

Elevating Hybrid Work and Learning in Higher Education

Blueprint for Chief Information Officers



Cisco
Country Digital
Acceleration

Why Hybrid Work and Learning Matters

The past five years has seen profound changes to the way universities teach and how they are administered. While the premium experience remains in-person, and on campus, the modern reality is most meetings (98%) and a large number of classes will involve at least one remote participant. The challenge for universities is not simply to create the mechanism for people to join a meeting or class remotely, but to ensure the remote experience is as close as possible to being in the room. Universities are also realising that true hybrid work and learning is not simply about video conferencing, but involves:

- Embedding high-value functionality for participants such as real-time annotation, language and transcription services, recording / playback features and background noise cancellation

- Adapting to the space and presenter including tracking of the active speaker, one-touch initiation of sessions, dynamic content sharing, embedding of third-party learning tools, and capacity for real-time collaboration between in-person and remote participants
- Collection and presentation of rich analytics (occupancy, utilisation and engagement) to improve decision making, experiences and resource allocation.

True hybrid work and learning demands more than ‘best efforts’ from universities; it is a basic expectation of every staff member and student.

“In today’s blended learning environment, students require inclusive, efficient and effective IT systems for a positive digital user experience, whether they are on-campus or remote.”

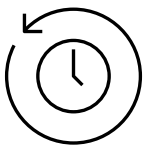
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The Current Hybrid Work and Learning Experience in Higher Education

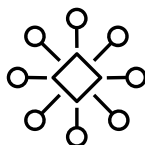
The COVID-19 pandemic accelerated the shift towards Hybrid Work and Learning but delivered patchy outcomes. The shortcomings were less obvious when all participants were remote but were gradually revealed as meetings and classes involved both on and off-campus attendees. The variability of individual experiences has impacted student engagement, teacher confidence and staff productivity.

Figure 1. Factors Contributing to Issues with Adoption of Hybrid Work and Learning



Prioritising Speed over Impact

The urgent move online often overlooked aspects like scalability, user experience, equitable access, cost-efficiency, and sustainability in work and learning areas.



Solution Fragmentation

Institutions frequently leaned on a mix of solutions instead of a unified platform. This increased the complexity of integration, elevated failure risks, and spiked costs, all while compromising user experience.



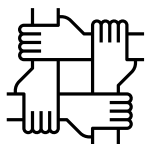
Commercial and Technical Uncertainty

The absence of standardised practices added to the uncertainty, with universities hesitant to fully commit to specific solutions or vendors.



Budgetary Constraints

Financial limitations for universities forced them to make trade-off decisions between spending on technology and physical infrastructure, especially given the costs and risks of integrating varied systems for hybrid environments.



Support for Multiple Collaboration Systems

The necessity to support diverse collaboration systems added complexity and increased the burden on support teams.

“Delivering true hybrid work and learning is a major priority for UQ given the importance placed on student experience, as well as management simplicity. UQ is focused on simplifying and streamlining the technology deployed into learning spaces so that we can ensure great lasting experiences for students and staff.”

- Rowan Salt, CIO, University of Queensland

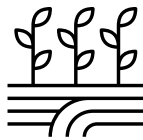
As understanding of true hybrid work and learning practices has grown, so has the capability of technology to deliver it. Physical learning spaces have had to evolve to become:

Figure 2. How Hybrid Work and Learning Enhances Physical Spaces



Smarter

Leverage cutting-edge AI, sensors, and adaptable APIs for enriched experiences and streamlined operations.



Sustainable

Prioritise energy efficiency and align with sustainability goals prevalent in higher education.



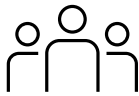
Insightful

Offer real-time and retrospective analytics encompassing facilities, IT, people, and software.



Cost-Efficient

Minimise Total Cost of Ownership by utilising AI, power over ethernet, and AV over IP to modernise archaic setups.



Adaptable

Modify space layouts and functions without technology or infrastructure restrictions.



Simplified

Opt for fewer standalone solutions, ensure smooth integration, and make management and support straightforward.

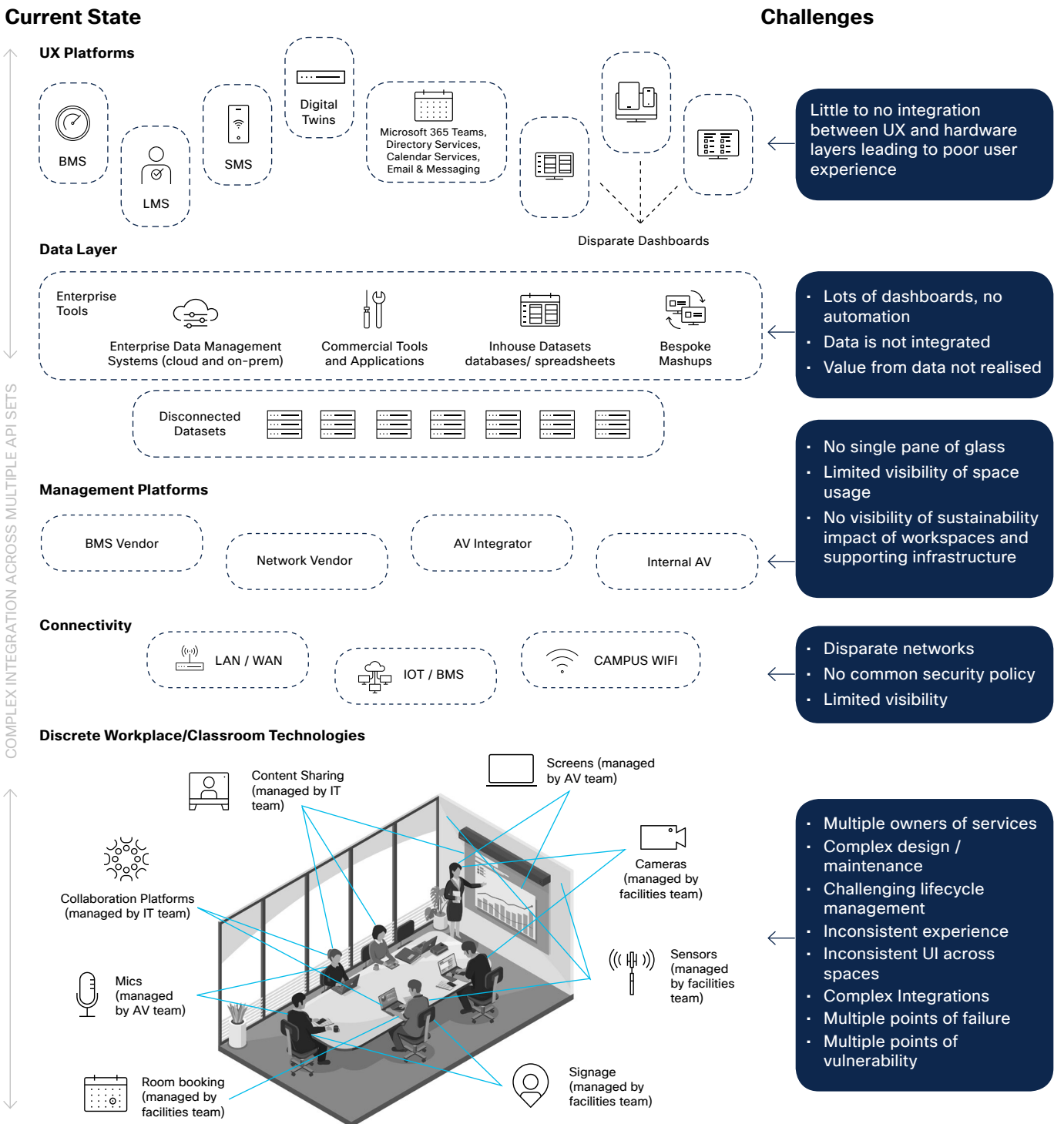
These capabilities and enhancements are being enabled by:

1. Rapid technology advancements in AI, sustainability, analytics and interoperability, making true hybrid work and learning easier and lower cost whilst delivering richer experiences.
2. Better collaboration between key vendors. For example, Cisco and Microsoft entered into a global partnership in September 2022, with Cisco becoming a certified Microsoft Teams Room devices partner and both organisations taking a more collaborative approach to joint development and go-to-market activities. The partnership brings more choice, flexibility and capabilities to Cisco and Microsoft customers, including simplified architectures, enhanced interoperability and improved support.

Designing for Hybrid Work and Learning

Current hybrid work and learning approaches tend to be highly fragmented with discrete platforms, disconnected point solutions and islands of data that are complex to integrate and analyse. The management of teaching and meeting rooms is highly distributed with IT, facilities, AV and education services teams responsible for individual services and assets in each space.

Figure 3. Typical Current State Workplace



Future State of Hybrid Work and Learning environments moving beyond traditional AV

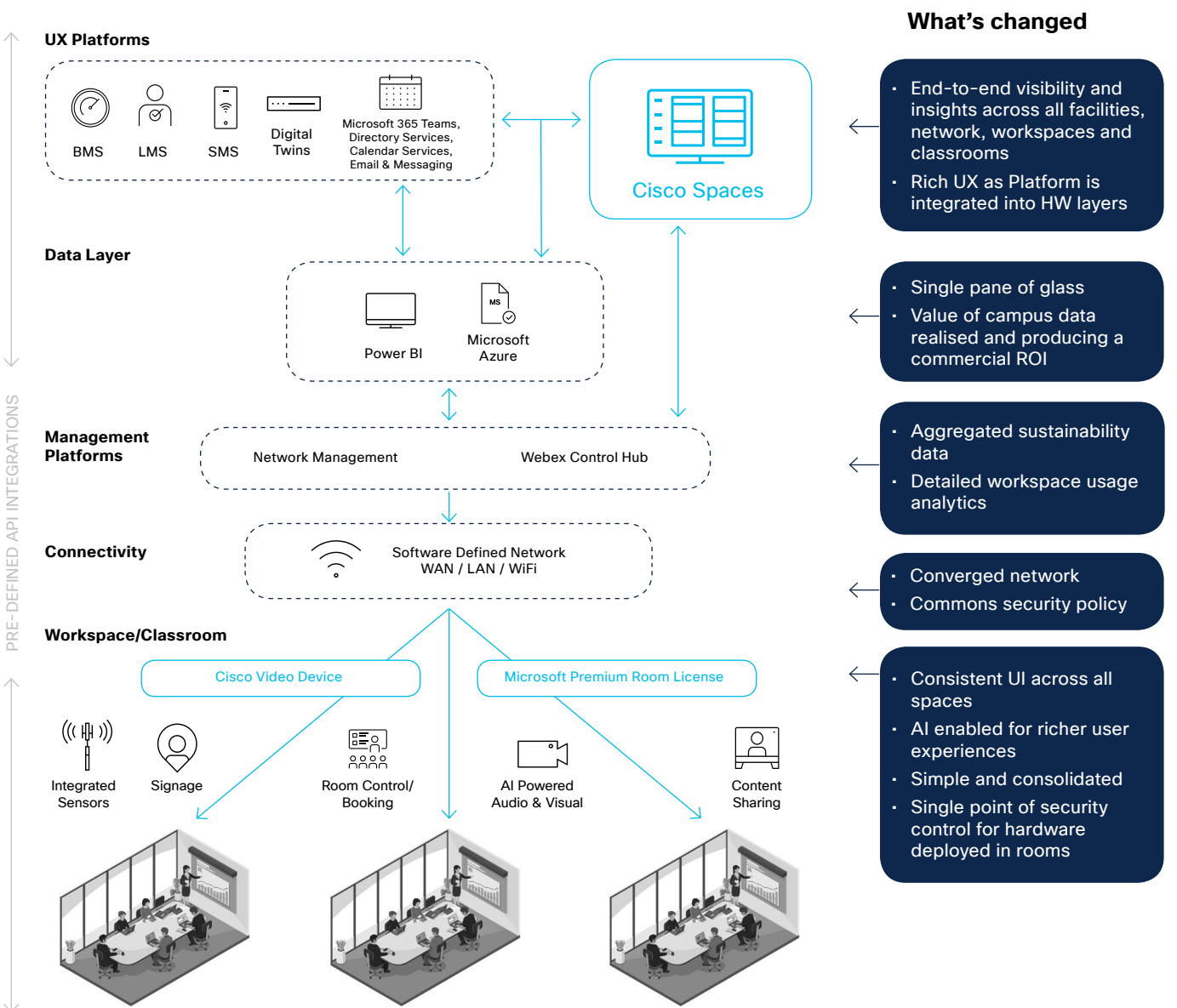
True hybrid work and learning is underpinned by secure connectivity, high levels of functionality and rich analytics that allow universities to:

Remove traditional AV equipment: New solutions offer native functionality once provided only by AV specialists including room kits with built-in microphones, cameras, controls, environmental sensors and displays.

Ensure visibility of the full technology stack: Pre-defined API integrations offering instant visibility and control over the hybrid work and learning environment, including providing insights across all facilities, network, workspaces and classrooms.

Unify approach to security: Holistic security policy that applies to every facet of the technology stack and provides better protection.

Figure 4. Future State Workplace



Realising More Business and Education Value

Current hybrid work and learning approaches tend to be highly fragmented with discrete platforms, disconnected point solutions and islands of data that are complex to integrate and analyse. The management of teaching and meeting rooms is highly distributed with IT, facilities, AV and education services teams responsible for individual services and assets in each space.

1. Improved Experiences

Improved equity and more active participation from remote and in-person participants:

- Advanced audio intelligence to eliminate background noise and improve voice clarity
- Cutting-edge video intelligence for compelling and immersive video
- Wirelessly share using protocols like Miracast, Airplay, MS Teams sharing and USB
- Super resolution for HD experiences on low bandwidth
- Human Language AI for real-time transcription and translation
- Generative AI for intelligent meeting notes and highlights
- AI-powered workspaces for gesture recognition and augmented reality
- Support for multiple meeting platforms.

2. Analytics, Insights and Visibility

Real time and historical data to improve decision making:

- Real time end-to-end visibility of the user experience, thereby improving troubleshooting and time to resolution for incidents
- Intelligent quality of experience analytics e.g. synthetic test calls
- Sensors that aid facilities, IT and educational stakeholders by monitoring and actioning workflows based on environmental factors like occupancy, air quality, condition of the room (e.g. leaving rubbish behind), humidity, temperature and noise.

3. Save up to 80% in total cost of ownership (TCO)

- Consolidating equipment for unified control of workspaces
- Implementing AV over IP for simplified connectivity
- Utilising integrated sensors for occupancy and environmental monitoring to make intelligent decisions on power, heating, ventilation and air conditioning (HVAC) and lighting
- Simplifying management and support through consolidated platforms
- Reducing elements that need to be managed for security compliance
- Ensuring workspace flexibility without major cabling changes.

4. Sustainability / Contribution to Net Zero

Achieve 30% to 60% power savings in spaces by:

- Simplifying AV equipment to reduce power consumption
- Using smart networks and equipment for efficient power management
- Employing sensors and automated workflows to optimise the environment
- Aligning with sustainable practices such as circular economy and recycling.

5. Interoperability and Extensibility

An interoperable platform that allows choice, integration and simplified experiences:

- Native support of Microsoft Teams meeting experience via Cisco's certified Microsoft Teams Rooms (MTR)
- Integration with other Microsoft platform components e.g. AD, MS Teams, Office 365
- Support for other meeting platforms e.g. Google Meet, Zoom
- Opens APIs and SDKs to integrate various applications or platforms e.g. Service Now (for incident management), Room controls.

The Way Forward: Get Started With a Proof of Value, Cost Saving and Sustainability Assessment

- Identify a teaching / meeting room space on campus that would be suitable for a trial of the hybrid architecture. With minimal fit-out costs, a room can be used to help IT teams understand the advantages of the new approach but can also serve as a highly visible test environment for hybrid work and learning on campus. Universities have already approached Cisco and Microsoft to deploy proof of concepts into these environments with incentives available for these activities.
- Cost modelling for conversion of existing spaces to true hybrid. Cisco and Microsoft's initial modelling suggests the cost implications are low for universities given the significant efficiencies that exist in relation to integration, ongoing management and refresh cycles.
- Immerse in a demonstration environment showcasing Cisco and Microsoft technology.

Cisco and Microsoft have validated designs that can be leveraged including suggested building / implementation partners, enabling technology (e.g. smart building components, smart cameras, smart spaces, networking elements, signage), room layouts and suggested designs.

Learn more at:

- <https://www.webex.com/solutions/integrations/microsoft.html>
- <https://www.webex.com/solutions/microsoft-teams-rooms-cisco-devices.html>

