Powering UK higher education

How Jisc will support universities towards a technology-empowered future
Who is this document for?
This document is primarily for leaders in the areas of teaching, learning and student experience alongside library directors and CIOs. We hope it will also be useful for interested higher education managers, staff, funders, sector agencies and membership organisations.

Why have we written this document?
We want to ensure that you understand the breadth, depth and relevance of our products, services and support as the sector’s trusted partner in edtech.

We would like to share our 2021-2024 priorities and look further ahead towards 2030 and the foundational activities that will help universities successfully adapt and progress.

This document starts a conversation between us, our members, customers, policymakers and funders and we look forward to discussing any, or all, aspects contained within.
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Introduction

We believe that education and research improve lives, and that technology improves education and research. Never have digital, data and technology been so important in meeting the multiple challenges and opportunities that UK universities face. We are focused on supporting UK universities, funders and UK governments to achieve their priorities.

We are already supporting the higher education sector with a greater choice of digital resources for academics and students, strategy development with leaders, data and insight for planners, open research-enabling systems, help for students to find careers, and connectivity and cyber security protection for all.

We bring higher education communities together to solve problems and share experiences and in Learning and teaching reimagined we collaborated to highlight a new future and provided the tools to get there. Our members and funders want us to build on these strong foundations and in this document, we share our future priorities using four strategic themes, developed from your needs and priorities:

- Empowering culture and leadership
- Reimagining learning, teaching and assessment
- Reframing the student experience
- Transforming infrastructure

These themes also make it clear how our current advice and guidance, training, thought leadership, innovation projects and products and services support the sector. They are developed from our work with sector groups, conversations and feedback from a wide variety of university roles and informed by the Learning and teaching reimagined initiative, which engaged more than 1,000 sector representatives including students and academics alongside a vice-chancellor advisory board.

Our mission is to power and empower our members with the technology you need to succeed, acting as a catalyst for your change. This document will explain how we do that now and will do, at pace, in the future.

Jon Baldwin
Managing director, higher education

Paul Feldman
CEO, Jisc

While this document focuses on these four strategic themes, our Research and innovation strategy (2021-2023) presents our detailed research strategy.
Empowering culture and leadership

We will support universities on their journey to embed digital at the heart of their cultures through inspiring and transformative thought leadership, guidance and leadership development.

We will empower a data informed decision-making culture across each university through dashboards, timely business intelligence and by increasing data literacy.

We will help universities to improve their efficiency and effectiveness through the transformative power of digital and data and through sector-wide agreements and services.

We will enable universities to increase the digital confidence of staff and students through a combination of diagnostic tools, training and consultancy support.

Reimagining learning, teaching and assessment

We will explore and develop solutions to help universities deliver personalised and adaptive learning using data, analytics, underpinning technologies and digital resources.

We will help transform the ways in which universities design, develop and deliver quality teaching by exploring the role of digital and data and delivering compelling new digital resources for the sector.

We will continue to work with universities to investigate, through collaboration with other sector agencies, how digital can support new paradigms for assessing learning.

We will help and support, through thought leadership and guidance, universities to reimagine their course and curriculum design to take advantage of the possibilities that online learning can bring.
Reframing the student experience

We will, in partnership with universities, develop approaches and digital solutions to improve and enhance the student experience and greater equity in access and participation in the UK and abroad.

Specifically, we will improve the student experience by capturing and analysing the many kinds of data that can be collected across a university that in turn enables student services to support student wellbeing and improve the quality of interventions.

We will enhance students’ progression into employment through informed and tailored career insight and choices and explore the employability skills required for the fourth industrial revolution.

We will be recognised as the authority on regional and national labour market information, data and research to help universities support students and partnerships with employers.

Transforming infrastructure

We will continue to develop and build the Janet Network access infrastructure to allow secure and resilient high-speed connectivity to meet the future requirements of universities and reduce the costs of delivering scalable services across the UK.

We will also work with universities, funders and partners to close the digital poverty gap by extending the reach of connectivity and cyber security services – wherever students and staff learn and work.

We will continue our research into the intelligent campus, learning spaces and digital platforms, and how these improve a seamless student experience. This includes how digital and physical estates work together so that they are responsive to student journeys and interactions as well as to help universities achieve their net zero targets.
UK higher education context and opportunities

The sector’s recent digital achievements have been emphatic and swift with many examples of highly effective and innovative approaches to research and online and blended learning. An opportunity now exists to evolve how UK universities support students, academics and professional staff.

In this part of the document we set out the context relevant to a technology-empowered future and the related connectivity, data and digital opportunities for universities to pursue. Each university’s context is unique but with a similar set of drivers, challenges and place-based circumstances.

“There has been a huge amount of digital acceleration in universities. But what has been achieved so far has mostly been about adding new tools to old pedagogy rather than general digitally enabled education across the board. The next big challenge is to integrate digital into the core university strategy.”

David Maguire, interim principal and vice-chancellor, University of Dundee
**Students, staff and culture**

Our research tells us that many students prefer, during and beyond the pandemic, a blended learning experience with easy access to materials, online assessment and support. Maintaining high levels of student satisfaction and improving students’ perception of value for money will partly depend on the successful delivery of online and blended learning strategies. Academics, too, think that blended learning brings opportunities to improve educational outcomes, while leaders understand the benefits of anywhere, anytime and any pace learning. The sector will continue to evolve its practice as Covid-19 rules change; dealing with student and staff fatigue also heightens the need for organisational agility.

This shift requires all-level leadership, practice change, digital fluency and the coordination of teaching, curriculum, library, research, information technology, estates, communications and student support teams. We are seeing increasing levels of student choice regarding learning modality and a deeper exploration of the nature of personalised learning. Universities need to ensure that their future digital practices reflect the ethical demands placed on them by students and society. More fundamentally, universities must continue to secure greater equity in the access and participation of students across the UK.

Embracing digital at the heart of university culture is a critical success factor. The success of new approaches depends on staff and students as co-designers of learning, co-creators of the curriculum and co-assessors of student development. This all needs to be underpinned with a keen focus on the wellbeing and mental health of staff and students.

**Overarching student, staff and culture opportunities:**

University leaders understand the potential transformative nature of digital, data and technology and the positive impact for students and staff. A culture of digital fluency is fostered to enable transformation and change.

University leaders support wise investment in transformative digital, data and technology.

**Student experience opportunities:**

Provide a personalised and consistent experience throughout student journey from pre-enrolment to post graduation, including personalised adaptive learning and assessment.

Use labour market and progression data to provide effective careers support, employment brokering and employability-based skills development.

Understand student needs and preferences through applied use of AI and machine learning.

Use data to inform and scale health and wellbeing support, building in appropriate interventions.

**Seamless online and physical learning environment and experience.**

**Teaching learning and assessment opportunities:**

Embed digital at the heart of high-quality teaching, learning and curricula to improve outcomes for all.

Rethink the management of effective assessment and feedback mechanisms.

Engage students through a personalised learning experience that meets the needs of lifelong learners and employers, and where inclusivity and accessibility is built in by default.

Fund new and developing models such as degree apprenticeships.

Expand the digital skills, fluency and confidence of students, staff and leaders.
Innovation and economic growth

The workplace landscape is rapidly evolving as some sectors decline and others grow. Research shows that large-scale automation may affect more than half of the currently furloughed jobs. More broadly, Industry 4.0 is driving investment and innovation, led in part by universities and research, with the UK’s Industrial Strategy and Grand Challenges (AI, data, clean growth, mobility and our aging society) playing an equally vital role. There is an increasing urgency to align universities with employers’ needs to assist the levelling up agenda and the UK’s economic recovery.

Meanwhile, the global demand for education will accelerate over the next 20 years, and UK university transnational education offerings will flex to grow – the sector welcomed 486,000 international students in 2019-2020 and the UK government has ambitions for the number of UK-hosted international students to increase to 600,000 per year by 2030. Furthermore, UK research partnerships with international universities and partners are critical to research and development success.

Opportunities:

Make effective use of technology to deliver innovative and agile curriculum and course design.

Leverage transformative technologies to scale delivery of high-quality services to students anywhere in the world.

Insightful data and analytics to enable partnerships focused upon economic recovery.

Develop quality improvement processes that will promote and support the adoption of appropriate technology to enhance teaching, learning and assessment.
Financial constraint, creativity and agility
The higher education fiscal backdrop is clearly challenging, particularly in light of Covid-19, the impact on campuses and international student attendance or due to Brexit. The UK-EU Trade and Cooperation Agreement highlights 'science, research and innovation' cooperation but uncertainties exist. University capital programmes have been impacted and cash flow remains a key challenge with, for example, student fee levels frozen.

A continuing focus on efficiency is important but enabling transformative practice also requires imagination and agility as resources remain constrained. New senior appointments in 'digital transformation' posts are a sign that the sector is taking the challenge seriously.

The digital transformation of learning, teaching, assessment and student experience requires sponsorship and investment from governing bodies and executive teams. Short-term investment must align with longer term strategic intent to ensure that every pound spent improves a student's journey throughout their time at university and beyond into the workplace.

Opportunities:

- Invest in the short term with a view to the long term.
- Use innovative and efficient technological solutions to grow student recruitment and provide value for money.
- Solve digital poverty – both hardware and connectivity – to ensure parity of access and experience.
- Explore new economic models to deliver high-quality blended learning.
Research and impact
Research has been at the heart of the UK’s Covid-19 response with universities front and centre of many positive global developments, nowhere more so than in the development of vaccines, treatments and the training of frontline staff. The arts, humanities and social sciences are also critical in contributing to our economic recovery and environmental sustainability.

The UK Government’s Research and Development Roadmap sets out a vision for science, research and innovation and offers a set of priorities focused on many of the themes presented above – innovation, impact, talent, infrastructure, place, internationalisation, equality, diversity and inclusion. All these priorities are rooted in the needs and aspirations of UK society, the UK Industrial Strategy and the ambition to invest 2.4% of GDP in R&D by 2027.

Find more about how Jisc supports UK research, including a deeper exploration of the UK research context, in our Research and innovation strategy.
Dependencies and foundations for success
Making changes to practice, staff behaviours, culture and systems depends on solid foundations. While all universities use similar systems, each university has its own unique combination of processes, culture and organisational design. But all institutions, we believe, face a common set of challenges if they are to evolve successfully.

Flexible, integrated and secure infrastructure is critical – both online and offline as well as on and off-campus – to enhance a coherent and seamless learning and research experience in and beyond the UK.

Ultra-fast and reliable connectivity is an essential ingredient for all universities – to connect staff and students and collaborate with partners and researchers. As technology becomes more complex and threats more sophisticated, it’s a challenge to ensure cyber security is in place to keep your online environment and physical infrastructure safe and secure.

Opportunities:
- Ensure anytime, anyplace, any pace access to learning for all students through state of the art physical and online learning environments and campuses.
- Build a reputation and culture for innovative and flexible systems and processes.
- Ensure leadership is aware of cyber security risks and invest accordingly in people, processes and systems.
- Reform and upgrade of data management practices, systems and skills.
- Develop the use of data and analytics across the university.
The UK nations

The UK nations’ contexts and priorities mirror the themes above but with nation-based flavours, approaches and funding mechanisms.

In Scotland, current higher education priorities are organised in three sections: The Learner, The System and Research and Innovation. The Learner aspect reflects many of the themes mentioned above. For example, a focus on seamless student experience for learners of all ages and backgrounds with a particular focus on student support, student voice, safety and mental health and wellbeing. System priorities highlight the need for an agile and demand-led skills system to help fuel growth sectors, a focus on STEM, digital skills and carbon management. All underpinned by stronger partnerships with industry, colleges and schools and internationally in developing research innovation.

In Northern Ireland, Graduating to Success sets out objectives to be achieved in relation to a sector more responsive to the needs of the economy; a higher quality learning experience; a more accessible higher education sector (augmented by a specific Access to Success strategy) and a more flexible lifelong learning environment. In terms of response to the pandemic situation, the DfE issued a whole directorate Covid-19 Response Business Plan, with consideration given to admissions, student funding, international and cross-border student participation and research.

In Wales, social and economic prosperity are at the heart of policies and practices. The Well-being of Future Generations Act requires universities to think about the long-term impact of decisions to prevent persistent problems such as poverty, health inequalities and climate change, while Wales 4.0: delivering economic transformation for a better future of work sets out significant recommendations focusing on capacity and agility across the sector. Investment in learning technologies, blended learning and learning analytics are essential to high-quality student experience. Similarly, and while maintaining a global perspective, Research and Innovation: The Vision for Wales challenges Wales’ research base to support innovation that boosts productivity in Welsh businesses, delivering economic prosperity and social wellbeing for the people of Wales.

In England, the priorities of the English higher education sector are set by the Office for Students (OfS). It works with higher education providers to make sure that students succeed in higher education. The objectives of the OfS are to ensure all students are able to participate in higher education, that they receive a high-quality academic experience and can progress onto further study or into employment. The OfS also ensures that all students will receive value for money. With the onset of the pandemic, the OfS has focused on acting flexibly and responsibly to protect the quality of teaching for students, ensuring it could understand the impact of the pandemic on providers’ financial circumstances, and supporting the most vulnerable students. With the publication of Gravity Assist: propelling higher education towards a brighter future digital teaching and learning review, the Office for Students has distilled what it believes are the core components of successful digital teaching and learning based on its research. It has made recommendations with preparation for the next academic year in mind and as a guide to the most significant longer-term opportunities.
The strategic themes and activities required to meet university priorities

We have developed four strategic themes to support the sector as it considers how technology and data can meet and exceed sector and institutional priorities. The themes also provide a clear way for us to share how we support universities now and in the future.

Empowering culture and leadership

Achieving transformative change not only requires digital leadership but also a university-wide culture of ‘digital fluency’. Digital, data and technology can empower transformative experiences for and engagement with students and staff but must be considered within the long-term goals of the organisation. Spending every pound wisely is as important as ever and, where appropriate, universities benefit from the economies that come with sector-wide agreements. As universities have, during their Covid-19 response, rapidly changed approaches and practices there is an opportunity to use innovative digital approaches that embed and develop greater organisational agility.

Reimagining learning, teaching and assessment

An opportunity exists to reimagine how students learn, how the curriculum, pedagogy and teaching can evolve and how assessment and feedback support an increasingly personalised learning journey. Flexibility is required to cope with pure online and blended delivery models. Digital, data and technology have a critical role to play underpinned by the digital confidence of staff and students. Successfully co-designing future teaching, learning and assessment approaches is equally important with close coordination between students, teachers, researchers and professional staff. Moreover, access to compelling and high-quality digital resources will assist library and curriculum aspirations.

Reframing the student experience

How online and offline experiences integrate will be critical to reframe the experience, as will be supporting all students’ employability and transition into the workplace. Agile university systems, data and processes must align with the personal needs and circumstances of each student and in turn contribute to their experience before joining, while studying and after leaving university.

Transforming infrastructure

The aspirations above are dependent on intelligent and integrated digital and physical environments and estates. Harnessing data and insight is also critical in supporting personalised experiences, measuring impact, agile decision-making and retuning approaches at pace. Trusted and secure systems and authenticated access are vital to success – wherever students and staff are located.
Propelling the future of research

Digital resources and approaches, data and technology have a significant role to play in progressing sector research and innovation priorities. Opportunities range from diversifying the workforce, enabling international collaboration and ensuring knowledge exchange to reducing administrative burden, ensuring financial sustainability and delivering excellent research.

Find out more in our Research and Innovation strategy.
How Jisc supports higher education

We have a broad portfolio that has evolved over time, is relevant to multiple stakeholders and supports you to meet the challenges within each of the strategic themes outlined above.

We work closely with you, as a trusted partner, fostering a community that’s driven by co-creation and knowledge sharing – delivering the innovation, products and guidance that will benefit you the most.

Our services and products are used by students, academics, library and academic support, technology enhanced learning and IS teams, planners, estate staff, registry, careers guidance and university leaders. Jisc’s heritage is rooted in the power and security of our shared Janet Network – used by all the UK’s universities, the broader research ecosystem and in extending connectivity internationally. Our portfolio helps universities to advance and support student experiences and realise research, learning, teaching and assessment ambitions in the UK and beyond. Our services also ensure policy compliance, reduce your costs and save your staff time to focus on high value tasks.

We know our members can enjoy even greater impact from Jisc and this document highlights where we can help further. See more detail here.

Your trusted partner
Our approach is multi layered to help you understand what is possible, consider and plan for the right future and get the most from our products and services. We do this through our thought leadership, fostering of peer-to-peer communities, training and advice and guidance. Innovative approaches also help and we have created the step up initiative to make it easier for universities to access edtech products relating to the student experience, wellbeing and teaching.

A connected portfolio
Our products and services combine to enable different tasks for students and staff. For example, a second-year geography student, using Jisc-enabled single sign on for all university systems, might access the online library, use resources we have licensed or provide, receive a text to provide digital insights feedback to improve student services, get an email to let them know a journal has arrived (our Zetoc service) and use eduroam to securely roam, play and work. They will be unaware that we are quietly providing their secure connectivity to all these services.
Jisc’s higher education portfolio

Our consultancy, advice and guidance, training services and innovation projects span across all of our strategic themes. Please see a more detailed breakdown of our portfolio, with examples and further links, here.
An independent study was undertaken with the University of Hertfordshire in 2019 to determine Jisc’s value.

The university views us as a trusted partner rather than supplier and the study found that more work was required to maximise Hertfordshire’s value from its Jisc subscription – it was not aware of the breadth of our support and services. The study highlighted that we save the university £1m per annum and Hertfordshire avoids £260,000 worth of staff effort by using our tools and services. Around £900,000 of these savings related to digital resources where, without sector-wide Jisc negotiations, students and staff would have access to fewer and sub-optimal resources. The study also highlighted that students, teachers, researchers, academic support staff and leaders all benefit from our portfolio.

Two further independent Jisc value studies, with similar findings, were undertaken with UCL and Cardiff University.
Empowering culture and leadership
The Jisc-led Learning and teaching reimagined initiative has provided university leaders with inspiration, insight and tools to plot a path through an uncertain future. We have been helping universities create and refine their digital strategies to support change and through programmes such as Digital leaders. Our building digital capability service supports universities develop their staff and students’ digital capabilities. Moreover, our data and analytics tools provide sector-wide student, graduate, staff and finance insights. We also support universities to act ethically regarding data and digital by publishing codes of practice and guides.

Reimagining learning, teaching and assessment
Our high-quality digital content and resources include the provision of textbook content for more than 1.4 million students. We have provided teaching and learning tools and guidance for universities, training courses designed to get the most from online tools and are exploring virtual classrooms with several universities. An exploration of future assessment opportunities has started our journey towards supporting innovative approaches. In addition, our learning analytics service is helping many universities reduce dropouts and plan appropriate interventions.

Reframing the student experience
With the addition of the Prospects portfolio to the Jisc family we now provide career guidance and support services to more than two million students as well as graduate market data for universities. We are also exploring new ways to enable skills-led training. Our learning analytics solutions help transform students’ learning experiences and support their wellbeing while our Digital experience insights services help universities understand where improvements can be made for students and staff. In addition, we have been sharing sector insight regarding Student and staff wellbeing in higher education, highlighting the impact of Covid-19 and how technology is being used in implementing new approaches and some practical recommendations.

Transforming infrastructure
All UK students and academics rely on Janet to stay connected, and we support extensive roaming through eduroam. Cyber security defences are critical to defend university reputations, staff, students and assets and we protect the Janet Network and all those connected to it. Seamless student and staff experiences are enabled by our trust and identity services and our cloud services enable agile approaches to manage and develop university systems.

Propelling the future of research
We support UK innovation and research through the capacity, scalability and global reach of the Janet Network, our access and identity management services, access to and discovery of high-quality digital content and collections, publishing agreements (with 50% of UK research output covered by a Jisc agreement) and open access services to enable compliance and efficiencies.

See details and examples of our services here.
Jisc’s research and innovation strategy – a summary

Our Research and innovation sector strategy provides greater detail about the seven priority themes that will ensure we deliver the right products and support at the right time. They also reflect where we are uniquely placed to act. The research strategy themes reflect our role in supporting new national data infrastructure for research, supporting the development of UK research analytics approaches and solutions and ensuring the effective management of the UK’s ‘research estate.’ The themes also highlight how we help the delivery and monitoring of the open research journey, supporting applied research and knowledge exchange, and support rapid innovation in research management and active research. In keeping with our ‘trusted partner’ sector role we will continue to shine a light on the future through our ‘Research 4.0’ work – so we can all explore and realise the art of the possible.
Jisc’s higher education strategy 2021-2024 and beyond to a vision for 2030

We have described how we are already supporting the higher education sector. In the future we will use these strong foundations, relationships and insight to evolve our offerings and develop new services aligned with your priorities. In this section we set out how we will advise, inspire and provide services to meet your future needs over the next three years and with 2030 in mind.

We will continue to talk with you about your needs and our ambitions and ensure we continually refine our approach and focus effort where it is most needed. We commit to doing so at pace. Furthermore, all the elements of our trusted sector relationship will remain as important as ever — to innovate, inspire, support communities of interest and provide timely and impactful advice, guidance and training.

These activities are important as they help the higher education sector scale advances in teaching, learning, assessment, research and student and staff experiences.
Our aim, over the next three years, is to focus on what matters most to you. We will use our strategic themes to share our commitments. One element of our approach is to help UK universities successfully meet the seven sector challenges identified as part of the Learning and teaching reimagined initiative and to help maintain sector forward momentum. We go further in focusing on the broader student experience, employability and the efficiencies we bring.

Empowering culture and leadership

We will enable universities on their journey to embed digital at the heart of their cultures through inspiring and transformative thought leadership, guidance and leadership development.

We will enable a data informed decision-making culture across the university through dashboards, timely business intelligence and by increasing data literacy.

We will help universities to improve their efficiency and effectiveness through the transformative power of digital, data and through sector-wide agreements and services.

We will enable universities to increase the digital confidence of staff and students through a combination of diagnostic tools, training and consultancy support.

Seven sector challenges:

1. Embed digital at the heart of university culture
2. Invest in the short term with a view to the long term
3. Explore new economic models to deliver high-quality blended learning at scale

Reimagining learning, teaching and assessment

We will help transform the ways in which universities design, develop and deliver quality teaching by exploring the role of digital and data and delivering compelling new digital resources for the sector.

We will explore and develop solutions to help universities deliver personalised and adaptive learning using data, analytics, underpinning technologies and digital resources.

We will continue to work with universities to investigate, through collaboration with other sector agencies, how digital can support new paradigms for assessing learning.

We will help and support, through thought leadership and guidance, universities to reimagine their course and curriculum design to take advantage of the possibilities that online learning can bring.
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We will, in partnership with universities, develop approaches and digital solutions to improve and enhance the student experience and greater equity in access and participation in the UK and abroad.

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We will be recognised as the authority on regional and national labour market information, data and research to help universities support students and partnerships with employers.

Specifically, we will improve the student experience by capturing and analysing the many kinds of data that can be collected across a university, which in turn enables student services to support student wellbeing and improve the quality of interventions.

Transforming infrastructure

We will continue to develop and build the Janet Network access infrastructure to allow secure and resilient high-speed connectivity to meet the future requirements of universities and to reduce the costs of delivering scalable services across the UK.

We will work with universities, funders and partners to close the digital poverty gap by extending the reach of connectivity and cyber security services – wherever students and staff learn and work.

We will continue our research into the intelligent campus, learning spaces and digital platforms, and how these improve a seamless student experience, including how digital and physical estates work together so that they are responsive to student journeys and interactions and help universities achieve their net zero targets.

4 Embrace blended learning as part of curriculum redesign

5 Expand the digital skills and confidence of students and staff

6 Communicate the benefits of blended learning

7 Strengthen the response to digital poverty
Looking further ahead – the 2030 horizon

The experience of 2020 has demonstrated the potential for a complete digital transformation of higher education learning, teaching, assessment and student experience. Our vision of 2030 is designed to promote further debate about the path forward for universities.

Student success is at an all-time high, as universities deliver high-quality teaching, learning and assessment, making extensive use of digital and online technologies, along with machine learning, artificial intelligence (AI) and human interventions and support. Students of all ages and in any location can participate by learning flexibly around work and family commitments and across time zones. The highly engaging and interactive learning experiences on offer set UK higher education apart, which is proving highly attractive to students from across the world.

The needs of the student are at the heart of the student experience. Students benefit from a personalised learning experience, one that effortlessly melds the context, preferences and needs of the individual learner. It recognises who and where a student is on their journey and is a combination of human and artificial intelligence (AI) interactions and interventions.

Students move fluidly across physical, digital and social experiences. The university campus is no longer defined as just a physical space, but as a seamless environment that crosses and combines the digital and the physical. Connectivity extends to the student and is flexible, secure and context aware.

The university in 2030 is recognisably like the university of 2020, except the use of digital, data and technology have transformed, reimagined and reframed the entire student experience.

Predicting the future in higher education is hard. The Learning and teaching reimagined initiative asked the sector to share its 2030 scenarios to provoke more conversations.

There were many and varied contributions; here are four that bring to life the opportunities and challenges shared above.
The year 2030 at the University of Graphene sees a future of phenomenon-based learning that tackles subjects holistically from a multidisciplinary perspective and with high levels of global participation.

Read more here

In South Wales 2030 a ‘hyperlocal’ community-based university experience overcomes barriers to higher education.

Read more here

In 2030 a new paradigm exists of commercial, tech and creative-based organisations and the higher education sector co-designing degrees. They build on degree apprenticeships and fuel economic growth.

Read more here

One 2030 scenario focuses on the continuing importance of strong leadership and culture alongside integrated digital systems, dynamic assessment, new learning design approaches, virtual work experience and a vibrant mixture of learning activities.

Read more here
What are the foundational activities to realise your 2030 vision?

We will continue to work with the sector on the best ways to realise the 2030 vision that is right for your university. One framework to help you is the sector-generated Learning and teaching reimagined recommendations designed for university leaders, sector agencies and government to adopt and progress.
Learning and teaching recommendations

1. Universities to use their strategic and structural planning processes to effect the digital transformation of learning and teaching, ensuring that sponsorship is provided by governing bodies and executive teams
2. Universities to review their strategic investment in digital learning and teaching
3. Universities to make investment plans to mitigate the heightened cyber security risks that arise from greater dependence on digital technologies
4. Universities to think radically about the scale and scope of their learning and teaching activities, prioritising blended learning approaches wherever possible
5. Universities to accelerate the adoption of blended learning, with close involvement of students in all aspects from design to delivery
6. Universities to ensure inclusivity and accessibility are integral considerations in curriculum redesign
7. Universities to ensure their professional development plans include digital training, peer support mechanisms and reward and recognition incentives to encourage upskilling
8. Universities and sector organisations to establish research to remain in step with the changing digital preferences and expectations of prospective higher education students
9. Universities, government and funders to provide additional funding or means to reduce digital poverty as a barrier to students accessing higher education

Underpinning these learning and teaching focused recommendations are a number of foundational aspects that are vital to address – they span across our four strategic themes.

Foundational activities to help you progress

1. Leader, staff and student digital skills embedded at the heart of a digitally fluent university through strong leadership, a whole-university strategy, relevant and up to date tools, plus learning and development support
2. Embed digital, data and technology within corporate strategy and planning approaches by treating these aspects as integral to progress and not as separate strategies
3. Infrastructure investment and delivery to enable a seamless student and staff experience across the physical and online and noting the ongoing need to remove the hardware and connectivity poverty gap
4. Continue to invest in cyber security defences and education and awareness across the whole institution
5. A strong and dependable approach to data and data management systems, processes and skills underpins the successful deployment of analytics and insight that in turn enables evidence-based decision-making across a university from professional services to teaching and research
6. The successful understanding and development of blended learning models including curriculum design through learner and pedagogical-centred approaches while using technology innovation to spark new ideas
How Jisc supports higher education – catalogue of services

One of the aims of this document is to share the breadth and depth of our services. In this section we outline how we work with you and, using our strategic themes, we present our products and services alongside examples and insights.

How we work with UK universities

We advise and guide
We provide best practice guides and training courses across all strategic themes as well as self-help tools. For example, webinars focused on impactful approaches to online learning and our successful Digital leaders programme to help embed digitally enabled transformation in your institution.

We are also developing our consultancy offer to provide a greater focus on learning, teaching, assessment, leadership and the student experience.

We enable and foster communities
Not only do we engage with our members through our account managers and through formal research, teaching and learning and IS groups but also by enabling peer-to-peer networks among lecturers, library staff, IS and tech teams and leaders. We know JiscMail is highly valued too.

“Somewhere, someone is always going to have 15-20% of pioneers who are already out there at the forefront of practice. Mobilising these individuals, who can and have done it all before, through peer-to-peer learning, is really important.”
Nick Petford, vice-chancellor, University of Northampton

We innovate
Our role is to inspire and stimulate technology-enabled transformative change. We do this through creating topical reports and leading initiatives such as Learning and teaching reimagined (see below). We also look to the future and plot innovation pathways that are rooted in universities’ technologies, processes and cultures.

Embracing AI
We have been investigating how AI-based approaches and tools can help improve the student experience, personalise assessment and reduce staff workload. Our focus is to highlight the art of the possible and consider ethical and other aspects.

Embracing innovation
Jisc and Emerge Education have developed the step up programme to match edtech startups with universities to tackle digital learning, assessment, employability, wellbeing and recruitment. The innovative programme helps universities choose and procure services from suitable and robust startups.
An international perspective

We have developed services to support our members’ international and transnational needs – the Global Education Access Framework, Global Connect, Global Partnership – and 47 institutions engaged with our Transnational Education (TNE) licensing services. With HESA and HECSU joining the Jisc family we have extended our international offer across data and student services, with offerings such as Prospect and Data Dashboards for offshore student provision, international student impact and student flows.

We have also responded to members’ needs on enhancing access to education overseas, and our work piloting projects with Alibaba Cloud in China culminated in the launch of the Global Education Access Framework in September 2020. We are now extending similar services to countries such as India and the United Arab Emirates.

Some of our services are used around the world. For example, our digital capability and digital experience insights services have been taken up extensively by Australian and New Zealand universities. Prospects Hedd is used by universities around the globe to attract high calibre, motivated students and graduates; and more than 2,600 organisations use Open Athens across multiple sectors, in more than 50 countries. In addition, we offer several library services overseas, and have been involved in extending advice and guidance in the cyber security space.
Empowering culture and leadership

In 2020 Jisc led a consortium of partners to address the future of UK higher education through the **Learning and teaching reimagined** initiative. It engaged more than 1,000 sector representatives including students and academics alongside a vice-chancellor advisory board and focused on providing university leaders with inspiration, insight and tools to plot a path through an uncertain future.

**Learning and teaching reimagined 2030 vision**

“In 2030 UK higher education is regarded as world class because it is attractive to all students, seamlessly spans physical and virtual worlds and is of the highest quality.”

See the [Learning and teaching reimagined](#) site for visions of the future, 'what you need to know' resources, a strategic planning framework and tools to help you on your journey.

**Supporting leaders**

One university vice-chancellor commented, in November 2020, that, “We’ve moved a 430-year-old university fully online in 10 days.” Our higher education sector is world class, and an opportunity exists to evolve how UK universities support students and staff. The Learning and teaching reimagined **New dawn** report states that the digital transformation of learning, teaching, assessment and student experience requires sponsorship and investment from governing bodies and executive teams.

We urge leaders to engage with us to turn strategy into action. Learning and teaching reimagined developed a **strategic investment framework** for university leaders to balance long-term planning with short-term investment. It includes tools and tactics that help answer your institution's questions, links to additional resources and university case studies.

**Enabling a digitally fluent culture**

We have been helping leaders plot new pathways by embracing digital-first cultural change through formal programmes, such as **Digital leaders**, and through engagements that reflect specific university circumstances. Our sector-wide insight provides a unique perspective from which members can benefit. Our consultants are also working with several universities to embed digital approaches within existing institutional strategies.
Digital strategy
The University of Arts London was seeking support to aid its digital transformation. We completed a review of its institutional digital strategy and culture around IT services. Working closely with the CIO and COO we conducted research across its strategy, policies and engagement with members of the executive board, heads of faculties and academics. We continue to support the institution on this journey, directly supporting the embedding of outcomes that will deliver improvements around culture, people and process.

Providing strategic data and insights
Our data and analytics portfolio includes tools used by 97% of the UK’s higher education sector and provides student, graduate, staff, finances, estates and community benchmarking and strategic planning insight. We also provide tailored datasets and consultancy support to ensure that data-based insight aligns with university priorities.

Visualising data and widening participation
Ulster University took part in a proof of concept development project that allowed it to view interactive data dashboards that, in turn, allowed it to access and use the combined power of public and university-based data sources regarding widening access and participation.

Economic recovery will be aided by useful insight – we provide local authorities with essential information for strategic decision-makers on the movement of students and graduates into and out of every part of the UK. By doing so we are enabling the flow of students into employment.

A national dashboard
Our data and analytics work extends beyond the institution. We have been working with the Higher Education Funding Council for Wales to create a national measures interactive dashboard to monitor progress. This will help the shift to evidence-based and informed decision-making. The dashboard reflects a wide range of measures including the impact of higher education on industry, fee and access plan performance and institutional risk assessments. The measures also determine the amount of innovation funding each institution gets.

Read more here

“Providing strategic data and insights”

“Digital strategy”

“Visualising data and widening participation”

“Economic recovery will be aided by useful insight”

“A national dashboard”

“Reading more here”

“We sought the support of Jisc to help us determine the best course of action to construct our approach towards a future digital strategy and to act as an independent investigators and critical friends. The investigative team was professional, thorough and highly knowledgeable of the higher education sector. The Jisc investigators were able to present to our board a series of cogent steps tailored to our specific needs to take towards embedding our approach towards a digital strategy. The report was very well received.”

Jim Nottingham, chief information officer, University of the Arts, London

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“Delivering a digital first culture”

The University of Sunderland has an ambition to become a truly digital first university. It is taking staff and students on a journey to develop their digital skills, putting technology at the heart of what they do. We have been working with Sunderland to realise this ambition.
Reimagining learning, teaching and assessment

Learning and teaching
We have been helping the sector to reimagine learning and teaching through working with universities and other sector bodies, sharing stories, building peer communities and providing tools and guidance. We continue to deliver multiple courses to help university academic staff maximise the use and impact of digital tools to support online teaching.

We provide access to learning and research resources for your students, academics and researchers. Our members tell us that they would have fewer resources without our arrangements.

We have enhanced access to open access and other online resources to support users during the Covid-19 outbreak and produced a list of publishers and content providers who are widening access to their resources.

In addition, we set up more than 80 institutions with access to critical textbook content for more than 1.4 million students over tens of thousands of modules of study, right across the UK and Ireland under the Free Student eTextbook Programme.

“The Free Student eTextbook Programme will have a significant impact in making this transition as quick and comprehensive as possible at no extra cost.”
Olivia Walsby, reading lists manager, University of Manchester

Our learning analytics service helps teaching and professional staff to identify students who might have problems and plan appropriate interventions to help with and beyond a student’s learning. We have worked with the sector to ensure your ethical, legal and security needs are covered.

We helped an Institute of Technology create a virtual classroom.

We are now discussing the project with universities that are considering new ways to enhance the learning experience. The University of Gloucestershire is one of those.

“The University of Gloucestershire sees significant potential in technologies which offer new ways to deliver engaging online learning experiences. We believe creating dedicated online teaching spaces is the right direction of travel; our current work with Jisc is looking to build environments that enable us to test this theory.”
Rob Blagden, director of libraries, technology and information, University of Gloucestershire
Assessment

The pandemic has challenged universities to assess student progress in new ways. Universities have responded in a variety of innovative ways as we reported in the summer of 2020. It continued a conversation we began earlier in 2020 with our report The future of assessment, five principles, five targets for 2025. This suggests that, by 2025, digital technology will enable assessment that meets five key goals: more authentic, more accessible, appropriately automated, more continuous and more secure. It laid out five targets for the development of digital assessment, to be achieved in five years.

We are now working on how we will help universities on their journey towards 2025 as well as sharing member stories to spread best practice across the sector. For example, the work of University of London in moving from pen and paper to online assessments, including digital proctoring, for 40,000 students, sitting around 500 exams in 160 countries.

Institutional framework

Using our digital experience insights surveys and our building digital capabilities service has also helped universities respond to Covid-19. The University of Derby has limited campus space but years of experience in planning and delivering effective online learning. Covid-19 required a significant scale up of staff and student use of online learning and our digital services helped develop an institution-wide framework for success.
Reframing the student experience

**Improving student and graduate career support and outcomes**

We have welcomed Prospects to the Jisc family. Our student services allow collaboration across government, universities and employers to improve student and graduate career outcomes through information, guidance and opportunities.

Our services are used by more than two million students and graduates a month (Prospects.ac.uk), for searching postgraduate courses, career planning and job matching tools and guides. Moreover, we are also tackling degree fraud through our Prospects HEDD service.

Critically, universities require trustworthy data and insights to assist students with career planning and employment. In this respect, Prospects Luminate provides invaluable graduate market data and reports.

**Student and staff wellbeing**

Our Learning analytics solutions help transform students’ learning experiences and support their wellbeing. Carefully and ethically harnessing the power of data, from multiple university systems, facilitates timely and useful conversations between students and staff.

We have also been exploring how digital and data can support university strategies to support the mental health and wellbeing of students. For example, our January 2021 Student and staff wellbeing in higher education report highlights the impact of Covid-19, how technology is being used in implementing innovative approaches and offers practical recommendations. Our step-up programme introduces edtech startups with innovative wellbeing orientated solutions that may help your students.

**Improving student, staff and university digital capabilities**

As university systems become increasingly digital, improving student and staff experience requires smart insight, tools and resources to help plot the right pathway. Our digital experience insights surveys show how your students and staff are using the technology you offer, what is making a difference to their learning, digital wellbeing and working experiences and where improvements can be made. Universities have a role in building students’ digital skills for the workplace and our digital capability tools help them diagnose and close skills gaps. The same tools help staff, as well as organisational-wide strategies. The Universities of Nottingham, Edinburgh, Westminster, Cardiff, York St John, Lancaster, Hertfordshire and Derby have all benefited.

**Digital credentials and employment**

Economic recovery requires a flexible economy and for employees to regularly upskill and retrain. This shift, including an increase in mature students, presents an opportunity for universities to embrace bite-sized learning alongside traditional degree courses. We have also been investigating the potential for increasing the use of micro credentials to help address the skills-led training challenge.
Digital insight and learner support
The University of Northampton has used our digital experience insights survey to help develop and refine its active blended learning model as well as its integrated learner support approach.

Read more here

The University of Gloucestershire is using Jisc learning analytics to have better-directed conversations that might make the difference between a student failing and flying.

“Basically, a student says, ‘I’m fine’ and the tutor says, ‘Well, not really’ and shows them the graph.”
James Hodgkin, university librarian, University of Gloucestershire

Learn more here
Transforming infrastructure

Connecting and securing your students, staff and assets.
Eighteen million users in education and research organisations, science parks and public sector bodies rely on the Janet Network to stay connected. We also support extensive roaming through eduroam and govroam.

The cyber security defences, services, audits, assessments and intelligence we provide focus on protecting the Janet Network and helping all those connected to Janet. We protect institutional reputations, assets, students and staff. Our Cyber impact report provides sector-wide cyber attack and impact insight as well as advice on how universities can improve defences and shorten recovery times. The report is actively used by university leadership and committees to progress their understanding of the challenges.

"Jisc is great to reach out to when we need to analyse information and threats."
Mick Jenkins, chief information security officer, Brunel University.
Read more here

Trust and identity underpinning access to resources and systems
Seamless student and academic experiences are dependent on verifying and authenticating students, academics and professional staff. Our trust and identity services do just that by managing ac.uk domains, certificates, verifying students and providing robust access management for all universities and research organisations.

Intelligent campus
We have been collaborating with the sector on what we understand by the concept of the intelligent campus, publishing an informative guide and supporting members with a series of potential use cases. We have provided thought leadership alongside data standards and structures to digitally frame the future university campus.

Cloud flexibility
Cloud-based software and platforms provide flexibility and security that in turn support agile universities. We have connections and partnerships with all the major cloud providers but, more importantly, can assist in the planning, migration and management of the cloud-based services that suit your institution’s needs.

Cloud direction
As part of its strategic digital transformation, Goldsmiths, University of London asked us to provide cloud support. We provided expert consultancy from inception through to implementation to help realise new and improved ways of working using a ‘cloud first’ approach. We also supported Goldsmiths in its engagements with commercial technology providers in an impartial capacity.

"Along the way, Jisc has helped us to form our vision and to stay true to the vision we had when we began the journey. […] Having experts that have experienced cloud adoption, and migrations within the sector, has been a huge plus."
Jamie Lee, head of infrastructure services, Goldsmiths, University of London.
Read more here
Cyber security

As technology becomes more complex and threats more sophisticated, it’s a challenge for universities to keep their online environments and physical infrastructure secure. With Jisc acting as a trusted partner and critical friend, we can support you through these challenges with our range of network security, incident management, monitoring, risk management and education services and expertise.
Contact us

Find your Jisc account manager jisc.ac.uk/contact/your-account-manager – we are ready to discuss the opportunities contained within this strategy and how we can support you to realise them.