

Higher Education and the delivery of decarbonisation

Capital, Capacity and Carbon

Bevan Brittan 



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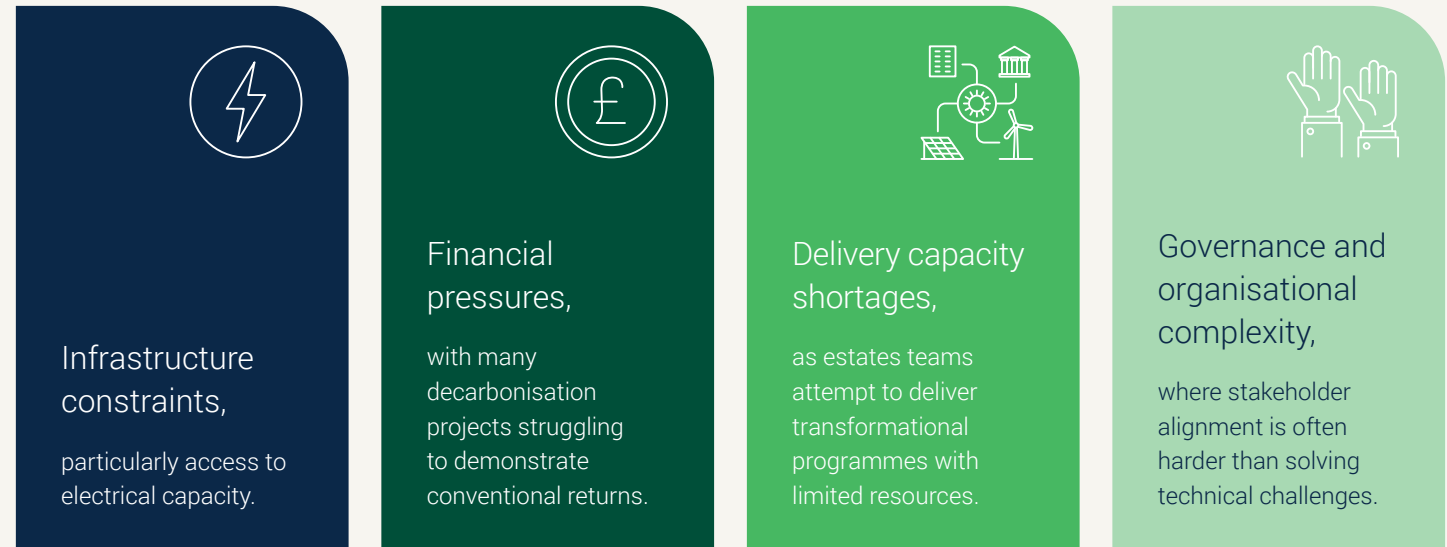
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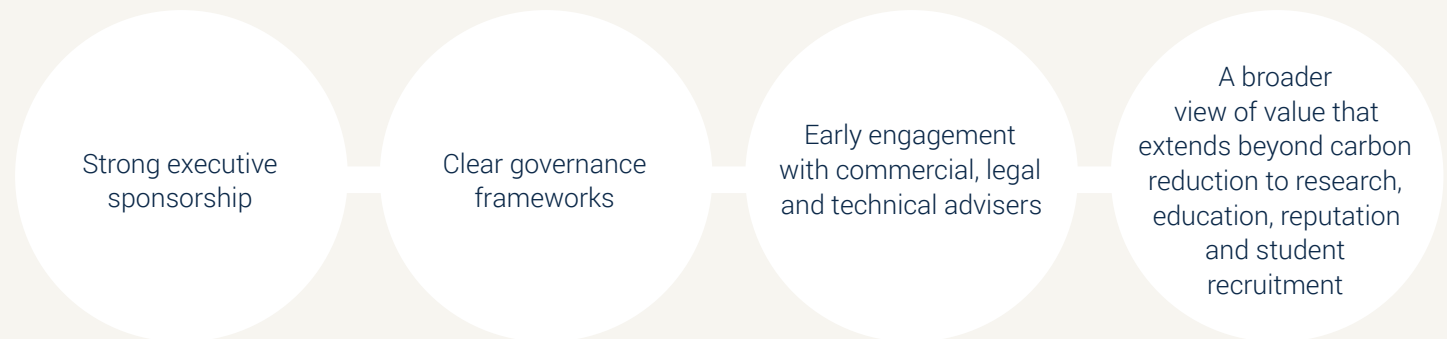
Executive Summary

The Higher Education sector has moved beyond setting net zero targets. Universities know what needs to be done. Most have completed carbon baselining exercises, developed decarbonisation strategies and identified the technologies required to reduce emissions. The question is no longer *what to do*. The question is *how to deliver it*.

Our research reveals a sector facing **four interlinked challenges**:



At the same time, the institutions making the greatest progress share common characteristics:



The sector's challenge is not a lack of ambition. It is **turning ambition into delivered infrastructure**.

Introduction

The Higher Education sector has emerged as one of the UK's most ambitious sectors in the drive towards net zero. Between 2019 and 2021, the majority of UK universities declared climate emergencies and adopted net zero targets, often significantly ahead of the Government's 2050 commitment.

These commitments have translated into substantial planning activity. Carbon management plans have been developed, decarbonisation pathways identified and investment requirements quantified.

However, universities are uniquely complex organisations.

Many operate estates comparable to small towns, encompassing teaching facilities, laboratories, heritage assets, student accommodation, leisure facilities, clinical settings and digital infrastructure. The scale of transformation required is significant.

Compounding the challenge is an increasingly difficult financial environment. The Office for Students reports that more than a third of institutions recorded a deficit in 2024-25, with that figure forecast to reach 42.7% in 2025-26¹. The deterioration has fallen hardest on larger research- and teaching-intensive institutions. The Association of University Directors of Estates has recorded property costs outstripping inflation for a third consecutive year, with rising energy prices a key driver of these increases².

This report examines the technical position, electrical capacity and the composition of the estate itself. It addresses the wider financial problem, which for some Higher Education is not scarcity of capital, and investigates the efficacy of delivery mechanisms, people and systems, and the value of decarbonisation in a sector with strong governance, bureaucratic processes, and expert internal constituencies.

About this research

This report draws on detailed interviews with sustainability and estates leads at research-intensive Higher Education institutions in the UK. Findings were triangulated against a review of published carbon management plans, climate action plans and estates strategies across a wider group of Higher Education institutions that encompass various levels of research intensity and access to funding.



¹ [Office for Students Annual Report and Accounts 2025-26](#)

² [Association of University Directors of Estates – Higher Education Estates Management Report 2025](#)

Technical

The technology challenge has largely been solved. The infrastructure challenge has not.

There is a high degree of technical maturity across the sector

Heat pumps, solar generation, energy management systems, fabric improvements and smart controls are widely understood. Decarbonisation pathways have generally been mapped and the technologies required are increasingly proven.

The challenge is delivery at scale.

For many universities, the most significant technical barrier is access to electrical capacity. As campuses move away from gas-based heating, electrification places increasing pressure on existing grid connections. At the same time, universities are expanding research facilities, accommodation and digital infrastructure, all competing for finite electrical headroom.



Organisations will have constraints in terms of electrical capacity. As we're all trying to swap from gas to electricity, everybody's coming up against the same problem: there isn't enough electricity in the right places in the country and on our campuses to be able to do it.

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A second challenge is that many institutions have already captured the easier carbon savings. Remaining emissions are often concentrated in complex assets such as laboratories, listed buildings and specialist facilities, where decarbonisation is technically difficult and significantly more expensive.

Additionally, where such complex buildings exist, most are already set up for gas heating and so don't require a new heat source. This can often act as a disincentive to decarbonising when the works to retrofit these buildings are already so technically difficult and expensive.

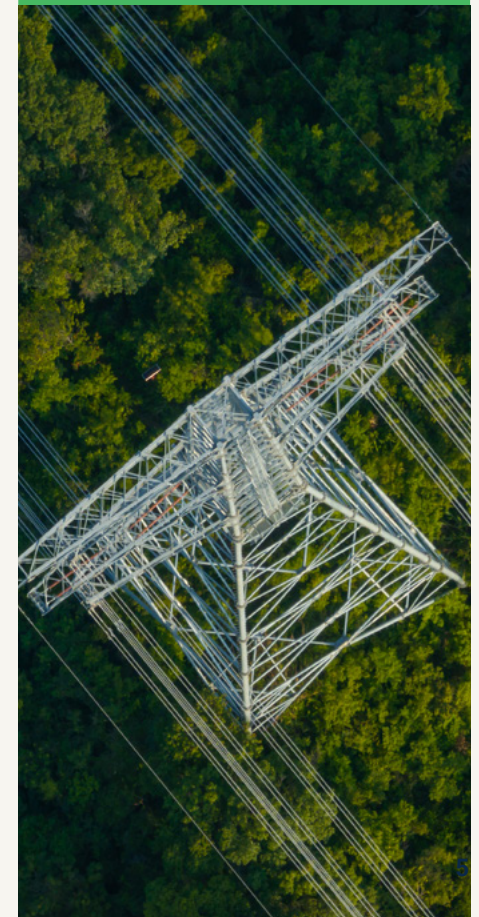
Electrical capacity should now be treated as a strategic campus asset.

Institutions that engage early with network operators, understand reinforcement programmes and align energy planning with wider estate strategies will be better positioned to achieve net zero ambition.



The next challenge is not installing heat pumps.

It is securing enough electricity to power them.



Financial

The financial case for decarbonisation has shifted

Historically, many energy projects could be justified through reduced energy costs and clear payback periods. Today, some of the most impactful carbon reduction measures increase operational expenditure.

The move from gas heating to electric heat pumps illustrates the challenge. Carbon emissions fall, but operating costs often rise because electricity remains materially more expensive than gas.



It used to be about generating or saving electricity, but it's mostly about decreasing gas consumption, because of the decarbonisation of the grid. The carbon factor for electricity has fallen, but the carbon factor for gas has stayed the same.

You've now got a fundamental tension between carbon and finances that didn't used to exist. You're decarbonising by getting rid of gas and swapping to a heat pump. But they're more expensive to run because electricity is much higher than the price of gas. It's not financially sensible, but it is sensible from a carbon point of view.

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Many universities are now assessing projects through a broader strategic lens. Institutions in Higher Education routinely commit capital on strategic rather than payback grounds. Once decarbonisation is considered, the governance conversation changes from 'what is the return' to 'what is the strategic case', and 'what is the affordability envelope'. That is a discussion Finance Directors are now equipped to have.



I think everybody's now got their head around the fact that we can't necessarily demonstrate a payback, or not a clear, purely financial payback.

Higher Education Institution

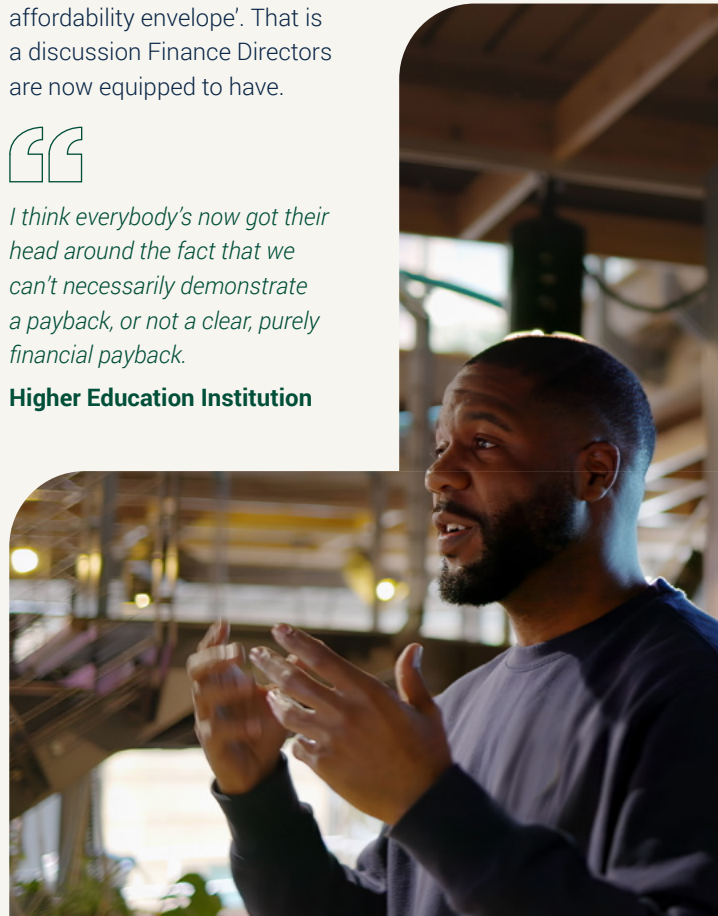
However, the Public Sector Decarbonisation Scheme – the primary funding model previously relied upon for large infrastructure projects – has stopped. The immediate effect is a shift of the burden onto internal resources, undermining confidence in capacity and delivery.

Even while it operated, the design of the scheme was challenged. The short window to apply, bid and deliver favoured institutions that already hold costed and approved projects. They can disadvantage institutions that need the funding because they lack the development capacity to prepare in advance. Queries around eligibility also arose. In particular, the technical classification surrounding how an institution is categorised created an unintended barrier for research-intensive universities.



It's ridiculously competitive and probably not accessible for about half the sector because of whether we're defined as public or private. For universities, that depends on the proportion of funding that comes from private or public sources. If you're a research-heavy organisation, you tend to fall into the category where you're over fifty per cent and therefore it's not accessible to us.

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Exploratory financial models and why several are not adopted

Universities have examined alternative financing models, however, prefer to borrow at lower interest rates through bank loans. From this, creating internally ring-fenced revolving funds can give the sustainability and estates function a predictable envelope within which to plan.

This limits the deployment of new financial and professional services in this sector. A proposition that offers capital at a rate above what an institution's treasury function can obtain through bank loans, is unlikely to be adopted. Any new financial model aimed at Higher Education must therefore provide value in addition to capital, such as development capacity, risk transfer, technical delivery, or a strategic relationship.

Joint ventures, special purpose vehicles and energy service structures have been considered by institutions, as part of the development of energy strategies in Higher Education. The research suggests that they are most likely to proceed where they are attached to a wider benefit that has obtained buy-in from the Vice Chancellor, for example, a research partnership, a campus development project, or an innovation park, rather than presented as solely a financing and construction solution.



Direction of travel – Bevan Brittan view →

Access to capital remains an important challenge for many institutions, but funding alone is unlikely to unlock delivery.

The evidence from the sector suggests that while some universities are able to access borrowing through established treasury arrangements, others face significant affordability constraints and competing demands on capital. Across the sector, however, the challenge increasingly extends beyond securing funding to identifying delivery models that can overcome capacity constraints, manage project risk and provide confidence that complex decarbonisation programmes can be implemented successfully.

Future funding models must provide additional value through risk transfer, technical expertise, programme delivery support and strategic partnerships. Institutions are unlikely to adopt alternative financing structures solely because they offer access to capital. Instead, they are more likely to be attracted to models that also provide benefits that cannot easily be delivered internally, such as specialist development capability, access to supply chains, performance guarantees, or support for programme management and delivery.



The sector is not simply looking for capital.

It is looking for delivery certainty.

As decarbonisation programmes become larger and more complex, universities may increasingly assess potential partnerships not only on the cost of finance but on their ability to accelerate delivery, reduce implementation risk and support wider institutional objectives. The most successful models are likely to be those that align decarbonisation with broader strategic priorities, including campus development, research collaboration, innovation, student experience and place-based growth.

In our experience, the discussion is increasingly moving away from simply “how do we fund this project?” towards “how do we deliver it in a way that is affordable, manageable and aligned with the institution’s strategic objectives?” Institutions that answer that question effectively are likely to be best positioned to achieve their net zero ambitions.

Key Takeaways

Carbon reduction and financial returns are increasingly disconnected.

The closure of PSDS has increased funding uncertainty.

Universities are increasingly investing based on strategic value.

Successful funding models must offer more than finance alone.



Delivery

The sector's greatest constraint may not be capital. It is delivery capacity.

Delivery emerged as one of the most consistent themes from our research.

Higher Education estates teams are designed to manage operational estates, maintain compliance and deliver conventional capital projects. Decarbonisation programmes require a different set of capabilities and significantly more capacity.



Delivery is another big challenge because we don't have the capacity to deliver big change projects. There are a lot of people trying to hold the place together and keep it running, and they're already incredibly overstretched.

Higher Education Institution

The position is compounded by the sector's wider financial challenges. Where institutions are reducing headcount to address deficits, the internal capacity available for discretionary change programmes is strained. The Association of University Directors of Estates has recorded property costs outstripping inflation for a third consecutive year, with rising energy prices being the

predominant factor³. Delivery capacity is squeezed at both ends, by the cost of running the estate, and by the reduction in the internal resource available to support the decarbonisation programme.

Where external capability is brought in

Higher Education institutions selectively buy in capability. Technical consultants are routinely procured for heat decarbonisation studies, feasibility assessments, and project design. However, financial and commercial advice on decarbonisation is solicited less often, and legal advice much later. This delay typically stems from a perception that legal counsel is mainly a transactional service for finalising contracts, rather than part of the strategic toolkit for structuring the project.



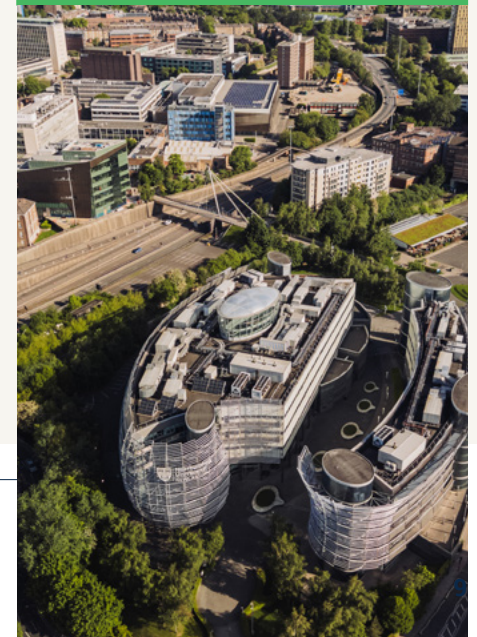
If we have big external funding or a complicated project, then there will need to be a legal view on the agreements in place. I'm not sure whether we do that internally or externally, and whether we'd use finance experts or legal experts – I think this will be according to each situation.

Higher Education Institution

Earlier intervention is where the value sits, and it is where a significant proportion of the delay can occur. A project agreement that has been designed without understanding the potential legal implications may have to be redesigned later down the line.



The gap between a funded programme and a delivered programme is often a **delivery capability gap**.



Direction of travel – Bevan Brittan view →

The greatest value is often created before a procurement begins or a contract is signed.

Early legal and commercial advice can help institutions select the right delivery model, allocate risk appropriately and avoid costly redesigns later in the process.

For many universities, the challenge is not only identifying the right decarbonisation solution, but assembling the capacity, governance and expertise required to deliver it at scale while managing ongoing operational pressures.

As programmes become more complex, institutions are increasingly required to make decisions about procurement routes, risk allocation, funding structures, partnership models and long-term operational responsibility. These considerations are often interconnected, and choices made at the outset can have significant implications for programme cost, timetable and deliverability.

In our experience, the institutions that make the strongest progress are those that treat delivery strategy as a core workstream from the earliest stages

of project development. By bringing together technical, commercial, financial and legal perspectives early, universities can establish a clearer route to implementation, make more informed investment decisions and reduce the likelihood of delays arising later in the process.

Ultimately, successful decarbonisation is not just about developing a pipeline of projects. It is about creating a delivery model that is realistic, resourced and capable of turning ambition into outcomes.

Key Takeaways

Delivery capacity is a major barrier across the sector.

Estates teams are being asked to deliver transformational change alongside business-as-usual operations.

Early legal and commercial input can significantly reduce project risk.

Successful delivery requires new skills, structures and partnerships.



People and systems

The most successful universities are not necessarily the institutions with the largest budgets or the most ambitious targets.

They are the institutions with the strongest alignment.

Decarbonisation programmes sit at the intersection of sustainability teams, estates departments, finance functions, academics, researchers, students and executive leadership. Each group brings divergent operational priorities, timelines and expectations.



There are always going to be some complicating factors you haven't factored in. The biggest challenges are often non-technical – they are people challenges and system challenges. But good project management should allow these to be anticipated and addressed.

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Universities that invest in engagement and collaboration are seeing stronger outcomes.

Decarbonisation projects inevitably intersect with multiple internal departments, each operating with distinct priorities. Managing these “expert internal constituencies” requires leadership to pivot from viewing dissenting internal voices as obstacles to integrating them as co-architects of the strategy. Early engagement ensures that competing priorities are reconciled.



Be open to listening to as many different views as possible, it's helped shape our decarbonisation plan and our approach.

Higher Education Institution

Executive sponsorship also emerged as a critical success factor. The role of executive sponsorship is critical. Specifically, executive commitment from the Vice-Chancellor sets the institutional tone, elevating the visibility of the decarbonisation programme and reinforces its organisational authority. Without high-level executive sponsorship to mandate accountability and drive net-zero goals into the institution's master plan, decarbonisation initiatives risk stalling.



The projects that are progressing are being driven forward by the fact that we have carbon targets and clear governance. They're also being driven forward because we have senior leadership committed to this. That makes a big difference.

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The governance feedback loop

A healthy governance structure relies on open communication channels, allowing sustainability teams to freely communicate when decarbonisation initiatives encounter obstacles. Rather than masking these delays, a safe reporting environment enables wider project teams and senior leadership to knowledgeably recalibrate benchmarks for the next reporting cycle. This turns the feedback loop into a strategic tool for maintaining realistic, impactful delivery timelines.



Some are not going to achieve their carbon targets. They are still carrying on regardless. Others have at least got that feedback loop within the governance of the organisation to say, 'We're not going to achieve them. What do we do about it?' Quite a few are still just reporting, because they are not in a powerful position in terms of internal governance. The feedback loop doesn't exist.

Higher Education Institution

An institution that can transparently surface a shortfall to its governing body, and swiftly receive a directive to revise the target, increase investment, extend timelines, or restate its baseline, is actively managing its risk position. Campus carbon targets now heavily influence external rankings, research bids, student recruitment, and capital applications. Under the Department for Education funded Standardised Carbon Emissions Framework, sector progress is becoming increasingly formalised and public⁴. With the Government's Net Zero Strategy signalling future legislation for mandatory emissions reporting, data comparability and divergence in the sector will only become more visible⁵.



⁴ [Standardised Carbon Emissions Framework \(SCEF\)](#)

⁵ [HM Treasury Sustainability Reporting Guidance 2025-26](#)

Direction of travel – Bevan Brittan view →

Net zero targets require governance structures that enable decisions, manage risk and maintain organisational alignment over the long term.

As decarbonisation becomes increasingly embedded within institutional strategy, the challenge for universities is less about setting targets and more about sustaining consensus around how those targets will be achieved. The decisions required often involve trade-offs between affordability, operational resilience, academic priorities, student expectations and long-term carbon outcomes.

The most successful institutions are those that establish a shared understanding of decarbonisation across the organisation. This means moving the conversation beyond sustainability teams and embedding ownership within estates, finance, procurement, academic leadership and executive decision-making structures. Where objectives are understood and supported across the institution, decision-making is faster, governance is more effective and programmes are better able to withstand changes in leadership, funding pressures and shifting priorities.

Effective governance is therefore not just about monitoring performance against carbon targets. It is about creating the organisational conditions for long-term change, including clear accountability, transparent reporting and a culture in which difficult decisions can be taken and revisited as circumstances evolve.

Ultimately, universities that achieve the greatest progress are likely to be those that treat decarbonisation as an institutional transformation programme rather than an estates initiative, aligning people, systems and decision-making around a common strategic objective.



The biggest barriers to decarbonisation are often **organisational, not technical.**

Key Takeaways

Governance is a critical success factor.

Stakeholder alignment is often harder than resolving technical challenges.

Executive sponsorship drives momentum and accountability

Effective reporting and feedback loops support delivery.



Conclusion

Defining project success and value

The most successful projects deliver more than carbon savings.

Leading institutions increasingly view decarbonisation as a strategic investment rather than solely an environmental programme.

Public visibility and strategic partnerships

A major factor in determining project success is how effectively an institution communicates its sustainability milestones. Best-practice institutions treat their infrastructure transformations as high-visibility programmes that can enhance global institutional rankings and serve as powerful marketing instruments.



That's where it is more complicated than just delivering. The evidence is that your carbon figures have come down, and it's just a graph on a report. In terms of all those other success aspects, we've got to publicise it well. It's got to be sufficiently visible. If it can feed into rankings points, great. If it involves a strategic partnership with a high-visibility partner, even better. It's not just doing it, it's doing it in a way that everybody knows and we get the best out of it."

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Many universities are actively designing projects to support broader institutional objectives.

Maximising academic and research co-benefits

This focus on external visibility changes the investment case materially. A capital project that simultaneously functions as an active research platform, a teaching resource, basis for grant applications, or demonstrate potential for innovation to external industry partners can unlock multifaceted success factors.



Generating higher student recruitment figures

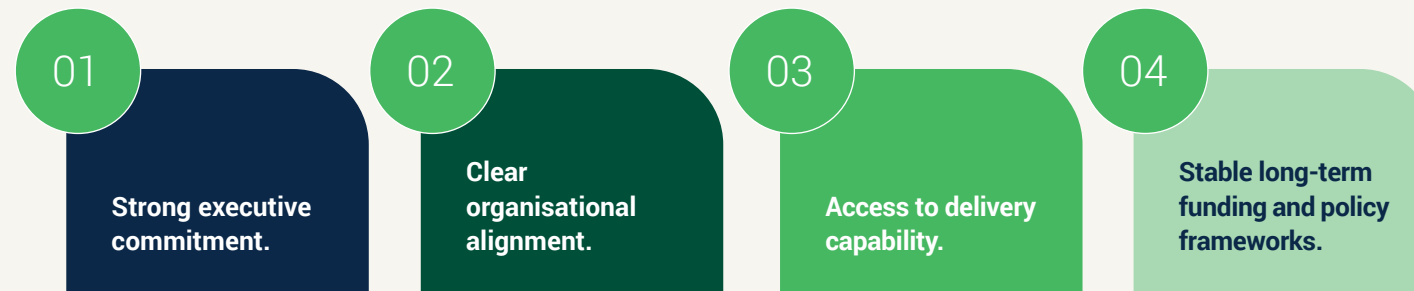
These multi-layered returns are reinforced by intensifying external commercial pressures, particularly regarding student acquisition. Global data highlights that sustainability performance is directly tied to market competitiveness. QS reports that 88% cent of prospective students rate sustainability as moderately, very or extremely important, 40% have actively researched an institution's environmental sustainability strategy, and more than two-thirds judge a university's environmental performance through its on-campus initiatives⁶.

For a research-intensive institution facing a decline of nearly a third in study visa applications year-on-year, decarbonisation can support ongoing initiatives to offset falling student enrolment numbers.

Where the sector goes from here



Our research identifies four factors shared by the institutions making the most progress:



The final piece of the puzzle requires a fundamental shift in the regulatory landscape. The limitation is the absence of long-term stability and reliable policy frameworks that should be underpinning external funding opportunities.



It's about sufficient external opportunities providing some seed funding or capital funding. Everybody knows what needs to be done to decarbonise. It's all very well having carbon targets, it's more about policy drivers.

Higher Education Institution

To unlock large-scale infrastructure investments, estates functions require operational predictability. The current model of short-term, reactive grant funding clashes directly with the multi-year planning and procurement cycles typical of major campus transformations.



Direction of travel – Bevan Brittan view →

The Higher Education sector does not have an ambition problem.

It has a delivery challenge.

The constraint is delivery, and delivery is a contractual question. The gap between a funded programme and a delivered one is filled by procurement route selection, risk allocation, contract structure and the management of performance over time. Institutions that treat this as an administrative stage at the end of project development will continue to under-deliver relative to their capital position. Those that engage commercial and legal input at design stage will not.

The financing conversation must offer something other than capital. Universities can borrow cheaply, and any instrument that competes only on cost of capital will be declined. The proposition that will succeed in this sector combines capital with development capacity, delivery capability and genuine risk transfer — and, where possible, attaches to a strategic

objective the executive already holds. Structures of that kind require careful design: they engage procurement, subsidy control, charity law, tax, VAT, asset ownership and long-term performance regimes simultaneously.

Electrical capacity should be treated as a strategic asset. Campus headroom is finite, and heat decarbonisation competes for it with academic and commercial growth. Institutions should establish their position formally with their network operator, understand the reinforcement timescale and cost apportionment, and make the internal allocation decision explicitly at executive level.

Published targets need active management. With comparability increasing and reporting frameworks tightening, divergence between

commitment and delivery will become progressively more visible. Institutions should be taking documented governance decisions on each published target — reaffirm with a funded pathway, revise with a stated rationale, or restate on a different basis — rather than allowing targets to lapse by attrition.

The research connection should be contracted for, not hoped for. Where a decarbonisation project is intended to serve as a research platform, teaching resource or partnership demonstrator, that intention needs to be reflected in the project documentation: data rights, access provisions, publication rights, treatment of intellectual property arising from novel installations, and the interaction between commercial confidentiality and academic freedom. These are readily addressed at the outset and difficult to retrofit.



The advantages of the sector are real and under-used. Universities hold technical expertise that no other estate owner has internally. They hold land, reserves and borrowing capacity. They have constituencies that actively want the work done. They have a route to convert capital investment into research income and reputational advantage. The sector's difficulty is not a shortage of assets. It is that the organisational machinery to convert those assets into delivered infrastructure has not yet been built.

That machinery is contractual, commercial and governance-based, and it can be built comparatively quickly. It is where we expect the sector's attention to concentrate over the next five years, and it is the work our team is engaged in with universities now.



The next five years will be defined not by the institutions with the boldest targets, but by those that **successfully deliver against them.**

Key Takeaways

Successful projects create wider institutional value beyond carbon savings.

Decarbonisation can support research, teaching, partnerships and student recruitment.

Delivery capability is becoming the key differentiator between institutions.

Stability of funding and policy remains essential for long-term progress.



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