

# Space Strategy Summit

*Spring 2025 Roundtable Series for Senior University Leaders*



---

# Welcome!

We're so glad you could join us

---

# Your EAB Hosts for Today



***Gary Guadagnolo***  
Senior Director,  
Research



***Michael Fischer***  
Senior Director,  
Research



***Alejandra Velez***  
Managing Director,  
EAB Partnerships



***Cricket Francisco***  
Strategic Leader,  
EAB Research



***Leon Lloyd***  
Senior Director,  
EAB Partnerships



***Benoit Jamous***  
Strategic Leader,  
EAB Research



***Monyé Morgan***  
EAB Events  
Specialist



## A **Global Approach** to Higher Education Research, Strategy, and Services

EAB partners with leaders at 2,300+ higher education providers around the world to address their biggest strategic challenges by leveraging:

- Best practice research and insights
- Decision and data tools
- Advisory support
- A global network of leaders

### **Our goal today:**

**Facilitate peer-to-peer conversations based in the latest EAB research in a format that allows you to focus on the most consequential and strategic parts of your remit and prioritise action**

# Complex Challenges Abound



Each Requires Significant Reimagination of People, Process, Technology



## Financial Resiliency

"How will we expand revenue and contain costs to avoid slipping into a structural deficit?"



## Modernised Workforce

"How will we recruit, retain, upskill, and deploy limited talent amidst generational transition and technological revolution?"



## Generative AI Deployment

"How will we teach, use, and create AI tools that support the needs of our students and staff?"



## Expanded Mission

"How will we scale our services to meet the needs of student, societal, and government expectations?"

# Our Agenda Today

9:00 a.m. **Welcome and Introductions**

9:30 a.m. **Putting the Built Environment to Best Use, Part I**

- Foundational Space Optimisation Imperatives
- Reduce Costs by Shrinking Space-Driven Consumption
- *Disrupt Space Growth with Checks and Balances*

12:00 **Lunch**

1:00 p.m. **Putting the Built Environment to Best Use, Part II**

- *Selectively Improve Space Utilisation with Targeted Intervention*
- *Funding the Built Environment*

2:30 p.m. **Snapshots of Utilisation Successes**

3:30 p.m. **Concluding Reflections and Forward Planning**

4:00 p.m. **Adjournment and Reception**

# Setting the Scene

Please share...

- *Your name, institution, and role*
- *What category of space 'type' or space 'problem' will be at the top of your mind today – and why?*

OR

*What's the biggest impediment to realising your space strategy?*





EAB

# Putting the Built Environment to Best Use

Strategies to Optimise Space and Activate  
the Real Estate Portfolio

Strategic Advisory Services



# How Do You Perceive Your Current Maturity?



EAB

London Space Summit

## Space Optimisation Maturity Diagnostic

### Evaluate Your Institution's Progress Across Space Optimisation Imperatives

<b>Obtain and Maintain Accurate Space Data</b>	Pre-Session Evaluation of Maturity	Post-Session Evaluation of Maturity
	1 2 3 4 5	1 2 3 4 5
	Notes	
<b>Align Space Governance to Institutional Conditions</b>	Pre-Session Evaluation of Maturity	Post-Session Evaluation of Maturity
	1 2 3 4 5	1 2 3 4 5
	Notes	
<b>Articulate Best Practices in Space Policies</b>	Pre-Session Evaluation of Maturity	Post-Session Evaluation of Maturity
	1 2 3 4 5	1 2 3 4 5
	Notes	
<b>Standardise Space Request Processes</b>	Pre-Session Evaluation of Maturity	Post-Session Evaluation of Maturity
	1 2 3 4 5	1 2 3 4 5
	Notes	
<b>Reduce Costs by Shrinking Space-Driven Consumption</b>	Pre-Session Evaluation of Maturity	Post-Session Evaluation of Maturity
	1 2 3 4 5	1 2 3 4 5
	Notes	

### Evaluate Your Institution's Progress Across Space Optimisation Imperatives (cont.)

<b>Disrupt the Space Growth Hindset with Checks and Balances</b>	Pre-Session Evaluation of Maturity	Post-Session Evaluation of Maturity
	1 2 3 4 5	1 2 3 4 5
	Notes	
<b>Identify Opportunities to Improve Utilisation of Offices</b>	Pre-Session Evaluation of Maturity	Post-Session Evaluation of Maturity
	1 2 3 4 5	1 2 3 4 5
	Notes	
<b>Identify Opportunities to Improve Utilisation of Labs</b>	Pre-Session Evaluation of Maturity	Post-Session Evaluation of Maturity
	1 2 3 4 5	1 2 3 4 5
	Notes	
<b>Identify Opportunities to Improve Utilisation of Classrooms</b>	Pre-Session Evaluation of Maturity	Post-Session Evaluation of Maturity
	1 2 3 4 5	1 2 3 4 5
	Notes	
<b>Improve Monetisation of the Built Environment</b>	Pre-Session Evaluation of Maturity	Post-Session Evaluation of Maturity
	1 2 3 4 5	1 2 3 4 5
	Notes	
<b>Most Urgent Imperative</b>	<b>Impediments to Progress</b>	<b>Next Steps Upon Return to Campus</b>

# There's No Stakeholder Problem Space Won't Solve

10

## All Leaders Can Make Case for More Space



### PVC International

"Prospective students will flock to campus with a new library and student centre."



### Head of Fundraising

"The easiest way to inspire donors to give is to put their name on a new building."



### DVC Research

"Top research talent is most enticed to campus with new labs."



### Academic Registrar

"Students today value health and community – new athletic and training facilities will surely help."



### I'll Have Whatever They're Having

"I have a dean that asks for everything. I could announce we're renovating the food courts and he'd say, 'I need that for my programme.'"

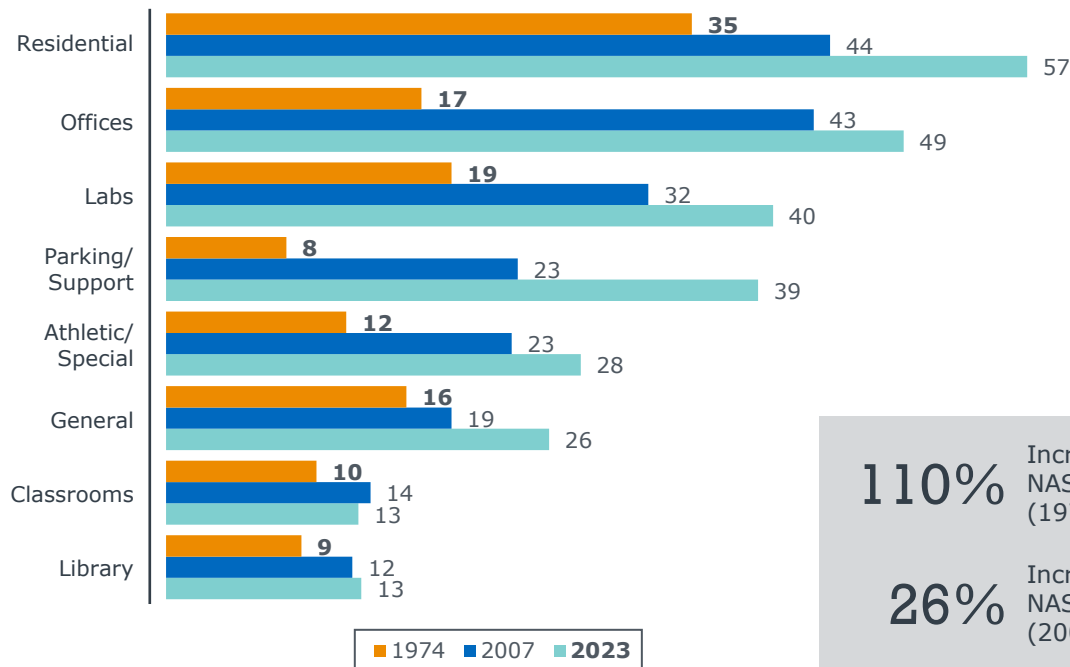
COO

# Natural Consequences of Insatiable Demand



## Campus Space Has Grown Across Functional Types

Mean NASF<sup>1</sup> per Student by Space Type<sup>2</sup>



110%

Increase in total  
NASF per student  
(1974-2023)

26%

Increase in total  
NASF per student  
(2007-2023)

1) Net Assignable Square Feet.

2) Excludes healthcare, non-student residential, and inactive categories.

# Shooting Ourselves in the Foot(print)



## Unconstrained Space Growth Presents Serious Risks to Institutional Strategy



### Increased Cost Basis

Cost of new construction in higher education has risen to **more than £1,500/SM**, and inflation and wage pressure have driven up Facilities Management costs by **nearly 20%**.



### Burdened Long-Term Stewardship

More than two-thirds of the overall financial costs of a building **occur after construction**, through operations, maintenance, and renewal.<sup>1</sup>



### Undermined Sustainability Goals

More than two-thirds of EAB-surveyed institutions have committed to achieving carbon net zero, yet the average new building adds **1.6 metric tonnes per m<sup>2</sup> of CO<sub>2</sub>** over its lifetime.<sup>2</sup>



### Ownership over Strategic Impact

Estates leaders estimate they could eliminate on average 20% of office space and **12% of total campus space** without reducing student success, satisfaction.



### Warped Sense of Need vs. Actual

While classrooms rank among the top three additional space campus leaders desire, existing classroom utilisation is **less than 60%** of standard hours.



### Space Usage Not "Top of License"

An institution discovered that one of their most expensive labs by classification was being used as a **furniture storage unit**.



1) Based on EAB analysis of lifetime costs of buildings from 22 universities.

2) Assuming a 50-year lifespan.

# Significant Space Optimisation Success Possible



## External Conditions, Internal Commitments Led to Space Reductions

	 University of Missouri	 Ivybridge University <sup>1</sup>
<i>Impetus for Change</i>	<ul style="list-style-type: none"><li>• Revenue risks related to fluctuation in state appropriations and enrollment</li><li>• \$900M in facility needs, growing at least \$30M annually</li></ul>	<ul style="list-style-type: none"><li>• Pressure from Higher Education Authority to improve utilisation</li><li>• Estates study reveals that space utilisation is less than 20% across campus</li></ul>
<i>University Action</i>	<p>Strategic Space Reduction and Relocation Plan:</p> <ul style="list-style-type: none"><li>• <b>730K</b> square feet space demolished or divested from</li><li>• <b>\$147M</b> avoided capital construction/renewal spending</li><li>• <b>\$5.1M</b> reduction in annual operating costs</li></ul>	<p>Space Optimisation Initiative:</p> <ul style="list-style-type: none"><li>• Incentivise increased <b>utilisation and/or release of space</b></li><li>• Align space with <b>blended working policies</b></li><li>• Institute a <b>long-range planning cycle</b> for cost management</li><li>• <b>Commercialise</b> underutilised and excess land and facilities</li></ul>

1) Anonymised institution.

# A Battle Few Willing to Fight

## Cultural, Not Technical, Barriers Impede Progress on Space Optimisation

### 1 Space = Prestige

---

Space ownership considered proxy for success and influence; reduction of space seen as losing campus prestige

“Pay is stagnant, pensions have vanished, and tenure’s days may be numbered. Is it too much to ask that we let academic staff keep their private offices?”

### 2 Lack of Trust in Real ROI

---

Units incur significant financial and cultural costs when optimising space; units may not trust they will concretely benefit in long run from sacrifices

“The benefit of new space to a program or function is well-documented. There’s less trust—and less clear an incentive—to an occupant to reduce their space footprint.”

### 3 Hesitation to Lead

---

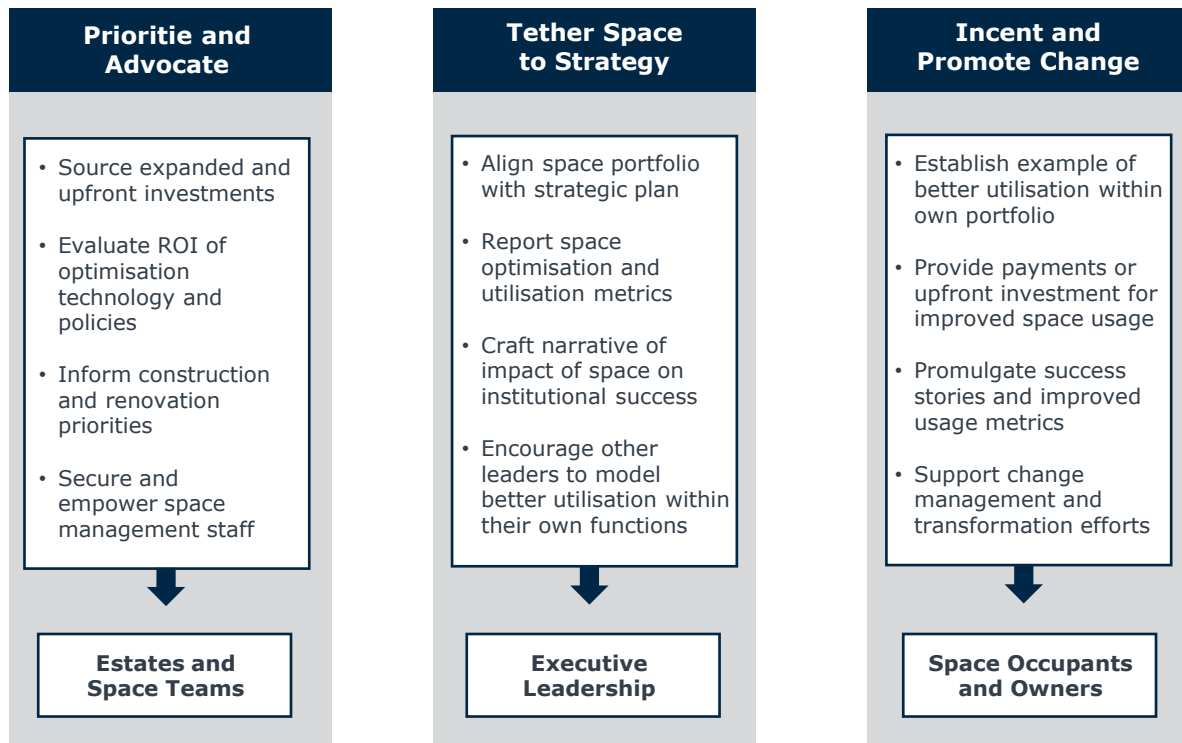
Risk aversion and concerns about day-to-day disruptions suppress units’ willingness to initiate optimisation efforts

“The SLT agreed to launch an initiative to reduce private office space. But when it came time to implement, no one wanted their units to go first.”

# What Is Your Role in Space Optimisation?



## Three Space Optimisation Activities Target Different Campus Stakeholders



# How to Put the Built Environment to Best Use

## Managing the Cost of Campus Space

### I

#### *Foundational Space Optimisation Imperatives*

- Obtain and Maintain Accurate Space Data
- Align Space Governance Committees to Institutional Conditions
- Articulate Best Practices in Space Policies
- Standardise the Space Request Process

### II

#### *Reduce Costs by Shrinking Space-Driven Consumption*

1. Downsize Campus by Strategically Offloading Space
2. Adjust Facilities Service Levels Based on Utilisation
3. Rebase Energy Consumption with Targeted Energy Reduction Interventions

### III

#### *Disrupt Space Growth with Checks and Balances*

4. Enact "No Net New" Space Mandates
5. Pursue Cost-Effective Alternatives for Necessary Growth

### IV

#### *Selectively Improve Space Utilisation with Targeted Interventions*

6. Reduce Private Office Space with Incentives and Mandates
7. Adjust Laboratory Allocations Based on Productivity
8. Broaden Classroom Usage by Expanding Access and Purpose



## Funding the Built Environment

9. Activate the Real Estate Portfolio for Revenue Generation

10. Engage Donors in the Total Cost of Ownership





# Foundational Space Optimisation Imperatives

---

SECTION

1

# Start with a Strong Foundation



## Four Essential Practices to Build a Space Optimisation Strategy



### **Obtain and Maintain Accurate Space Data**

Gather data on campus spaces such as utilisation, condition, and purpose to gain a more complete picture of campus and make informed decisions about space ownership and resource allocation



### **Align Space Governance to Institutional Conditions**

Establish formal management groups to integrate cross-departmental perspectives that ensure consistency and alignment in space management decisions with the intensity of the structure tailored to the maturity of your institution's governance



### **Articulate Best Practices in Space Policies**

Define "best-case scenario" expectations in standards such as space type and total allocation based on role/job type



### **Standardise Space Request Processes**

Create and enforce a formal process for space requests that includes collecting evidence for space needs; the goal is to prevent ad-hoc approvals and allocations

# Obtain and Maintain Accurate Space Data



“ We have enterprise-level management systems for professional staff, academics, and finances but we didn’t have one for space, our second largest asset.”

*Director of Facilities Management*

## Three Approaches to Space Data Management

### *Manual*



**Highland Crest  
University<sup>1</sup>**

- Estates staff make hourly rounds of professional and support staff offices over a six-week period, noting occupancy
- While more time- and labor-intensive, approach avoids inconsistency of self-reported data

### *Self-Reported*



**UNIVERSITY OF  
OREGON**

- Hosts space type, allocation, and usage data in [UO Spaces](#), a custom-built, live map of campus
- Units asked to update system as changes made to space (e.g., office reassignments)

### *Automated*



**UNIVERSITY OF  
BIRMINGHAM**

- Collects comprehensive data about every aspect of campus space including condition, utilities, and utilisation using Internet of Things (IoT) sensors
- Data integrated into digital twin; machine learning processes information to suggest improvements for the future

1) Anonymised institution.

# Align Space Governance to Institutional Conditions

20

## Boston University's Bicameral Committee Structure



### sub-SPACE<sup>1</sup> Committee

- **Purpose:** Reviews routine/small projects and filters space requests
- **Size & Seniority:** 8; Staff to AVP level
- **Composition:** Includes representatives from Provost's Office, Operations, Facilities Maintenance & Planning, and Budget & Planning
- **Time Commitment:** Bi-weekly meetings
- **Responsibilities:** Advise SPACE committee on changes to use, design, layout and condition of campus space and buildings and respond to routine requests and small projects under \$1M



### SPACE<sup>1</sup> Committee

- **Purpose:** Review sub-Space committee reports to approve and prioritise space requests
- **Size & Seniority:** 5; VP/SVP
- **Composition:** Provost (Co-Chair), Senior VP of Operations (Co-Chair), President, SVP/CFO, and VP for Budgeting & Planning
- **Time Commitment:** Bi-monthly meetings
- **Responsibilities:** Review large projects and evaluate based on cost, complexity, and ability to meet need within existing space

## Key Components of Effective Space Governance Groups



Responsibilities are appropriate based on membership



Members have knowledge and data to make informed decisions



Limited time commitment helps members prioritise meetings, responsibilities

1) SPACE is an acronym for Space Planning and Capital Expenditures.

# Articulate Best Practices in Space Policies



## University at Buffalo Provides Clear, Transparent Guidance for Campus



### Sample Space Standards from University at Buffalo

#### *Recommended Office & Workspace Standards*

Personnel Type	Area (NSF)/ Type of Space
Full-Time Academic Staff	120-140 Private Office
Full-Time Professional Staff	55-85 Open; 80-120 Shared
Part-Time Professional Staff	50-80 Shared

#### *Instructional Space Guidelines*

Discipline Group	ASF/WSCH <sup>1</sup>	ASF/Station <sup>2</sup>
Education, Economics, Law, Social Sciences	2	40
Biology, Psychology, Health Sciences	3	60

### Standards and Metrics Include:

- Assigned and net square feet per space and/or workstation
- Type of space allocated (private, shared, open)
- Productivity expectations for research across disciplines

### Benefits of Buffalo's Approach

- ▶ Size and type of allocation are based on need, not one-size-fits-all approach
- ▶ Institution-wide policy ensures consistency across units, while acknowledging differences by space type, academic discipline, job type
- ▶ Campus Planning Office, Facilities Planning & Management Officers verify compliance more easily given documented standards

1) Assignable square feet per weekly student contact hour.

2) Assignable square feet per station.

# Standardise the New Space Request Processes



## Include Prompts That Solicit Data and Encourage Discernment

“We’ve seen some improvement in space request behavior. But people still try to circumvent the process with an email or even just a text.”

*Estates Leader*

Questions help ensure departments have justifiable need

Prompts requestor to consider alternative solutions

Communicates impact of denied request on department and/or strategic priorities

Space requests approved by senior leadership

### SPACE NEEDS ASSESSMENT:

Describe why the space is needed and how it impacts strategic priorities

What attempts have been made to locate space within your current allocation?

If this request is denied, what will be the consequences?

Please attach floor plans and/or sketches and supporting documents for this request.

- ☐ Approved by Department/Unit Leader
- ☐ Approved by Chief Financial Officer
- ☐ Approved by Senior Estates Leader

# Standardise Space Request Processes (cont.)



## UNC Chapel Hill Formalizes Space Request Process



### Consult

Requestor consults with Campus Planner to understand specific need

### Elevate

Facilities presents requests and options to Space Management Committee to determine best fit



### Request

Requestor submits Space Needs Request Form during designated submission period



### Identify

Facilities locates space that potentially meets need and connects with current space steward to determine feasibility of reallocation



### Approve

Provost and Vice Chancellor for Finance and Operations provide final approval

# Check Your Past Work



## Evaluate Your Institution's Maturity Across Foundational Imperatives



### **Obtain and Maintain Accurate Space Data**

- ☐ Data on occupancy, utilisation, facility conditions accurate; collected in a centralized, digital inventory
- ☐ Data updated and reviewed for accuracy annually; a rolling update schedule is also appropriate
- ☐ Space data available in easily accessible, centralized location



### **Align Space Governance to Institutional Conditions**

- ☐ Institution has a space governance committee
- ☐ Committee members have knowledge necessary to make informed decisions
- ☐ Responsibilities and authority appropriate based on seniority of committee members



### **Articulate Best Practices in Space Policies**

- ☐ Policy sets standards for allocations across space types
- ☐ Policy has clear enforcement mechanisms and consequences for not meeting expectations
- ☐ Standards based on role/discipline, not one-size-fits-all



### **Standardize Space Request Processes**

- ☐ Request process is streamlined, user-friendly enabling easy adoption
- ☐ Requestors prompted to consider alternatives to meeting needs without additional space





# Reduce Costs by Shrinking Space-Driven Consumption

- Tactic 1: Downsize Campus by Strategically Offloading Space
- Tactic 2: Adjust Facilities Service Levels Based on Utilisation
- Tactic 3: Rebase Energy Consumption with Targeted Reduction Interventions

SECTION

2

# Costs Rise While Resources Lag (North America)



## Construction, Utilities, and Maintenance Costs On the Rise...

19%

Increase in building supplies and construction services costs (2019-2024)

+3%

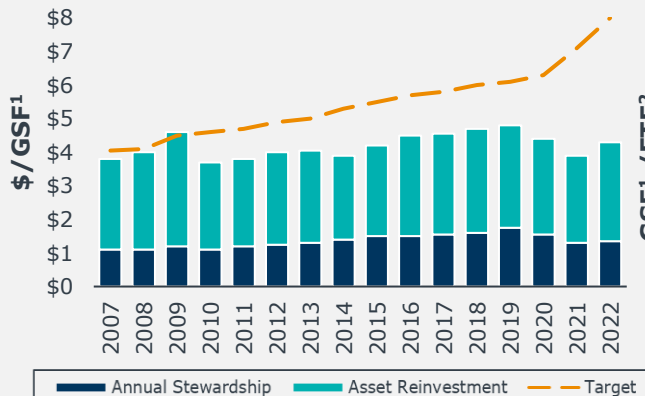
Average yearly increase in utilities costs

£6.6B

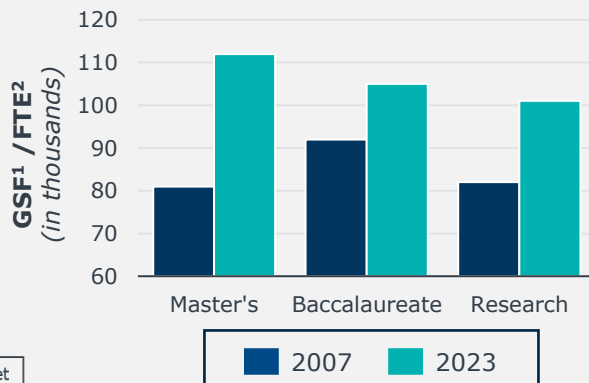
Investment required to decarbonise university estates

### ...But Budgets, Labor Not Keeping Pace

Capital Spending vs. Investment Target



Maintenance Staffing Coverage



1) Gross square foot.

2) Full time employee.

# Costs Rise While Resources Lag (United Kingdom)

27

## Construction, Utilities, and Maintenance Costs On the Rise...

### 19%

Increase in building supplies and construction services costs (2019-2024)

### +3%

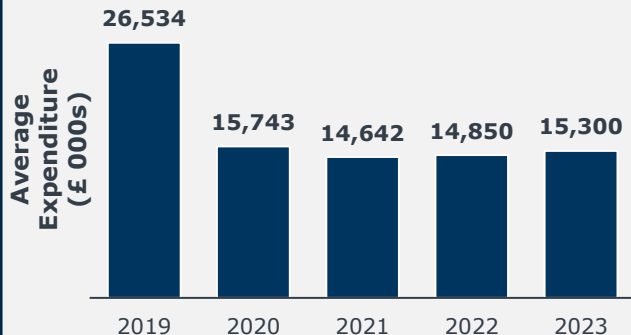
Average yearly increase in utilities costs

### £6.6B

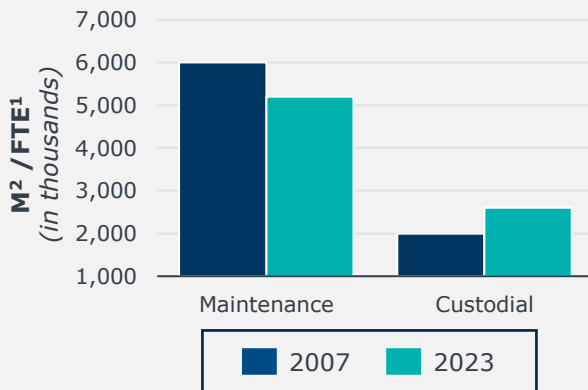
Investment required to decarbonise university estates

## ...But Budgets, Labor Not Keeping Pace

*Average Total Capital Expenditure 2018-2023*



*Maintenance and Custodial Staffing Coverage*



1) Full time employee.

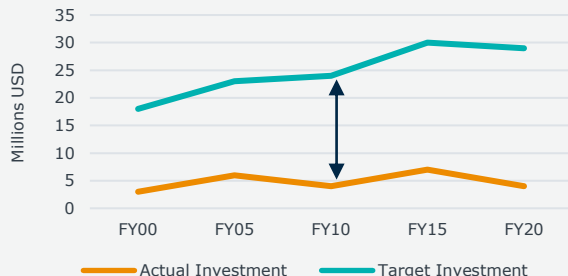
# Getting the Board “On Board”

## NIU’s Annual Report Educates Leaders on Value of Rightsizing Campus



### Key Points From NIU’s “Report on Facilities & Infrastructure Investment”

Actual vs. Target Maintenance Investments



- Rate of **deterioration outpaces investments** over 20 years
- Lack of necessary investment **increases deferred maintenance backlog**
- **Underinvestment in preventative maintenance** skews corrective repair ratio (20:80 instead of 80:20)

### Strengths of the Report

- 1 Consistent focus year over year helps board develop familiarity with ongoing investment needs
- 2 Demonstrates cost of underinvestment, motivating leaders to either invest or shrink footprint
- 3 Frames changes to campus space as “rightsizing” not “downsizing”

### Progress Towards Rightsizing

**500K** Square feet of space offloaded through demolition or sale

**5%** Reduction in total campus footprint

# Socialize the Need to Let Go



## University of Minnesota's Public "Do Not Invest" List Prepares Community for Campus Changes



Facilities updates **Do Not Invest** (DNI) List annually through a two-stage process, published online



Renewal dollars allocated based on designation (keep-up/catch-up = 90%, sustain = 5%, and DNI =<5%)



Leadership approval required to make all but required safety investments in DNI Buildings



Designation process, DNI list, exemption criteria, and investment strategy **available online to campus community**

### UMN's Two Stage DNI Designation Process

#### Stage One Evaluation Criteria

Rating	FCNI <sup>1</sup> Score	O&M <sup>2</sup> Costs	Energy Demand
Good	Excellent	<95%	<95%
Medium	Good-Poor	95-110%	95-110%
Poor	Critical	>110%	>110%

#### Stage Two Evaluation Criteria

- Adaptability
- Campus Plan Fit
- Usability
- Program Impact
- Displacement



 **Keep-up/Catch-up**

 **Sustain**

 **Do Not Invest**

1) Facilities Condition Needs Index.

2) Operations and maintenance.

# Overcome Resistance to Exiting Leased Space



## Three Ideas to Incentivize Stakeholders to Reassess Current Leases

### Cost-Benefit Analysis



- Calculated that paying employees to vacate space was more cost-effective than leasing in New York City
- Academics given £2.2K-£3.7K annual stipends to vacate private offices
- **Shed 4.5K square meters of leased space**

**£2.5M** Annual savings

### Monetary Incentive



- Allowed units to keep budget allocations for internal rent in exchange for vacating space
- One unit funds strategic priorities with savings, builds momentum for other units to do same
- **Exiting 41K+ square meters of leased space by 2030**

**€3.5M** Projected annual savings

### Shortened Lease Length



- Switched from 10-year commercial leases to 3-year leases with community colleges
- Provides flexibility to exit underutilized space and reclaim savings more quickly
- **Exited 60% of leases, 39% of total footprint**

**£2.6M** Decrease in operating expenses

# The High Cost of Empty Space

Underutilisation Wastes Severely Stretched Operating Dollars



X



=



**£155K**

Annual service  
costs for 50  
staff offices<sup>1</sup>

**<50%**

Office  
utilisation rate

**~£77,500**

Unnecessary annual  
service spend per  
50 offices

## The Challenge

How can we identify which spaces need  
less service, even with inconsistent  
occupant usage patterns?

1) Based on 14m<sup>2</sup> per office and using industry annual service provision averages.

# A Smarter Approach to Service Provision



## Sensors Allow for More Cost-Effective Deployment of Services

### ROI for Space Sensors Has Never Been Stronger

**£17**

Average per sensor cost<sup>1</sup>

**40-50%**

Reduction in energy usage in campus offices, classrooms using only lighting sensors

**~2 years**

Average time to payback for sensor installation



#### **Texas A&M University Aligns HVAC to Occupancy**

- Installed occupancy and humidity sensors to modify air flow changes based on space utilisation
- Saw significantly reduced energy costs



**UNIVERSITY  
OF ALBERTA**

#### **University of Alberta Prioritises Cleaners Based on Need**

- Used thermal sensor data to modify custodian schedules to bypass unutilised spaces
- Achieved net savings in 2.5 years through adjustments to cleaning frequency, HVAC



#### **Toronto Metropolitan University Predicts Future Service Needs**

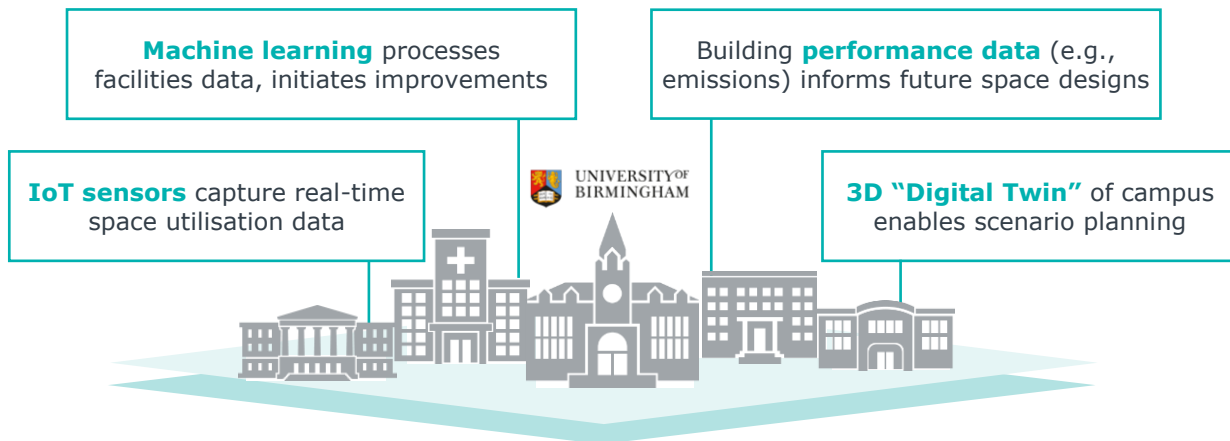
- Ran sensor data through various scenarios (e.g., summer building shuttering) to forecast utilities and maintenance impact on Health Science Complex

<sup>1</sup>) Benchmarked against Internet of Things (IOT) enabled occupancy sensors.



# A Holistic Approach to the Smart Campus

## Birmingham's Widescale Investment Allows Flexible, Predictive Modifications



### Progress to Date

**£750K+**

Initial investment in sensor technology

**23K**

IoT sensors installed in 25 energy inefficient buildings

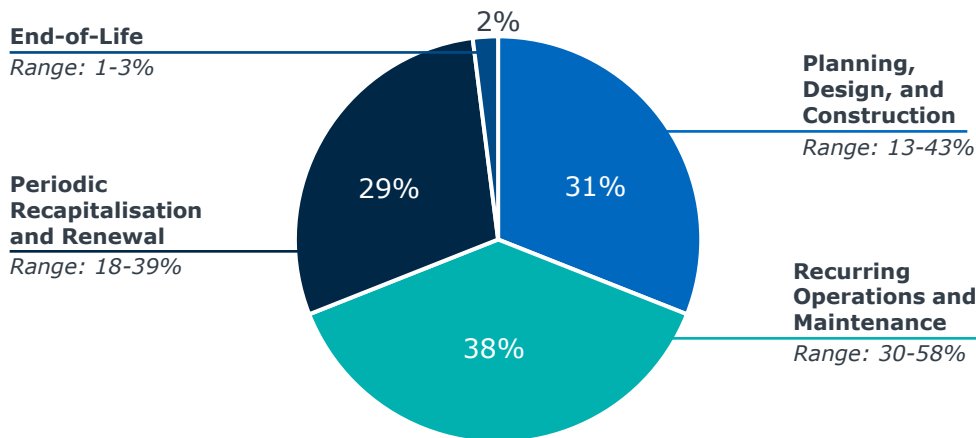
**5%**

Immediate reduction in carbon emissions

# Tackling the Total Cost of Ownership Challenge

Deteriorating Energy Systems Drive Compounding Long-Term Costs

## EAB's Total Cost of Ownership Model<sup>1</sup>



### Energy and Utilities—Biggest Cost Category Under Operations

**£400M**

Est. total spent annually on energy by higher ed sector

**10-30%**

Decreased building efficiency every 1-2 years

<sup>1</sup>) Developed in 2019 using historical data from 22 institutions. Building types include residence halls, labs, and mixed-use facilities. Only four institutions reported data on decommissioning costs.

# Cutting Through the Technical Jargon

Option	Energy Savings	Average Payback Time	Example
<b>Commissioning</b> Verifying and ensuring that new facilities' infrastructure operates as intended at the completion of construction	<b>13%</b> Median whole-building energy savings	<b>4.2</b> Years	<b>Miami University</b> saved \$570K on avoided costs and contractor refunds
<b>Recommissioning</b> Testing for inefficiencies in existing systems in order to modify and improve performance	<b>16%</b> Median whole-building energy savings	<b>1.7</b> Years	<b>University of Sussex</b> projected savings of £450K by recommissioning heating controls
<b>Retrofitting</b> Replacing old system with or adding new modern systems to existing buildings	<b>25-50%</b> Annual whole-building energy cost savings	Depends on scope	<b>Trinity College Dublin</b> reduced energy use and CO2 emissions by 75% through a retrofit of one building
<b>Continuous Commissioning</b> Dedicated staff and technology to continuously monitor, analyse, and address system inefficiencies	<b>£300K</b> Potential yearly energy savings per building	<b>&lt;2</b> Years	The <b>University of Iowa's</b> Fault Detection and Diagnostics Program saved \$600K within first six months

Source: "[Continuous Commissioning](#)," Energy Systems Lab; I Biemiller, "[Don't Let Energy Costs Devour Your Budget](#)", *Chronicle*, November 19, 2017; E Crowe et al., "[Building Commissioning Costs and Savings](#)," *Energy and Buildings*, November 2020; "[The Case for Deep Energy Retrofits](#)," *Rocky Mountain Institute*, 2012; Miami University, Miami, OH; [Trinity College Dublin](#), IE; University of Iowa, Iowa City, IA; [University of Sussex](#), UK; EAB interviews and analysis.

# The Win-Win of Reducing Energy Consumption



## Interventions Appeal to Campus Financial and Environmental Conscience



### Retrofitting

**Western University's [Deep Energy Retrofit Program](#)** aims to complete one to two retrofits per year to advance progress on **net zero ambitions**

**Funding:** Retrofit of chiller plant funded via [energy performance contract](#) (100% of fees tied to utilities savings)

#### Pilot

- Two engineering buildings
- **ROI:** 50% reduction in GHG<sup>1</sup> emissions

#### Program Results

**40%**

Reduction in building utilities costs from latest retrofit

**60-80%**

Average reduction in GHG emissions per building



### Recommissioning

**Oregon State University** committed to recommission at least two buildings per year as part of their [Path to Carbon Neutrality](#)

**Funding:** Offset upfront costs with a grant from a [local nonprofit](#)

- Reinvests savings to support future initiatives via **green revolving fund**

#### Pilot

- Laboratory building
- **ROI:** £12K cost savings in nine months

#### Program Results

**£19K**

Cost savings from another building within 4 months

**880 tons**

Total carbon footprint reduction within one year of initiative

1) Green house gas.



# Disrupt Space Growth with Checks and Balances

- Tactic 4: Enact “No Net New” Space Mandates
- Tactic 5: Pursue Cost-Effective Alternatives for Necessary Growth

SECTION

3

# Many Universities Have Grown Space Unevenly



## Likely Too Little



## Likely Too Much



### Student Accommodation

Over 230,000 additional beds are needed to meet demand for student housing across the UK



### Office Space

Annual newly-leased office space accelerates despite hybrid work, surpassing 37K m<sup>2</sup> per year



### Collaboration Spaces

Students increasingly join classes remotely but study in-person



### Lecture Theatres

Lower in-person attendance means less demand for large lecture spaces



### STEM Labs

STEM degree completions are on the rise, with 42% of all UK graduates studying STEM disciplines in 2022



### Historic Residential Spaces

Historic homes repurposed for academia become unnecessary given new purpose-built facilities

Source: Grove, "[Lectures in Question as Paid Work Pushes Attendance Even Lower](#)," *Times Higher Education*, March 14, 2024; Purvis and Preece, "[Spotlight: The Growth of the Education Sector in the London and South East Office Market](#)," *Savills*, May 15, 2023; "[Science and Engineering Workforce](#)," *University of Cambridge*; Wheeler, "[UK Cities Need Much Higher Rates of Student Housing Delivery](#)," *The Savills Blog*, Apr. 8, 2024; EAB interviews and analysis.

# Break the Cycle of Campus Growth

## Shifting Institutional Mindset From New Growth to “Right-Sizing”

### Growth Over Everything

*Why is this a problem?*

- Prioritises immediate gains over long-term planning, sustainability
- Undermines better metrics of institutional health, such as student success, social responsibility

**Tactic 4: Enact “No Net New” Space Mandates**



### New Is the Only Option

*Why is this a problem?*

- Fails to consider more cost-effective alternatives to address space needs
- Costs of construction continue to rise, making building new financially unsustainable

**Tactic 5: Pursue Cost-Effective Alternatives for Campus Growth**

# A Principled Approach to Estate Expansion

“We know we have more space than we use efficiently. Despite enrolment growth, leadership set a goal to optimise through investments in renovation and selective elimination. For the first time in Indiana’s history, **we will end the decade with less campus space than we started it with.**”



*Tom Morrison, VP for Capital Planning and Facilities*

## Running the Numbers: Indiana University Reevaluates Space Need

**56K**

Square meters of  
space demolished



### Demolition

Buildings with high deferred maintenance needs and renovation costs targeted for demolition, including 18.6K square meters of office building

**28K**

Square meters of  
leases exited



### Exiting Leases

Several million pounds worth of leases exited due to reduced need for certain spaces (e.g., offices) and availability of owned space on campus

**79K**

Square meters  
added to estate



### New Construction and Renovation

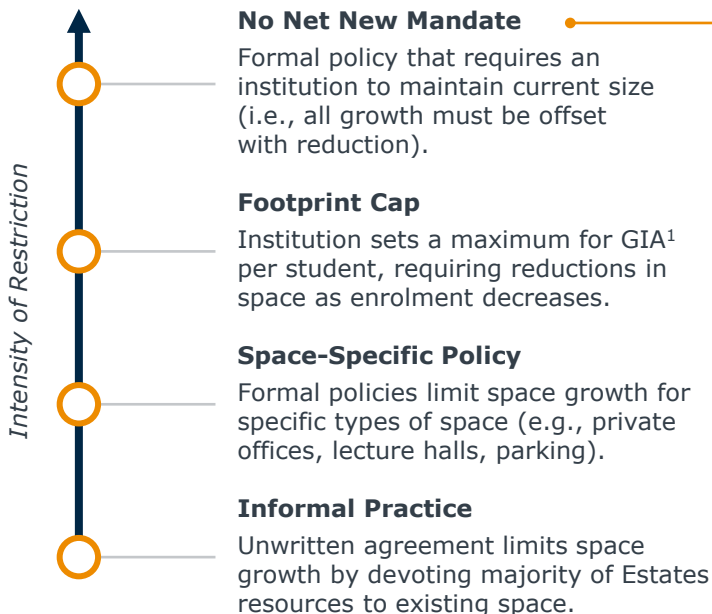
New construction only pursued when necessary (e.g., additional residences for growing grad student population)—most recent capital projects prioritise renovations



# Baby Steps Toward “No Net New”



## Spectrum of Options for Limiting Undisciplined Campus Growth



### Why Institute a No Net New Space Mandate?



Prevents unchecked cost growth from new construction



Supports sustainability goals by limiting emissions growth



Allows for new construction while ensuring long-term stewardship

***What are the barriers to implementing a “No Net New” mandate?***

1) Gross internal area.

# You Can Say Yes to More, But Not Always New

## Respond to Space Requests with Alternatives to Slow Cost Growth



### Make Work More Flexible

"Have you considered enabling more hybrid work arrangements? It will quell demand for new office space."

- ▶ An institution can save an average of £8.3K<sup>1</sup> per 50/50 hybrid worker.

### Move to Open Plan Workspaces



"I know your unit is crowded—but all your spaces are assigned. Hotdesking would create more capacity and enable more collaboration."

- ▶ **University of St Andrews** collocated 450+ administrative staff into an open plan workspace, freeing up 1K square meters.



### Assign an Older "New" Space

"It's not much to look at, but this older building will give you the space you need."

- ▶ **University of Illinois Urbana-Champaign** has used one serviceable, 3.8K square meters office building for swing space overflow during multiple capital projects.

### Why Build When We Can Buy?



"I understand that we need more offices, but we can buy buildings sitting empty in the city centre for less."

- ▶ **Georgetown University** acquired commercial properties at opportunistic costs, allowing them to consolidate and grow new campus while reducing their leased space.

# Evaluate Best Options for Your Context

## UT Dallas Uses Cost-Benefit Analysis to Reduce Cost Growth

### Evaluate Space Need

Determine necessary components of space:

- Footprint area
- Space type(s)
- Urgency
- Permanency of need



# 13K+

Square meters of office space needed

### Consider Alternatives

Identify alternatives to new construction:

- Purchase commercial buildings
- Lease nearby properties
- Consolidate units



# £6K-8K

Cost per square meter of new construction

### Compare Costs

Compare costs associated with each option including:

- Renovations
- Lifetime O&M<sup>1</sup>
- Utilities consumption
- Deferred maintenance



# <£484

Cost per square meter of commercial property



### Alternatives to New Construction Yield Millions in Savings

**£34M** In avoided new construction costs

**£3M** Saved by exiting major lease

1) Operations and Maintenance.



# Selectively Improve Space Utilisation with Targeted Interventions

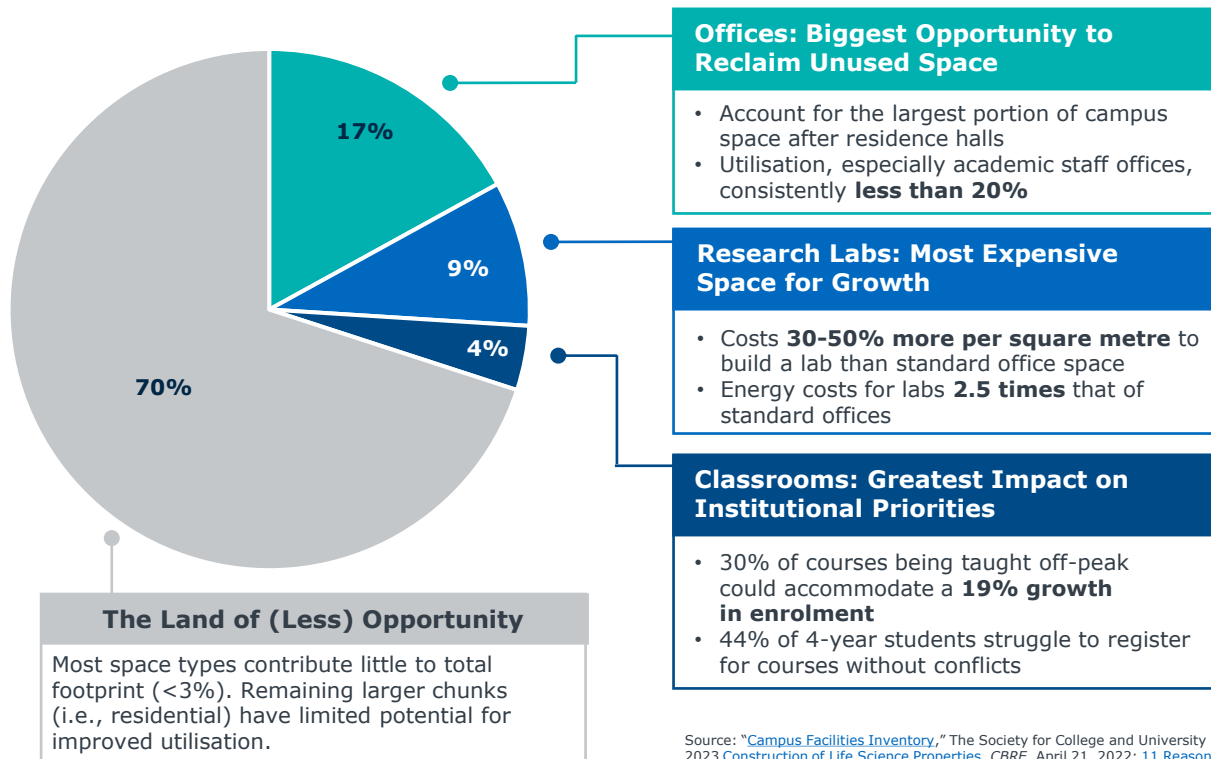
- Tactic 6: Reduce Private Office Space with Incentives and Mandates
- Tactic 7: Adjust Laboratory Allocations Based on Productivity
- Tactic 8: Broaden Classroom Usage by Expanding Access and Purpose

## SECTION

# 4

# Not All Space Created Equal

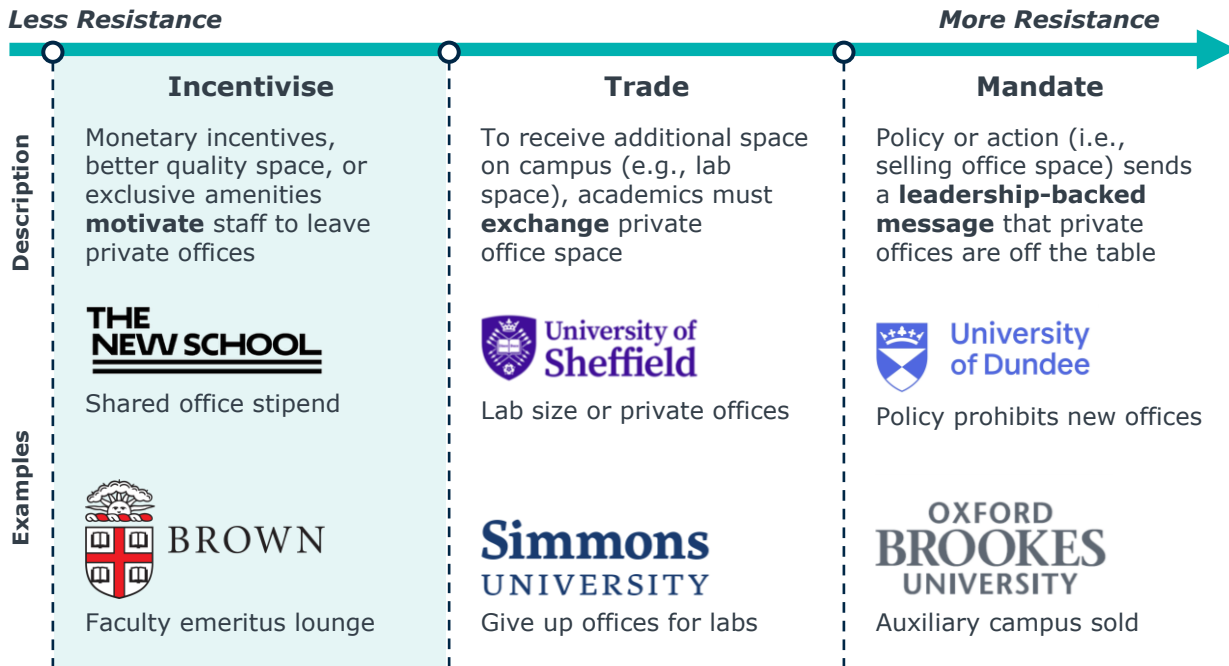
Campus Space Is Fragmented, but Urgency to Optimise Is Concentrated



Source: "Campus Facilities Inventory," The Society for College and University Planning, 2023 Construction of Life Science Properties, CBRE, April 21, 2022; [11 Reasons Why Lab Space is So Expensive](#), University Lab Partners, August 11, 2021; [2024 National Student Satisfaction Survey](#), Ruffalo Noel Levitz, 2024; EAB interviews and analysis.

# Pick Your Poison

## The Spectrum of Resistance for Private Office Reclamation



# Gain Without Pain?



## Three Strategies to Reclaim Private Offices Without a Mandate

### Build Buy-in by Offering Design Input



**Kwantlen Polytechnic University's** Director of Campus Space and VP of Academics consulted with staff on their workspace needs for two months while designing shared offices.



**75%**

of Faculties on one campus work in shared space

### Make Shared Space an Upgrade



**The University of Utah** offered staff higher quality, conveniently located shared space in exchange for vacating private offices.



**43%**

Less space accommodates same number of staff

### Offer a Choice (with the Odds in Your Favor)



The **University of St Andrews** presented staff with a choice: smaller private offices facing an internal quad or larger shared offices with an external view.



Staff choose shared space for first time

# The Hub: A Better Way of Sharing Space

Academics Relinquish Offices to Access Amenity-Heavy Shared Space

 Anschutz **The Hub at CU Anschutz**



- **Goal:** Solve academic staff office space deficit without building new offices
- **Process:**
  - EVP of Finance and Administration inspired by airport lounges, secured funding from senior leadership
  - Academic staff user group consulted on design
  - £2.6 million, 1.2K gross square meters renovation began September 2019 and was completed August 2019
- **Requirement:** Academics must give up private offices to join The Hub

## Luxury Amenities Make Joining The Hub Desirable



Snack and drink bar, kitchenette, and meal ordering assistance



Sleep pods, showers, and lockers



Staffed concierge desk provides on-site administrative support



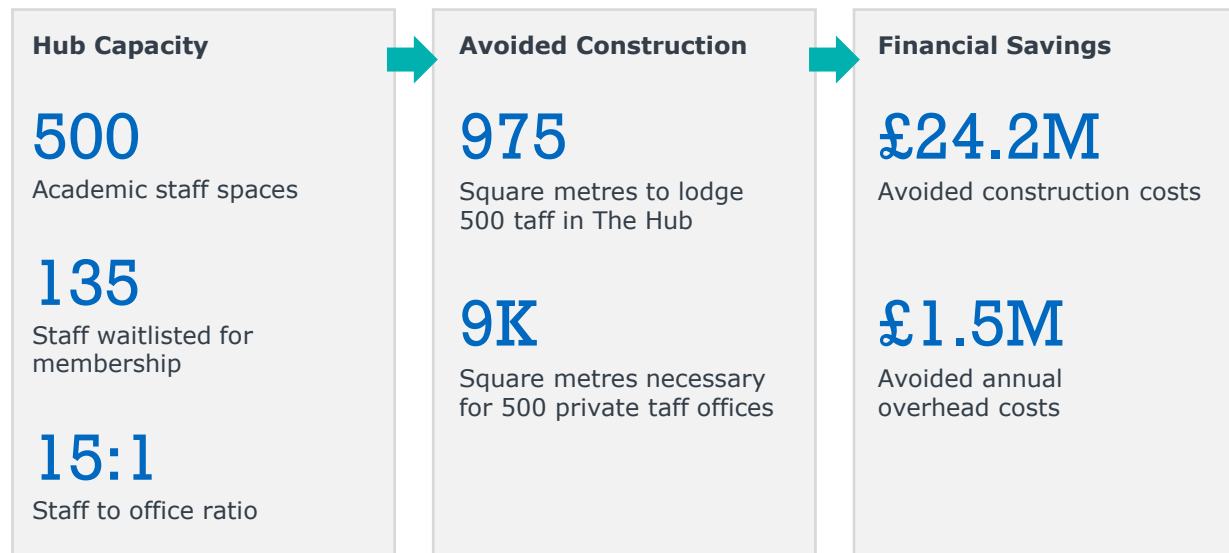
Bookable single-occupant offices, treadmill desks, soft seating



# The Hub Proves Both Popular and Cost Effective



## CU Anschutz Saves Millions By Going Shared Over Private



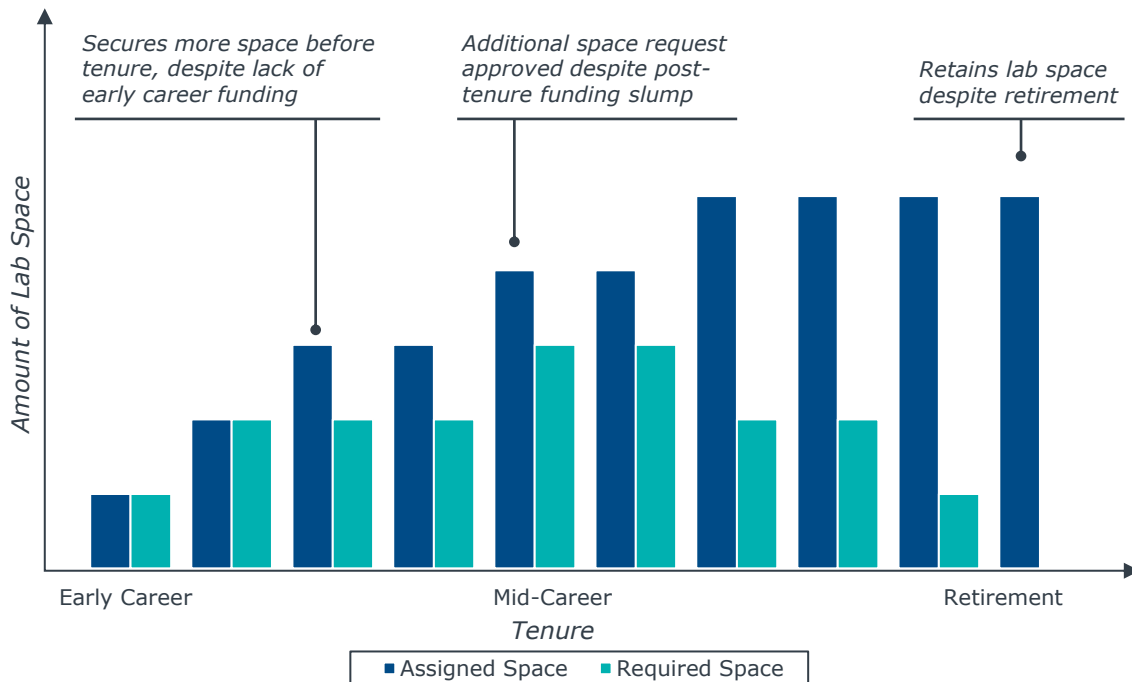
“I didn’t think I would like working here, but the bright, well-designed space has improved my mental health and productivity. The free coffee is the cherry on top!”

*Staff Testimonial*

# A Mismatch Between “Wants” and “Needs”

Investigators Accumulate Space Over Time, Rarely Forfeit as Needs Change

## Representative Space Allocation Across an Academic’s Career



# Implementing the Gold Standard Approach



## Interdisciplinary Spaces Designed for Temporary Assignments

### Key Elements of Interdisciplinary Space Management



Research office has managerial oversight



Research teams must apply for space



Space allocation guided by project alignment with strategic goals



"Clawback" policy allows for space reallocation



### University of Idaho's Integrated Research & Innovation Center (IRIC)

- Space is controlled by ORED<sup>1</sup> but governed by [Facility Committee](#) with representatives from every college, ORED appointees, and building manager
- Collaborative research teams must submit a [formal application](#) for space in the facility
- Formalized [waitlist protocols and guidelines](#) for IRIC applicants



### James Cook University's Temporary Allocation Policy

- Labs are centrally owned and allocated on a temporary basis, requiring periodic justification for occupancy
  - Allocation decisions are driven by demonstrated need
  - Labs serve specific functions (e.g., evolutionary biology) rather than being tied to individuals or projects
- Bench space within labs is centrally pooled and assigned based on individual researchers' needs
- Large lab spaces are shared by multiple teams whenever possible

1) Office of Research and Economic Development.

# Set Concrete Expectations for Lab Productivity



## ECU Research Space Policy “Right-Sizes” Allocations



### Define Governance Structure Across the Institution



### Establish Productivity Measures Across Disciplines



### Review Productivity and Reallocate as Needed



- Allocation and reallocation decisions made at three levels: Department/Unit, College, and Institution
- Institutional Planning and Research (IPAR) group and University Space Committee provide guidance and approvals

- Units select productivity metrics with oversight from University Space Committee
- Metrics and benchmarks vary between disciplines, but financial measures are part of overall assessment
- Measurement schemes communicated to and approved by leaders based on level

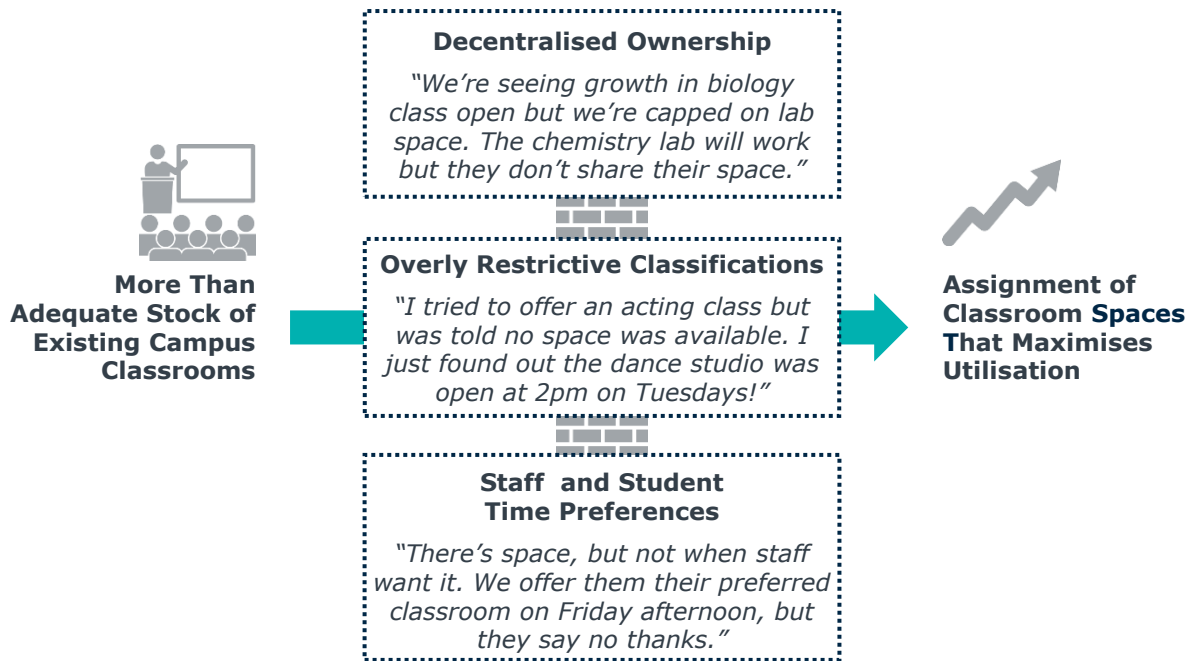
- IPAR manages research space and productivity data, preparing five-year reports of productivity for research spaces at all levels
- IPAR conducts biennial inventories and audits of research space
- Spaces falling below 20<sup>th</sup> percentile on metrics deemed “unproductive” and considered for reallocation based on level

### Considerations for Research Space Allocations Include:

- ▶ Alignment with strategic priorities
- ▶ One-time and recurring costs
- ▶ Impact on space productivity and utilisation
- ▶ Opportunities to share space

# Barriers to Maximising Classroom Utilisation

Scheduling Constraints Create Artificial Scarcity and Keep Utilisation Low



To understand the trends shaping the future of classroom design, access EAB's [Campus of the Future Infographic](#).

# Carrot or Stick?



## Two Approaches to Centralising Ownership Based on Campus Culture

### Provide Quality Enhancements



Southern Mountain University<sup>1</sup> trades repair, renovation, and technology upgrade costs for centralized management, **increasing number of centrally controlled rooms by 31%**

### If New, It's Not Just for You



University of Colorado  
Boulder

**University of Colorado Boulder** has a policy that **automatically designates** any new or significantly renovated instructional spaces as centrally managed

## Well-Documented Benefits of Centralised Classroom Management

**22%** Higher space utilisation rate in centrally-owned classrooms

**44%** More classes held each semester in centrally-owned classrooms

1) Anonymized institution.

# Reduce Classification Complexity



## Ohio's Space Standardisation Broadens Academic Assignment Options



### Ohio University's Campus Optimisation Initiative



Recategorized room types down from 50+ to four **flexible space use classifications**



Determines primary use based on **room attributes** (versus owner preferences)



Makes more space available via centralised scheduling system to **broaden access**



**Recategorises or allocates space based on utilisation data**, led by space governance groups

### Flexible Space Use Classifications



#### Informal

Open space with minimal separation, for casual use



#### Individual Workspace

Furnished to support focused work for individuals



#### Specialised

Dedicated to specific function(s) for limited set of users



#### Schedulable

Enclosed spaces with furniture and technology for meetings, events, and classes

# Loosen the Stranglehold of the 10-2



## Make Classrooms More Productive Outside Peak Instructional Hours

### Repurpose Unoccupied Classrooms for Student Use



- Converted **underutilised lecture halls** to spaces for student study and group work during COVID
- Developed an easy-to-navigate [study space finder](#) tool

### Require Staff to Teach at Off-Peak Times



- **Established policy** to schedule classes during every day and time block
- Schedules all classes centrally and allows staff to select two time-blocks that can be “vetoed”

### Mitigate Scheduling Preferences with Incentives



- East Lake University<sup>1</sup> **offers financial bonus** to staff willing to teach morning/evening classes
- Considering piloting this approach for weekend classes

?

How would you encourage staff to teach outside peak hours at your institution?

1) Anonymous institution



# Choosing the Right Space “Goldilocks”

## Questions to Assess When It’s Right to Tackle Each Space Type



### Offices

- What is the utilisation rate of private offices across campus?
- Do many academic/professional staff work on hybrid/remote schedules?
- Do the financial benefits of reducing private office space outweigh the political/cultural challenges?



### Research Labs

- Do researchers maintain and accumulate lab space despite low productivity?
- Are lab allocations based on departmental ownership rather than project need?
- What are the potential cost savings and efficiency gains from moving to temporary lab allocations?



### Classrooms

- Do classrooms across campus sit empty during off-peak hours?
- Do you have enough classrooms, but appear to be at capacity due to high-demand periods?
- Are there opportunities for colleges and departments to share specialised space instead of adding more?



# Space Change Exercise

# Objectives for the Exercise



Understand the need for and **importance of change management** in the HE context



Learn EAB's **framework for leading change** initiatives on campus



Practice **applying the framework** using HE scenario exercises

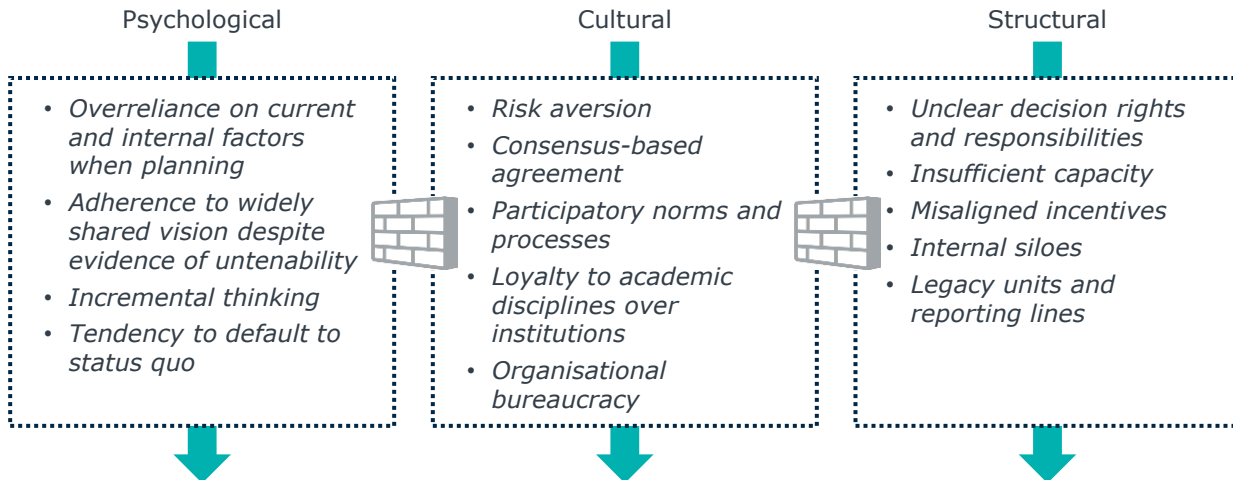


Reflect on lessons learned and **identify initiatives on your campus** that will require change leadership

# High Barriers to Change in HE

Campus Leaders Face Strong Aversion, Stakeholder Resistance

## Types of Barriers to Change



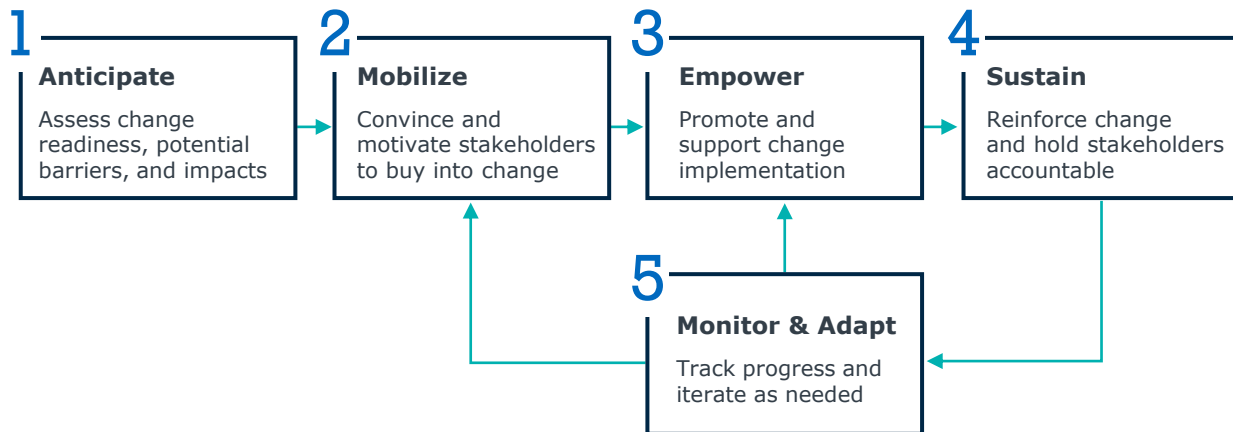
## Outcomes

- 1** Deters leaders from initiating change initiatives entirely
- 2** Stops change initiatives early in their tracks
- 3** Leads to long-term stall outs and change fatigue

# A Model for Leading Change in Higher Ed



## EAB's Change Management Framework for Higher Ed Leaders



## Methodological Notes

### *Shortcomings of Existing Frameworks*

- X Not directly applicable to higher ed context
- X Do not provide actionable guidance
- X Fail to account for rapid and continuous change
- X Do not balance bottom-up and top-down approaches

### *EAB's Framework Creation Process*

- ✓ Analysed existing literature and frameworks for relevant components for higher ed context
- ✓ Incorporated customized elements based on research and input from higher ed leaders
- ✓ Tested framework via ongoing research



## **Reducing Private Office Space**

Your institution is implementing an Office Space Consolidation policy. Going forward only divisional leaders and above will receive private office space. All other instructors and staff will no longer be entitled to private office space.



## **Productivity-based Lab Allocations**

Your institution is implementing a new Research Lab Allocation policy. Space allocations for research labs are now based on a set of productivity metrics with researchers that fail to meet expectations losing their space.



## **Centralized Classroom Management**

Your institution is implementing a new Classroom Funding policy. Disciplines will no longer receive budget allocations to cover the costs of classrooms not managed centrally.



# Creatively Source Space Funding with Real Estate and Donors

- 
- Tactic 9: Activate the Real Estate Portfolio for Revenue Generation
  - Tactic 10: Engage Donors in the Total Cost of Ownership

# Got Space?

## Six Examples of Revenue Generation from Underutilised Space

### One-off



- Estates group rents teaching spaces whenever not timetabled
- Rents classrooms and specialised spaces (e.g., science labs) for meetings, events, filming, etc.



- Rents spaces and provides support for TV and film productions
- Generates up to **£940K annually**

### Seasonal



- Conference and events services leases up to 3K bedrooms to non-students during the summer
- **£3.9M net income** from summer accommodation rentals



- Hosts artists for the Edinburgh Festival Fringe as an official "festival village" in their accommodation over the summer
- **Nets over £400K** from this event

### Long-term



- Completely leases out office building to solicitors and flexible workspace provider
- Charges **£630 per person per month** for private office space and **operates in the black**



- Sold villas and houses historically used for teaching beyond main campus
- **Generated revenue and consolidated geographic footprint** for better placemaking

Source: [California State University, Northridge](#), Los Angeles, CA; McFadden, "Universities in Cash Crisis Make £100m Renting Student Flats to Non-Students," *The I Paper*, February 24, 2025; University of West London, London, England; [University of Westminster](#), London, England; Queen Margaret University, Edinburgh, Scotland; EAB interviews and analysis.



# Elevate Entrepreneurial Space Ambitions



## UBC Properties Trust Grows Endowment, Fast-tracks Institutional and Community Capital Projects

- ▶ Established as separate private real estate trust, reducing university liability and governmental restrictions
- ▶ Revenue from profit-sharing agreements and managing rental housing portfolio goes to endowment
- ▶ Board of Directors includes experienced real estate industry professionals and senior university administrators
- ▶ Project managed over 800K square meters of institutional capital projects



THE UNIVERSITY  
OF BRITISH COLUMBIA

### Benefits Finances and Mission



Contributed over **£1.5B in revenue to the university endowment**



**Invigorates local community** via new amenities and housing



**Attracts and retains staff** with below-market rental units

Explore UBC Properties' portfolio [here](#).

# Maintenance By Any Other Name

## Donors *Do* Care About Maintenance—With the Right Framing



QUEENS UNIVERSITY  
OF CHARLOTTE

### “See for Yourself”

**Queens University of Charlotte** had donors and trustees tour older buildings and see need for renovations firsthand. They raised **£16.5M to renovate an older building** after a tour.

### “Maintain Your Legacy”

**Delta University<sup>1</sup>** incorporated maintenance endowments into naming packages after donor’s willingness to maintain buildings that represent their legacy. This enabled Delta to raise **£45M for maintenance endowments**.



### “This Is What Could Be”

**Mississippi State University (MSU)** created a “lookbook” showing how campus locations would look with grounds improvements. MSU was able to raise **over £560K for grounds improvements**.

### “Preserve History”

**UNC Chapel Hill** found that “historic preservation” made maintenance projects more appealing. A new role within Advancement works with Estates staff to help identify donors and **secure funds for maintenance** under this umbrella.



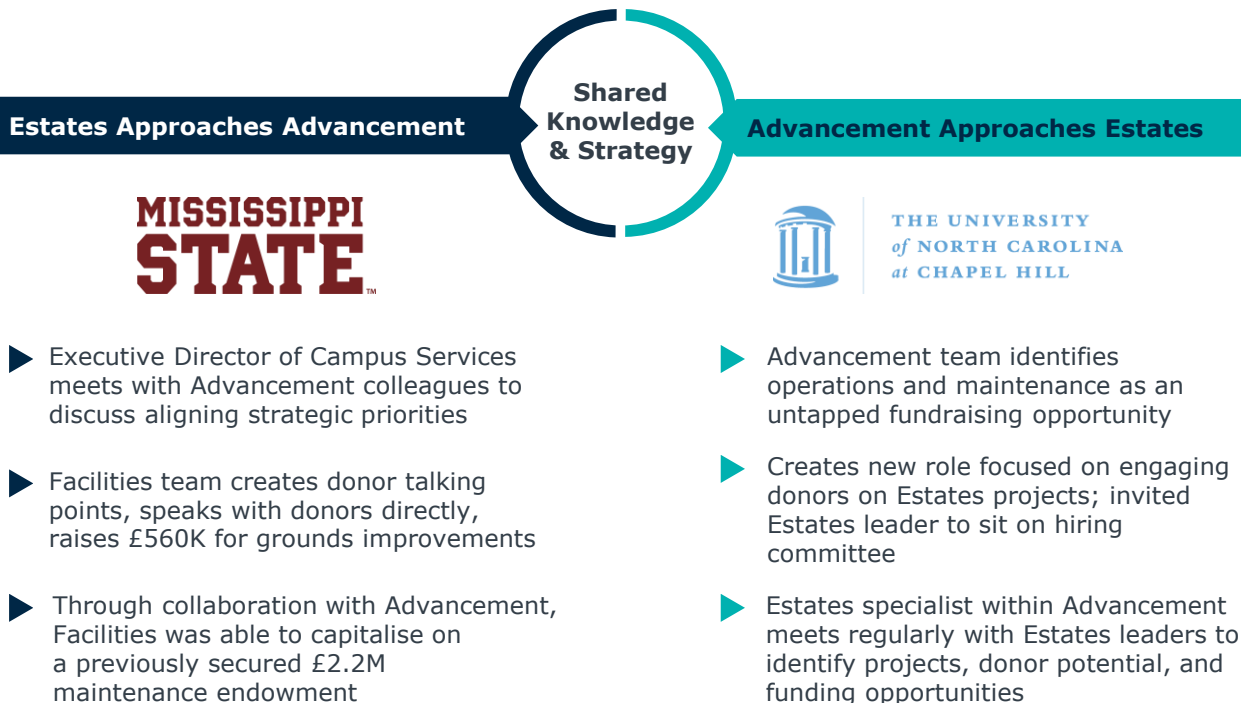
THE UNIVERSITY  
of NORTH CAROLINA  
at CHAPEL HILL

1) Anonymised institution.

# Getting Donors Requires Coordination



## Two Ways to Bridge the Gap Between Estates and Advancement



# Explore EAB's Space Optimisation Resources



## **[Working with Academic Leaders to Improve Space Utilisation](#)**

Equips administrative and academic leaders with strategies for improving space utilisation in offices, classrooms, and research labs.



## **[Envisioning Tomorrow's Multi-modal Campus](#)**

Shares how seven campus spaces will change over the next decade due to trends in student expectations, hybrid work, and more.



## **[Building a Total Cost of Ownership Mindset](#)**

Highlights how Facilities leaders are defining, communicating, and implementing total cost of ownership (TCO) investments.



## **[Research Laboratory Setup Toolkit](#)**

Helps estates, research, and academic leaders proactively gather information about lab needs and better anticipate lab renovation timelines and costs.



## **[Navigating Public-Private Partnerships](#)**

Provides guidance on evaluating, planning, and implementing P3 arrangements along with case studies from institutions that have seen success.



## **[Compendium of Maintenance Endowment Structures](#)**

Details different endowment structures by assessing funding potential and providing case studies for each.

# How EAB Can Help You Address Space Challenges



## **SLT and Board-Level Briefings on Space Optimisation**

Bring these insights to your campus. Equip your senior leadership team, board, or other stakeholders with a deeper understanding of how to make best use of the built environment.



## **EAB Expert Consultation**

Discuss the current state of your estate and identify opportunities for space optimisation on your campus with an EAB expert.



## **Change Management Workshop**

Prepare your institution for space changes with a strategy workshop. Leaders will learn the importance of change management, EAB's framework for leading change, and practice applying the framework in scenario exercises.



202-747-1000 | [eab.com](http://eab.com)



@eab



@eab\_



@WeAreEAB



@eab.life

