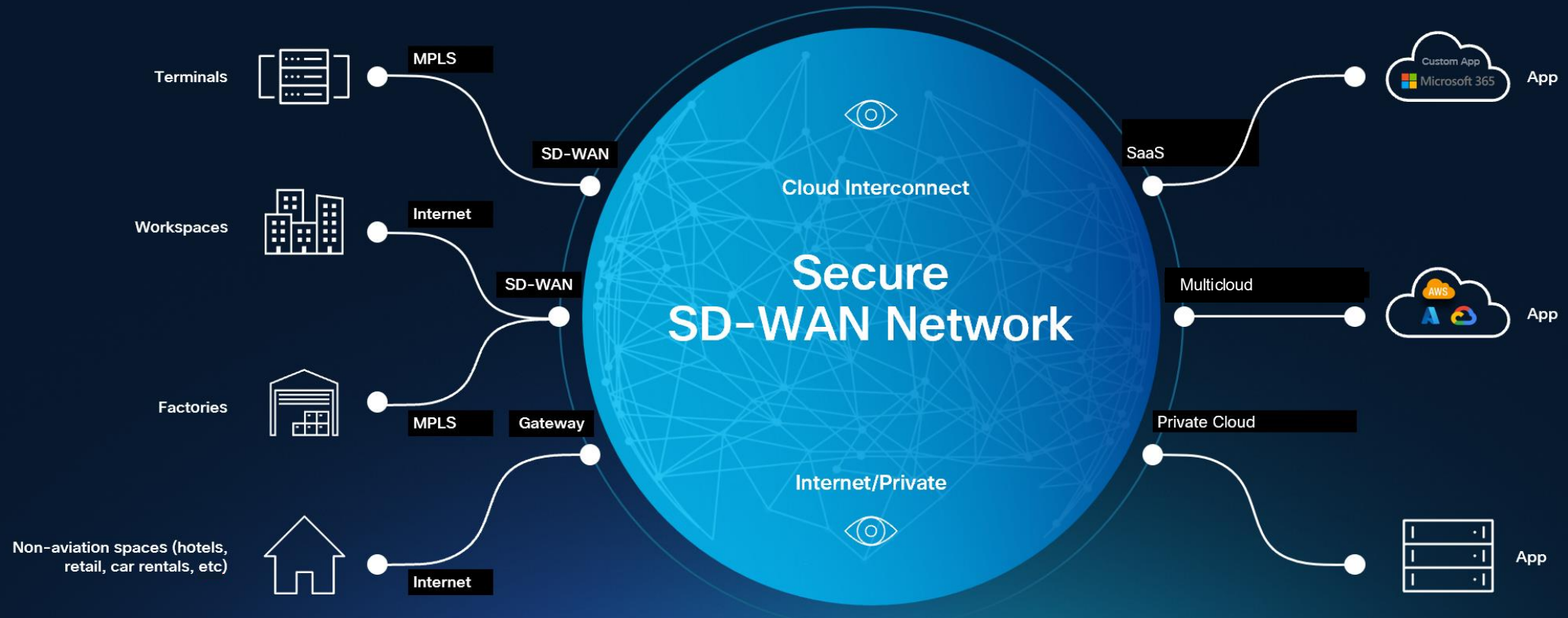
Catalyst
IR8300



Catalyst
IR8100H

Extending Cisco beyond the campus and branch office with rugged, 5G, LTE, fiber powered secure routers

Leverage the best of network efficiency with Catalyst SD-WAN



✓ AI-powered path optimizations

✓ Multi-Vendor, Multi-Cloud, Multi-Region

✓ Data Sovereignty

Leverage the best of network efficiency with Catalyst SD-WAN



Controller
Disaster Recovery



AI-driven Real-time
Analytics



Guided
Workflows



Long Lived
Life Cycles



Intelligent
Traffic Steering



Auto-recovery of
remote devices



Custom Edge
Application



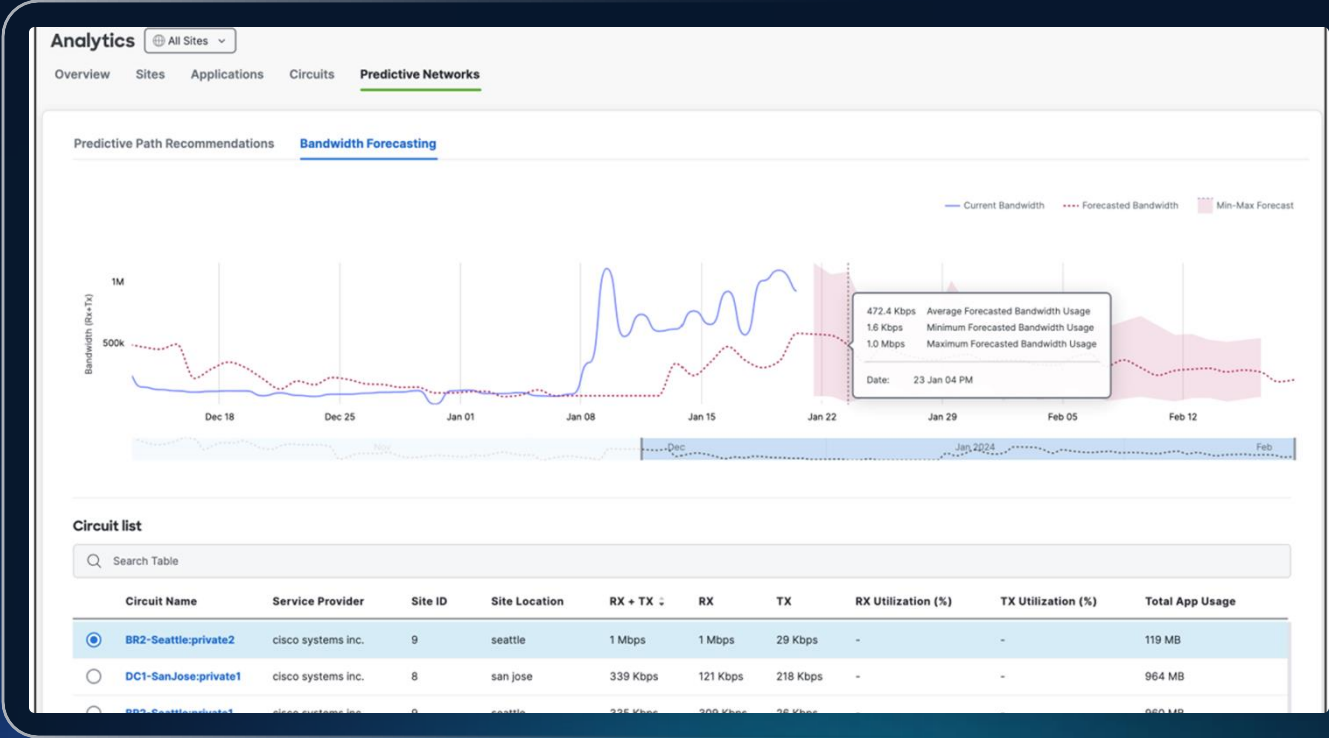
Air gapped
solution as well!

Bridge IT/OT with SD-WAN, and keep the network running

AI-powered Bandwidth Forecasting

Monitor usage trends for capacity planning

Get a better understanding of growth trends, seasonality, surge, min/max band, and performance

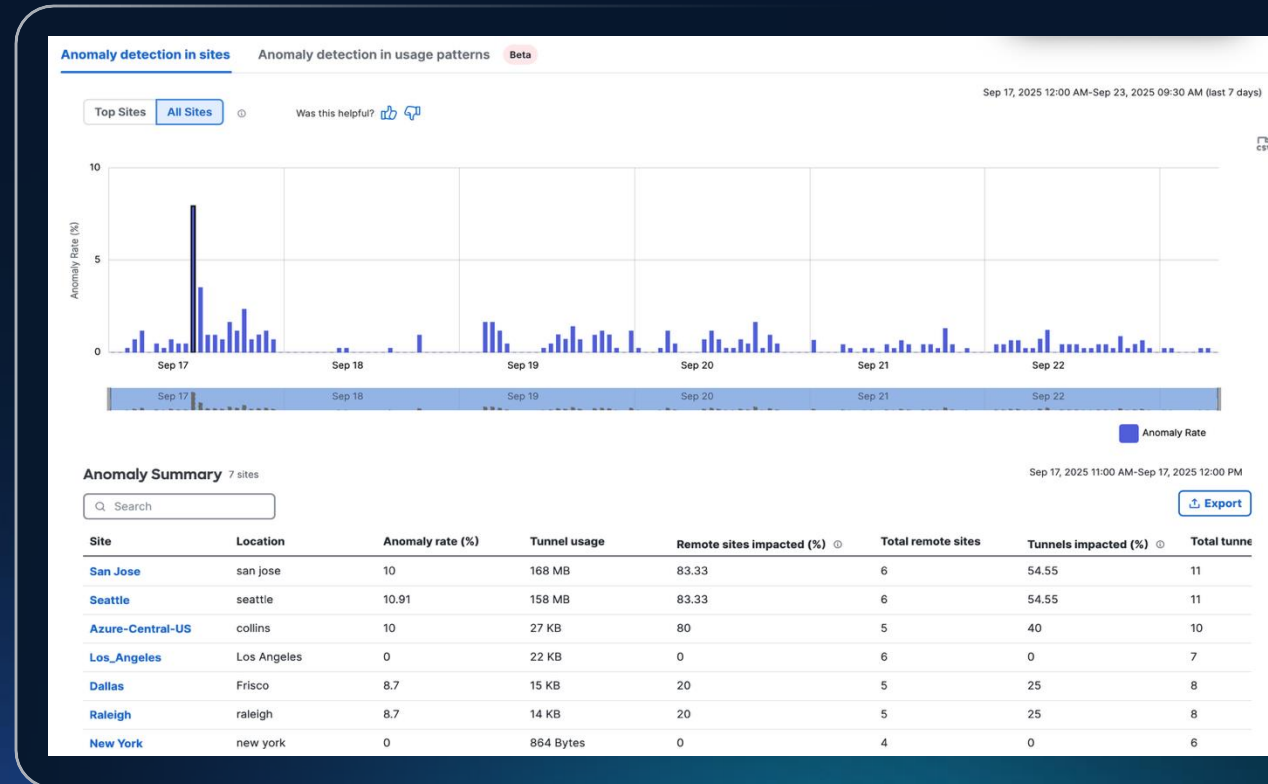


AI-powered Anomaly Detection

Identify unusual patterns in network metrics* & cellular usage** before they manifest into larger issues

Fine-tune your network to improve end-user experience

Streamline operations & reduce downtime



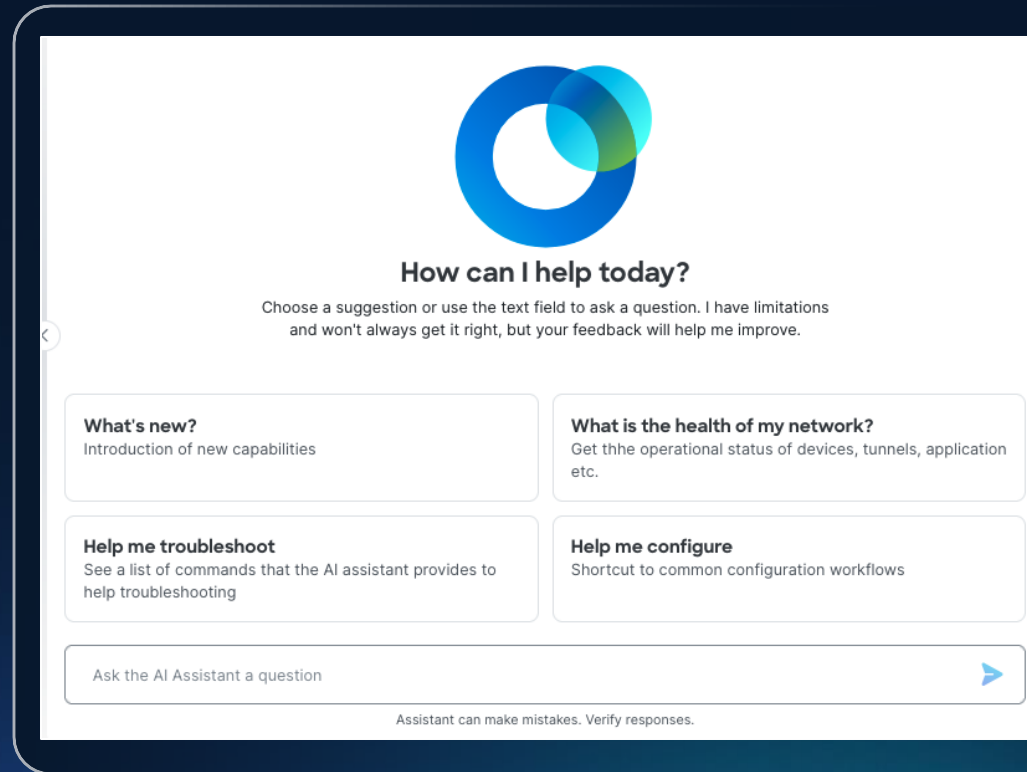
AI Assistant

Conversational,
intuitive interface to
help with operations

Contextual
documentation help

Troubleshooting
assistance

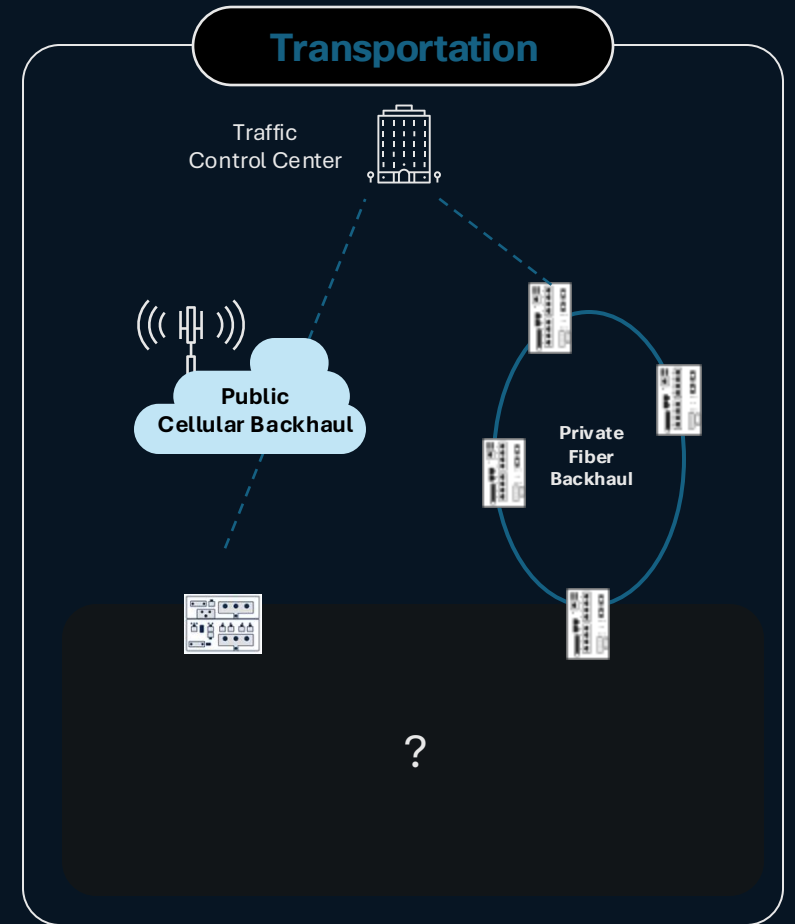
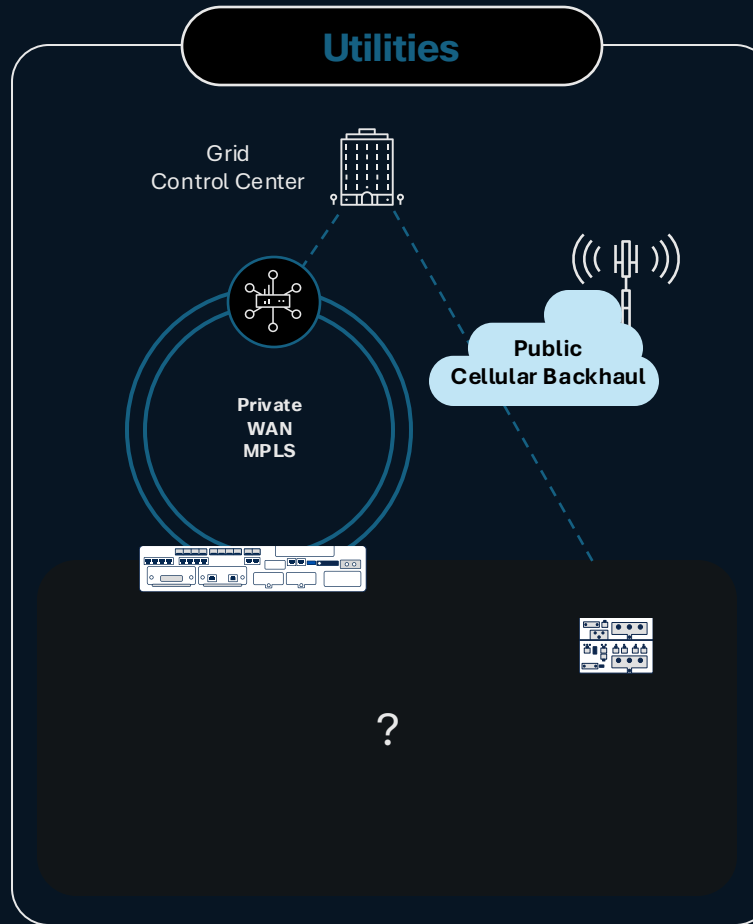
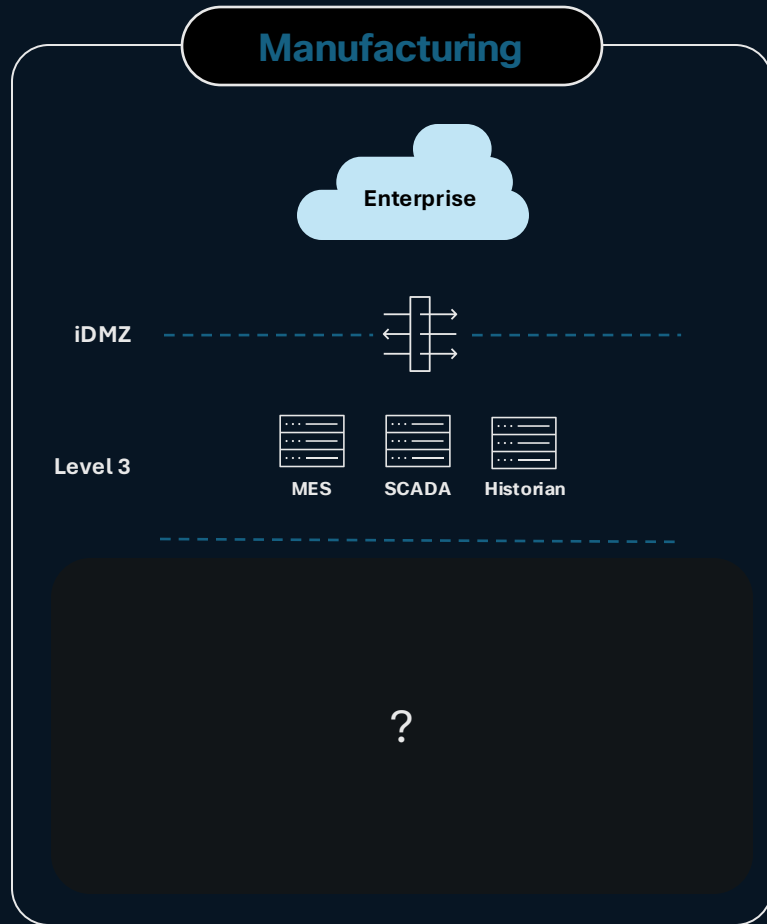
TAC case
management



Catalyst WAN Manager: Private Beta

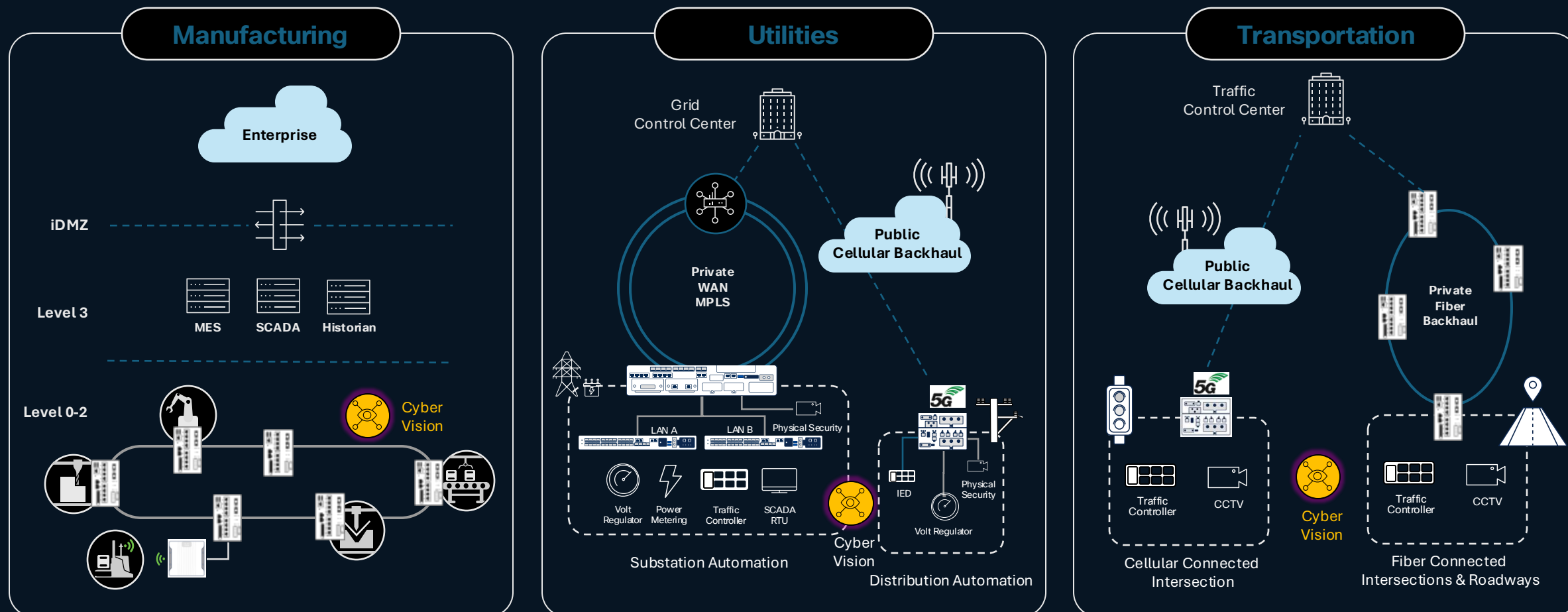
Security starts with visibility

but where you look matters



Security starts with visibility

Cyber Vision extends OT asset visibility and threat detection



Leave no asset behind

OT security posture Asset Visibility

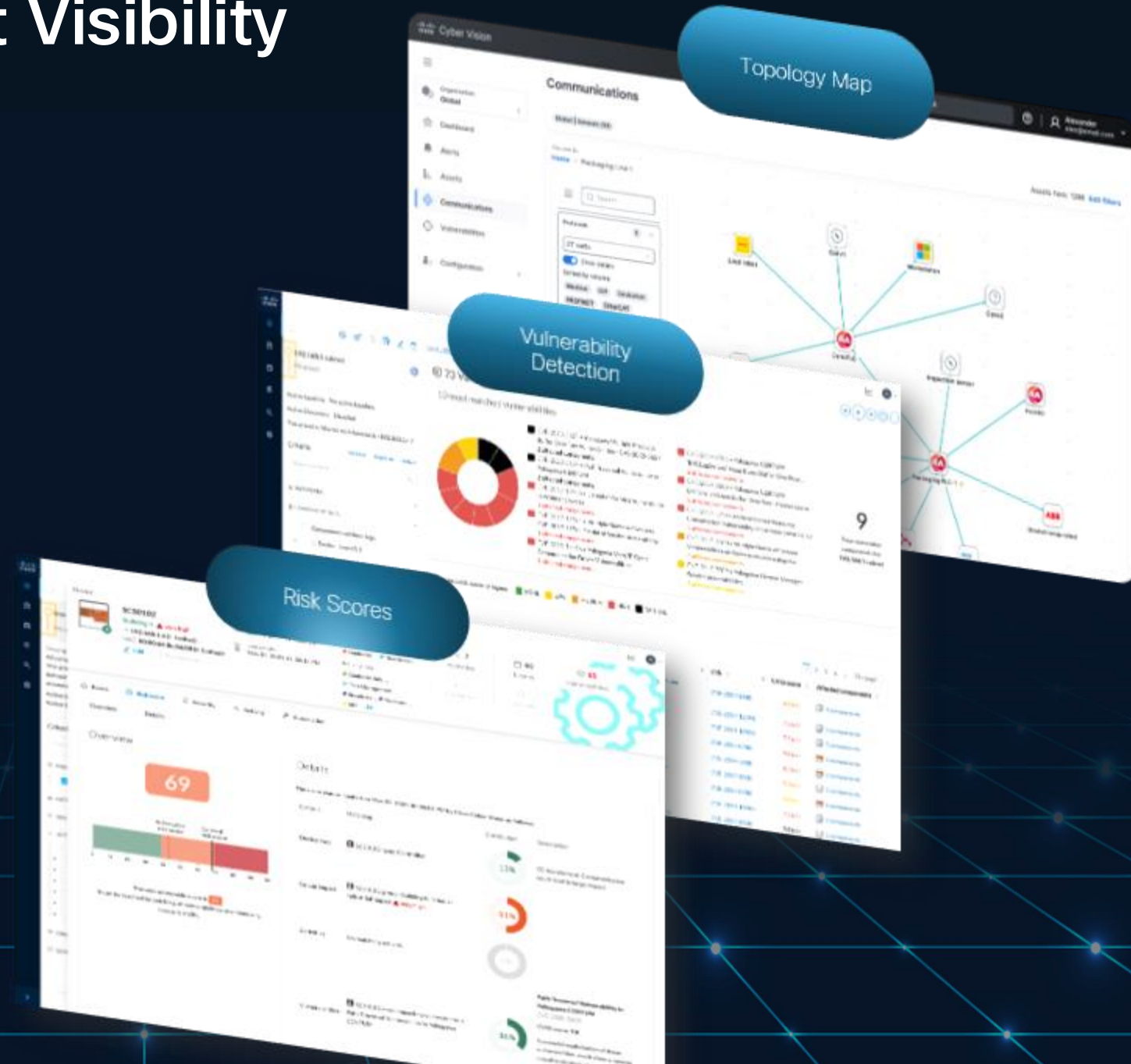
Cisco Cyber Vision

Vulnerability Detection

Identify known asset vulnerabilities so you can patch or protect them before they are exploited

Risk Scoring

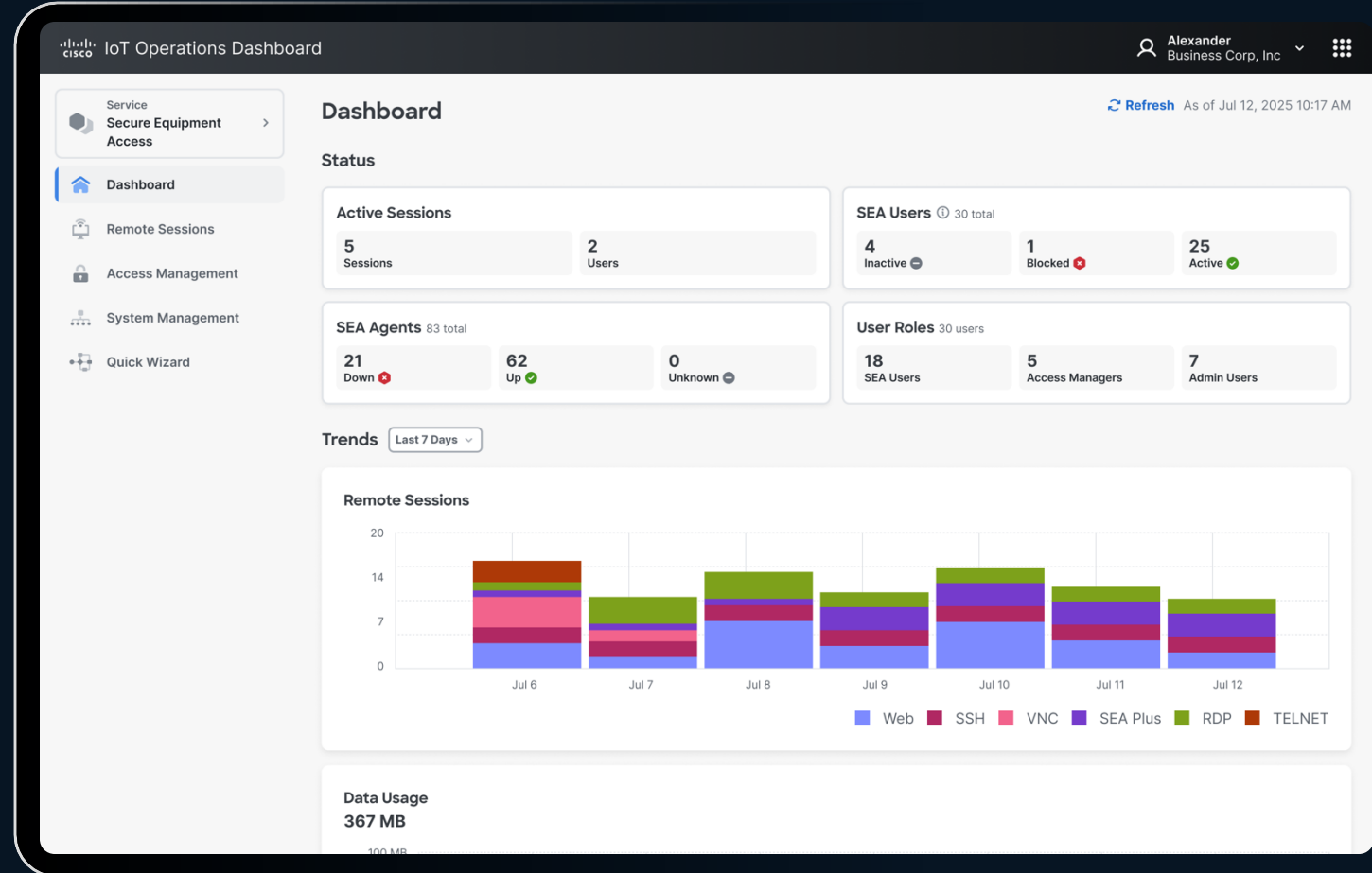
Risk scoring for assets, production cells and sites, to help prioritize action and improve governance



Secure remote login to assets

Secure Equipment Access

- ✓ Secure login with MFA, SSO, and remote user identity threat detection
- ✓ Role based access control - Remote users only see assets you expose to them
- ✓ Grant access on-demand or within a scheduled window
- ✓ Session recording, monitoring, and kill
- ✓ Send files remotely and securely to the remote asset



Secure the edge, Manage at Scale with Cisco SD-WAN



+
Cisco Security
built-in



Ethernet



Cellular



MPLS



5G



Starlink



Fiber

Multi-transport Agnostic



Application Firewall

>5000 layer 7 apps classified (1500 on box)



Cyber Vision

OT asset visibility and vulnerability detection



DoS Protection

Protection against denial-of-service attacks



TrustSec

End-to-end micro-segmentation



URL Filtering

Custom Domains & Web Reputation Score



Advanced Malware Protection

File Reputation & Sandboxing



Snort IDS/IPS

Most widely deployed IPS engine in the world



SSL Decryption

Detect Threats in Encrypted Traffic

IR8340 Only

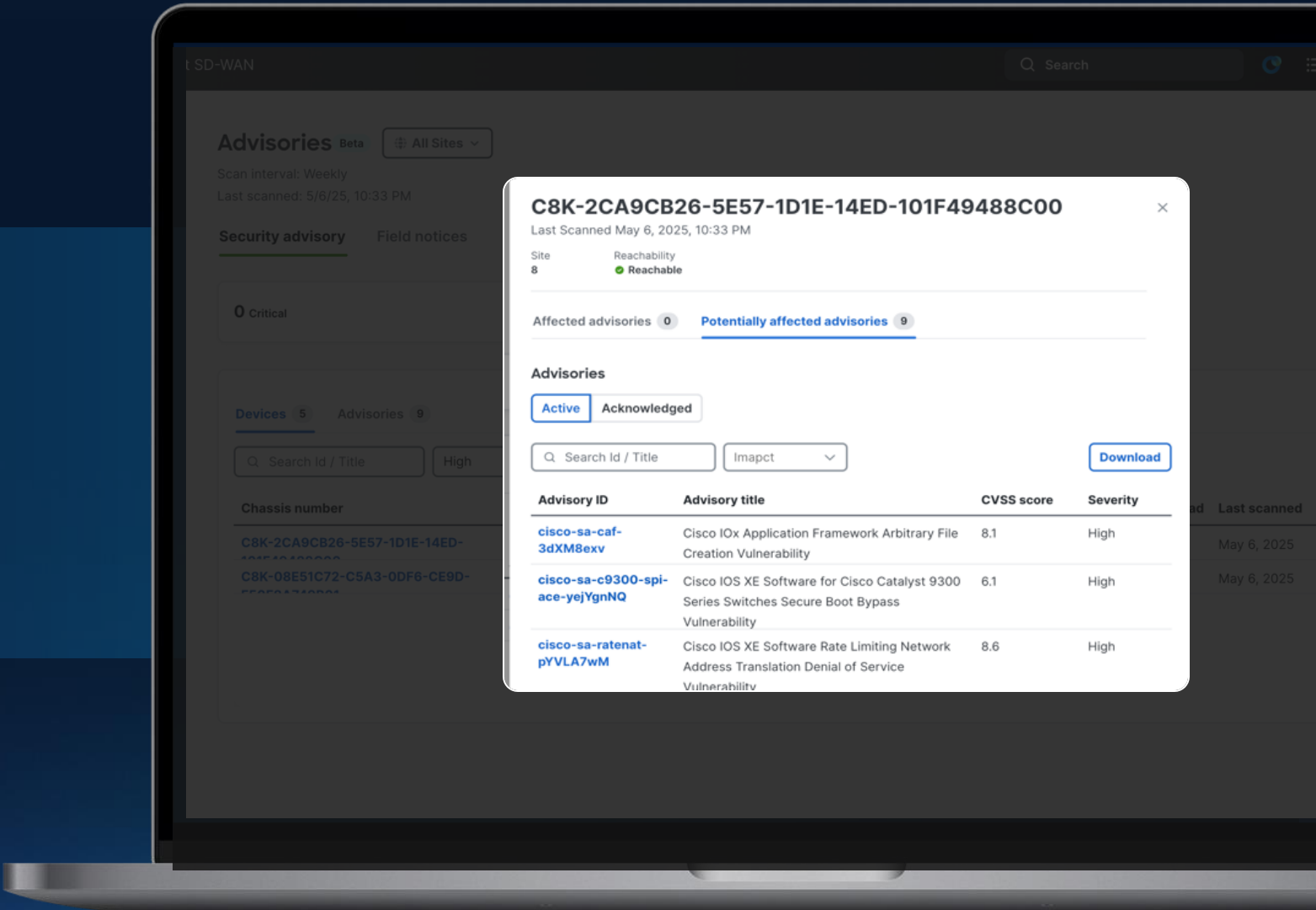


Secure Access Service Edge

SASE with Cisco Secure Access

Proactively stay ahead of alerts

Actionable insights on
Security Advisories and **Field Notices** applicable to your
SD-WAN fabric



C8K-2CA9CB26-5E57-1D1E-14ED-101F49488C00

Last Scanned May 6, 2025, 10:33 PM

Site 8Reachability Reachable

Affected advisories 0Potentially affected advisories 9

Advisories

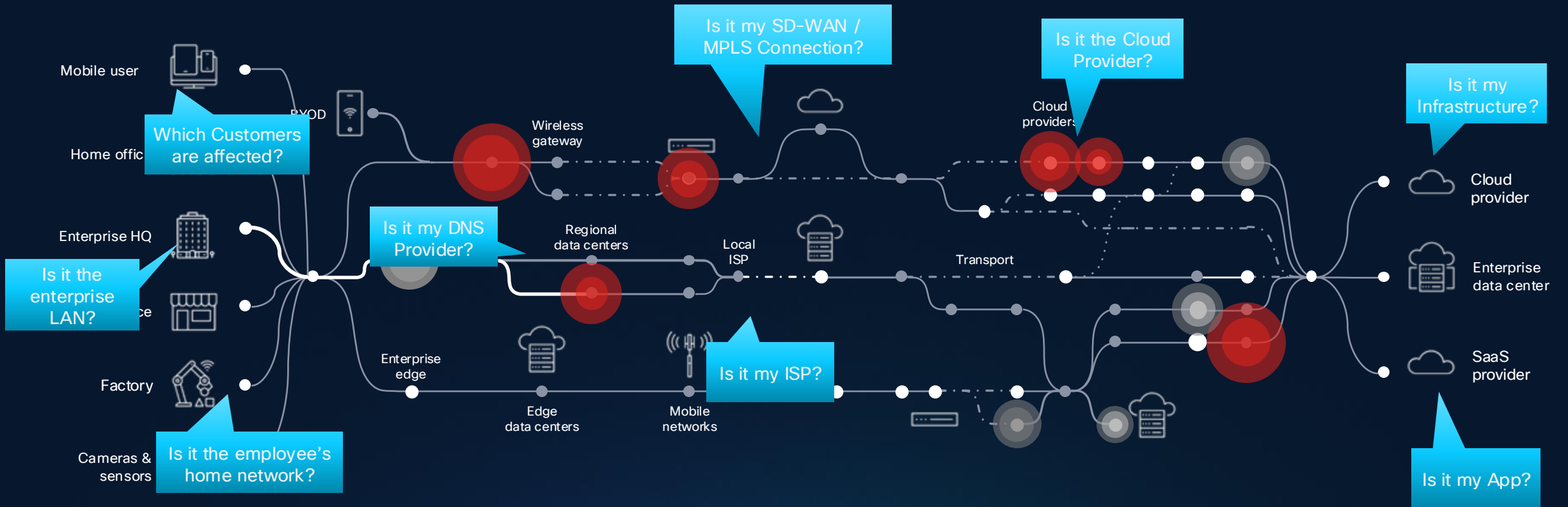
ActiveAcknowledged

Q Search Id / TitleImpactDownload

Advisory ID	Advisory title	CVSS score	Severity
cisco-sa-caf-3dXM8exv	Cisco IOx Application Framework Arbitrary File Creation Vulnerability	8.1	High
cisco-sa-c9300-spi-ace-yejYgnNQ	Cisco IOS XE Software for Cisco Catalyst 9300 Series Switches Secure Boot Bypass Vulnerability	6.1	High
cisco-sa-ratenat-pYVLA7wM	Cisco IOS XE Software Rate Limiting Network Address Translation Denial of Service Vulnerability	8.6	High

Troubleshooting through Fragmented networks

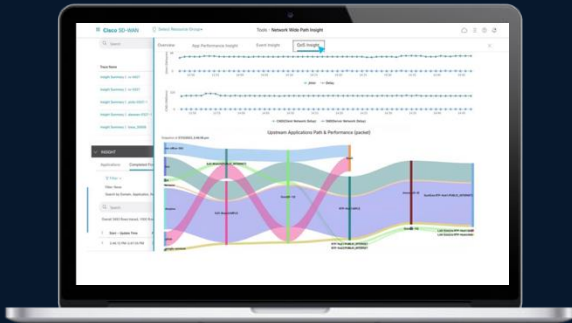
Clarity into exact area of outage



Deploy Thousand Eyes from SD-WAN manager for assurance and visibility from edge to cloud applications

Digitize your industrial network

leveraging the best of SD-WAN



AIOps With Secure SD-WAN Fabric

Best of OT Insights



Trust Anchor Module | Secure Boot

Best of OT Security

Embedded Security Stack



Application
firewall



Intrusion
Prevention
System (IPS)



Advanced
Malware
Protection



DNS
Security



Live
Signature
Updates



Denial of
Service
Protection



Segmentation



TrustSec



URL
Filtering



Secure
remote
access



Identity
Policies



Cyber Vision

Powered by Cisco Talos

Best of OT Networking



Simplified
Configuration
& monitoring



Lossless
Redundancy



Precision Time
Protocol



Traffic Load
Balancing



Quality of Service



Secure Plug
and Play



Service
Resiliency

Powered by Cisco IOS-XE

Takeaways

20+ years in Industrial
Networking

Extend Enterprise IT to
Industrial Networks

End-to-end
Network Visibility

Modernize and Secure with Cisco Industrial Networks