

Industry in Focus

Managing risk in higher education

Higher education sector risk profile 2023



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Introduction and scope

The Higher Education (HE) sector has faced another year where the resilience of institutions has been tested by an ever changing risk environment. In particular, over the last 12 months, the sector has become more aware of the instant impact operational, strategic and global events can have, whilst having to place greater focus on the longer-term risks which could impact the stability of most institutions.

Our annual risk register benchmarking exercise has identified a number of key risk 'themes' faced by the sector and how institutions are dealing with them. We look at each one below, discussing how institutions are worrying less about pension security and the political landscape (as seen in previous years) and more about the risks of cyber security and sustainability. Interestingly, with many universities operating in aging estates and a lack of funding into physical facilities in recent years, infrastructure was also a new challenge identified in 2023, with a potential to see this increase in relevance in the future.

Technology

Cyber security is flagged as the number one risk in our analysis for 2023 and has remained in the top two risks facing the sector in the last three years. Given the significant number and severity of cyber security incidents experienced by the sector in the last few years, this could have been predicted and it's likely to remain high on the risk agenda for some time.

The sector remains an attractive target for cyber attackers and the likelihood of state sponsored attacks could increase as many institutions hold research data and other information that is likely to be of value.

Mitigating the likelihood and impact of cyber attacks is challenging and costly, not least because:

- Many institutions have historically not invested significantly in technical IT controls and dedicated cyber security staff.
- The IT environment across institutions is diverse and has been built up in a piecemeal fashion over a number of years.
- Shadow IT is common and widespread across many institutions.
- Recruiting talented staff in this area is challenging and costly.
- Obtaining insurance to transfer (at least part of) the cyber security risks is increasingly difficult.

In addition to cyber security risks, many institutions face challenges in their broader IT infrastructure. Some are finding a move to the cloud both costly and technically challenging and there is an increasing demand and desire from students to receive education in innovative ways.

Financial sustainability

All of the risk registers we reviewed included risks around the medium to long term financial sustainability of institutions. This is not a surprise, given that challenges in this area have been noted in our previous analyses, but our 2023 analysis showed that institutions have greater concerns about balancing increasing costs with flat revenue streams. This uncertainty means that institutions are having to pay closer attention to balancing the need to invest with a requirement to maintain cash reserves. At the same time, student demands are increasing, it's becoming more challenging to make a return on research, and the competition for students is increasing exponentially, particularly internationally.

What's clear is that management are now increasing their scrutiny over investment cases and demanding better and quicker returns on investment. In some cases, financial controls over budgeting, budget monitoring and expenditure processes have been enhanced. Whether this will be sufficient to mitigate against an institutional failure is yet to be seen, but many in the sector expect that regulatory action may be needed to prevent this in the near future.

Environmental sustainability

Our analysis also showed that institutions are worried about the impact of climate change and the work required to meet Net Zero targets. The HE sector is increasingly seen as being key to solving environmental sustainability challenges, especially given the academic talent and focus of research for many institutions.

Whilst scope one (direct emissions from owned sources) and scope two (indirect emissions from purchased energy) emissions have been relatively straightforward for the sector to calculate and develop plans to reduce, scope three (indirect) emissions have proved much more difficult. Our analysis also noted that some institutions have found it challenging to obtain the funding for plans to reduce carbon emissions and gaining buy-in from the whole organisation has been difficult. The estate clearly has a huge role to play in reducing carbon emissions and some institutions have a number of old buildings, which were not built with sustainability in mind.

The focus on resilience has also moved away from withstanding one off shocks, to being confident that institutions can thrive regardless of the challenges that arise. This is, of course not isolated to the HE sector, as PwC's recent rethink risk/rethink resilience thought leadership has shown [Find out more here.](#)



Introduction and scope (continued)

Our sample, scope, and methodology

We reviewed the risk registers of 35 Higher Education Institutions (HEIs). For each institution, we examined the risks cited, identified those similar in nature and grouped them by theme. We also calculated the average likelihood of each risk theme materialising and its possible impact, which allowed us to determine the greatest threats to an institution and the severity of individual risks. The detailed findings of our analysis are set out in the remainder of this paper, along with a commentary on the top themes, a comparison with prior years, and the types of individual challenges included within each theme.

Risk reporting is a developing topic across the HE sector, particularly as governance bodies (Council / Board / Audit Committee etc.) are keen to digest risk information in different formats. The risk registers we reviewed were in a variety of formats, but all included key information such as key risks, risk descriptions, risk scoring and mitigations in place. Some had clear links to strategic priorities, details of assurance sources and visualisations such as heat maps. The majority of institutions used the 5x5 risk scoring methodology, some use a 4x4 methodology, and in a small number of cases no quantitative scoring mechanism was used (instead a critical to low or RAG rating was used). To support our analysis, we normalised the risk assessment scores across all registers reviewed to a 5x5 matrix.

Year on year trends

The table below summarises the top five themes for the last five academic years, providing an overview of how they have evolved. These are the top themes noted in terms of both impact and likelihood.

A number of trends have remained consistent with the 2021/22 year, such as cyber security and financial sustainability, although as noted in the detailed commentary below, the nature of these risks has evolved between the two years.

In the past year we have seen the risk around infrastructure, both digital and physical, increase significantly. This has been driven by challenges with:

- Restructuring of campus layouts in response to new delivery models.
- A backlog in estate maintenance due to the pandemic disruption over the past three years.
- Concerns about future energy usage.
- Sustainability, environment and climate change is included in the top five risks for the first time, perhaps unsurprisingly given the external attention this topic receives. This risk is driven by many institutions' goals of achieving net zero by 2030, which for many will require significant planning and investment and will impact on reputation if targets are not achieved.

Finally, whilst student experience risks have dropped out of the top five risks this year, it remains the most common risk in the risk registers we reviewed (albeit not deemed as significant in terms of impact and likelihood).

	2018/19	2019/20	2020/21	2021/22	2022/23
1	Pensions	Pensions	Cyber security and information governance	Financial sustainability	Cyber security
2	Government policy and political landscape	International student recruitment	COVID-19	Cyber security	Sustainability, environment and climate change
3	Student recruitment	Business continuity / cyber security	Student experience	Student experience	Financial sustainability
4	Reputation	Postgraduate student recruitment	Mental wellbeing	Research	Infrastructure: university estates and capacity
5	Information security / cyber security	Undergraduate student recruitment	Student recruitment	Infrastructure	IT infrastructure

Current risks

Cyber security


A number of high profile issues in the sector have meant that cyber security is again included in the top five risks from our analysis this year. On the whole, the sector has a much better understanding of the cyber risks it faces, which is likely to be a contributor to the increase in average impact scores seen in this risk over the last few years. The external threat remains high and many across the sector are still concerned about the potential for an increase in state sponsored cyber security incidents, as well as individuals/ groups perpetrating ransomware attacks. At the same time, many institutions have placed significant investment into staff and technology resources to support in mitigating this risk (although staff resources in this area are scarce).

Education institutions continue to be viewed by attackers as low-effort targets, with potentially high rewards. The sector has seen real diversification of its data, software, systems and users and whilst in some cases, progress on centralising controls has been made, many institutions persist with a devolved model, which increases the attack surfaces available for unauthorised entry.

The use of a devolved model and the fact that the IT requirements across most institutions is broad and varied means that shadow IT, which refers to information technology (IT) systems deployed by departments other than the central IT department, is common. This may occur because certain research initiatives or academic provision require specific IT hardware or software. Shadow IT introduces risk by broadening an organisation's attack surface and increasing the number of unauthorised injection points in the environment. It can also lead to a situation where the IT department does not have full visibility into its environment, leading to a false sense of security.

Our analysis shows that the most common security vulnerabilities for the HE sector are in application security, endpoint security, and software and patching updates.

With new cyber security trends and variations on existing trends more prevalent than ever, HEIs need a comprehensive response.

Further information on the broader issues around cyber security can be found in our Cyber Security Outlook 2023 report: [Link](#) 

Sustainability, environment and climate change (new)

HEIs have an important role to play in the sustainability of their communities, as well as working to reduce emissions and minimise costs on their campuses. Whilst many institutions do critical research on sustainability and educate their students on sustainability as a matter of course, the reality of a net zero campus requires high levels of investment which many institutions are strategically committed to, but not financially prepared for.

Institutions often operate highly carbon-intensive estates, especially where on-site combined heat and power plants are in place and changing this requires leadership support and focus. We noted trends in:

- Sustainability governance structures being revised to sit centrally in institutions.
- The sector's focus being on scope 1 and 2 emissions.
- A legacy viewpoint remains in that sustainability is an 'estates problem' rather than a university-wide responsibility.

The current energy crisis may also bring about positive change, as many universities are being driven by energy security requirements to focus on diversifying their energy sources. This clearly includes consideration of greater self generation, either alone or in partnership, as well as seeking to invest in green energy supplies.

One of the most complex challenges faced by universities is how best to quantify, monitor and report on scope 3 emission sources. Two of the key challenges in this area include:

- Student travel, where engagement with student travel surveys has been a challenge for the sector and therefore emissions data is often reliant on assumptions around student travel, which may not reflect reality.
- Supply chain, where the level of engagement with suppliers on scope 3 emissions is largely dependent on the skills and experience of institutes' procurement teams. We have noted a lack of consistency in the inclusion of environmental sustainability questions in tendering and monitoring of carbon reduction as part of contract management processes. This is also impacted by a reticence to move away from the traditional 'most economically advantageous tender' and towards a cost-benefit analysis including long term benefits to the environment and alignment with institutional sustainability strategy.

Current risks (continued)

Financial Sustainability

It's clear from our analysis that the HE sector is facing increasing financial challenges. The institutional cost base is increasing because of:

- Rising energy costs.
- Inflation on non-pay expense.
- Increasing staff costs which are needed to support staff through the cost of living crisis.
- The demand from the student population for increases in support services.
- Increasing pension costs.

At the same time, undergraduate tuition fees will be capped at £9,250 until at least 2024/25 and there is little political appetite to increase these fees in the medium term. This means that competition for students, from the UK and abroad, is rising, particularly for 2022/23 where the total number of home UK undergraduate applicants dropped unexpectedly by c2%.

The Government's levelling-up ambitions will also impact where research funding is directed in future. This is a risk for some if the opportunity to work collaboratively within regions is overlooked.

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To meet the financial challenges, institutions need to better understand:

- The drivers of their cost base and the relative income that is being generated on a more granular level for key activities (e.g. on a course by course basis, including resource allocation).
- How new income streams will contribute to an improved financial position.
- Where investments are being made, whether they will generate a sufficient return in an appropriate time frame.
- How effective ongoing controls over procurement activity, ongoing contracts and budgetary performance are operating.

This may need institutions to take some bold decisions e.g. course closure / stopping certain activities and to be brave at seeking out new / innovative ways in which income can be generated. In the long term though, these types of decisions can result in improved financial resilience.

Infrastructure - university estates and technology capacity / capability (new)

During the Covid-19 pandemic, many institutions refreshed their estates strategies to ensure that the physical infrastructure was fit for new strategic plans, new ways of learning and teaching and the need to ensure the estate is environmentally sustainable. This highlighted a number of risks, which have been exacerbated by a historic lack of planning an investment across the estate.

Developing an estate which takes account of the changing ways that campus spaces are used to reflect current needs of students and teaching methods is complex. The continued move to blended tuition as well as more flexible working models has obvious implications on the estates' footprint given the reduced need for physical space for professional services staff and the increased need for facilitation and co-working spaces for students, whilst also representing a challenge for institutions in ensuring ongoing, visible and active support services for students.

Investment in estates now represents a significant opportunity to redistribute space to right-size, better use facilities and in some cases sell spare capacity to raise additional finance. Devolved control of buildings and research facilities means that many institutions currently operate a number of spaces with very low usage rates and some have taken the step of building data models to fully understand the existing use of space to inform strategic decision making in this area.

The UK's HE sector is entering a new digital age, where HEIs must effectively implement digital technologies in order to attract talent, promote growth and to survive. It is key to integrate systems and implement blended learning programmes whilst still maintaining the quality of the student experience and reputation. At the same time, the advent of AI technologies brings a whole new set of academic risks, which many institutions are working through.

There has been increasing focus and investment being undertaken across digital infrastructure to drive efficiencies. This is also enabling a new way of working, and teaching, driven in part due to the pandemic and changing expectations of students.

HEIs that are not adapting to the digital challenge may struggle to compete, in a world where students embrace and expect digital learning. This comes with a significant investment cost to create an increasingly digital campus, especially where that investment has been neglected in some institutions over many years either because they have been perceived as too complicated or too expensive to deliver.

Current risks (continued)

Other common risk areas include:



Staff recruitment and retention

1

Attracting and keeping the best people is a pivotal issue for HEIs. This risk was highlighted in 100% of the risk registers we analysed and attracting and retaining talented, high calibre academics and professional service staff is a growing challenge. The sector's inability to attract and retain diverse, high calibre staff is leading to increased workloads, increased staff turnover and a reduced student experience. This then may be detrimental to the mental health and wellbeing of staff and has played a role in the current industrial action taken by thousands of staff in recent months. If HEIs do not effectively manage change and national and local employment issues effectively, then it may result in more prolonged industrial action, which will increase the risks around organisational and financial resilience even further.

Policy and engagement

2

Government and Department for Education policy shapes the risk environment of HEIs. It also influences the way in which the Office for Students shapes its policies and regulations and can have an impact on an institution's ability to achieve its strategic goals. If institutions fail to adequately prepare for, and respond to, changes in UK government policy in relation to HE, it may have consequential effects in the recruitment of students nationally and globally, and the regional economy.

Some institutions have already started considering future policy changes, including the drive towards more vocational education (e.g. apprenticeships) and the potential introduction of the lifelong learning entitlement.

Student recruitment

3

Student recruitment remains a key operational and strategic risk for many institutions. Changing student priorities represent both an attrition risk and an opportunity to target new demographics.

The recruitment market can be volatile, which can be challenging to accurately forecast student numbers. In recent years, the UK sector has seen continued growth in international student applications. This increase is despite of the turbulence caused by the pandemic, growing global competition for students and the current cost of living crisis.

The number of Chinese students coming to the UK is decreasing, but still make up the largest group of international students according to Higher Education Statistics Agency (HESA) statistics. Much of the current growth in international student numbers is driven by Indian and Nigerian students, with French and Italian students being the two largest cohorts from the EU. Changes in immigration policy and wider foreign policy and security could have a radical impact long term on sector viability.

Student experience/student welfare

4

Student experience is of paramount importance throughout the whole student lifecycle. From recruitment, learning and teaching, pastoral support and beyond, there are many touchpoints that are pivotal to ensuring students are experiencing the best the institution has to offer. It also has an impact on academic achievement, student wellbeing, the National Student Survey and league tables, which often impact institutions' strategic goals and KPIs. This is therefore an area we would always expect to feature highly on institutions risk registers and we have noted one or more risks relating to student experience on the risk registers we have reviewed.

It is well known that an increasing number of students are suffering with their mental health while at university. Support for students is key to ensuring students have a positive experience, and the all-rounded support becomes increasingly important in the new digital hybrid learning experience, where students spend less time on campus and arguably, it is harder for institutions to spot those in need of support.

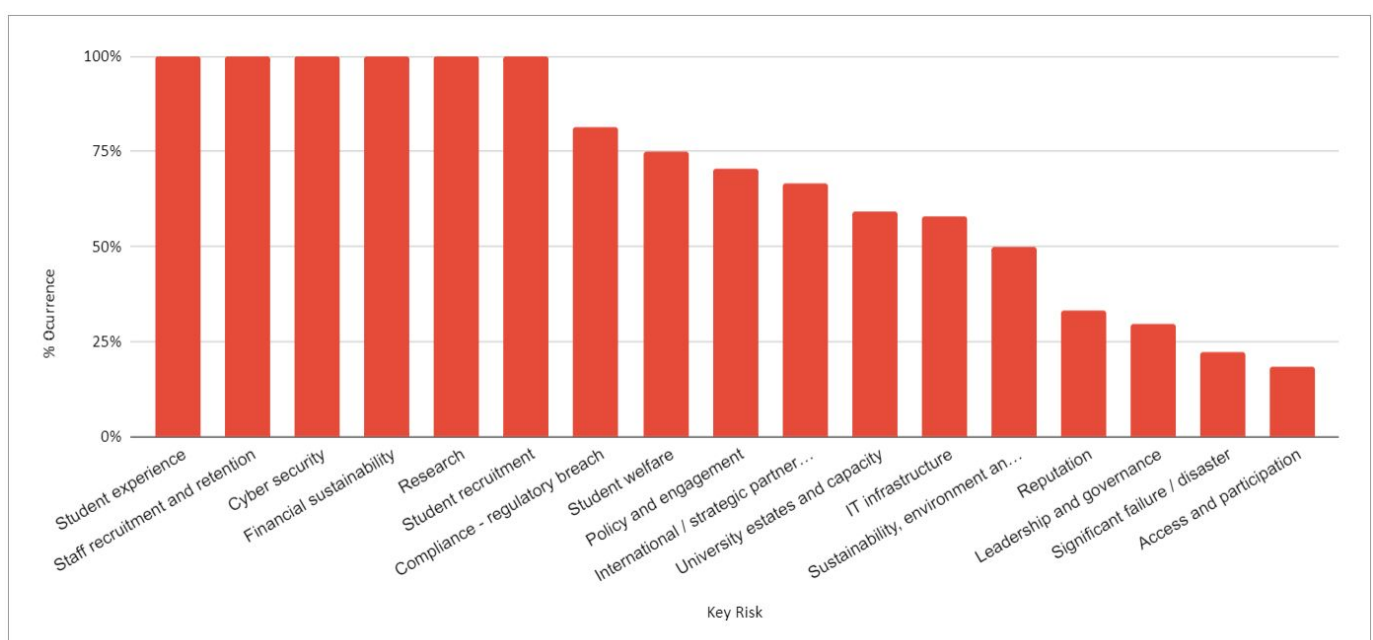
Many institutions are now considering how their structures and processes are set up to ensure student experience remains a priority in a new educational delivery model (e.g. hybrid/blended learning).

Occurrence of risks

Whilst our analysis is based upon averaging out risk ratings, it is also worthwhile noting the number of times that issues occur on registers. Below are the top ten risk purely based on the number of registers they appear on.

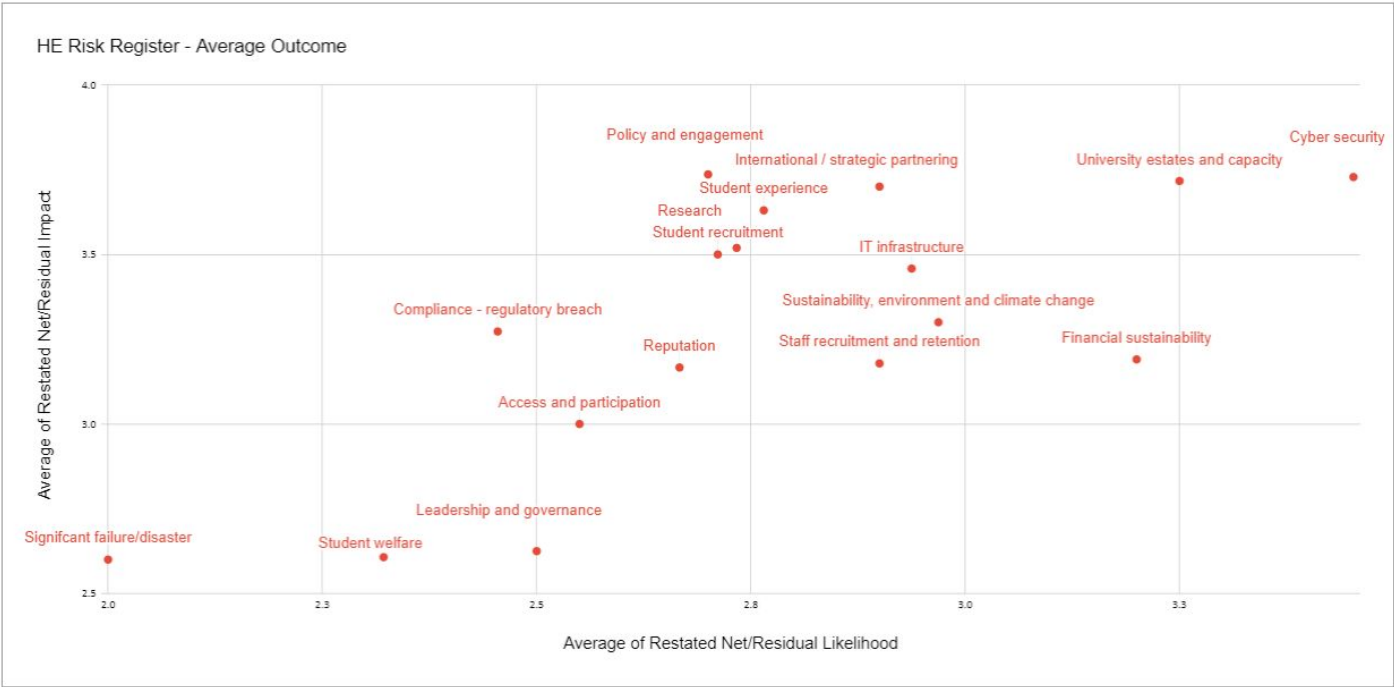
	Risk area	Occurrence (% of risk registers)
1	Financial sustainability	100%
2	Cyber security	100%
3	Student experience	100%
4	Research	100%
5	Infrastructure	100%
6	Staff recruitment and retention	100%
7	Student recruitment	100%
8	Compliance - regulatory breach	82%
9	Policy and engagement	70%
10	Infrastructure - estates and capacity	60%

Occurrence of key risks



2023 Higher education sector risk profile

HE risk register – Average outcome









Appendix



Appendix A






Risk themes and subcategories

Below we provide examples of quotes from the anonymised risks included in institutions' risk registers to give some context for the individual risks within risk themes. This is not an exhaustive list and is included for illustrative purposes only.

Risk theme	Subcategories of risk
Cyber security 	<ul style="list-style-type: none"> • Failure to plan and invest in maintaining and enhancing the information technology infrastructure, capabilities and security. • Unprepared and unable to respond to cyber security attacks. • Inadequate data security systems and processes on an individual and organisational basis, such that a successful cyber attack could occur and/or a serious breach of data. • Security related risks in internationalisation, including foreign interference, theft of IP and data, breaches of security, or breaching export controls. • If sufficient cyber and information security governance and practice is not maintained, then there might be detrimental impacts on the university's ability to operate, reputation and financial stability. • Failure to implement and operate effective controls to provide assurance of cyber and information security resulting in the inability to avoid a major data breach or significant disruption to university hardware and software systems.
Equality and diversity 	<ul style="list-style-type: none"> • Failure to deliver on an institutional approved Access & Participation plan, including: a failure to recruit, retain and maintain diverse student profiles; and failure to remove a student attainment gap • Risk of a failure to deliver an inclusive educational experience. • Risk that not tackling inequalities will impact culture, damage morale and impact reputation (both staff and students). • Increasing staff diversity and inclusion.
Financial sustainability 	<ul style="list-style-type: none"> • Failure to manage and diversify income or manage the cost base and levels of investment, such that levels of shorter term cash flow, cash holdings, and surplus are not achieved (and insufficient headroom is maintained) leading to a longer-term impact on the university's ability to invest and deliver the strategy. • Capital investment programmes fail to focus resources on strategically important priorities. • Failure to meet bank covenant thresholds, resulting in loan foreclosure. • Changes to the funding rules for QR funding/dual support mechanism in the future reduces research income. • Does not respond effectively to changes in the external environment leading to a financial impact which cannot be mitigated without changes to university strategy (e.g. poor UK economic performance, policy changes, freezing of UK undergraduate tuition fees). • Challenge to financial sustainability due to increased employer contributions to pensions, constraints to universities ongoing capacity to raise debt finance.
Student experience 	<ul style="list-style-type: none"> • Student satisfaction and outcomes do not improve in line with planned expectations and investment and fail to outperform competitors. • Failure to deliver a consistently high quality inclusive education, caused by a failure to adapt and resource teaching and learning methods to meet the needs of large student cohorts due to accelerated growth. • Failure to provide subject specific, professional development and employability skills to help all students' secure graduate employment and meet career aspirations. • Failure to develop a vibrant, student voice and community that supports institutional learning and individual student satisfaction and engagement. • Failure to develop and deliver apprenticeships. • Failure to provide good quality accommodation.






Appendix A

Risk themes and subcategories (continued)

Risk theme	Subcategories of risk
<p>Infrastructure - university estates and capacity</p> 	<ul style="list-style-type: none"> • We fail to plan, invest and maintain the university's physical estate to ensure that its size, shape and structure are aligned to the university's strategic ambitions, is environmentally sustainable and compliant with relevant health and safety legislation. • Lack of internal capacity to deliver capital investment programmes. • Student accommodation: demand for accommodation (both university provision and private providers) outstrips supply, impacting on the university's strategy for growth. • If adequate research and teaching infrastructure, including the physical and digital estate, are not developed and sustained, then our ability to deliver a high-quality student experience and excellence in teaching and research may be adversely affected.
<p>IT infrastructure</p> 	<ul style="list-style-type: none"> • IT - Failure to meet changing and increasing demand for IT caused by increased costs, delays and supply chain challenges leading to an impact on business capabilities, operational efficiencies and future growth. • Fit for purpose and resilient business processes are not in place and working risk that digital and physical infrastructure is not fit for purpose. • Failure to adapt the physical and digital infrastructure will impact on the achievement of the future strategic direction and changing individual and societal expectations. • Failure to improve our digital capabilities to conduct high-quality, collaborative and globally impactful challenge-based research and innovation.
<p>Organisational change</p> 	<ul style="list-style-type: none"> • Operating model - Failure to ensure that our operating model adapts as needed to best support our academic teaching and research objectives. • Risk that ineffective change management, particularly around new ways of working will limit abilities to make changes around our business model and to successfully deliver strategic goals and objectives. • Strategic change programmes: Risk of failure to lead and manage the substantial amount of technical, educational and people related change. • Risk that the pace and volume of change related to our long term plan is not appropriate to meet overall aims and objectives leading to poorly managed actions and low quality implementation.
<p>Partnerships</p> 	<ul style="list-style-type: none"> • Failure to manage impacts due to a potential change in partners for international campus. • Over reliance on a single geographical region and/or country means vulnerability to political or macroeconomic factors. • If the university fails to develop a critical mass of partnerships that spans its academic and operational activities and that are closely aligned to our strategic objectives, then the university will become uncompetitive in innovation and enterprise, and will fail to secure income, research collaborations and educational opportunities.
<p>Student recruitment</p> 	<ul style="list-style-type: none"> • If the university fails to sustain the recent growth in student numbers from international markets, a serious budget deficit would result. • Failure to have an appropriate portfolio, attracting prospective students, meeting student expectation, or preparing them for their chosen profession. • We fail to achieve planned retention levels from the previous academic year, resulting in a reduced forecast tuition fee income and/or over-reliance on budget contingencies. • Failure to optimise the university international partnerships, presence, and enrolments in light of changes in UK and International Government Policies and trade blocks and changes in competitive intensity, student expectations and recruitment channels. • A destabilised sector, and aggressive competition leads to failure to meet planned recruitment targets and associated income impacts long term financial sustainability limiting opportunities for investment in strategic priorities.

Appendix A

Risk themes and subcategories (continued)

Risk theme	Subcategories of risk
<p>Policy and engagement</p> 	<ul style="list-style-type: none"> • Failure to anticipate, understand and respond to significant changes in the external policy environment. • Changing nature of education including government led changes to undergraduate and postgraduate teaching quality measures. • Explore options and scenario planning for new funding landscape coming from government and education policy. • Due to changing and heavy regulatory burden and political environment, the executive is overburdened as they revise strategy.
<p>Regulatory compliance</p> 	<ul style="list-style-type: none"> • OfS/Ofsted inspection and compliance. • Risk that the university fails to comply with regulatory body and/or legislative requirements or that excessive regulation undermines universities autonomy. • Risk that the University fails to identify and respond to new / changing compliance requirements.
<p>Research</p> 	<ul style="list-style-type: none"> • Failure to strengthen research culture, quality and standards leading to increased risk of failure to achieve related university objectives. • Failure to forge strategic alliances and academic partnerships with leading individuals or organisations, including national and international research relationships. • Inability to deliver impactful research, loss of research reputation, research becomes financially unsustainable, failure to recruit and retain high quality staff, non-compliance with good practice on research integrity, reduction in PGR students. • Insufficient research grant funding to deliver critical mass of world leading research. • Inability to develop research capacity and grow revenues in line with the university's financial forecasts. • Risk of constraints on academic freedom/spread of self-censorship due to external disruption, threats, or pressure
<p>Staff recruitment</p> 	<ul style="list-style-type: none"> • The current national dispute, which includes pay, precarious contracts, workloads and the gender/ BAME pay gap alongside ongoing USS pension issues, will lead to strike action and ASOS by UCU. • We fail to develop and align the profile of our workforce (skills, size, cost, structure) to deliver our strategic ambitions, leading to an inability to achieve both educational and financial sustainability. • We fail to support the physical, emotional and mental health, safety and wellbeing of our diverse university community leading to a lack of motivation and engagement and an increase in behaviour that is not aligned to our values. • Staff are not engaged which impacts culture and the achievement of objectives. • Staff retention, recruitment and satisfaction is impacted by us not delivering the right capacity, capability, and culture in our workforce.
<p>Student welfare</p> 	<ul style="list-style-type: none"> • Failure to prevent and address harassment and sexual misconduct. • Risk that university fails to offer a suitable range of support on health and wellbeing issues, including for the mental health of all staff and students. • Failure to create a culture where the full community feels safe and supported in compliance regulatory expectations or provider sexual misconduct and harassment policies.

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Thank you

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