

# Enabling the Digital Campus

Innovative solutions for Higher Education

Steve Kaluza    [skaluza@cisco.com](mailto:skaluza@cisco.com)  
Solutions Engineer



# Technology demands on Higher Ed

- Millennials are expected to drive the integration and advancement of technology in higher education institutions.
- Gen Z students, as true digital natives, have strong opinions on climate change, equity, healthcare, and living costs.
- Gen Alpha students are used to technology in daily life and expect it to be fully integrated into their education.
- Australian public university **expenses rose 16%** from 2019 to 2023, while full-time equivalent **enrolments dropped 5%**.<sup>3</sup>
- New Zealand Universities attributed 2023 deficits to lower domestic enrolments and rising costs.<sup>4</sup>
- Technology could be doing more to support teaching and research, but universities have many priorities for available funding.<sup>5</sup>
- A global survey by the Digital Education Council A global survey found **86% of students and 61% of faculty use AI in education**<sup>6</sup>



# Technology impact on students

**70%**  
In Person

**79%**  
Online



Students indicated that technical issues impact their learning experience



**41%**  
May not continue

**39%**  
May not attend class

Students impacted by technical issues

# CAUDIT Top 10



## Leading through complexity

Cyber Strategy

Digital Strategy

The CIO Challenge  
(Data/Money/Risk)

## Strengthening foundations

Supportable, Sustainable  
& Affordable

Data Governance

Data Empowered Institution

## Delivering empowered experiences

Emerging Technologies and AI

Holistic Student Experience

Secure Digital Environment

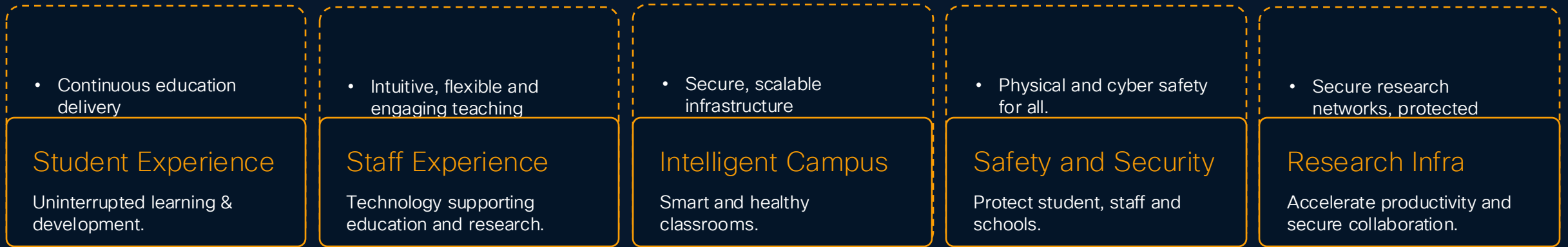
Identity and Access Management

# The Digital Foundation: A Business Imperative for Universities

In today's rapidly evolving education landscape, a robust digital foundation is no longer a luxury—it's the cornerstone of a university's success, competitiveness, and long-term sustainability.



# The Digital Foundation: A Business Imperative for Universities



Secure Networking & Segmentation | Building Analytics, Automation and Wayfinding | Multi-Cloud Security  
Application and Network Assurance | Common Security Policy | Sustainability

Cisco Digital Education Platform  
*Integrated and operating as a unified platform*

Cisco Networking  
*Securely connect everything*

Cisco Security  
*Secure everything*

Cisco Collaboration  
*With Meetings Platform choice*

Cisco Cloud & AI  
*Cloud and On-Premise*

# Digital Strategy: Laying the Foundation



**Empowers Learning & Research:** Enhances teaching, learning, and innovation through seamless access to tools and resources.



**Meets Student Expectations:** Attracts and retains a tech-savvy, digital-first generation.



**Fosters Accessibility & Sustainability:** Expands access to education while reducing environmental impact.



**Drives Operational Agility:** Streamlines processes, improves decision-making, and adapts to evolving demands.

# Strategic Focus Areas



**Hybrid Working & Learning:** Meeting the demand for equity in student access, staff flexibility, and long-term resilience



**Smart Campus Infrastructure:** Monitoring and optimising spaces and enhancing environmental monitoring for a better campus experience.



**Sustainability:** Aligning with global sustainability goals through energy-aware and connected systems



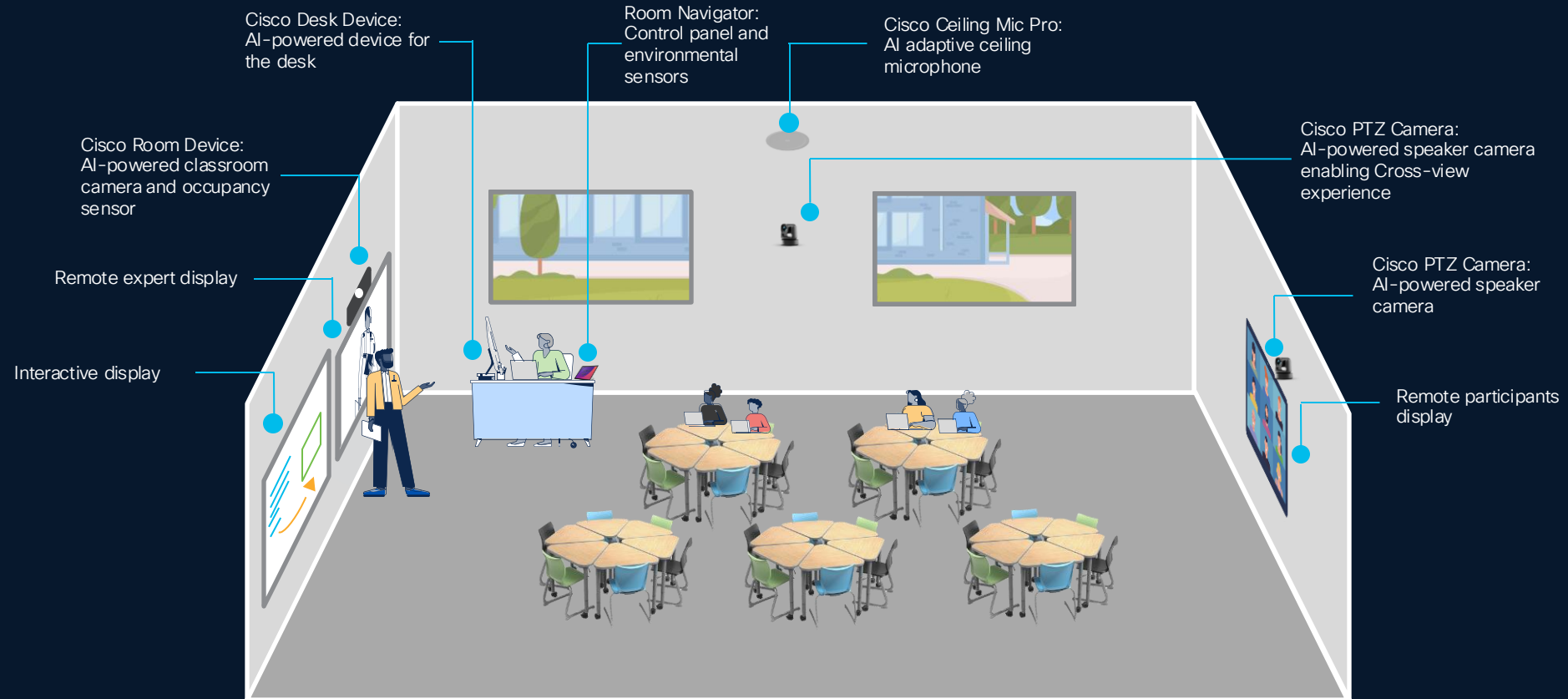
**Cyber Security:** Protecting the expanding digital teaching and research environments



**AI:** Supporting university strategy and research goals by enabling appropriate access to AI services and capabilities

# Hybrid Working & Learning

# Seamless hybrid learning environments



# Total Cost of Ownership Assessments of AV

Motivated by anecdotal evidence from Cisco customers, this tool aims to assess the multi-year cost of more traditional AV solutions in a university and compare this against solutions built on Cisco Collaboration Devices.

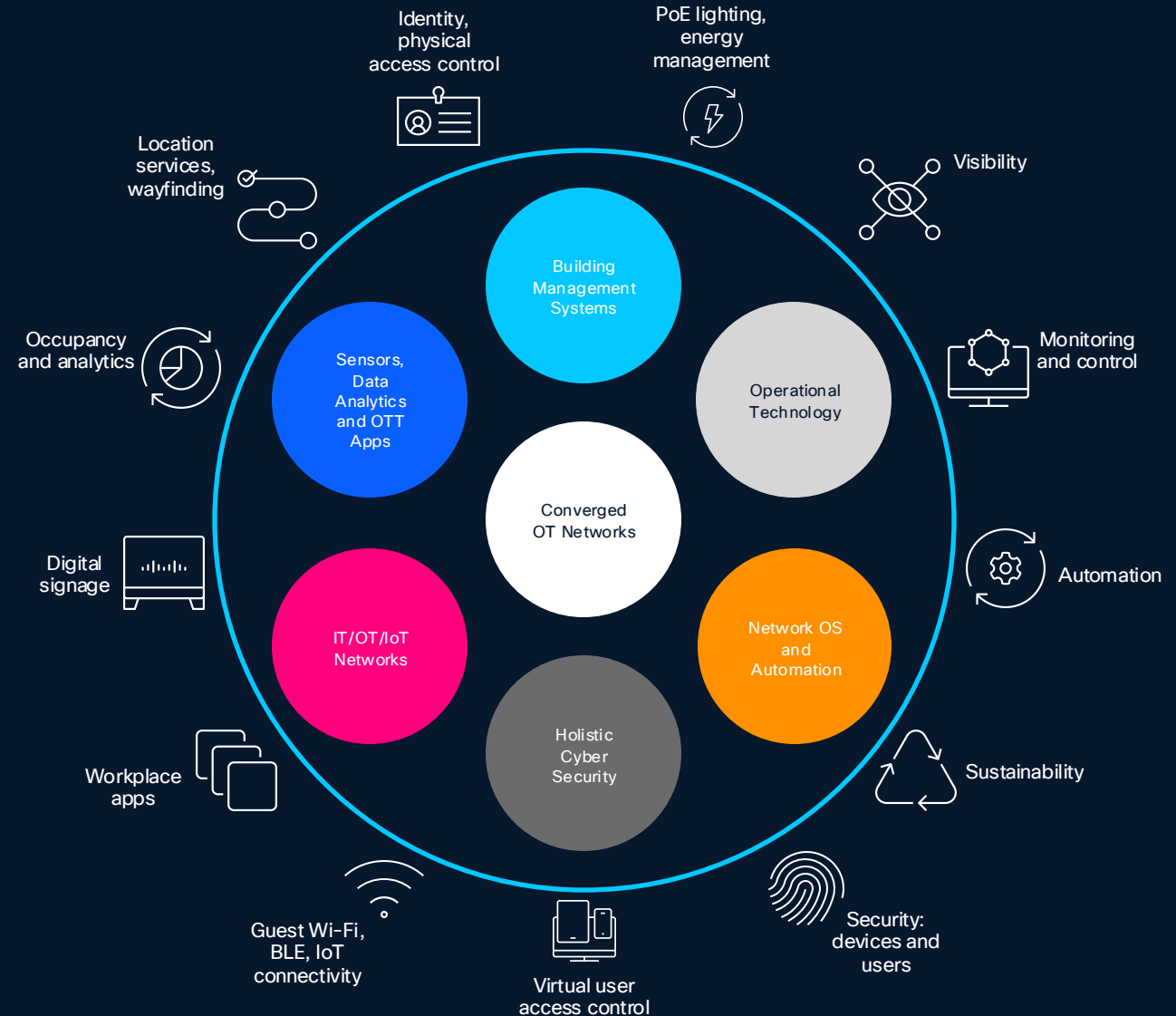


# Smart Campus Infrastructure

# Smart building technology

Smart buildings, workplaces and classrooms:

- See real-time occupancy
- Environmental conditions
- Easily locate available rooms
- Use intelligence to drive sustainability outcomes
- AC versus DC power



# The Intelligent Campus



## Space Explorer Kiosk

The interface for your smart campus. Enable students and staff to find meeting rooms, desks, and amenities on interactive kiosks with floor maps.



## Campus Navigation

Get turn-by-turn directions to workspaces (meeting rooms, desks) and other points of interest, including accessibility path navigation.



## Smart Rooms for Wellbeing & Sustainability\*

Meeting rooms that are intelligently aware of occupants & environment, & automatically adjust ventilation



## Space Utilization Analytics

Optimize and consolidate unused space and right size real-estate for cost savings



## Smart Desking\*

Find, book and sign into a desk for the day from anywhere - from home or on kiosks signages when you arrive at the office

# Experiences and insights built on the University foundation

## Experience

## Outcomes

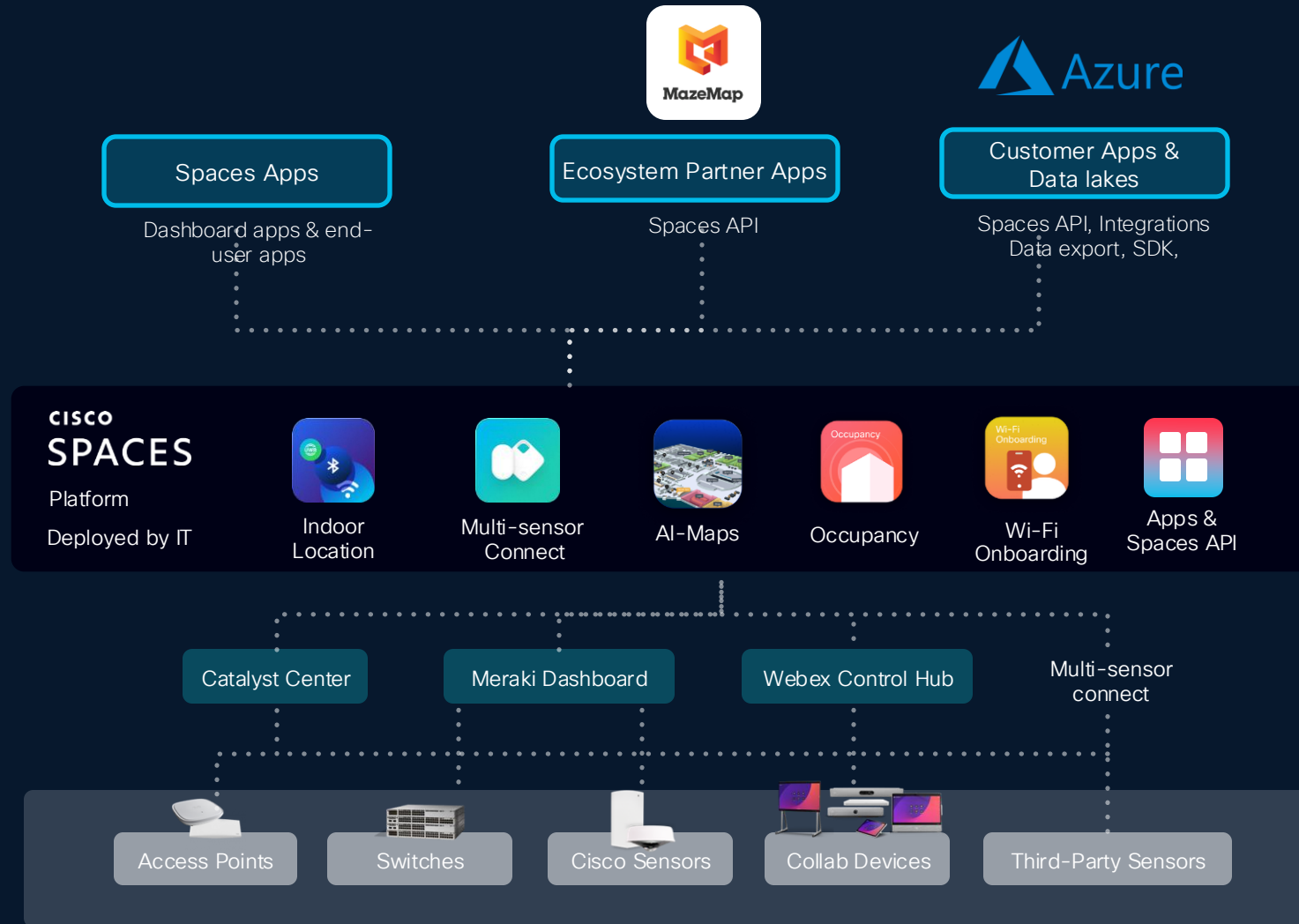
Native & Partner Apps & APIs for Business Outcomes

## Software

The OS for Smart Spaces, managed and deployed by IT

## Hardware

Cisco Hardware as the Foundation



# AI-Ready Secure Networking Hardware

## Cisco C9000 Smart Switches

Powered by Silicon One, delivering exceptional throughput, quantum-secure networking.

## Cisco 8000 Secure Routers & Secure Firewall 200 Series

Advanced SD-WAN and SASE integration with up to 3x previous throughput. The Secure Firewall 200 Series adds on-box threat inspection and integrated SD-WAN for branch security.

## Enterprise Wi-Fi innovations

Industry-first Wi-Fi 7 access points for large venues like stadiums and theatres, offering high-speed connectivity. The Cisco Campus Gateway enables seamless cloud management, scaling up to 5,000 APs and 50,000 clients without re-cabling or reconfiguring.

## Expanded industrial solutions

Ruggedized switches for demanding applications, plus new Ultra-Reliable Wireless Backhaul (URWB) for resilient and scalable operations.

## Smart Switches



## Secure Routers



## Campus Gateway



## Large Venue Wi-Fi 7



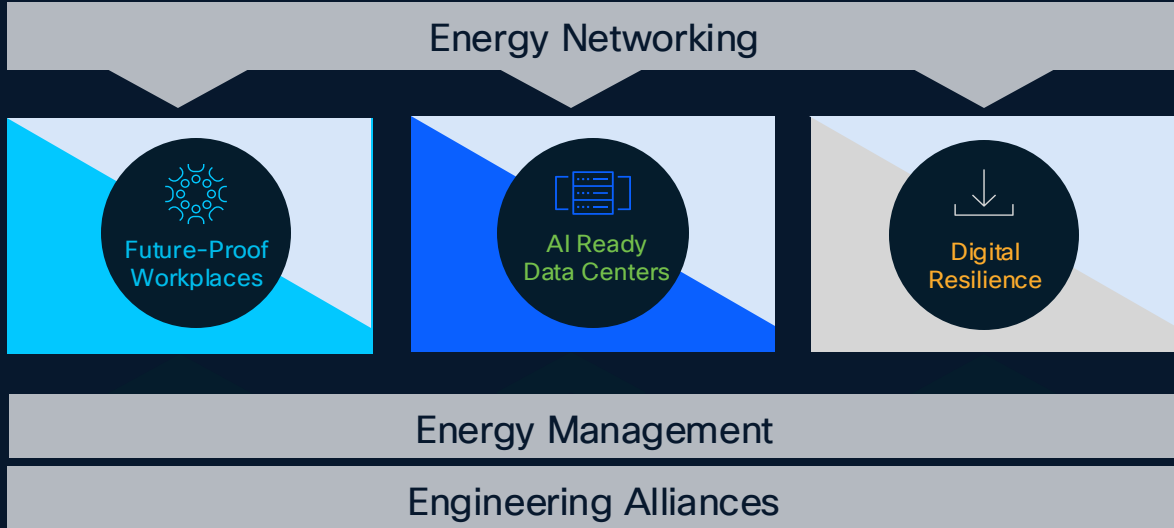
## Scale OT for AI





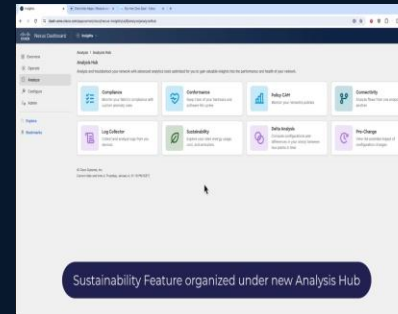
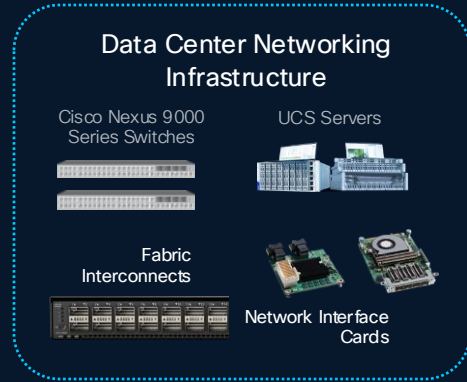
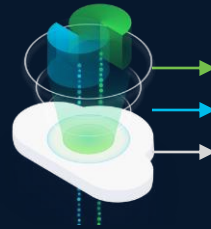
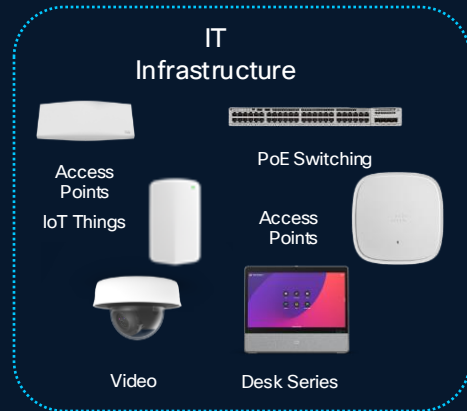
**Sustainability**

# Cisco Vision for Sustainable Technology: To help customers track, report and optimize energy, cost, and carbon footprint

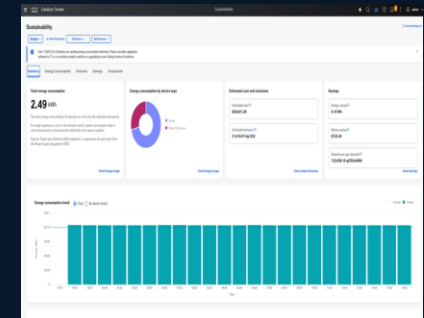


# Network energy management

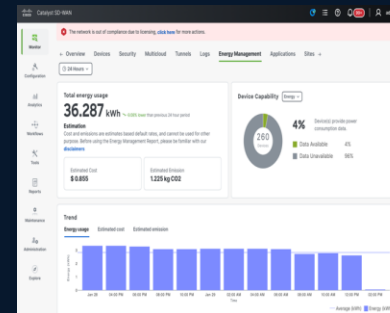
Available today



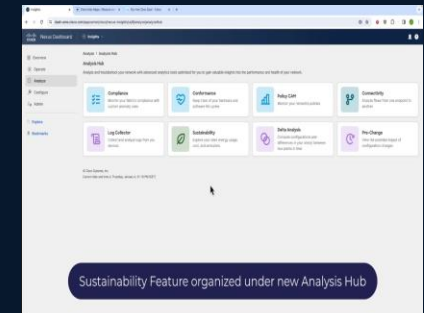
Nexus Dashboard GA 3.2



Catalyst Center EFT 3.1.3



SDWAN GA 17.16.1a



Control Hub GA

# Leverage data for sustainable outcomes

## Foundation infrastructure

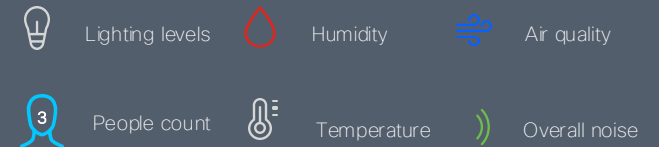


## Cisco Networking & Collaboration Devices



## Smart Outcomes

- BMS integration
- Automation based on real time occupancy changes and environmental threshold triggers



# Cyber Security

# Network Segmentation for Critical Infrastructure

“Modern campus networks must evolve into IBN-Driven automated, secure fabrics that enable Zero Trust, unify wired and wireless, and support hybrid/cloud operations.” - Industry Analysts

## NZISM

- 10.8.3. A large, unsegmented network presents a large attack surface with greater susceptibility to the rapid spread and dissemination of system faults, weaknesses, vulnerabilities and attacks.
- 10.8.8. Network segmentation is an effective strategy for protecting access to key data assets, and impeding the lateral movement of system faults, threats and malicious activity.

## Cisco SD-Access Fabric Value



### Operational simplicity

Network simplification, Unified wired & wireless



### Secure networking

Identity-based segmentation, multi-domain policy



### AI-driven Assurance

Network insights & Analytics

# Future-proofing UWA



- University of Western Australia
- 28,00+ students
- 10,000+ connected devices

*“Through our strong partnership with Cisco, we have been able to deliver a secure and resilient network delivering a significantly improved student experience, enabled a modern workplace, and delivered high-speed research networking capabilities.”*

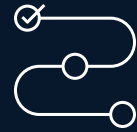
Peter Seddon, Chief Information Officer

[Case study link](#)



## Customer Challenge

- UWA’s outdated network posed risks to teaching, research, and administrative operations, requiring immediate improvements. The university aimed to enhance the student experience by supporting hybrid learning, strengthen the security and scalability of its research network, improve efficiency and agility through automation, ensure compliance with cybersecurity legislation, and reduce emissions and energy costs to promote sustainability.



## Solution Implemented

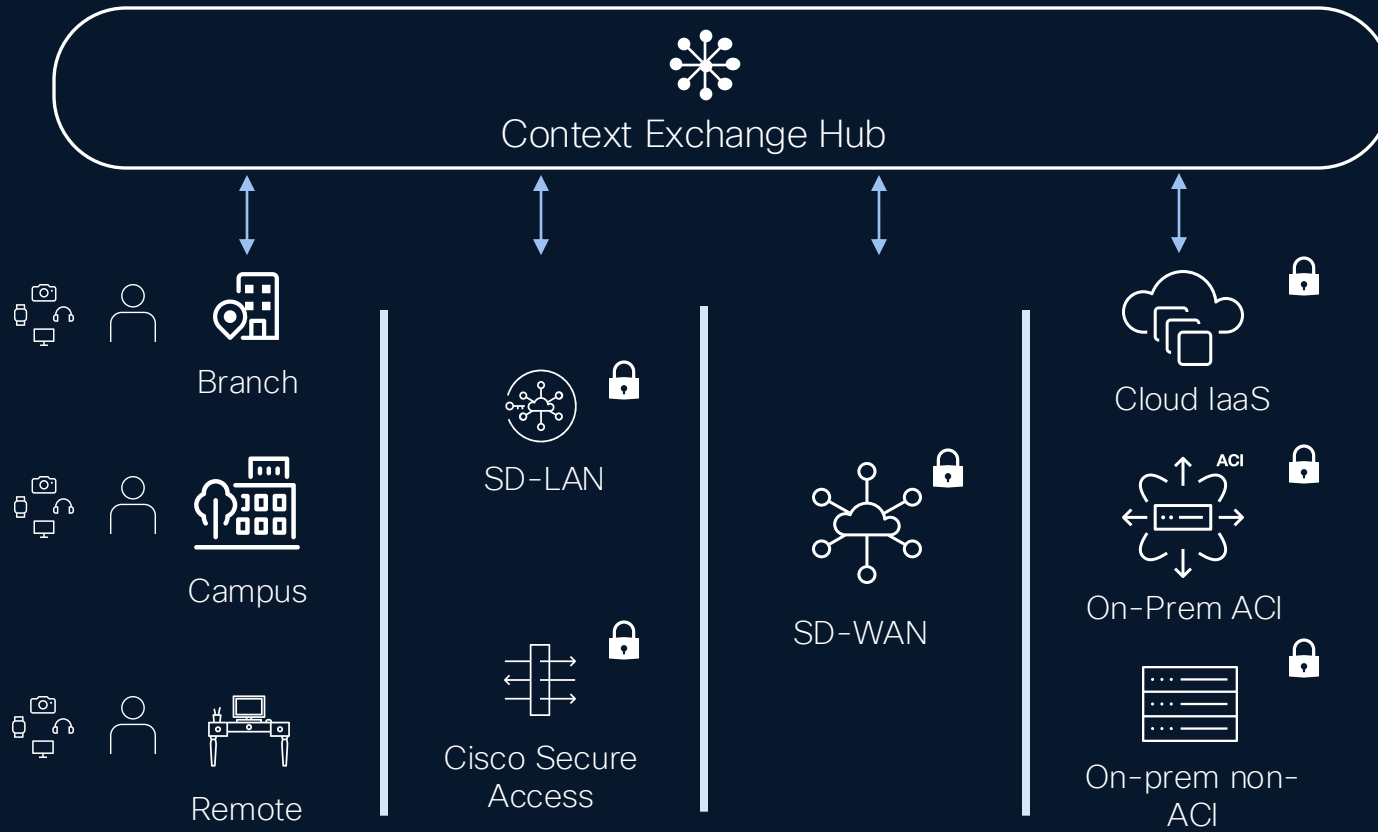
- The University of Western Australia (UWA) collaborated with Cisco to overhaul its core network, replacing equipment like Wi-Fi access points and adding an analytics platform to optimize space utilization. Key components included Cisco Catalyst Center for automating and securing network access, Cisco Software-Defined Access for managing IoT and user access with zero-trust capabilities, and Cisco Spaces to transform buildings into smart spaces using the existing network infrastructure.



## Business Outcome

- Improved student experience including hybrid learning capabilities
- Increased security to support research
- Improved operational efficiency
- Improved cyber resilience and compliance

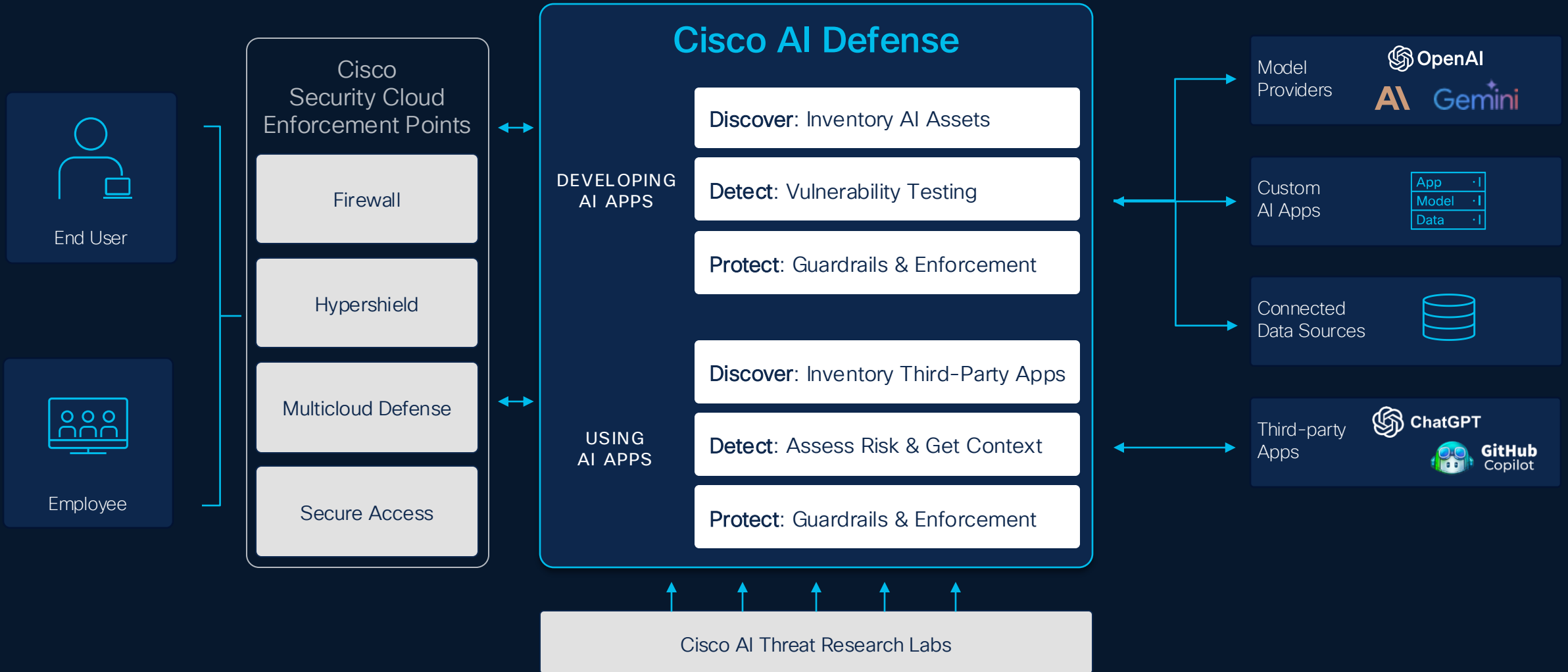
# Common Policy



- ✔ Build context in its local domain and store it as standard scalable group tags (SGT)
- ✔ Share context everywhere, across networking and security domains
- ✔ Enforce consistent SGT based policies, enable simple and unified policy experience

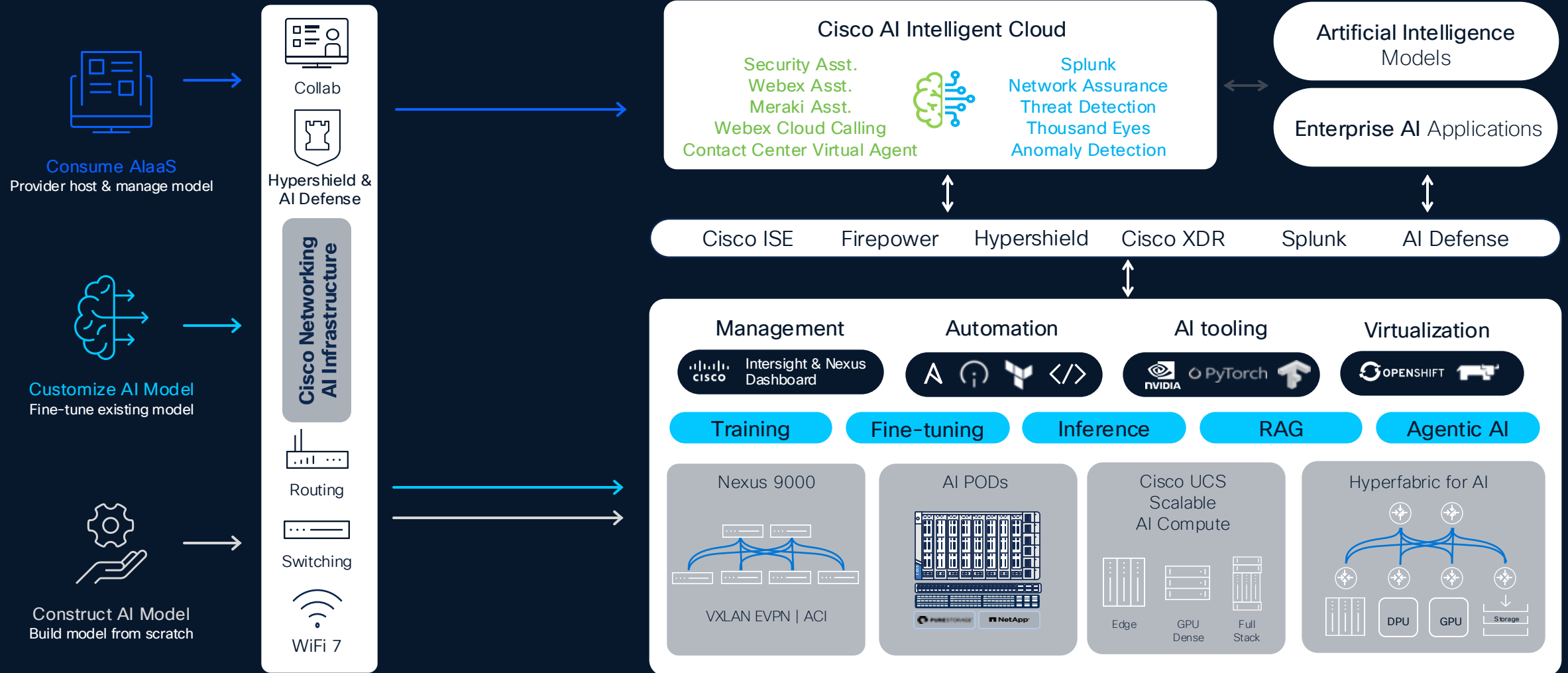


# Cisco AI Defense Solution



AI

# Consuming Cisco AI to enable AI

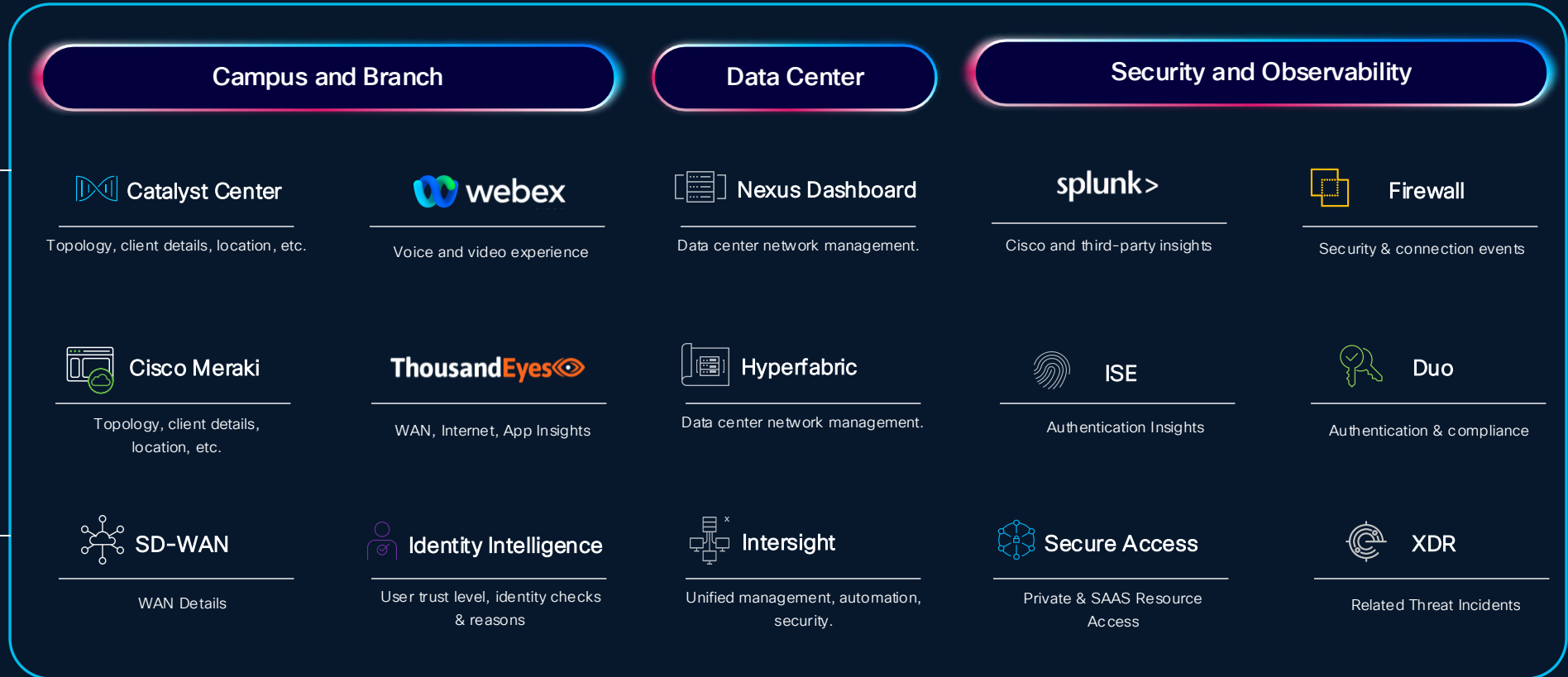
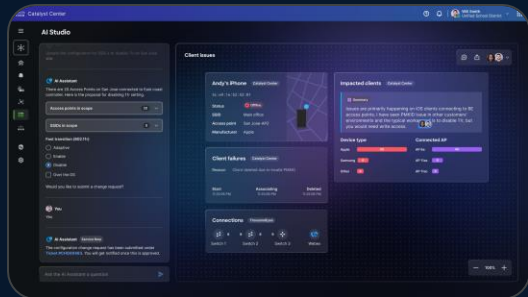


# AgenticOps with cross-product skills and unified data

AI Assistant



AI Canvas



**Next steps**

# Roadmap to digital transformation

## Network Modernisation

A secure, high-performance network that meets growing demands for connectivity and digital services.

Key Technologies:

- Cisco SD-Access: Secure, automated network with consistent user experience and easy management.
- Campus LAN/WAN and Wi-Fi 6/7: High-speed, seamless connectivity for students, staff, and faculty.
- Data Centre Modernisation to support hybrid workloads with advanced infrastructure

1 Foundation

## Unified IT Systems

Enable efficient operations, better resource use, and seamless collaboration across campuses.

Key Technologies:

- Cisco SD-WAN: Secure, optimized connections for campuses, cloud services, and remote learners.
- Hybrid Cloud: Combines on-premise systems with leading cloud platforms.
- Cisco ISE: Secure, role-based access for users and devices.

2 Integration

## Smart Digital Experiences

A modern learning environment that enhances student and faculty engagement while boosting campus efficiency.

Key Technologies:

- Cisco Collaboration devices that support hybrid learning, virtual classrooms, and remote collaboration.
- IoT & Smart Campus: Enable smart lighting, occupancy tracking, and energy efficiency.
- Personalized Portals: AI-powered platforms for seamless student services and self-service options.

3 Engagement

## Data-Driven Innovation

Use data strategically to drive academic success, operational efficiency, and innovation.

Key Technologies:

- Cisco Catalyst Center: Advanced analytics, automation, and predictive insights for optimized operations.
- AI and ML Tools: Support adaptive learning, resource management, and student success predictions.
- Cisco SecureX: Unified threat protection, incident response, and system compliance.

4 Transformation

## Intelligent & Resilient University

A future-ready campus that adapts to trends, enhances resilience, and drives digital innovation.

Key Technologies:

- 5G, Advanced Connectivity: Ultra-fast, low-latency connections for AR/VR learning and research.
- Zero Trust design to secure sensitive data and ensure safe campus operations.
- Sustainability solutions and tools to monitor and reduce energy while meeting environmental goals.

5 Visionary

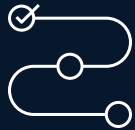
# Partnering for success

## Focus on Customer Pain Points



- Lean IT Teams (Insourcing vs Outsourcing)
- Digital Transformation
- Reduced IT Budgets
- Increased Cyber Attacks
- Adoption of AI

## Meet customers where they are on their journey



- Provide expertise when & where customers need it most
- Solve immediate problems and build credibility
- Leverage Cisco's Buying Programs to help overcome budget constraints

## Leverage the power of the platform



- Take full advantage of Cisco's extensive portfolio & recent product announcements
- Demonstrate the benefits of vendor consolidation
- Drive operational efficiencies, cyber resilience and compliance

## Be awesome



- Work closely with your Cisco Account Team
- Identify your niche & value you can bring to the Account
- Help identify new buyers outside of traditional IT Teams and Procurement

