

School of Informatics

Strategic Plan 2023 – 2028

21 February 2023

Executive Summary

The School of Informatics at Edinburgh has the leading research position in the UK and is recognised internationally for excellence of its research outputs, education and knowledge exchange.

We produce extraordinary science, scientists and knowledge that is the source of transformative change. Through our research, education, knowledge exchange and public engagement activities, the knowledge that we create impacts upon the international academic community, upon policy and society, industry and businesses, our local community and individuals.

In this Executive Summary, we provide an overview of our Vision, Mission and Strategic Priorities for the next five years (2023/24 to 2027/28). In the second section of this document, we outline some of our strengths and our challenges within the context of our priorities; we list the key actions that we will take in the forthcoming year to bring our strategic priorities to life, and how we will measure progress in achieving our strategic priorities. Targets are not yet set for all measures of success; in many cases we need to gather baseline data which we will do in the forthcoming year but they provide a guidance on what we consider will be appropriate measures to monitor our success over the life of this plan.

Vision

Our vision is to build a strong research and teaching environment that addresses key challenges of the 21st century and benefits society as a whole.

Mission

- To provide quality education that equips all of our graduates with problem solving, analytical and critical thinking skills, which they can rely on as future leaders in an ever-changing global environment of the 21st century.
- To conduct research of the highest quality, motivated by both intellectual curiosity and societal needs, informing our research-led teaching and retaining our position as one of the world's leading informatics schools.
- To make a significant, sustainable and socially responsible contribution to Scotland, the UK and the world through education, research, innovation and impact.

Strategic Priorities

To ensure we can achieve our Vision our strategic priorities for the planning period will be focussed around the University's 2030 Strategy Plan focus areas of People, Research, Learning & Teaching and Civic and Social Responsibility.

People

Supporting our people to thrive is key to the success of the School and achievement of our strategic plan. We aim to:

- 1. Recruit, retain and develop the best academic, research and professional services staff**
- 2. Create a culture where staff and students feel they belong and have equal opportunity to fulfil their potential**

Research

The School has the leading research position in the UK and is recognised internationally for excellence of its research outputs. We aim to continue to produce research of the highest quality and significance, encompassing both applied and foundational work, ensuring our impact on the world both now and in the future, with our particular strategic priorities being:

- 3. Increase our research activities through more funded projects, fostering in our academic staff the skills and ambition to lead projects of increasing scale**
- 4. Position our research with respect to Global and Societal Challenges and the UN Sustainability Goals**

Learning & Teaching

The School has a diverse portfolio of programmes and courses and strong demand from across the world to study with us. We aim to provide quality undergraduate and graduate education that equips graduates to solve real world problems and provides them with a competitive advantage in the ever changing and challenging global work environment of the 21st century. Our key strategic priorities are:

- 5. Be the best school in our discipline for student and teacher experience**
- 6. Maintain our strong demand from high quality applicants and extend our reach**

Social and Civic Responsibility

We create knowledge that, through our research, education, knowledge exchange and public engagement activities, impacts upon the international academic community, upon policy and society, industry and businesses, our local community and individuals. We aim to make a significant, sustainable and socially responsible contribution to Scotland, the UK and the world through education, research, innovation and impact. Our strategic priorities are:

- 7. Strengthen and diversify relationships between the School and our industry partners, other parts of the University, the city, our communities and our alumni**
- 8. Grow student entrepreneurship opportunities and education**

2023-2028 Strategic Priorities, Targets and Actions

The [College of Science & Engineering's strategic plan](#) sets out a commitment to three core thematic areas in which consolidation and growth is expected over the coming years – **Data science and AI; Healthcare and data-intensive medicine; Sustainability**. The School has long-standing strengths in data science and AI and a number of different research projects and expertise in healthcare and data-intensive medicine. We are therefore well positioned to lead in these areas. A number of our staff have an interest in Sustainability; this is an area in which we can expand in collaboration with other parts of the University.

Over the planning period, the School intends to consolidate and strengthen, rather than grow in size, except where we make specific business cases for new programmes and staff. This is partly due to constraints on space to accommodate staff and students but primarily to ensure we can focus on creating a compelling experience for our students, being a great place to work and maintaining our cutting-edge research, following previous significant student growth.

People

People are key to the success of the School and we are fortunate to have people who are incredibly committed to their work, their colleagues and the School.

We continue to recruit excellent academic, professional services and research staff who make a significant contribution to the success of the School. We aim to create a values-driven culture where we trust and respect each other; where we take mutual accountability for actions whilst always giving safety and wellbeing due consideration; where everyone feels they belong; and where everyone has equal opportunity to fulfil their potential.

The past three years have been challenging for our people on both a personal and professional level, as we have had to adapt to the negative impacts of the pandemic and University change programmes, the latter having led to systems that are not fit-for-purpose and have eroded individual and School autonomy. We are proud of our strong community of staff and students, however these challenges, alongside high workloads because of pre-pandemic unplanned growth of students, have impacted our ability to interact as a community as much as we feel is necessary to help new colleagues fully integrate and maintain a strong community. During AY22-23 we have implemented various **staff wellbeing and community building initiatives** which we will continue as more people begin to return to campus.

The School's Mental Health First Aiders Network has continued to provide support to staff and PGR students and we will continue to support and expand the network. We have begun reviewing and improving our induction and on-boarding of new staff through re-induction of in-person HR inductions and a structured induction programme for new academic staff. We will **continue to review and improve induction and on-boarding** as we believe that this provides vital initial support for our people.

During AY22-23 we formed a People & Culture Committee with wide representation from across the School. They are **developing a set of Values which we will bring to life across the School** to embed them in our ways of working and ensure we create a values-driven culture and community, and ensure that we are collectively taking responsibility for raising awareness of EDI matters to support our ambition to be a caring and inclusive community.

We recognise that many University and School processes are complex which creates inefficiencies that take time away from what matters. **Identifying ways to streamline processes and reduce bureaucracy** is a key priority. We know we can also improve the manner in which we implement new initiatives by more effectively identifying impacts and communicating changes. We will provide **project planning and management training** to professional services staff.

We continue to have a poor gender balance amongst our staff (under-representation of females in academic, research, computing and business development; and under-representation of males in other professional services roles). **Addressing gender imbalance** remains a key priority, as does **addressing gender pay gaps and ethnicity achievement gaps for our students**. Due to workload pressures during the pandemic we were unable to pursue renewal of our Athena Swan award.

Submission of an application to **regain our Athena Swan award** is a key priority in the forthcoming year alongside initiatives to improve equality, diversity and inclusion within the workplace.

Staff surveys have indicated that staff do not feel confident about the way the School deals with poor performance, discrimination and inappropriate behaviour. These are dealt with when raised however it is obviously not clear to staff that is the case. We will deliver **training and initiatives to support our goal for Zero Tolerance for harassment and bullying**.

We delivered a leadership development programme in the latter part of AY20-21 and we have invested in coaching for senior leaders, which we are confident has assisted in the creation of our consultative leadership team which supports the Head of School. We recognise that many of our staff are put into management positions where they do not have sufficient knowledge or experience of managing and developing people. We will **continue delivery of our leadership programme** and will **deliver a management development programme** – the latter providing a combination of leadership skills and practical training of HR policies and processes that managers need to know to support their staff.

We remain committed to developing our people so they can fulfil their potential. This is especially important for research staff whose roles are fixed term and usually a stepping stone within their career, and for professional services staff who have transferable skills that can be used in any School and therefore often leave our School to take up promotion opportunities. **We will support RAs to participate in professional development opportunities** by working with PIs to ensure they build time for this within research projects, and continue with initiatives started during AY22/23 to build a strong RA community. We will provide **training** to professional services managers on workforce and service design planning and **identifying opportunities for staff to build re-grading cases**.

Where we can, we will continue to support hybrid and flexible working opportunities for our people as we recognise the value this provides to many people in maintaining a healthy work/life balance. Our hybrid working guidelines have been fully adopted by professional services staff and we know that academic and research staff continue to work in a hybrid manner more informally, which we will continue to support where we can. Unfortunately, **we will need to explore opportunities for balancing hybrid working with our space challenges** to identify opportunities to continue to accommodate a growing number of people and demands on space within our existing footprint.

Our specific goals, measures of success and actions are:

Strategic priority 1: Recruit, retain and develop the best academic, research and professional services staff

| Measures of Success | |
|--|---|
| Performance indicator | Target |
| #Employee Engagement | +5% by next survey <i>(baseline 53% 2020 Pulse Survey; 70% 2019 Staff Survey)</i> |
| #Staff who feel that the School deals with poor performance, discrimination, and inappropriate behaviour | >50% by next survey <i>(baseline 2019 Staff Survey: 32% dealing with bullying/harassment; 36% dealing with discrimination; 39% dealing in inappropriate behaviour)</i> |
| #Percentage of PDRAs securing positions at end of their contract (UoE or elsewhere) | <i>Refer action to begin collecting data to identify baseline</i> |
| #Percentage of academic, research and PSS staff who successfully achieve promotion (internally and externally) | % of staff achieving promotion <i>(baseline data tbc to set target)</i> |

| Key Actions for 2023-24 – Strategic Priority 1 | | |
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| Action | Milestones | Responsibility ¹ <i>Accountability²</i> |
| Develop and deliver School leadership and management development programmes | Training to include undertaking annual reviews, coaching, providing feedback | HR Administration Manager <i>Deputy Head of School and Director of Professional Services</i> |

¹ Staff member within School responsible for ensuring the action is completed, in consultation with the Strategy Committee member who is accountable.

² Member of School Strategy Committee responsible for ensuring the action is progressed and reporting on status.

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| Review induction programme for all staff to ensure emphasis on supporting new staff through their transition to working within the School and looking towards longer-term personal development. | Review/feedback on current academic induction programme to feed into next cohort Review of current induction guidelines and feedback gathered to date for research and professional services staff; establish working groups to review and redevelop induction programme/information. | HR Administration Manager <i>Deputy Head of School and Director of Professional Services</i> |
| Review processes to reduce bureaucracy where we can | May-23: Prioritisation of processes to be reviewed Quarterly review and reporting in School newsletter | Deputy Director of Professional Services <i>Director of Professional Services</i> |
| Deliver project planning/management training to professional services staff to ensure impacts of large and small changes are assessed and appropriately implemented. | | Operations Manager <i>Deputy Director of Professional Services</i> |
| Improve the School's estate and infrastructure, to ensure our working environment is fit for purpose and reflects the School's reputation as world-class in research and teaching | Review of working spaces to support hybrid/flexible working Upgrade facilities that are worn Regular review and preparation of small capital funding requests | Deputy Director of Professional Services |

Strategic priority 2: Create a culture where staff and students feel they belong and have equal opportunity to fulfil their potential

| Measures of Success | |
|--|--|
| Performance indicator | Target |
| *Gender, ethnicity and disability pay gaps | Gender pay gap: Zero by 2027 Ethnicity pay gap: Zero by 2027 Disability pay gap: Zero by 2027 <i>(baseline data needed from College and clarity from College on how these will be measured given Ethnicity and Disability are often undeclared)</i> |
| Percentage of female students and staff | % of female staff aligned with % of female PGR students <i>(baseline data tbc)</i> % of female UG and PGT students above national average <i>(baseline data tbc)</i> Increase in applications for our taught and research programmes from female students <i>(baseline data tbc to set target % increase)</i> Increase in applications from women for academic, research, computing and business development positions <i>(baseline data tbc to set target % increase)</i> Increase in applications from men for other professional services positions <i>(baseline data tbc to set target % increase)</i> |
| Athena Swan Award | Silver Award in 2023/24 |

| Key Actions for 2023-24 – Strategic Priority 2 | | |
|---|---|---|
| Action | Milestones | Responsibility <i>Accountability</i> |
| Embed the School's Values in our ways of working to ensure we create a values-driven culture and community | Values agreed by P&C Committee Plan for communication/embedding across the School agreed | Director of People & Culture |
| Preparation and submission of Athena Swan Award application | | Athena Swan Champion <i>Head of School</i> |
| Implement a strategy to increase the proportion of applications from women to our taught and research programmes | Actions identified by March 2023 | Marketing Communications & Outreach Manager <i>Director of Professional Services</i> |
| Implement a strategy to increase the proportion of applications from: • Women for academic and research staff positions; | Actions identified by March 2023 | HR Administration Manager <i>Director of Professional Services</i> |

| | | |
|--|--|--|
| <ul style="list-style-type: none"> • Women for computing and business development staff positions • Men to other professional services roles (particularly grades 4-7) • Women in senior roles (particularly PS UE08 and above) | | |
| <p>Continue delivery of Don't Cross the Line training, supplemented by Bystander training to ensure people know how to tackle inappropriate behaviour when they see it.</p> <p>Supplement Unconscious Bias training with wider Diversity & Inclusion or awareness training</p> | | <p>HR Administration Manager <i>Director of People & Culture</i></p> |
| <p>Rebuild school community through in person activities (work and social)</p> | <p>People & Culture Committee develop schedule of events for the year</p> | <p>HR Administration Manager <i>Director of People & Culture</i></p> |
| <p>Ensure RAs have capacity within their roles to engage more broadly with the School, the RA community and develop themselves</p> | <p>Train PIs to include more "slack" in research projects</p> <p>Dols to host lunches for PDRA's a few times a year</p> <p>Empower the PDRA to self-organise – continue existing funding for community building activities and workshops</p> <p>Ensure PDRA's are aware of existing resources such as staff development fund and IAD careers adviser for CV review, etc</p> <p>Workshops for staff on how to manage your manager</p> | <p>PDRA Coordinator and Head of Research Services <i>Deputy Head of School</i></p> |
| <p>Ensure professional services staff have capacity within their roles to engage more broadly with the School, each other and develop themselves</p> | <p>Training for PS Managers on workforce and service delivery planning and on planning/identifying opportunities for staff to undertake new work that can build re-grading cases</p> <p>Training for PS staff on planning/identifying opportunities to undertake new work that can build re-grading cases</p> <p>Workshops for staff on how to manage your manager</p> <p>Team/Unit away days</p> <p>All PSS away day / meetings</p> | <p>Director of Professional Services</p> |

Research

The School has the leading research position in the UK and is recognised internationally for excellence of its research outputs.

We are ranked 24th in the World's Top Computer Science Departments in the 2023 Times Higher Education World University Rankings, 5th in the Guardian Best UK Universities Rankings for computer science and related courses, 7th in the Times Good University Guide – Informatics; and 23rd in the QS World University Rankings – Computer Science. Our joint submission with EPCC topped the Research Professional Computer Science and Informatics rankings in the 2021 Research Excellence Framework, and Research Professional ranked us first for the size of submission (144 FTE), power rating (100) and market share (7.6%).

We continue to be successful in attracting research income from a range of sources and in securing fellowships, and we have strong research engagement with the rest of the University and with industry. Over the life of this plan, we aim to continue to increase the breadth and depth of our research while increasing research income, enhancing the quality, interdisciplinary and impact of our research.

As **Data Science and AI** become ever more pervasive in daily life and there remains strong student demand and funding opportunities, we recognise our responsibility to ensure that these techniques are used appropriately. Key to this objective is our involvement and leadership in the UKRI Trustworthy Autonomous Systems programme. Additionally, the Edinburgh Laboratory for Integrative AI (ELIAI), led by Lapata and Williams, seeks to improve the applicability of AI systems.

In Spring 2023 we will establish the NQCC Software Lab, led by Kashefi in her capacity as Scientific Director of the National Quantum Computing Centre. This is part of an expanding programme of activities around quantum technology, maintaining our lead in this field of growing national importance.

The nature of our work lends itself to inter-disciplinary work and we will continue to explore opportunities for collaboration across the School and University on cross-cutting research themes.

In **data intensive medicine/healthcare** we are involved in joint initiatives with CMVM such as Advanced Care Research Centre (ACRC) and within CSE we are leading the CDT in Biomedical AI. A key priority for us will be to **continue to expand our reach in this area**. We are working to establish a Rehabilitation Institute in collaboration with Schools across the University and external stakeholders.

We are already undertaking **research activity that contributes to the College's sustainability priority**; however we know that we can do more and this will be an area of focus for us in the planning period. Similarly we are working to explore how we can contribute to the Space and Satellites theme.

While our research grant success and income remains strong, there are opportunities to increase our research activities through more funded projects, whilst fostering leadership skills in our academic staff. We will **implement mechanisms to support our academic staff to increase the ratio of funding achieved from grant applications**, in particular support for large collaborative bids, which will in turn support their career progression. More opportunities to gain peer support for research applications through pitching workshops are being piloted in AY22/23 and we will monitor if this has an impact on the number or success rate of applications. NIA preparation workshops have been positively received.

We have strong demand from postgraduate research students and have continued to invest in school-funded studentships as part of our CDTs, new staff joining the School and in key strategic areas to pump prime future research funding opportunities, through stimulating academic interest and building interdisciplinary connections. There are **opportunities for us to secure funding from external funders for studentships**, including increasing our EPSRC grant portfolio which will increase DTP studentship funding. Our CDTs remain strong with Biomedical AI, Natural Language Processing, and Robotics and Autonomous Systems admitting their final cohort of students in September 2023. In AY22/23 we will submit **bids for the refresh of existing CDTs and for new CDTs**. Space remains a key issue for our PGR community; we have implemented a PGR student desk sharing framework which has helped us maintain our student population but we will have difficulty expanding.

Most research and teaching in the School of Informatics is data-intensive. This includes all work in AI and machine learning, but also a lot of work in computer systems, computer graphics, robotics,

bioinformatics, neuroinformatics, and computer security. To support this work we need two types of provision: (1) A high-capacity centrally run service designed for standard data-intensive computing workloads (most AI research falls under this category), and (2) An Informatics-run service that is highly customisable and meets the specialised research and teaching needs in areas such as computer systems, machine learning, and computer security - these areas require experimental hardware or software setups that a central service can't support. Both types of activity are expanding rapidly, and current provision is at full capacity, limiting our ability to apply for grants, forge industry collaborations, and attract world-class researchers. Need (1) is being addressed by the expansion of ISG's Eddie service and through the EIDF provision that EPCC are building up. However need (2) requires the completion of phase 1 of the sever room upgrade scheduled to occur summer 2023, and funding of phase 2 of the Informatics server room project to create space for additional servers. An alternative would be a shared University datacentre which could house Informatics servers managed by the School's computing team. The time scale for these two needs to be addressed is two years or it will have a significant impact on the School's research and teaching.

The breadth of the School's research laboratories has expanded over recent years. While much of the School's research is computer-based and can be conducted from an individual office or home, we have an increasing number of specific research laboratories – Robotics laboratories, Speech Technology laboratories (involving human participants), prosthetics/robotics lab (involving human participants), cyber security laboratories and other computer laboratories used for generalist and specialist research and teaching. While we have academic leads for each of these research facilities, we need strategic oversight to ensure we are maximising opportunities for cost recovery and space, avoiding duplicate equipment and indeed ensuring we have adequate inventories and equipment replacement planning.

Strategic priority 3: Increase our research activities through more funded projects, fostering in our academic staff the skills and ambition to lead projects of increasing scale

| Measures of Success | |
|--|---|
| Performance indicator | Target |
| #Times Higher Ed World University CS Subject Ranking | In the top 20 by 2028 (24 th 2023; 25 th 2022) |
| #Guardian Best UK Universities Rankings – Computer Science and Information Systems | Remain in top 5 (5 th 2023) |
| #Times Higher Education (UK) Ranking for CS & Informatics | Increase ranking at next REF (baseline: ranked 6 in REF2021; 15 in REF2014) |
| *Number of REF 4* papers and 4* Impact case studies | Increase % of submitted research outputs deemed 4* at next REF (baseline: 2021 61%; 2014 33%) Maintain % of submitted impact cases studies deemed 4* at next REF (baseline: 2021 100%; 2014 48%) |
| #QS World University Ranking in Computer Science and Information Systems | In the top 20 by 2028 (baseline: 23 rd 2022; 26 th 2021) |
| Number of research grant applications each year | Equivalent of academic staff FTE (ie everybody making one application a year on average) |
| #Value of research grant income and awards (total income and award for School) | Increase in total research grant income and £ overhead income (baseline data tbc to set target) |
| #Value of research income per academic FTE | Increase in total research grant awards (baseline data tbc to set target) £tbc research grant income per academic staff FTE pa (baseline data tbc to set target) |
| #Diversity in research grant funders | No one funder accounts for more than one-third of research grant income over 3-year rolling average (baseline data tbc) |
| *Share of UKRI income | Increase in UKRI application success rates (baseline data tbc to set target – measure may change to maintain success rates if we are already above average) |
| *Percentage of Faculty and PDRAs holding Fellowships | Increase in % (baseline xx Faculty; xx PDRAs tbc to set target) |
| *Number of PhD students | % growth in PhD students aligns with % growth in academic staff |
| #Number of CDTs | 3.5 CDTs (baseline 2022/23: 2.5) |

| Key Actions for 2023-24 – Strategic Priority 3 | | |
|--|------------|-----------------------|
| Action | Milestones | Responsibility |
| | | <i>Accountability</i> |

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| Ensure we have a broad and sustainable portfolio of PhD funding, including CDTs | Prioritise and submit CDTs bids Implementation of awarded CDTs | Director of Research and Director of Graduate School |
| Development of strategic plan for <i>Edinburgh Laboratory for Integrated Artificial Intelligence</i> to ensure continuity beyond end of current funding | | Director of ELIAI <i>Director of Research</i> |
| Development of strategic plan for <i>NQCC Quantum Software Lab</i> to ensure continuity beyond end of current funding | | Director of NGCC Quantum Software Lab <i>Director of Research</i> |
| Strengthen relationship in AI with other Schools and Colleges | Consolidation and implementation of plans discussed 2023-23 (workshops, summer school, MSc project call, seed funding) | Senior Data Scientist <i>Director of Research</i> |
| Secure EPSRC investment in AI Hubs and initiatives | | Director of Research |
| Implement mechanisms to support staff in preparing large collaborative bids (target of one major collaborative project led by Informatics - funded in 2022/23) | Clarify support to be provided by ERO (investment proposed) HoRS, DDoPS and DoR to discuss options to outline support that can be provided for discussion with Research Committee | Director of Research and Head of Research Services |
| Implement mechanisms to support individuals in preparing bids, including more consistent peer support for grant applications | Sharepoint site for one-pagers set up 2022-23. Library of previous successful applications available within School Pitching workshops to be continued NIA workshops at least twice a year | Director of Research |
| Improve effective use of server room capacity and increase use of shared GPU clusters | Server Room cooling project complete Phase 2 of funding for server room expansion secured EIDF servers and financial model in operation | Director of Computing and Head of Computing <i>Head of School</i> |
| Ensure research funding proposals and bids are fully and appropriately costed and priced in light of eligible cost and opportunity | Matrix of chargeable costs and mechanisms to apply to bids | Head of Research Services <i>Director of Research</i> |
| Develop and implement research facilities strategic management framework | Set up of small research facilities and/or recharge income Framework for monitoring and reporting on research facilities developed (to ensure space allocated is being used effectively), equipment replacements budgeted, etc. | Deputy Director of Professional Services |

Strategic priority 4: Position our research with respect to Global and Societal Challenges and the UN Sustainability Goals

| Measures of Success | |
|--|---|
| Performance indicator | Target |
| Number of research and dissertation projects that align with the UN Sustainability Goals and/or Edinburgh Earth Initiative | 20% of research project bids have such a tag by 2027 20% of proposed dissertation projects have such a tag by 2027 |

| Key Actions for 2023-24 – Strategic Priority 4 | | |
|---|---|--|
| Action | Milestones | Responsibility <i>Accountability</i> |
| Introduce mechanisms to encourage and measure research projects and dissertation projects corresponding to UN SDGs and/or sustainability/climate change | Identify mechanisms by which this can be recorded Implement measures | Head of Research Services, MSc Project Coordinator, Honours Project Coordinator <i>Director of Research</i> |

Learning & Teaching

The School has a diverse portfolio of programmes and courses, and strong demand from across the world to study with us; moreover we have outstanding students who achieve at the highest levels and make contributions both in the UK and around the world. We aim to deliver high quality teaching programmes, securing high levels of student satisfaction.

AY19-20 saw the transition to hybrid teaching which was highly successful given the speed at which the transition occurred and we have now gained a significant amount of experience of online teaching. Since the return to campus, the majority of our teaching has reverted to in-person; there does not appear to be appetite for developing online programmes and we are not confident that they are cost effective. We have continued to deliver some distance-learning courses through the University's DSTI programme and we know that we need to focus on digital teaching methods – whether that is online teaching or greater use of digital teaching and assessment methods. Over the planning period **we will develop a digital teaching strategy** which will include assessing which of our existing courses and programmes are suitable to deliver online for pedagogical reasons; opportunities for online/digital exams; opportunities to deliver online CPD to industry; and we will utilise existing DSTI infrastructure to deliver more online courses.

There are opportunities for data education beyond core computer science. A number of our staff have been involved in the design, development and delivery of EFI courses in recent years. The first full year of delivery by EFI has identified that they need to be designed with less technical content than courses designed for students undertaking our degrees. While the knowledge and expertise of our academic staff is necessary for the design and development of courses, delivery could be undertaken by university teachers under broad direction from the academic staff member – allowing our academic staff to utilise their expertise back within the School. **We will continue our commitment of academic colleagues to deliver EFI courses in AY23-24** while seeking to invest in additional University Teachers for delivery of courses in future years. We will also **develop a cognitive social science course for delivery to non-Informatics students** where there is currently unmet demand from schools in CaHSS.

We are proud to have moved into the top 5 of the Guardian's Best UK Universities Rankings for Computer Science and Information Systems and up to 24th place in the Times Higher Education World University Computer Science Subject Rankings. However, student satisfaction scores through NSS and PTES continue to be of concern for the School and University. **Addressing student satisfaction will be one of our highest priorities** through a school-led Student Experience Project. This will include ensuring **alignment with the University's ELIR recommendations, reducing assessments** (which will reduce workload for both staff and students); providing **training for teaching staff** in effective use of technology; formalising teaching mentoring; **ensuring courses have sufficient time for feedback** and are developed through the ELDR process, together with improving mechanisms to elicit student feedback and instilling a sense of belonging for our students. During AY22/23 we introduced the new Student Support Model for incoming students and will roll this out to all students in AY23/24. We continue to engage with the University's Curriculum Transformation programme, and have started mapping our existing programmes to programme artetypes, as well as discussing enrichment, challenge and experiential courses that might be introduced.

Demand for our taught programmes remains high however we remain concerned at the high percentage of overseas students in our programmes and the impact that a mono-culture can have when English-speaking students are in the minority – a particular concern for our UG students where it is a larger adjustment to studying and adult life. Our proportion of home students has increased over the past few years, primarily because of applicants who met our entry requirements due to predicted grades. However, assuming from AY23/24 entry predicted grades will no longer be applicable for the majority of applicants, we need to continue to increase demand from Scottish and RUK students, while also diversifying demand from high quality international students to avoid high concentrations from particular countries. College have identified five priority markets of **India, USA, Malaysia, Indonesia, UAE and Saudi Arabia**, with Nigeria and Ghana as potential markets to explore in the future. We believe that Thailand and Mexico may also be appropriate markets for our School but our primary focus will be on those five markets. **Our immediate 23/24 priority will be to focus on converting offers to**

enrolments from these countries, while also participating in Edinburgh Global in person recruitment and conversion activities within those countries, where we can identify staff to do so.

In recent years we have struggled to retain our WP students and we will **implement mechanisms to ensure WP students are appropriately supported** through their programme. The new Student Support Model will provide a mechanism for us to do this more effectively than we have in the past. The Centre for Open Learning and College are developing a STEM Foundation Programme intended to remove barriers to undergraduate study for WP and fee paying international students. This will provide an opportunity to a significant pool of applicants that do not meet our contextual entry requirements and contribute to our objective to increase our intake of domestic students.

In the past year or so we have implemented various improvements to our teaching support resource allocation to ensure equity in allocation of resource and made improvements in our processes to support timely appointment of tutors and demonstrators. This is a long-term project, which includes reviewing administrative tasks that have over time moved to Course Organisers, identifying mechanisms to increase demand from potential T&D staff and ensuring all new and continuing tutors and demonstrators receive adequate training and support. We are also aware that the growth in student numbers over the years has placed strain on our teaching related administrative processes – few of which are stand-alone processes and therefore complex to review and streamline without breaking another element of the process chain. **We will undertake a review of our teaching related administrative processes** to ensure they are fit for purpose, not overly bureaucratic and work is undertaken by those best placed to do the work. We believe that by reducing the administrative burden on academic staff it will improve the staff experience and therefore the student experience.

Strategic priority 5: Be the best school in our discipline for student and teacher experience

| Measures of Success | |
|---|---|
| Performance indicator | Target |
| *Student satisfaction as reported in the NSS, PTES and PRES | Attain level of at least 80% overall student satisfaction (<i>baseline 2020-21: tbc</i>) Improve scores in NSS 'Assessment and Feedback' to a level (<i>baseline 2020/21: tbc</i>) |
| *Academic staff engagement | Improvement in academic staff engagement scores (refer People) and Teaching Office professional services staff if identifiable in surveys/data |
| #UG student withdrawals within first year of study (including WP students) | Reduce UG student withdrawals within first year of study (<i>baseline data tbc</i>) |
| *Graduates entering graduate level employment or further study; and #Graduates starting their own company | (<i>School baseline data needed from College</i>) |

| Key Actions for 2023-24 – Strategic Priority 5 | | |
|--|--|---|
| Action | Milestones | Responsibility <i>Accountability</i> |
| Improve the UG and PGT student experience through a comprehensive Student Experience Project – including full roll-out of student support model | Feb 2023: Project plan developed confirming actions and milestones. Elements of project likely to include: <ul style="list-style-type: none"> • Assessment project – as below • Student support model and responsibilities • Teaching admin (including teaching support) process review – as below • Supporting student societies • Celebrating student successes | Head of Student Services <i>Director of Teaching</i> |
| Reduce assessments within our courses to reduce workload for students, academic and teaching support staff | Feb 2023: Project plan developed confirming actions and milestones – likely to include: <ul style="list-style-type: none"> • Hold a workshop to brainstorm issues and solutions • Produce and circulate data on feedback timeframes • We need clarity on what is expected from the students | Assessment Project Coordinator <i>Director of Teaching</i> |
| Support enrolled WP students to ensure retention and completion | Analysis of current WP student cohorts – where do they come from, gender, ethnicity. | Senior Cohort Lead <i>Director of Teaching</i> |

Measures of Success marked with * = University/College KPIs; those marked with # = School KPIs

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| | Implement actions to ensure they are fully supported to fulfil their potential | |
| Review of teaching related administrative processes and responsibilities | March 2023: Priority processes to be reviewed identified, with broad project plan for timing of reviews Sem 1 2023/24: Trial Professional Course Organiser position for large courses | Strategic Projects Manager <i>Director of Professional Services</i> |
| Improve the PGR experience | Support PGR community building activities through continuing funding for cohort building activities | Head of Student Services <i>Director of Graduate School</i> |

Strategic priority 6: Maintain our market share and strong demand from high quality applicants

| Measures of Success | |
|---|---|
| Performance indicator | Target |
| *Number (and proportion) of undergraduate entrants from an SIMD0-20 area | TBC (<i>baseline: tbc – CSE: 43 - 8.1%</i>) |
| #Proportion of home students in UG and PGT student population #Proportion of international students in UG and PGT student population; and *Ratio of largest overseas market to 5th and 10th largest overseas (or #Proportion of target international markets (as per Internationalisation Strategic Plan) | TBC (<i>baseline: tbc</i>) |
| *People gaining qualifications via certified data skill courses and MOOCs | Number of enrolments in our DSTI courses (<i>baseline data tbc</i>) Number of CPD data skill courses delivered and number of enrolments within |

| Key Actions for 2023-24 – Strategic Priority 6 | | |
|--|--|---|
| Action | Milestones | Responsibility <i>Accountability</i> |
| Develop our curriculum to include relevant courses on Climate and Sustainability | Sep 23/24: Commence delivery of course being developed 22/23 and explore opportunities for further courses in this area | Deputy Director of Teaching (Curriculum) <i>Director of Teaching</i> |
| Develop an outside course to respond to student demand and contribute to Data Science and Curriculum Transformation Programme ambitions | 2022/23: Recruitment of staff member to develop/deliver course 2023/24: Development of course First intake 2024-45 | Deputy Director of Teaching (Curriculum) <i>Director of Teaching</i> |
| Develop a digital teaching strategy | Identify existing courses/programmes which are good to deliver online for pedagogical reasons Identify opportunities for online CPD for industry Develop strategy for online/digital exams Develop School digital teaching strategy | Digital Teaching Strategy Lead <i>Director of Teaching</i> |
| Increase number of courses delivered through DSTI Programme | | Digital Teaching Strategy Lead <i>Director of Teaching</i> |
| Diversify our international student market and ensure we have an appropriate proportion Scottish and RUK students within our UG programmes and Home students for our PGT programmes | Appoint academic lead for India/US to start 23-24 Feb-23: Caps agreed on over-populated regions for 23-24 intake Jul-23: Plan for reaching into new markets developed and being implemented. 24/25 intake: Introduce two gathered field deadlines for applications, to align with North American market | Director of Professional Services |

Social and Civic Responsibility

Through our research, education, knowledge exchange and public engagement activities, the knowledge that we create impacts upon the international academic community, upon policy and society, industry and businesses, our local community and individuals. We have strong links with industry and links to schools across the University, but over the life of this plan we aim to expand and strengthen relationships between the School, other parts of the University, the city and our communities.

We have a robust pipeline of industry partnerships and funding, and strong relationships with industry partners and collaborators, however there is increasing nervousness from industry given the current economic uncertainty which we need to monitor. During AY22/23 we successfully diversified industry funding and this mitigates risks of over-reliance on a limited number of partners and regions. Over the planning period we will continue to focus on diversifying our industry funding and partnerships.

The expertise of our staff is highly sought after by industry and public sector bodies, and in some cases the more appropriate route for this is through consultancy. As well as the benefits for the companies and the individuals, this brings benefits to the School through income, but more importantly in establishing relationships which often lead to broader opportunities such as funded PhD studentships.

Our Data Science Unit, which was established in 2018, supports academics and researchers from across the University to use cutting-edge data science in their research. Demand for support from across the University has been increasing in recent years and during AY21-22 we recruited two fixed term Data Scientists to support the Senior Data Scientist who had been leading activity within the Unit. The Unit's model is – where possible – to charge their time to the relevant grants for short periods of time to develop the PI/team's data science skills. Demand is so great that all three could easily be fully bought out by grants, leaving little flexibility to provide responsive and free support to students, researchers and academics. We will therefore **seek to invest further in the DSU team** given their direct contribution to the University's DDI objectives.

In AY20-21 we secured funding from the Principal's Teaching Award Scheme Award to develop and deliver a School Tutoring Scheme through which our students support secondary school exam-level students (studying computer science and maths) in economically deprived areas. This has been hugely successfully and we will expand delivery through investment in administrative resource to ensure ongoing commitment to this outreach activity. This will support our objectives to increase our intake of WP students, and through better preparation, help with their retention.

During 2023 we will be celebrating 60 years of research in Computer Science and AI through a series of events, including some targeted at alumni. We have lost connections with many of our alumni as we have had insufficient resource to support activities and communication over the last decade. We will use our 60 year celebrations to rebuild those connections and (subject to ongoing investment to support engagement with alumni) we will implement a sustainable engagement programme and create a new admin role to lead our alumni engagement activity.

During AY22/23, using external funds, we have recruited a fixed term Entrepreneurship Trainer who is developing a new Entrepreneurship course for UG students to be delivered in AY23/24 and is providing entrepreneurship workshops and mentoring to staff and students. Anticipating the benefit that these initiatives will provide to our students – increasing their skills and employability, and increasing opportunities to lead or be involved in new start-ups – we will be seeking to invest in ongoing resource beyond the current funding.

Strategic priority 7: Strengthen and diversify relationships between the School and our industry partners, other parts of the University, the city, our communities and our alumni

| Measures of Success | |
|---|--|
| Performance indicator | Target |
| #Number of UoE schools with whom we are collaborating | Maintain top position as the most collaborative School within the University <i>(baseline: 2021/22 - 22/24 Schools)</i> |
| #Number of MSc projects with industry partners | <i>(baseline data tbc to set target)</i> |
| #Number of external project supervisors | <i>(baseline data tbc to set target)</i> |
| #Number of industry, third sector and public sector collaborators | <i>(baseline data tbc to set target)</i> |
| #Total value of industrial and translation research awards | |
| #Number and value of academic consultancies | <i>(baseline data tbc to set target)</i> |
| #Number of industry funded studentships | <i>(baseline data tbc to set target)</i> |
| #Number of school aged children participating in Outreach activity; and % SIMD20 school aged children | <i>(baseline data tbc to set target)</i> 20% of total from SIMD20 by 2030 |

| Key Actions for 2023-24 – Strategic Priority 7 | | |
|--|--|---|
| Action | Milestones | Responsibility <i>Accountability</i> |
| Develop a strategy for maintaining engagement with our alumni | Alumni reunion event(s) held Autumn 2023 as part of 60 year celebrations Identify model for ongoing engagement Business case prepared for (and recruitment of) resource to support alumni engagement activities New academic admin role, Alumni Coordinator, established with responsibility for alumni engagement strategy | TBC <i>Director of Professional Services</i> |
| Implement mechanisms to measure industrial income from geographic location and targets to address weaknesses or opportunities | | Director of Commercialisation & Industry Engagement |
| Develop and deliver Outreach activities that reach school aged children | 22/23: Delivery of Tutoring Scheme Secure approval for ongoing resource to support delivery of Tutoring Scheme / Outreach activity | Outreach Coordinator and Marketing Communications & Outreach Manager |
| Secure funding for Outreach activities (eg. from Royal Academy of Engineering, Royal Society of Edinburgh, Turing) | | Director of Commercialisation & Industry Engagement (with Outreach Coordinator) |
| Develop a Sustainability Action Plan | Establish Sustainability Committee early AY34-24 Finalise Action Plan (Dec 23) and progress on implementation of priority actions | Sustainability Coordinator <i>Director of Professional Services</i> |

Strategic priority 8: Grow student entrepreneurship opportunities and education

| Measures of Success | |
|--|--|
| Performance indicator | Target |
| *Number of spin-out companies | <i>(baseline data tbc to set target)</i> |
| #Number of staff and student entrepreneurship activities | <i>(baseline data tbc to set target)</i> |
| #Number of students joining Venture Builder | <i>(baseline data tbc to set target)</i> |
| #Value of venture capital raised in spin-outs and start-ups | <i>(baseline data tbc to set target)</i> |
| #Number of RAE and RSE Enterprise Fellows and Industry Fellowships | <i>(baseline data tbc to set target)</i> |

| Key Actions for 2023-24 – Strategic Priority 8 | | |
|---|--------------------------------|---|
| Action | Milestones | Responsibility <i>Accountability</i> |
| Deliver new Entrepreneurship course (3rd year UG) | 2022/23: Development of course | Entrepreneurship Trainer <i>Director of Teaching</i> |

Measures of Success marked with * = University/College KPIs; those marked with # = School KPIs

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|---|-----------------------------------|---|
| | 2023/24: First delivery of course | |
| Develop a coaching programme for PhD students and PDRAS | | Royal Society Entrepreneur in Residence <i>Director of Commercialisation & Industry Engagement</i> |
| Provide Entrepreneurship workshops and mentoring to UG, PGT and students and to staff (primarily RAs) Develop and award Enterprise Fellowships | | Entrepreneurship Trainer <i>Director of Commercialisation & Industry Engagement</i> |
| Provide mentoring to academic staff in (1) start-up activities and (2) submission of RAE/RSE Enterprise Fellow applications | | Director of Commercialisation & Industry Engagement |