



Scottish Funding Council
Comhairle Mairneachaidh na h-Alba

Coherence and Sustainability: A review of Scotland's Colleges and Universities Phase One Report: Insights to Develop Further



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Executive Summary

Introduction

Scotland is one of the most highly educated countries in the world, with a formidable reputation for science and research excellence that attracts talent and investment. We are also an ambitious nation, keen to translate our learning, knowledge and skills into sustainable and inclusive economic growth that creates opportunity, prosperity and wellbeing for everyone.

The most striking response to this review, requested by Scottish Government Ministers, has been the expression of immense pride in our world-leading education and research system. Our colleges, universities and specialist institutions are major national assets that have significant social, economic and cultural impact. They will help us survive and thrive through a global pandemic, and will underpin our longer term success. They catalyse ideas, research, innovation and economic growth; they shape local communities and address social inequalities and disadvantage; they help us understand the world around us; and they are a vital ingredient in our global reputation and competitive advantage in the world. They also provide a pipeline of skills across technical, vocational and critical thinking requirements. They develop our young people from all walks of life, workers who need to reskill for different jobs, researchers who will help us live better lives, the leaders of tomorrow, our healthcare professionals, teachers and technicians – a full spectrum of talent that Scotland needs.

This review provides an opportunity for everyone interested in the tertiary education, skills, research and innovation delivered through colleges and universities in Scotland, to consider what the future could or should look like, to help us achieve our ambitions at a time of great uncertainty.

Our purpose in this first phase has been to listen to respondents, and to distil and present back what we have heard so that we can work together on next steps. There are areas of consensus, alongside different views on key issues. There are no easy answers, only a number of difficult choices. This first phase report reflects back material from over 100 submissions, round-table discussions, advisory groups, and recent sector-specific and economic recovery reports. We are immensely grateful to the wide range of respondents who have given us their time, insights and guidance.

An appetite for change

COVID-19 presents many significant challenges for this sector and students, in terms of face-to-face learning, practical skills acquisition, campus living, and business models, particularly models that rely on cross-subsidisation from international student recruitment. As in many other countries, the COVID-19 crisis in Scotland has accelerated trends and accentuated issues that were already in play, such as: financial sustainability; pressures on public spending; vulnerabilities from international competition or leaving the European Union; the pace of digital, AI and technological change; demographic shifts; and a changing world of work and of student, employer, government and the public's expectations of further and higher education.

This first phase review demonstrates a real appetite to consider change while recognising:

- We are working at **two speeds**: responding to the immediate pandemic, alongside securing an adaptable and resilient sector for the future that delivers optimal outcomes.
- We need to take a **whole-system view**, working across the education and skills system.
- Colleges and universities are making **rapid adjustments** to deal with this emergency. More profound changes that affect students, curriculum delivery, financial and business models, or physical estates in different states of adaptability will need **longer term transition and adaptation**.
- We will get the best outcomes if we **collaborate for change** - colleges, universities, students, employers and key interests - in an iterative way, to shape the conversation and bring forward and explore options for the future.

Emergency Years 2020-22

We will work towards sustaining the quality and responsiveness of vital learning and skills provision, and the institutions and programmes we fund. This will include:

- Collaborating to secure student, researcher, staff, and community health and safety.
- Flexibility and stability in funding for institutions and key social policy programmes.
- Protecting and promoting equality and social inclusion, including widening access.
- Support for students facing hardship and/or mental health and wellbeing issues, to enable students to be successful in their studies.
- Funding additional student places at university as a consequence of the special arrangements surrounding the 2020 Scottish Qualifications Authority (SQA) examinations.
- Protecting Scotland's research and science base, and early career researchers.
- Prioritising social and economic recovery activities as part of the national mission.
- Focusing capital funding to support blended learning, safe campus development, digital development, and digital poverty.
- Securing Scottish interests in UK-wide approaches to job retention, costed extensions for research grants, the R&D Roadmap, post-Brexit and broader international strategies, migration policies, and stabilisation packages.
- Securing financial viability through a range of mitigating actions by organisations, government and funding bodies, and the development of longer term actions from this review.
- Reducing unnecessary bureaucracy to focus on this public health emergency and front-line delivery of student education and training, research and innovation.

As we do this, we will adopt new ways of working that help secure solutions that are fit for purpose and can successfully meet the changing needs of learners, our institutions and the communities they serve.

Ten key themes from phase one that will extend into the medium term

Theme 1: Keeping the interests of current and future students, and equalities, at the heart of everything we do by focusing on what students tell us they want from colleges and universities: a good job and career progression; a deeper understanding of a subject they love or a talent they want to develop for itself alone; a sense of belonging and place; value for money; benefit from the reputation and standing of the institution they attend; and the ability to progress to university if at college. The need for excellent online and blended learning is now a key requirement for students, alongside greater consistency in the quality of that offer, and a strong response to digital inclusion and literacy. Many want support and advice to make good, informed choices and transitions. Representatives raised the need for supportive pastoral care, and mental health and wellbeing approaches and services, a continued focus on diversity and inclusion, and improved student-institution partnerships to strengthen communication and participation in decision-making forums. They emphasised the importance of keeping the interests of students at the heart of decision making in dealing with COVID-19 responses and disruption. We currently fund programmes to support student participation, such as student associations and quality enhancement activities. For the purposes of the review, we will be setting up a student advisory group to ensure we continue to keep students at the heart of our thinking and further developments.

Theme 2: Supporting the digital revolution for learners. Excellent digital, online and blended learning delivery is no longer a nice-to-have – it is an essential core strategy for every institution. We had suggestions about developing a national repository of knowledge, and collaborative curriculum and new pedagogy development that could reduce development costs and share good practice. Many also highlighted the digital literacy needs of staff and students; the opportunity for more condensed, more cost efficient blended provision; and the need to create new quality standards for blended and online learning, that involves students, as new practices develop.

Theme 3: Towards an integrated, connected tertiary education and skills system for learners and employers. Respondents highlighted that Scotland has a great opportunity to build on the pioneering regionalisation of colleges, the policy drivers around widening access and the existing articulation routes and partnerships between colleges and universities to make an integrated tertiary system a reality for Scotland:

- Articulating the **distinctive roles** of colleges and universities, and the differentiation we need within the system, while incentivising closer collaboration.
- Examining options with the **senior phase** of school in terms of duplication, connections, transitions and funding overlaps with tertiary education; and working closely with the Organisation for Economic Co-operation and Development's (OECD) review of the Curriculum for Excellence (the national curriculum for children and young people from 3 to 18), which includes the senior phase.
- Safeguarding **widening access** for students from disadvantaged backgrounds and communities and creating **better ladders, bridges and pathways** for learners between qualifications and institutions.

- Supporting flexible entry and certificated exit points, along with **“stackable” qualifications and micro-credentials** with currency across providers and post-graduate offers.
- Prioritising efficient **regional planning and skills alignment** through better labour market intelligence and enabling local decision-makers to adjust provision to respond more flexibly to local, regional and national economic needs.
- **Improved information, advice and guidance** will help learners better navigate their qualification choice and progression routes to college, university, apprenticeship or directly into employment.
- Exploring how a **fully integrated tertiary funding model by SCQF level and whole system targets and outcomes** might support closer collaboration, more efficient learner journeys, and more equitable approaches to funding.

Theme 4: Recognising colleges and universities as national assets and civic anchors by harnessing better their significant contribution to the economic, social and cultural life of Scotland; celebrating their success and impact; better articulating a distinctive Scottish tertiary education tradition and offer; and embedding them into regional and international plans, and the promotion of Scottish interests.

Theme 5: Building long-term relationships with employers and industry so that along the company-institution axis can flow knowledge, curriculum and course design and content, internships, work-experience, employment, reskilling and upskilling, and research. Demand data, along with analysis of existing provision, will support the alignment of skills with employers’ current and future needs. There is huge support for prioritising and safeguarding apprenticeships through longer term investment and planning, an extended range of courses, and greater flexibility between apprenticeship programmes and with other qualifications.

Theme 6: Protecting and leveraging the excellence of our research and science base through encouraging reduced cross-subsidy from international teaching, and working with partner funders and charities to support higher funding to cover the full economic costs of research, while recognising this may lead to a possible reduction in the total amount of research undertaken as a result. Many respondents highlighted the need for continued strong relationships with UK counterparts and research councils. And there were suggestions for ways of incentivising better co-ordination and collaboration to tackle grand challenges and harness Scotland’s particular research strengths, through targeted mission funding.

Theme 7: Driving the innovation agenda by greater translation of our investment in research into successful innovation through commercialisation; a focus on place and the benefits of regional collaborations and clusters with industry; evolving our Innovation Centres and Interface to meet new challenges; and bringing colleges more fully into innovation partnerships and the national innovation agenda.

Theme 8: Enhancing collaboration around pathways for learners, mission-driven research, internationalisation, procurement and shared services, and by exploring different

organisational partnerships and models, and making changes to Regional Strategic Bodies in multi-college regions.

Theme 9: Making the most of the sector's global connections, with many respondents pointing to the need for collective promotion of the Scottish tertiary education brand and offer; the need to protect our most globally renowned institutions as they attract talent and resource and important international relationships; and embedding tertiary education into export, inward investment and trade deals in priority markets, alongside a focus on transnational in-country education.

Theme 10: Focusing on the financial sustainability of colleges and universities, and current funding models by tackling the cross-subsidy from international student income for research activities; supporting the mitigation strategies and business model adjustments of individual institutions (for example, as they consider workforce changes, review capital and digital infrastructure projects, efficiencies, re-negotiate with lenders); incentivising collaboration, and working towards a more integrated, differentiated, connected tertiary education and skills system; and taking forward the themes outlined in this phase.

A Renewed SFC Framework

Investment: our work in phase one suggests we should explore:

- With the Scottish Government, one tertiary education budget, to enable greater flexibility in our approach to investment.
- Moving away from activity targets towards participation indicators and demographic modelling that would track the proportion of the population who benefit from college, university or apprenticeship provision, as a better fit with skills alignment and to reflect the changing needs of our society.
- An SCQF-based tertiary funding model and simplified premiums across institutions that take account of access and inclusion objectives, an institution's context, and successful student outcomes.
- With Skills Development Scotland (SDS), develop options to embed Foundation and Graduate Apprenticeship programmes into our tertiary education offers and SFC's funding and accountability frameworks.
- A Transformation Investment Fund to support change in the sector.

Quality, Accountability and Insights: our work in phase one suggests we should explore:

- A new National Outcome and Impact Framework for colleges and universities, for a proportionate and targeted reset of our Outcome Agreement process, with clear expectations and indicators of success, and a focus on improving student and stakeholder experiences and outcomes across all progression pathways.
- Generating better debate about the future of tertiary education and skills through evaluative research, good engagement with students, employers, and key stakeholders, and development of better data analytics.

Developing phase two

This report on phase one of our review reflects the submissions we have received, the discussions we have hosted or been invited to participate in, and analysis conducted to support emerging themes. We intend to develop many of these themes further during phase two, through debate, analysis, and the exploration of options and solutions, in a spirit of partnership and collaboration. This ability to come together to develop a shared mission and to exercise collective system leadership is more important than ever as we navigate a complex, interconnected and changing world, so that we can build and invest in a tertiary education system, and research and innovation, that will help people survive and thrive through this COVID-19 crisis, and will benefit future generations.

Key areas for development in phase two will include:

- A continued focused response to the COVID-19 pandemic, particularly in the areas of health & safety; supporting students to succeed; economic and social recovery; and financial sustainability.
- Assessing the feasibility and prioritisation of options outlined under theme three in moving towards an integrated, connected tertiary and skills eco-system for learners and employers.
- Development of the issues identified under theme six to protect and leverage the excellence of our research and science base and support better innovation.
- Development, with SDS and stakeholders, of skills alignment, and the funding of, and planning for, Foundation and Graduate Apprenticeships.
- Engagement with employers and industry to ensure their views and expertise help inform and improve student outcomes.
- Exploring how we can collectively enhance and support digital and blended learning options.
- Developing further SFC's outcome and impact framework, funding methodologies, quality assurance arrangements, options for targets and measures, and a Transformation Fund.
- Engagement with multi-college regions on next steps.
- Making sure student views are threaded through our considerations. We will establish a student advisory group to help facilitate this.

Feedback and engagement

We would welcome your feedback on this report. Please email us at reviewsecretariat@sfc.ac.uk. We will be setting up further engagement to develop the themes in this report.

CHAPTER ONE: About this review

Introduction – why do we need a review?

“Ultimately, there is significant opportunity based on the idea that the traditional model of education developed in the 19th century and maintained through the 20th century, is coming to an end. A new model is evolving as we recognise that education is not about providing access to one job for life, but providing the competencies to survive in a complex and fast-changing lifelong career of continual training, learning and evolving. We must not prepare our learners for the ‘new normal’, but for the ‘next normal’. And the one after that, and so on.” (College Regional Strategic Body submission)

“This is a rare opportunity for a substantive review of Government support and intent for Higher and Further Education. It is important that, while short-term actions will be needed, these are contextualised with a clear articulation of future state eco-system. It is clear that current provision is neither financially sustainable nor entirely coherent; with demand from within Scotland likely to increase in both volume and diversity both in the short-term post COVID-19 but also as automation increases the need and opportunity to upskill.” (University submission)

“To safeguard the stability of the sector, and further cultivate this ecosystem, now is the time for bold, imaginative and wide-ranging conversation about the contribution we can make to the country as a whole. Put simply, in a challenging environment where resource is likely to be constrained, HE and FE cannot afford to stand still.” (University submission)

“...a holistic, coherent, and tertiary response characterized by agility, flexibility and adaptability – is now more essential than ever if Scotland is to make a step change in delivering its national priorities...” (The Cumberford-Little report)

“Be careful. This is a time of huge uncertainty. We simply don’t know where we will end up over the next couple of years, and it’s the low ebb and sensitive end of a political cycle. Putting even more uncertainty into the system through this review needs extreme caution.” (University)

1. This review provides an opportunity for everyone interested in the education, skills, research and innovation delivered through colleges and universities¹, and for post-16 provision generally in Scotland, to consider what the future could or should look like. There are areas of consensus, alongside different views on key issues. It is also clear from our engagement during phase one that there are no easy answers, only a number of choices.
2. COVID-19 presents many significant challenges for this sector and students, in terms of face-to-face learning, practical skills acquisition, campus living, and business models that rely on cross-subsidisation from international student recruitment. As in many countries, the COVID-19 crisis in Scotland has accelerated and accentuated some of the trends that were already in play before the crisis. These include the financial sustainability of our institutions; pressures on public spending; vulnerabilities from international competition for talent and resources; leaving the European Union; the pace of digital, artificial intelligence and technological change; demographic shifts; and a changing world of work and of student, employer, government and the public's expectations of further and higher education.
3. Given this context, we were asked by Scottish Ministers to review coherent provision by colleges and universities, and the undertaking of research, in these changing times, with these objectives:

¹ Throughout this report, the term 'universities' should be understood to include Scotland's world-leading small specialist higher education institutions.

Who is this review for?

4. Tertiary education and research matters to a broad range of stakeholders with different interests but we have four primary stakeholders in this review:

Review Engagement

5. This review is being conducted over three phases: to early Autumn; into February 2021 (a revision to our original plan which envisaged phase two completing at the end of December 2020); and into early summer 2021. In the first phase, we received over 100 submissions to our initial call for evidence. In addition, we held round-table discussions, worked with advisory groups, conducted desk-top analysis in particular areas of interest, commissioned specific research, and drew on the experience of SFC's Board and Committees. An overarching Programme Board, with external experts, kept the review process on track. We acknowledge that the timescale for responses to our first call for evidence and through our other interactions was very short and we are immensely grateful for the insights people and organisations have provided against a tight deadline and given all other pressures. There will be opportunities to influence this review as it proceeds and a revision to the timings of phases two and three should ensure there is scope for further engagement. We have not yet decided if there will be one published report from each of the next two phases, as some of the themes may need to be explored quickly, while others will take longer to develop.

6. This first phase of this review is primarily concerned with reflecting back what we have heard, sharing broader analysis and generating discussion about the future direction and necessary evolution of the sectors, in order to secure the best tertiary system for learners, employers, and Scotland; to maintain excellence; and to socialise and incentivise ideas for change. It also threads through ideas and issues raised in recent reports about the Scottish sector:
- The Cumberford-Little Report: One Tertiary System: Agile, Collaborative, Inclusive (February 2020).
 - The Muscatelli Report: Driving Innovation in Scotland – A National Mission (November 2019).
 - The Report of the Advisory Group on Economic Recovery (AGER) to the Scottish Government (June 2020).
 - A Sub-Group of the Enterprise and Skills Strategic Board (ESSB) Report on measures to mitigate labour market impacts (July 2020).
 - Commissioner for Fair Access' annual report (August 2020).
 - Accelerating Articulation: Final Report from the National Articulation Forum (August 2020).
 - The Logan Review: The Scottish Technology Ecosystem Review (August 2020).

7. These accompanying papers sit alongside this report and provide further background and context:
 - A slide-deck about the Scottish tertiary education system.
 - Two papers analysing the financial performance and sustainability of colleges and universities in Scotland.
 - An assessment of Regional Strategic Bodies in multi-college regions.
 - Comparisons with the tertiary education systems in other countries.

Working through change and uncertainty

8. There are 26 colleges across 13 regions, 16 universities and three small specialist institutions (SSIs) in Scotland (The Royal Conservatoire of Scotland, Glasgow School of Art, and SRUC). It is a very diverse group of organisations in terms of size and scale, age and historic asset base, financial health, the breadth and intensity of research activities, global reach, regional population served, significance at local, national and UK levels, skills provision and graduate destinations. This heterogeneity is a core strength and important context as we consider choices about future differentiation and integration within the sector, and how best to define and recognise the contribution of colleges, universities and SSIs to Scotland's future prosperity.
9. Colleges and universities in Scotland have changed and adapted over past decades, and developed complex inter-connections and collaborations. So, in conducting this review we are conscious that change in one part of the system has consequences and impacts in other parts. It is also true that, while the sectors pivoted quickly in response to the COVID-19 and economic crises, change can take time and may need periods of transition and adjustment. There are multi-year commitments to students, people employed to deliver particular curriculums, financial arrangements that require to be serviced, and a historically configured physical estate in different states of adaptability.
10. We are still dealing with a global pandemic. No one can truly know at this time how this will affect us and how it may change the way we live our lives. Institutions, governments and businesses are trying to survive and thrive in an extremely difficult context. At this time of great uncertainty, we need to balance required short-term responses, interventions, and rapid adjustments, with our ability to protect our longer term capabilities. Therefore, this review deals with the two emergency years ahead, alongside considering how to build a system for the future that is adaptable and resilient, to secure optimal outcomes for a wide range of interests in a shifting and complex environment.
11. There will not be one simple answer to the challenges we face, and there are many stakeholders who will influence how best to respond to the consequences of the pandemic and other long-run issues within the sector. That is why this review is founded on the premise that we will get the best outcomes if we collaborate for change - colleges, universities, students, employers, and other key stakeholders working together, in an iterative way, to shape the conversation, bring forward and explore options, and consider necessary reforms at a system-wide level.

CHAPTER TWO: Immediate Focus 2020-22 - Public Health, Economic and Social Recovery

“As this response [to the pandemic] has demonstrated, higher and further education are key to addressing the various strategic challenges we as a country face, whether through equipping young people with the skills they require to thrive in a changing economy, reinforcing Scotland’s post-Brexit resilience, or supporting the national recovery as we emerge from the pandemic.” (University submission)

“Colleges have a critical role to play in Scotland’s recovery, supporting Scotland’s future, getting our citizens back to work, ensuring an absolute focus on both social and economic recovery, and contributing to the success of the changed economy of Scotland of the future – in other words playing a vital role in helping us build back better. Colleges are critical to the capacity to re-build.” (Colleges Scotland’s submission)

“The central importance of the role of education in the reconstruction of the economy is unarguable, and the breadth of what this means needs to be reconsidered. We need to accelerate existing concepts being developed in schools to prepare some children in their later years for vocational roles and apprenticeships. We must strive to ensure that learning is designed to match the skills we need in Scotland in future. Reskilling and lifelong learning will be vital too. Our universities are the envy of many around the world. We must protect them but also leverage them to greater effect; we must transform acknowledged world-class research into comparable levels of development, and, in turn, large-scale commercialisation. We need an education-led recovery.” (Report of the Advisory Group on Economic Recovery)

12. Dealing with the COVID-19 pandemic has tested us all, but colleges and universities have shown great agility and leadership: the switch to online delivery for students within days, drawing on the resilience, dedication and expertise of staff to support the education and training delivery needs of students; their pivotal role in the fight against the disease through vaccine development, delivering world-leading health research and the deployment of staff and students to the NHS frontline; the release of personal protective equipment (PPE) and facilities from both sectors; strong support for students facing hardship and early career researchers through this difficult time; and the visible commitment to be a catalyst in Scotland’s recovery.

13. The start of term, the management of blended learning, and dealing with a public health emergency, continue to provide challenges, particularly in terms of keeping the interests of students to the fore and dealing well with COVID-19 responses and disruption.

Public health and safety

14. Our top collective priority has been keeping students, staff, and communities safe. This has involved extensive collaborative action, for example, by local and central governments, public health and police authorities, and representative bodies, to develop guidance, standards, interventions, assurance reporting, and community engagement. There have been no risk-free options. Government and its agencies, health professionals, institutions, students and employees have been constantly balancing choices and harms around personal and community health and safety, economic and social recovery, and the need to continue with education and training opportunities that can provide personal development and improved life chances, purposeful activity when the labour market is depressed, and talent and trained people for employers and research. Those risk assessments, informed by our best scientific knowledge at the time, are conducted at national, local, institutional and individual levels.
15. During phase three of the Scottish Government's COVID-19 Route Map, the Scottish Government's advice is that planned, risk-assessed blended learning enables students

to learn from each other, and gives institutions opportunities to support them to succeed through more direct interactions with tutors and lecturers, and to stick with their chosen courses. Campus learning at college and university is also felt to support good mental health and wellbeing and may be vital for students from disadvantaged backgrounds who may live at home and who are likely to benefit from tutor and lecturer support delivered on campus. It also matters for most practical subjects where online teaching only goes so far, and for research that requires laboratory and physical facilities. Over recent months and for the foreseeable future, a key focus remains the safety and wellbeing of students in particular types of accommodation, while recognising the importance of the wellbeing of, and support for, college and university staff who have had to adapt to different ways of working in difficult circumstances

Flexibility and support

16. We cannot predict how this pandemic will develop or when a vaccine will be available. So, responsiveness, and support for students will be key, along with flexibility from agencies, like us, to ensure institutions keep their focus on education and training, front-line student services, research, and the adjustments required for these next two academic years. We need to find the right balance in that flexibility to continue to seek appropriate assurances on delivery and accountability for public investment.
17. We expect institutions to fulfil their duty of care to students who are isolating or in quarantine, to those who are estranged from their families, to mitigate digital poverty and hardship, to be clear about what learners should expect from their learning and teaching experience, to support their mental health and wellbeing as well as their study needs, and to provide good, safe social activities wherever possible. We know students want to understand their rights and options, to be listened to, to get the best student experience throughout these difficult circumstances, and to be involved in decisions affecting them. Clearly, that duty of care extends also to staff at colleges and universities.

Focusing on economic and social recovery

18. The public health crisis will have profound economic effects. As a number of important reports on economic recovery have highlighted, further and higher education, science and research will be cornerstones in that recovery – through world-leading research that will find cures and healthcare strategies for COVID-19; through education and training that helps people of all ages to develop the skills they need to succeed in a changing economy; by strengthening our post-Brexit resilience; by continuing to attract international investment and talent; and by coalescing around the national economic and social recovery strategies. The importance of the role of colleges and universities, as anchor institutions, to Scotland's economic and social recovery threads through all aspects of this report and is outlined in more detail in the paragraphs below.
19. Scotland's colleges and universities are also essential to wider social and cultural objectives, for example, mitigating the effects of economic scarring and inequality, around social mobility and cohesion, supporting some of the most vulnerable in our society to overcome disadvantage, providing access to museums and art collections,

and developing people who will help us understand the world around us, through their creative and intellectual talent.

Striving for stability and sustainability

20. At a time of great uncertainty, as institutions adapt their operating models, as we work towards a coherent tertiary learning and skills system, and as the strategies of key partners become clearer (for example, research and innovation funding at UK level), at the same time institutions need clarity on funding and less fragmented investment.

SFC's priorities over the emergency years

21. We will continue to focus on supporting institutions to do their best for disadvantaged pupils, students, local employers, people in local communities facing the economic and social impacts of the pandemic, upskilling and reskilling, and on the research, innovation and activity that will aid Scotland's recovery:
- **Collaboration on health and safety guidance:** the Scottish Government has taken the lead in developing guidance for the colleges and universities to deal with the COVID-19 emergency, working closely with stakeholders, including SFC. We have provided advice on funding interventions that can make a difference in dealing with the crisis, allied to financial analysis at an institution and sector-wide basis about the current and longer-term impacts of the crisis.
 - **Immediate flexibility and funding stability for institutions:** we have confirmed that we will not recover funds for shortfalls against outcome agreement targets where these are related to COVID-19 for Academic Year (AY) 2019-20 and AY 2020-21. This provides institutions with flexibility and financial stability.
 - **Protecting and promoting equality and social inclusion:** we have continued to support a significant number of programmes aimed at promoting widening access and social inclusion. We have worked closely with programme managers to sustain that vital work and to flex into the new situation in ways that maintain our focus on wider social policy objectives. And we are working with the Equality and Human Rights Commission (EHRC) to tackle persistent inequalities. We must ensure that we mitigate the impact of COVID-19 on those for whom school closures, new assessments and the shift to online study may have a significant impact on their opportunities and future success in life.
 - **Supporting students:** SFC provides student support for students on further education courses in colleges and the Student Awards Agency for Scotland (SAAS) provides student support for students on higher education programmes in colleges and universities. We have taken specific and significant action to minimise student poverty and support mental health and wellbeing concerns, as described in the box below:

Supporting Students

Students facing hardship: we provided immediate support to students by arranging for some of the student support allocations to colleges to be brought forward to respond quickly to students facing increased financial hardship; supported colleges to redirect travel and childcare funds to discretionary funds; removed the individual student £4,000 cap on discretionary funds; and worked with benefit providers to secure the flexibility colleges needed to bridge the gap students faced at the end of the AY, as their student support funding ended and before they could receive benefits if they were unable to secure employment.

Supporting students to complete their studies and to undertake additional learning: in order to mitigate the risk of learning loss and reduced educational attainment, and to ensure students whose studies were disrupted have the opportunity to complete their studies, build their skills and gain their qualifications to secure employment or further study, we have prioritised funding for students who need to repeat units as a result of COVID-19. We also removed the 2.5% limit for 'one plus' activity (where students undertake more than one full-time course or programme over the AY) to enable students to benefit from additional learning during the lockdown period. We also confirmed that credits were claimable for timetabled guidance on college sector higher education (HE) programmes.

Supporting the mental health & wellbeing of students: to ensure students get the most out of their learning experience, it is important that they have good mental health and wellbeing. To enable students to get support when they need it we have been working with the sectors to embed 80 mental health student counsellors across colleges and universities. We are also working with institutions to share good practice and secure equality of access for students to this resource.

- **Additional student places at university:** additional funded student places will be allocated to universities in AY 2020-21 following changes to the SQA results.
- **Protecting Scotland's research and science base:** the Scottish Government's allocation of a one-off £75 million package of support for research for AY 2020-21 recognises the importance of Scotland's university research base to the nation's future prosperity and wellbeing, as well as to its international reputation. We included the requirement within our guidance that the funding should support early career researchers.
- **Prioritising social and economic recovery:** our long-term investment in research and in the supply pipeline of graduates from colleges and universities remains our biggest contribution to Scotland's social and economic recovery. In addition, in order to respond effectively and with pace to the central recommendations in the reports of the AGER and the ESSB sub-group we have taken the actions described in the box below.

Skills-Related Economic Recovery Actions

- We changed our **college credit guidance** for AY 2020-21 to create headroom for mainstream provision aimed at future skills areas and to provide shorter retraining, upskilling and reskilling activities.
- We are supporting **regional skills alignment**, where SDS is providing enhanced labour market data and intelligence to help us work collaboratively across agencies, institutions and key partners to collectively plan for shifts in provision, particularly to make best use of resources freed up for upskilling and reskilling short courses for local employers and people at risk of unemployment.
- We are **supporting apprenticeships** by enabling colleges to develop and deliver industry-endorsed pathways to apprenticeships, delivered through SFC core funding.
- We helped employers access funds to create tailored upskilling and reskilling programmes with their local colleges by extending the timescales for the expenditure of the **Flexible Workforce Development Fund** for AY 2019-20, and supporting the Scottish Government to increase this fund to £13 million for this AY while extending delivery to include SMEs and prioritise skills for a post-COVID-19 workforce.
- We shaped the college contribution to the **Youth Guarantee Programme (YGP)** that gives all young people access to work, training, education or formal volunteering. Of the £60 million total for YGP, colleges have been directly allocated £10 million and may also benefit from indirect funding.
- We championed the role of colleges and universities in their contribution to the delivery of the £25 million **Transitional Training Fund** that will support people facing redundancy.
- We are providing the **University Upskilling Fund** to support the design of short courses and skills development work. The majority of the courses have been developed in an online format and match well the recommendations from AGER and ESSB in delivering high quality digital pedagogy and scale up online learning in critical high level skills areas required by employers and the future economic vision for Scotland.
- We continue to deliver **innovation funds** to colleges and universities to support industry/academia links and help target priority sectors and future skills needs.

- **Financial viability monitoring and mitigating actions:** SFC has provided flexibility in grant drawdowns to several colleges encountering liquidity challenges.
- **Reducing bureaucracy to focus on public health emergency and the front-line:** we have been keeping returns and reporting requirements to a minimum, focusing on absolute priorities to ensure continued compliance with legislative requirements. This supports institutions to focus on front-line delivery while balancing the requirements of accountability for public investment.

- **Capital funding:** we have made additional capital funding available to support the provision of ICT equipment for learners to help tackle digital poverty and to support the economic recovery through construction-related activity.
- **Securing Scottish interests in UK-wide schemes:** we have worked with UK partners to promote the following schemes to institutions:

UK-Wide Schemes

- Coronavirus Job Retention Scheme (CJRS): colleges and universities were eligible to apply to the UK Government scheme.
- UKRI costed grant extensions: on 27 June 2020, UKRI [announced](#) an award of £180 million to UK universities to allow for the additional (largely staff) costs of resuming COVID-interrupted research grants.
- The UK Government's Research Stabilisation package, [announced](#) on 27 June 2020 is expected to compensate for 80% of international student fee losses, capped at each university's non-public research income. The package of 75% loan and 25% grant will be available before the end of Financial Year 2020-21.
- The UK R&D [Roadmap](#) contained an announcement of £300 million to upgrade scientific infrastructure across the UK through the UK Government's World Class Labs funding scheme. This will be delivered through a variety of mechanisms, with around £10 million expected to pass through SFC in increased research capital for universities.
- The UK Government's Kickstart Scheme provides funding to employers to create job placements for 16 to 24 year olds on Universal Credit.

CHAPTER THREE: Ten Key Themes From Phase One

22. This chapter outlines the ten key themes that we have distilled from submissions, expert input, round-tables with stakeholders, and SFC Board considerations. The ten themes are:
- Keeping the interests of current and future students, and equalities, at the heart of everything we do.
 - Supporting the digital revolution for learners.
 - Towards an integrated, connected tertiary education and skills eco-system for learners and employers.
 - Recognising colleges and universities as national assets and civic anchors.
 - Building long-term relationships with employers and industry.
 - Protecting and leveraging the excellence of our research and science base.
 - Driving the innovation agenda.
 - Enhancing collaboration.
 - Making the most of the sector's global connections.
 - Financial sustainability and funding.

Theme One: Keeping the interests of current and future students, and equalities, at the heart of everything we do

23. Through this review we have considered what students want from their education and kept their interests and a focus on equalities at the heart of things. In general, students articulate a mix of these attributes:
- Good jobs and career progression.
 - A sense of belonging and place.
 - Value for money.
 - Benefit from the reputation and standing of the institution they attend.
 - A deeper understanding of a particular subject or the pursuit of a talent for itself alone.
 - Enhanced online and blended learning, alongside greater consistency in the quality of that offer.
 - The ability to progress to university.
24. The top drivers for international students in choosing where to study include teaching quality and up-to-date technology that prepares them for the modern workforce; the prospect of an excellent student experience and graduate outcomes; pre-existing connections with an institution through friends or family; and course choice.
25. When we talked to students who had articulated from college to universities, they highlighted:
- The importance of having supportive staff at the institutions who knew about articulation.
 - The need for a broader range and choice of articulation routes at both local and national levels and better information about available routes and funding options.

- The role of secondary schools and careers advice in giving equal priority to university and to college, and articulation routes.
26. From our engagement with the National Union of Students and student bodies, these points were raised:
- Increased levels of anxiety and the need for strong pastoral care, and mental health support for staff and students at this difficult time, and the paramount priority of securing health and safety for students and staff.
 - The lack of part-time jobs due to the downturn in the economy, particularly in the hospitality sector, and increased financial hardship for students (especially many college, part-time and international students - who have limited access to SAAS support), alongside a concern that graduates entering the job market this year will face significant difficulties.
 - The need to tackle digital poverty and literacy.
 - Possible continued lockdown issues around student assessments.
 - The desire of students to be included in decision-making forums, particularly where new structures or groups had formed to tackle the COVID-19 emergency or the financial sustainability of institutions.
 - The need for investment in colleges and universities to protect and enhance the student experience, and to support apprentices.
 - Concern about the level of fees faced by international students and the consequences of EU students being charged tuition fees.
 - The importance of international programmes such as Erasmus Plus and Horizon 2020.
 - The importance of dealing well with the fundamental changes being introduced by COVID-19 measures and how that affects students' experiences during COVID-19; and the need to listen and get feedback from students to inform institutional approaches.
 - While student engagement is already an area of strength in Scotland, we were encouraged to strengthen Students' Associations and make sure the student voice influences institutions across Scotland.
27. At this stage in the review we have used this feedback to highlight important issues being raised by students, but also to help shape our approach to a new Outcome and Impact Framework and to quality assurance. A further area for future interest remains the quality of information and advice for pupils in the senior phase as they are inspired to consider their future options and make important choices.
28. We currently fund programmes to support student participation, such as student associations and quality enhancement activities. For the purposes of the review, we will be setting up a student advisory group to ensure we continue to keep students at the heart of our thinking and in the development of our framework.
29. Issues of inequality and injustice thread through our work and the responses to this review.

“The harms caused by coronavirus do not impact everyone equally and so our response must recognise these unequal impacts. This means that as we develop ways to reconstruct our lives, we must ensure that we do not entrench existing inequalities further, and wherever possible we must take steps to meet the different needs of people with protected characteristics and tackle the disadvantages they face.” (Equality and Human Rights Commission submission)

30. Many respondents highlighted the need to continue to focus on widening and supporting participation for individuals from disadvantaged backgrounds and communities, and meet the needs of people with protected characteristics. Many respondents pointed to the importance of our Outcome Agreements as a means of setting targets and addressing equalities issues. We have taken these views into the development of the draft Outcome and Impact framework discussed in Chapter four of this report.
31. SFC has maintained a strong focus on socio-economic disadvantage, gender equality, disability, and the importance of supporting care-experienced and estranged students. Our recent work with the EHRC has refocused our response to race and ethnicity-related discrimination. As the Commissioner for Fair Access’ recent report recommends, while continuing to keep a tight focus on socio-economic disadvantage in addressing fair access, we will increasingly look at the strong cross-overs with age, care-experience, ethnicity, disability and gender.

Theme Two: Supporting the digital revolution for learners

32. Excellent online and blended learning delivery for students is no longer nice-to-have, but is now recognised as essential - a core strategy for every education institution, even where residential and campus life will still remain important for students and institutional business models. For some of our institutions, like the University of the Highlands and Islands (UHI) and the Open University in Scotland, high quality online learning is integral to their success and they are already at the forefront of these developments. For all, it means an increasing premium on mentoring and tutor advice, excellent content, and supporting changing student expectations and ways of engaging with study.
33. Many respondents described this move to blended and digital learning as a moment of inflection and urged us all to keep Scotland ahead of the game. Online learning is seen as innovative, agile, and environmentally friendly. People are keen to explore how we can build world-class, accessible digital learning opportunities, where the sectors could develop more efficient digitally based curriculum, investing in material that can be shared more widely throughout the sectors and subject areas for the benefit of a wider range of learners. Respondents also highlighted the importance of blended learning models in many subjects, with students being able to develop practical skills on campus.
34. Of course, there are challenges – the stretch in ICT infrastructure, the need to support the development of our educator workforce, diverting capital spend, the need to

deliver practical and work-based learning with imagination, cyber-security, data management and privacy. Many spoke about digital poverty, digital literacy and the additional support for those who would struggle both technologically and personally. But there is a real appetite to challenge traditional patterns of delivery, manage demand for learning throughout the year, and collaborate better with industry.

35. Key suggestions included:

- The development of a National Online Academy or National Centre of Digital Learning & Teaching Excellence that builds content, acts as a central repository of knowledge, helps transfer skills throughout the sectors and supports collaborative ways of sharing new pedagogy to support teachers, lecturers and practitioners. We could view this as critical national infrastructure that will help reduce development costs, enable responsiveness, and promote repurposing and improvement of materials, just as we have invested in national procurement through Advanced Procurement for Universities and Colleges (APUC) and digital infrastructure through JISC². Some respondents simply pointed to the need for institutions themselves to innovate rapidly around blended learning while collaborating on good practice.
- A revised national infrastructure and estates management plan for further and higher education that sets out the digital and physical requirements of the sectors.
- A better way of supporting the digital literacy of staff and students. For some this means embedding AI, machine learning and data science across all learning portfolios. For others, it is about ensuring confidence in digital learning for all. The recent Logan review (August 2020) provides important, related recommendations on tech scalars, programmers and tech entrepreneurship throughout our education system. This is relevant for our economic future and for the way we handle the immediate challenge of online, digital learning.
- An exploration of the opportunity that online and blended learning brings to a greater proportion of condensed, less expensive post-16 education and a more compressed delivery of qualifications, with adjusted funding models. The Scottish sectors should consider what a condensed or less conventional academic year might start to look like, with a blend of on-campus and online courses in order to achieve a more effective throughput of students to the workplace.
- Further discussion about the need for a new Scottish-level standard for blended and online learning; and ways of assuring the quality of the online experience for students over the next few years as we live with COVID-19 and as we develop capabilities and expertise, with a strong desire to ensure students are involved as partners as new practices develop.

² JISC: UK higher, further education and skills sectors' not-for-profit organisation for digital services and solutions

Theme Three: Towards an integrated, connected tertiary education and skills ecosystem for learners and employers

“Scotland is in a better position to develop a truly flexible tertiary education system than any other UK nation....The case for an integrated tertiary education system, rather than discrete university and college, higher education and further education, education and training sectors, should be vigorously promoted in Scotland.” (Commissioner for Fair Access)

36. Many responses pointed to the opportunity this review provides to create a more coherent and integrated post-16 offer, that builds on the strength of regionalised colleges, accelerates the collaboration that exists between colleges and universities to recognise prior learning and support students to articulate from college to university, reduces duplication in terms of repeat levels of study and manages better pathways at the senior phase in school, and incentivises more efficient and equitable learner journeys.
37. Alongside more integrated pathways for the learner, and collaborative place-based hubs or clusters, responses highlighted a need for better differentiation and specialisation between institutions – a clearer definition of the roles each plays in order to become a more efficient system and to reduce duplication, and to play to the strengths of each provider while forming part of a coherent whole.

“It is evident that in the areas of research and innovation there is an obvious requirement for a combination of greater specialisation in the higher education system, and far greater collaboration between institutions. The same should apply to skills. What we need now, at a time of scarce resources, is greater differentiation and specialisation, not less.”
(University submission)

“Within Scotland’s tertiary ecosystem, working with and alongside schools and universities, and delivering both access and degree provision – and all points in between – colleges are valued for their flexible, adaptive and inclusive approach” (The Cumberland-Little report)

“A defining characteristic of a healthy ecosystem is its diversity, so we would urge the Scottish Government and the SFC not to lose sight of the value of the sector’s diversity (range of choice/possibilities) in pursuit of efficiencies and rationalisation.” (Small Specialist Institution submission)

“This diversity across further and higher education institutions is one of the key strengths that can inspire businesses of the possibilities – many different specialisms will be required to build back better in line with the key principles of health & wellbeing, net zero, fairness and inclusivity.” (Interface submission)

38. Few stakeholders define that differentiation or the respective roles of colleges and universities in any great detail. The College of the Future Commission discussed the benefit of a more distinctive, even exclusive, role for colleges in the delivery of higher level technical and professional qualifications up to SCQF level 7 and 8 and/or HNCs and HNDs, with universities responsible for full degree, degree-equivalent and post-graduate programmes. Others also commented on the need for a clearer binary divide between the level of qualifications offered by both sectors while building guaranteed articulation pathways through community, vocational, college and university programmes and qualifications. A large metropolitan college may view its role as providing opportunities all the way through to two year degrees (as set out in the Cumberford-Little report). For universities, this discussion involved the distinctiveness of specific research specialisms, or the collaborations along the base and applied research continuum (for example in engineering) or the interdisciplinary connections, and the connectivity between research and teaching; and harder questions about duplicative course provision in universities that are operating cheek by jowl, with departments that have different resources, scale and success; and how best to work with the grain of missions that make some universities more likely to invest, for example, in industry apprenticeships.
39. Responses focused on the importance of regional planning structures. We touch on this further in the report under the theme on colleges and universities as local anchors, and in our consideration of demographic modelling in the final chapter. In essence, many see the ability to plan collaboratively across all relevant partners at a regional level as key not only to the learner journey, but to the delivery of skills and training that unlock our capabilities around decarbonising our economic recovery and leveraging our natural capital, to the way we develop clusters around Scotland that maximise our investment in world leading strengths such as digital and data, precision medicine, quantum, life sciences, and advanced manufacturing.
40. We had a vast and diverse range of responses on coherent provision for learners and how to make the learner journey efficient and equitable. A large body of responses pointed to the need to reimagine the interaction of colleges and universities with the senior phase at school, particularly SCQF level 7 provision. Of course, any development

of these options would need to be explored with local and central government, COSLA, the Association of Directors of Education in Scotland and the school sector, and should recognise the existing level of collaboration between schools and local colleges/universities within that senior phase.

41. These suggestions from respondents aimed to keep a focus on widening access and participation, to save public money by reducing duplicative levels of learning, or to enable young people to have prior learning recognised and to become economically active more quickly:
- Build on existing approaches to widening access to strengthen and expand these programmes, to secure the necessary outreach into communities and workplaces, overcome digital poverty and decrease competition between colleges and universities for students from disadvantaged communities. The Commissioner for Fair Access' annual report makes specific recommendations that will provide further focus for government, institutions, SFC and SFC-funded programmes.
 - Examine the senior phase of school in terms of duplication, connections, transitions and funding overlaps with further and higher education, working closely with the OECD's review of the Curriculum for Excellence, which includes the senior phase. Respondents suggested encouraging pupils to leave school at S5 for a bridging or foundation year delivered by Scottish universities in collaboration with schools as an alternative to additional Highers in S6. One university suggested introducing a more rounded first year at a Scottish university, with a return to a broad, deeper, general, graduate curriculum aimed at job-readiness and improved meta skills for future study, for example, around team-building, history and culture, statistical methods and digital literacy. People also suggested we promote much greater progression from S6 into year two at a Scottish university, while recognising that many students want to be part of a cohort of entrants in their initial year as an undergraduate. There were also associated suggestions about moving to three year degrees for many subjects, with implications for attainment levels for university entrance that might lead, for example, to a consequential trend towards Advanced Higher admission criteria or a stronger argument for a foundation year instead of S6.
 - Recognise the distinctive role of colleges working with schools in the senior phase on systemic change at a regional level, to broker stronger curriculum re-design and skills education and training to provide greater integration between schools and colleges and, where appropriate, universities. We should also recognise the partnership model between colleges and schools established through the Developing the Young Workforce (DYW) programme and the opportunities this provides for alignment and progression between secondary and tertiary systems and with the world of work. This is already happening across parts of Scotland and has been an important strategy for some regional colleges to strengthen specific skills, such as computer science and STEM subjects.

- Create better ladders and bridges for students to use between institutions using a more standardised, national articulation framework, and operationalised through regional articulation agreements, across a wider range of study areas. This links to other review work, such as the Cumberford-Little suggestions around building more specialist hubs to address specific critical skills shortages or the development of Northern Ireland-style curriculum hubs.
 - Introduce differentiated SFC funding for SCQF levels 7/8 and 9/10 to bring greater parity between college and university funding for some courses, and where students may prefer to take their first one or two years at a local college (e.g. keeps student costs lower, better practical teaching) with a final two years at a more research-orientated university. This is suggested either through articulation routes or building partnership degrees between colleges and universities.
 - Encourage more fully integrated tertiary approaches where there is vertical regional collaboration, with a greater number of colleges and universities offering integrated degrees, working with schools to reduce repeat levels of study.
 - Develop more flexible entry and exit points – largely, by securing the value of Higher National (HN) qualifications below degree level as natural “terminal qualifications” from the outset of a learner’s journey and challenging the prevailing wisdom that everyone should study for an honours degree.
 - Expand post-graduate offers, particularly for the cohort of 2019-20 graduates who may face a particularly difficult labour market.
 - Develop mechanisms that enable students from different institutions to “stack” qualifications and accumulate micro-credentials across providers. Respondents also pointed to the need for greater flexibility and currency within the existing post-16 accredited qualifications portfolio, and a desire to review the process of qualifications development and subsequent commissioning in order to respond more efficiently to the needs of learners and the economy.
 - Focus on the student by creating their own individual “Lifelong Learning Account” to enable them to access relevant education at their point of need and in flexible ways that support them through life.
42. The Commissioner for Fair Access and the National Articulation Forum’s final report both make a number of important recommendations about the recognition of prior learning at college in moving to a degree in a university. More than ever, we need good data and evidence to help us decide on the right interventions. We will publish a more extensive data set towards the end of 2020, and engage about further interventions that might be most effective. We are already keen to respond positively to many of the recommendations, including:

- Updating the definition of articulation from ‘an HN gained at college moving to a degree in a university’ to recognise all movement between SCQF levels 7 to 8 and 8 to 9, and promoting full credit for all previous HE study. This will ensure that activity through UHI and SRUC receives recognition and will be included in national figures, as will degree provision that is validated by universities but delivered through and by colleges. In addition, universities should be able to accept students with other qualifications at SCQF levels 7 and 8 that are not HNs onto degree courses as part of an articulation pathway.
 - Working with colleges and universities to make best use of the National Articulation Database to identify subject areas where Advanced Progression (*students only receiving partial credit for previous HE study*) pathways can be encouraged with some additional curriculum mapping. We recognise that not all subject areas or all HNs can easily map onto an articulation pathway, but more can still be done to promote more efficient learner journeys.
 - Gaining information and advice about articulation and choices to learners, either through existing online resources or the use of existing SFC-funded programmes, to further promote articulation pathways to school and college pupils, and a consistent national message on articulation.
43. This review underscores the need for a system wide view of provision that takes into scope the senior phase. Indeed, many respondents were clear that widening participation, for example, requires an inclusive approach across all levels of education, to support young people and their families, teachers, and communities to help them explore their options from an early stage. An integrated tertiary system also needs an examination of our funding models (perhaps by SCQF level); joined up national funding streams; and whole systems targets and outcomes. We explore these issues later in this report.

Theme Four: Recognising colleges and universities as national assets and civic anchors

“We excel in research and development as well as teaching and three universities in Scotland appear in the top 25 universities in the UK. Student experiences have, time and again, put Scotland’s universities as some of the best in the UK. All of this does not happen by chance. It is a combination of both the quality of teaching, excellent learning experiences and the commitment and dedication of the support services. If our universities were corporations, they would be blue chip.” (Union submission)

“...Together, Scotland’s colleges represent a huge national asset in which the Scottish Government invests considerable resource...” (The Cumberford-Little report)

“Serving as anchors for the community, colleges thrive as a result of their strong partnerships with a myriad of players across the public, private and not-for-profit sectors...developing a productive local workforce and boosting participation help deliver long-term sustainable, inclusive economic growth.” (College submission)

“Scotland’s universities are among the best in the world, with a social impact that is felt right across the globe – at the vanguard of work that is leading the way in helping to meet some of the major social, economic and environmental challenges of the 21st century.” (The Muscatelli report)

44. The most striking response during phase one of this review has been the immense pride in our world-leading education eco-system and the need to treat our colleges, universities and specialist institutions as major national assets that have significant social, economic and cultural impact. The characteristics of reach, spread, diversity, breadth, depth and quality are a huge strength for Scotland at community, regional and national level, within the UK, and as a vital ingredient in our global reputation and competitive advantage in the world.
45. Respondents described the sectors’ role in catalysing ideas, research, innovation and inclusive growth; their distinct contributions in local communities, addressing social inequalities and disadvantage; and their importance in shaping a skilled workforce across all technical and vocational requirements and wider skillsets, like critical thinking, to address the social and economic challenges we face. They develop our young people from all walks of life, researchers who will help us live better lives, the leaders of tomorrow, our healthcare workers and nurses, teachers and technicians – a full spectrum impact.
46. Respondents suggested that:
 - Colleges and universities could do more together to define their roles and be clearer on the significance of their contribution and impact. We are not always good at telling that story.
 - While high quality can be achieved by many, outstanding quality can only be achieved by a few. If this is so, people asked how we make sure we nurture that excellence and recognise the importance of beacon institutions for us all.
 - If there is a distinctiveness to the Scottish tradition - for example, that education should be available to everyone, a post-Enlightenment approach to integrating arts and sciences for comprehensive general learning and cultural knowledge, the importance we place on collaboration among institutions that could be distinctive for Scotland - we may want to articulate or develop it more explicitly.

- We should embed our tertiary education assets into export and inward investment plans, and the promotion of Scotland overseas.
47. The importance of colleges and universities as anchor institutions, at the heart of towns, cities and regions, means they have a key role in acting with agency and civic purpose to sustain and renew places and communities. Colleges expressed their role as being well beyond simple training provision – “their doors are wide and their reach is deep”, supporting vulnerable and disadvantaged people progress through education to achieve their potential. Community learning and development practitioners encouraged active partnerships at local level, particularly to widen access and consolidate that anchor role within communities. Many responses from institutions set out their ability to bring together resources, employment, influence, investment and capital to work in partnership with others to sustain localities and regions to help communities flourish – and to do this in a way that responds to and aligns with local, regional, and national economic recovery plans.

Theme Five: Building long-term relationships with employers and industry

“...if the delivery of qualifications were compressed, and funding models adjusted, this would give opportunity to create routes through current school DYW, college and university that achieved more effective throughput of students to the workplace.” (College submission)

[DYW - Developing the Young Workforce - is Scotland’s youth employment strategy and programmes to support vocational education.]

48. Scotland has a preponderance of small and medium sized businesses, a smaller business base relative to its population than other EU countries, and with fewer high growth businesses to boost economic and productivity. So it needs more registered businesses, and an increase in the number with high growth ambitions in order to export, innovate and invest in research and development. Within this context, Scotland’s industrial landscape has significant strengths, for example in financial services, life sciences, low carbon transport, renewable energy, space, food and drink, and marine science and considerable geographical variation across Scottish regions in terms of economic performance, growth sectors, business base, and industrial sectors. Our higher education R&D rate is amongst the best in the world, and we have a highly educated population in terms of tertiary education attainment. This, in addition to the economic and labour market recovery interventions outlined in chapter two of this report, forms an important backdrop to these next review themes around leveraging our research assets for innovation and commercial activity, making the most of our talent and aligning skills to Scotland’s current and future requirements.
49. Meeting the needs of employers and aligning the outputs of colleges and universities with the future needs of the labour market is not a simple task. Leaving aside the problem that employers are not always good at forecasting and specifying either the

type or quantity of skills they will need in future, and the fact that different organisations and sectors of the economy are often in competition with one another for what they believe to be a finite pool of talent, there is also a major problem with creating and sustaining talent pipelines.

50. At one end, there is the need to attract sufficient numbers of students who are able to benefit from the relevant courses. This is often dependent upon individual subject choice decisions that are not always easy for colleges and universities to influence, as they are often formed relatively early in life. At the other end, the pipeline can leak. For instance, many students whose subject is engineering choose not to enter the engineering profession, but rather take their talents into other occupational areas, such as management consulting and the finance sector. Thus, even when we have reasonably precise forecasts of the volume of future skills needed (the number of x), 'matching' that demand does not mean recruiting and educating x number of students, as in some instances a substantial proportion will make career and labour market choices that do not lead to them entering the sector that originally forecast the skill need.
51. We also know that we can sometimes confuse a lack of skills with an underlying problem of a lack of job openings or people being made redundant from existing jobs for reasons other than their particular skill-set. So, it is essential that underlying demand is stimulated, alongside helping people through education and skills training to be ready for the job openings that arise. Alongside a strategy that stimulates demand, we must do all we can to ensure that strong demand signals are picked up quickly by schools, colleges, universities and students themselves, across the whole education system, and that there is a mix of provision, including taught post-graduate courses, shorter college modules, or micro credentials that support transitions and the pipeline closer to market.
52. We know reasonably well from the work of our partner agency SDS, the Scottish Government and other recent economic recovery reports, which sectors, occupations, localities and the kinds of people in our communities that will most likely be hardest hit by the impact of COVID-19, the UK's exit from the EU, and the economic downturn. We know there will be a longer-term shift in Scotland's economy towards greater digitalisation, automation, and artificial intelligence, and that we must align skills with the new high-growth sectors and key areas that will drive economic recovery. This means investing in education and skills that help us in the transition to a net-zero carbon economy, life sciences (including precision medicine and health technology), health and social care, early years, construction, data science and technology, quantum and nanotechnology, engineering, mathematics and design subjects (STEM-D), and the high-tech segments of the creative industries. Many of these areas will require graduate and postgraduate skills and are in areas where Scotland can lead the world.
53. Our exit from the EU will also have an impact on particular sectors, such as hospitality, health and social care, and rural industries. The industries and key areas that anticipate skills shortages – both before and as a result of the COVID-19 crisis – include construction; digital technology; food, drink and agriculture; health and social care; and early years. It is likely that re-skilling and upskilling programmes may need to prioritise these particular sectors. There will also be differential impacts across geographies and in society generally from the COVID-19 crisis. Local authority areas that are rural or

mainly rural have a slightly higher share of jobs in the most exposed sectors; although the number of jobs in the most exposed sectors is highest in Glasgow, Edinburgh and Fife.

54. We also know that the COVID-19 crisis will disproportionately affect young people, women, vulnerable groups, BAME communities, and those in disadvantaged areas and with lower skills. Colleges and universities will have an important role to play in responding to these social impacts and redressing inequalities.
55. The challenge we face collectively is harnessing the different strengths of colleges and universities to build a broad spectrum of skills for business and industry, operating at different levels and speeds, and to ensure that, alongside short-term and emergency responses to economic recovery, we provide longer term skills investment that nudges and incentivises the alignment of skills into the right areas and the right study mode:
 - **Mitigating learning lost through COVID-19 disruption:** We must continue to mitigate the risk of reduced educational attainment and ensure that students whose studies were disrupted in the last academic year or who may be disrupted over the coming year have the opportunity to complete their studies, build their skills, achieve their qualifications and progress to more advanced study or enter the world of work.
 - **Skills alignment:** To understand the economic and employment situation in different regions, we are working with SDS and with colleges to undertake demand analysis across economic regions, drawing on labour market intelligence and better data that gives real time data on job openings and skills gaps and trends. This is vital information that, in accessible format and with the right level of granularity, and alongside information about, and analysis of, existing provision, will help us to make collective choices about how best to align our resources and activities to overcome the challenges presented during this crisis, as well as respond to the longer-term trends in the economy. Allied to this, respondents highlighted the associated need to have good information for learners about career opportunities, to help them make decisions as they progress through their studies.
 - **Developing long-term, strategic business/industry/academic relationships,** so that along the company-institution axis can flow many interactions - knowledge, curriculum and course design and content, internships, employment, upskilling, research directions, intellectual property, and incubation spaces for businesses. Rather than pursue transactional relationships around a particular product or programme, respondents emphasised the need for an immersive and symbiotic, deeper and longer-term, investment in these relationships.
 - **Micro-credentials and work-experience:** Many respondents point to the need for bite-sized chunks of learning and modular, credit-bearing courses, and the opportunity we have in Scotland through our credit-based qualifications structure to find ways to certify these smaller, modular courses and design ways in which they can be combined to add up to a larger qualification that can be acquired over time. We were also encouraged to prioritise building work-related or industry-recognised credentials and work experience into every qualification or course or

degree that lasts for more than a year (for example, placements, digital skills, numeracy, business knowledge, languages). Respondents suggested we increase Honours/Masters joint qualifications, or accelerated masters (credit bearing activities); and respond to the need for higher level technical skills through, for example, maths/science/technology-focused undergraduate degrees that build-in internships with industry.

- **Lifelong learning relationships:** The review challenges us to consider how best to intentionally design structures to support students and graduates as lifelong learners. People suggested programmes of study that stretch beyond the enrolled study programme or degree – working with students and employers to keep a person relevant in the workplace long after completing the college or university place. It is clear that upskilling and reskilling, by colleges and universities, will become more critical. Respondents do not believe there are funding arrangements in place to support this.
- **Apprenticeships:** The review shows support for safeguarding apprenticeships, with suggestions from respondents about how they might develop, for example, through earlier involvement in their development, longer term investment and planning rather than current commissioning models; extending the range of courses for apprenticeships; more flexibility between apprenticeship models to bridge between apprenticeships and other qualifications. We will be working closely with SDS, the Scottish Apprenticeship Advisory Board (SAAB), and sector representatives on next steps in terms of funding, design, and planning the delivery of apprenticeships in ways that maximise their value to individuals and the wider economy.
- **Business support:** As set out in the Cumberford-Little report, colleges and universities could bring a greater focus on the availability and quality of business engagement and support, and improvement services for businesses at this critical time. This could help drive up business performance, but would need to be linked closely with integrated economic development, innovation, fair work and skills policies. Organisations like Interface could help broker relationships if necessary and regional partnerships will also be key to setting business support in a local context. University business schools can increase their consultancy with business to support reinvention and digitisation of products and processes, and business leadership skills in the changing environment, alongside entrepreneurship education in universities. This links to the section on innovation.

Theme Six: Protecting and leveraging the excellence of our research and science base

“We can and should be the driving force of Scotland’s economy – the quality of our institutions and our research is a competitive advantage we simply must capitalise on in the coming years. We should not forget that we have an obligation to the communities we serve to ensure that they see the economic benefits of the often world-changing work we undertake.” (The Muscatelli report)

“Maintaining the world leading position of Scotland’s more research-intensive institutions will need to be explicitly recognised and supported as a strategic priority if we are to continue to make such a huge impact for our relative size as a country.” (University submission)

“Concentration already exists through REG and other funding mechanisms, and we would question the evidence base for diverting the small amounts of the REG monies allocated to modern universities to research-intensive institutions. There is potentially a value-for-money case for such funds to be flowing more freely to modern universities with strong research impact.” (University submission)

[REG is SFC’s Research Excellence Grant funding that allocates resources to universities, informed by a UK-wide framework for assessing research]

“Combining research and teaching together within each institution is a tried and tested recipe for successful learning. Separating the two out into different silos is a recipe for weakness.” (Students’ Association)

“It is therefore critical...that the SFC recognises the potential in the UK Government’s new strategy and identifies ways, including through targeted funding, in which they can best support this initiative so that Scottish universities can remain a viable and reputable partner of choice internationally.” (University submission)

56. We intend to draw out the research and innovation themes in more detail over phase 2, taking account of the recommendations in the Muscatelli Report, and our contribution to Scotland's net-zero future, in tandem with developments across UK strategies for research, science and innovation. However, the following themes emerged in response to our call for evidence.
57. **The importance of the dual support system and partnership within the UK:** UK R&D spend is rising to £22 billion per annum by 2024/25, and the UK Government's R&D Roadmap brings a renewed emphasis on the value of research both for the long term and research for our immediate needs. Many review respondents outlined the challenge of maintaining project income and attracting more research facility investment, but felt that the Scottish approach to collective missions is well aligned to the missions and moon-shots of the Roadmap. We are being encouraged through this review to examine all relevant evidence and comparators to inform our review of the Research Excellence Grant (REG) and other levers, to support collaboration across universities and disciplines in order to succeed in these challenges and to continue to make the most of investment partnerships across the UK. Some of the submissions also highlighted specific areas where there are opportunities to enhance Scotland's participation, for example in health-based research through the National Institute for Health Research or simply through better research integration across the NHS and universities.
58. **Solving grand social and economic challenges – mission funding:** The current emergency has underlined the vital importance of research and innovation in responding to global challenges, with our universities and researchers at the forefront of world-wide efforts to respond to COVID-19. Scotland's ambitious national mission will rely on collaborative research, working to a variety of timescales. Respondents suggested that SFC might design funding mechanisms that increase mission-driven research on key challenges; help target regional priorities; could scale up our expertise; and encourage collaboration and leverage-in additional investment to Scotland.
59. University Scotland's submission highlighted areas where leaders in Scotland's university research community see exceptional potential to develop collaborative capacity and distinctive strengths in relation to promoting health wellbeing and resilience; addressing the climate emergency; developing the blue economy, based on Scotland's strength in marine science and energy; and developing the natural economy of sustainable economic activity based on Scotland's outstanding natural resources. We will be taking forward the recommendations from the Heathwaite Report to build on our collaborative ethos and will also explore our role in increasing the public understanding of, and support for, research as a common public good. We intend to explore this more fully in phase two of this review.
60. **Nurturing research talent and culture:** Respondents to our call for evidence point to the growing need for talent in universities and high-skill industries such as those set out in the Logan Report, while our exit from the EU and the nature of that exit may reduce mobility and collaborations, unless arrangements are reached with the EU or alternatives put in place. We need to decide collectively how to strengthen the pipeline of talent. Many highlighted the importance of partnerships with industry (in part, through Innovation Centres and other similar innovation zones and hubs) and between universities, with both UK Research and Innovation (UKRI) and the new UK Office for

Talent. Attracting international talent in research will require sustained effort through collective marketing. Through all of this, universities have an opportunity to address the culture of research, support increased inclusion and diversity, and enhance universities' attractiveness as employers.

"Researchers must be supported to identify and leverage opportunities for substantial collaborative UK or international funding. Universities' existing efforts could be supported in this aim by the commitment of funding to facilitate large collaborative proposals – releasing funds only when external funding is awarded." (University submission)

"It will be important moving forward that funding and policy frameworks promoting collaboration have reinforcing objectives; particularly as we try to co-ordinate effective Scottish bids for national infrastructure facilities and reduce duplicative effort." (University submission)

61. **Collaboration and the REG:** The collaborative nature of the Scottish research base is widely recognised in the responses, as a distinctive feature that has been copied in other countries and should be celebrated. Incentivising further collaboration on Scottish and UK-wide challenges of scale featured strongly in the feedback throughout this review, as well as the need for greater co-ordination of Scottish research bids. We will be re-examining the REG to ensure it supports greater collaboration and sustains a high performing research base. Stakeholders are keen to explore how we can reward and support regional or national collaborations that are achieving traction and impact.
62. **Excellence in a challenging environment:** Universities fall into some natural camps in this review in terms of whether we should encourage a further concentration of REG and/or its distribution across all universities. There is a strong body of opinion in our consultations to date that we should protect the research and science base by insulating it from cross-subsidisation from international student fees. International students are often attracted to particular Scottish universities because of their position in league tables, and those league tables are weighted towards the excellent research produced by our universities. Universities, therefore, decide to subsidise research that is often loss-making, because it attracts international students who pay more than domestic students for their education, and that income supports research activities.
63. We have a direct role in considering how we use our REG, but the issue of cross-subsidisation requires a collective approach across the UK, given the dual funding system and the role of other funders. We will explore with UKRI whether their strategy will change to fund more of the full economic costs of research. We could also collectively influence charities and foundations to pay more of the costs of the research they fund. In order to increase full economic rates and reduce cross-subsidisation, the UK may need to choose to fund a lower volume of research (it may be reducing in any

event as result of falls in fee income). We will face choices on these matters soon and will explore them further in phase two of this review. In any event, respondents highlight the need for a Team Scotland approach to the international promotion of Scotland's research strengths, and support for increasing private sector income. In order to reduce overheads and maintain a sustainable research base we are likely to encourage deeper collaborations.

Theme Seven: Driving the innovation agenda

64. **Place:** The UK Roadmap gives a welcome focus to place and many respondents to our review provided excellent examples of our successful recent track record in winning Strength in Places funds and City Deals to build from. Many pointed to the benefit of regional collaborations and clusters involving industry in terms of integrated offers that include the full gamut of research, company engagement, and skills optimisation, etc. SFC's University Innovation Fund (UIF) provides support for business connectivity. The next phases of this review will consider how to use the UIF to greatest impact, how to encourage clustering and how best to co-ordinate the leverage of UKRI or other UK place-based funding.
65. **Boosting innovation and commercialisation:** Several responses highlighted the need to attract inward investment and grow Scotland's new companies because we do not currently have a large enough indigenous company base that invests in R&D, with resultant low productivity. We will learn from global best practice and support greater commercialisation, the creation of spin-out companies and the attraction of international investment into the industries of the (net-zero carbon) future. This provides a virtuous circle with place-based cluster building and the quality of undergraduate output contributing to the workforce.
66. **Tertiary partnerships in innovation:** Our responses highlight the massive asset we have in our colleges and the opportunity to accelerate the inclusion of colleges in regional clusters aimed at supporting company growth, and as partners for Innovation Centres (including the National Manufacturing Institute Scotland).
67. **Innovation Centres and Interface:** We have built a solid platform of investment in helping businesses source and use academic support through Innovation Centres and Interface. Interface brokers connections and activity across all sectors and academic institutions, helping our SME community in particular to embrace innovation and create jobs. Innovation Centres focus on key industrial and healthcare areas, bringing industry leadership to draw value from our universities, and, increasingly, colleges. There is support to build from there and support the evolution of this patient investment to be impactful in the new circumstances, while exploring lessons to be learned from international comparators. Respondents pointed to the need for our Innovation Centre programme to pivot to new challenges (for example, low carbon, recovering from the COVID-19 pandemic) and to be more clearly connected to our college and university system. Some suggested Innovation Centres could form something more like a shared commercial arm of universities. A number of respondents also highlighted other sectors that would benefit from an innovation centre-style focus, for example in food and drink, the natural environment, and the creative industries, and encouraged us to work beyond the established Innovation

Centres. There is an appetite for Interface to expand and play to its strengths in becoming more involved in the co-ordination of cluster building and connectivity between industry and colleges and universities.

Theme Eight: Enhancing collaboration

“This review is not about committing to the current arrangements or constructs – the sectors, institutions, funders, agencies and governments will need to adapt and adjust. The future will not look like the past.” (Review Brief)

“Collaboration between universities, and between universities and other education providers, should increase where this is in learners’ interests, in the interests of increasing the substantive impact of higher education on building a sustainable recovery for the nation, and in the interests of ensuring the efficient and effective use of resources for these purposes.” (Universities Scotland’s submission)

68. Colleges and universities in Scotland have changed and evolved significantly over past decades with the establishment of modern universities, the regionalisation of colleges, and the founding of the University of the Highlands and Islands. In recent years, new higher education institutions have also been formed through mergers, including the University of the West of Scotland in 2007 and SRUC, established in 2012 through the merger of three land-based colleges with the Scottish Agricultural College; and the largest super college and campus was established in the City of Glasgow College. The drivers behind such changes in the sector include:
- Coherence of provision, both geographic and sectoral.
 - Cost reduction.
 - Improving quality.
 - Investing in industry or employer requirements.
 - Developing into other types of provision.
 - Achieving sustainability through scale.
69. As public finances become increasingly pressured, in part through the likely effects of COVID-19 on economic recovery, institutions will need to take difficult decisions about what they can afford to provide and how best to provide it. Institutions have already been exploring internal efficiency measures, for example, increasing class sizes, reducing the percentage of income spent on staffing, ensuring support staff arrangements are appropriate to the size of the institution and what it can afford, and examining curriculum delivery to reduce duplication, poorly performing courses and to make the most of blended learning. Many institutions have already taken these measures at an individual level, and may need to explore further ways of working more closely with others, rationalising offers and ensuring greater value for money. New

collaborations and structures can protect and improve student access, provision and experience; address issues around the quality of provision; provide better career opportunities for staff; and create valuable economies of scale.

70. Throughout this review phase stakeholders have highlighted excellent existing collaborations or an appetite to further develop collaborations in a range of ways – for example, through joint submissions for funding, partnership agreements and alliances, more integrated models of tertiary education provision, cross-sectoral agreements, and federal models or consolidations.

71. In considering these collaborative models, these general principles or lessons from previous organisational change, will be important to bear in mind for any further evolution of models of provision:

- It is often better to start considering future arrangements and partnerships while each institution is in a relatively healthy position than before a situation deteriorates or becomes serious.
- There is no one right or perfect structure or arrangement for an institution to pursue and there are pros and cons associated with every arrangement. Collaborations can come under pressure when each constituent institution is looking out for its own survival. Federations that preserve individual governance arrangements at local level often become more bureaucratic and more costly than a single governance model. Mergers may often seem to offer financial efficiencies, yet they can be beset by problems and can often take many years to implement and many more to realise planned benefits. And working with a complex, large, multi-sited institution requires a different vision and leadership skill set than in a smaller, single site institution. We would always expect the best interests of students, employers and local communities to remain at the heart of any change process.

It is essential to be crystal clear about the core purpose of any collaboration from the beginning and to analyse the options objectively. This should shape the sort of structure that might be required to deliver the benefits being sought. The success of most models of collaboration, partnership or consolidation usually rests in positive leadership across partners, clear roles, clarity of vision and purpose, and strong planning and project management to ensure effective implementation. However, simple things like a name or unaligned ambitions can derail progress.

72. Different forms of collaboration will be appropriate to different contexts. Respondents highlighted collaboration on mission-driven research and in Research Excellence Framework (REF) submissions; for internationalisation where there are shared interests and relationships in particular markets; in providing pathways for learners; and in procurement and shared services, where APUC is a leader in collaborative procurement.

73. Examples of different models of collaboration were raised through this review period, in various stages of thought or development. They are outlined here to promote discussion about future collaboration that might improve outcomes for learners and economic renewal rather than, necessarily, worked-through, concrete propositions for the future.

An Integrated College/University Regional Partnership for Coherent Provision

A college and a university with a long history of joint working, through articulation agreements and progression schemes, decide to develop a more fully integrated approach to skills and provision planning between the institutions. Both institutions remain distinct entities, with their own governing bodies and accountabilities. However, a joint operational Planning and Delivery Board integrates academic planning, development and delivery across both organisations. The Board is supported by a small enabling group drawn from both organisations to make the most of the analytical, influencing and workforce capabilities across both organisations, to plan and to deliver coherently and jointly where appropriate. The Board assesses changes in the labour market and skills demand from employers (drawing on the information from SDS, local government and key stakeholders); it aligns provision with future skills needs; commissions and pilots new provision with active engagement with employer partners; co-ordinates engagement with regional and national stakeholders; and plans co-investment to support the joint delivery of SFC/SDS funded and commercial provision.

The key deliverables include the creation of more sustainable tertiary education in the region, with a more explicit focus on employment; seamless pathways and fast-tracked degree pathways from local schools' senior phase for priority subject areas; joining up apprenticeship pathways; co-designed and branded qualifications and course portfolio; a joint schools engagement team to widen access and participation in under-represented groups.

This requires from SFC a streamlined outcome and impact process, shared targets, and a more inclusive definition of articulation that takes full advantage of the SCQF; and support from SDS on the development of the apprenticeship family and partnership working on industry-relevant and skills-focused education.

New Integrated Tertiary Institutions

A compact integrated, regional tertiary institution

A university and a number of colleges with existing close connections within a region explore the creation of a new institution to deliver a completely integrated student experience, covering the full range of provision from non-advanced further education right through to post-doctoral research in a broad range of subject areas and disciplines. It provides opportunities for a more sustainable future for all the institutions involved. It offers enhanced, clearer routes for schools and students, with fewer barriers to progression for people in areas of traditionally low levels of education attainment or higher education aspirations, and curriculum designed from the outset with progression in mind, rather than matched between institutions. It has the power to design this integrated curriculum and accredit all higher education provision. It provides business with more joined up points of engagement across all post-school and skills planning, national and international opportunities, and collaboration for innovation.

The single new institution follows the dissolution of all the existing bodies and the creation of, what is effectively, an autonomous newly branded university, aiming to be greater than the sum of its parts, with borrowing powers, a full tertiary offer, and a single governing body and management structure. It provides efficiency of integrated operational and academic delivery, resilient scale, a coherent campus and digital infrastructure plan, and a greater presence regionally, nationally and internationally. It has one integrated further and higher education and skills funding and accountability agreement with SFC and SDS.

An Integrated Tertiary Model for Scotland's Natural Economy and Rural Areas

An existing regional university and national specialist institution join together to form a new tertiary institution majoring on Scotland's rural and natural economy (i.e. tourism, food & drink, fishing and aquaculture, agriculture, and energy and forestry). Its mission is to enhance the use of existing assets and strengths in particular rural and island geographical locations across Scotland while operating at a national level to drive a green economic recovery from Scotland's non-metropolitan areas. It is more financially resilient and fuses rural, natural economy and place-based research with a digital tertiary learning delivery model that takes people right through from senior phase to higher levels of study.

Strategic Alliances

- Four colleges covering a wide co-terminus geographic area come together to provide innovative and flexible methods of delivering qualifications, pathways to apprenticeships, and bespoke upskilling and reskilling provision. They plan co-production and co-delivery of a range of courses in a loose alliance that engages with national skills and funding bodies in a collective way.
- Four universities and a major college in a metropolitan area explore options for shared services across a range of back-office and student-facing services.
- College STEM partnership groups that can be used as models to forge stronger collaboration across schools, community learning and development, institutions, local authorities and with industry and the third sector.
- The Crichton Campus enables Dumfries & Galloway College and partner universities to work together, with significant impact within the region. There are opportunities for further collective planning for enhanced student experience and articulation.
- The National Articulation Forum offers opportunities to co-develop pathways from colleges to universities.
- Research pooling is the distinctively Scottish approach to creating deep multi-institutional research collaboration. Pools also host multi-institution graduate schools delivering geographically distributed programmes of high quality doctoral training, since been reproduced in UK-wide CDT (Centre for Doctoral Training) and DTP (Doctoral Training Partnership) schemes.
- Joint REF submissions show the strength of existing alliances and collaborations, based on research pools or otherwise.
- SFC's Innovation Centres have set up a range of agreements and alliances to connect research and application into industry.

Exemplar models of collaboration recommended for further exploration in submissions

- The Flemish Biotechnology Institute is a comprehensive collaborative model that addresses all parts of the innovation system, working in partnership with a range of different partners, including Flemish universities. It has a strong focus on translating scientific results into pharmaceutical, agricultural and industrial applications, and has become one of Europe's leading life sciences clusters within 25 years. It has a dual mission – excellent fundamental science and its commercialisation for economic benefit. It has created a venture capital fund match funded by others; and a programme to develop entrepreneurial managers for start-up companies.
- UNA Europa is an alliance of eight European universities where students, staff and researchers move between campuses across Europe. They bring together expertise and enable students to select modules at different campuses or study on joint degree programmes. “Not a place, but a body of knowledge, ideas, and values, evolving freely beyond borders, mediums and time”.

74. In the context of this review, we would encourage greater exploration of the structures that operate to deliver tertiary education, research and innovation throughout Scotland and beyond, and whether or not changes to these structures might further improve the coherence and sustainability of the Scottish tertiary ecosystem.

Multi-college regions: unfinished business and our recommendations to the Scottish Government

75. The process of college mergers that started in 2011 placed an enhanced regional approach at the heart of planning, funding and delivery. In essence, the programme of mergers aimed to support learners and employers with a more coherent and sustainable curriculum offer and engagement; provide funding based on regional needs; and bring a sharper focus to regional outcomes and accountability.
76. The original merger policy envisaged every region, other than the Highlands and Islands, having a single college. Given the voluntary nature of the merger process, the legislation in 2013 allowed for single regional colleges and regional strategic bodies (RSBs) to cover the remaining multi-college regions. There are currently ten single college regions and three multi-college regions, each overseen by a RSB. Audit Scotland recommended we review current arrangements.
77. We have since reviewed the role of the RSBs in the three multi-college regions. Each grouping has a different history and development, and each has achieved the objectives of regionalisation, collaboration and integration to different degrees. We conclude that the status quo is not tenable for reasons that are particular to each RSB, but often involve tensions in governance and accountability structures, contested costs and funding authority, and unclear outcome gains for students and tax-payers. You can read our full report to the Scottish Government [here](#). Our summary conclusions are outlined below.

- **The Lanarkshire Board:** Despite best endeavours, the current governance arrangements are not well understood or accepted, and lead to constant friction. They distract both colleges from their main missions for students and economic recovery. Some may view the Lanarkshire situation as an unfinished merger that simply needs to complete. At some point, South Lanarkshire College, or both colleges together, may want to consider options for the future. For now, there is no widespread appetite locally for merger. Efforts to make the governance and the RSB function effectively are time-consuming for the Lanarkshire Board and its executive and are unlikely to change outcomes for students or local communities. We recommend that the RSB should be dissolved and both colleges manage themselves as separate regional entities, forming a direct relationship with SFC. For clarity, we also encourage both colleges to continue to be part of appropriate education, skills and economic recovery regional planning, and to build useful collaborations together or with other partners, and to foster strong economic planning partnerships at a Lanarkshire and wider Glasgow level.
- **Glasgow Colleges' Regional Board (GCRB)** is meeting its core statutory requirements and has made good progress in delivering additional benefits through regionalisation. That said, there are still mixed views within the assigned bodies themselves about the additional value being added by the RSB and the cumbersome nature of the four-Board arrangement (i.e. the boards of the assigned colleges – Kelvin, Clyde and City of Glasgow – alongside the regional board). All agree on the need for collaboration, but disagree about the cost and region-level processes of GCRB. Agreeing the funding allocations across the three colleges remains challenging for GCRB, despite an efficient approach. Operating within tight timescales following SFC funding allocation decisions and negotiating agreement on key issues between four Boards and senior managers has been time-consuming and difficult at times. We propose that now is an appropriate stage in its development for GCRB to begin conversations about further reformation of the structures in Glasgow that will facilitate the continued effective and efficient delivery of education and skills for the region. We recommend GCRB and the colleges explore other organisational options that build on and secure pan-regional planning, further efficiency gains, the financial viability of the constituent colleges, and a Glasgow front door for students, employers and other stakeholders. This should include options that may lead to reformation of the regional structure, and further consolidation that will fulfil regional and policy objectives.
- **The University of the Highlands and Islands (UHI)** existed before regionalisation, but was established as the RSB in August 2014, securing operational fundable body status in April 2015. To carry out its regional body role, UHI established a committee of its Court, called the Further Education Regional Board (FERB), to work with the nine assigned colleges that are also academic partners for delivering higher education. The regional governance arrangements have been able to deliver regional benefits and added value for students and other stakeholders, including employers. UHI has invested significant time and effort in building relationships with assigned colleges and establishing a more collaborative culture. That said, the RSB is yet to realise its full potential and deliver the significant wider aims of regionalisation, including curriculum planning, driving further regional coherence, strategic alignment and enhanced offers for students and stakeholders. At the time

of writing colleges are exploring with UHI options for possible mergers of partner colleges. We recommend UHI considers consolidation, shared services, recalibrated roles and responsibilities, and options to ensure it survives and thrives, and gets closer to the original mission of a more fully integrated tertiary institution. In all options it will be vitally important to preserve local presence and reach, as well as good further education, while streamlining governance and decision-making, securing greater curriculum coherence, and seeking more efficient modes of delivering provision that streamline management costs and support front-facing services, courses and opportunities for students and local communities.

78. We have presented our recommendations to the Scottish Government and will work with them and key stakeholders on next steps.

Theme Nine: Making the most of the sector's global connections

79. Universities are, by their nature, international institutions. This review underscores the importance of the sector's global connections and the need to champion their role in providing substantive and reputational advantage for Scotland. Most responses focused on how best to support them to remain international in outlook, and competitive, in a post-Brexit and post-COVID-19 environment:

- Appraise the likely recovery or growth of international student numbers and the impact of changes in fee status for EU students, to assess and develop future strategies.
- Support universities to attract international staff and student talent, essential to our openness to the world and its ideas, and to the internationalisation of staff and student experience.
- Embed tertiary institutions into export and foreign direct investment propositions through a genuinely Team Scotland approach and recognition of their existing and potential role in key priority markets as globally significant research powerhouses and producers of world-leading talent.
- Maximise connections with alumni and engage this network to build and strengthen global connections as ambassadors for Scotland. Graduates are more likely to do business in Scotland as a result of studying here.
- Explore the role of internationalisation and mobility within the curriculum and encourage institutions to embed it more formally.
- Support transnational education to enable a Scottish education offer to flourish in places where students may not be able to leave due to restrictions or to "green" our international footprint, and explore shared pathways from universities' overseas bases into higher education delivered in Scotland either digitally or in person.
- Stay connected with the EU, to continue to attract and retain staff and students, and to remain associated with Horizon Europe (the EU's research and innovation programme) and Erasmus Plus (the EU's programme to support education, training, youth and sport in Europe), all of which will depend on the nature of the post-EU exit relationship that is negotiated between the UK and the EU; and keep close to UK-wide schemes if they need to develop to support international research

collaboration, partnerships and mobility. There were suggestions for new scholarships to ensure Scotland remains a destination of choice.

- Encourage institutions to form closer relationships with leading export companies and internationally engaged organisations.

80. Some responses referenced the role of Scotland's colleges internationally, highlighting significant international partnerships, specifically in sharing best practice and business development, and the importance of Erasmus opportunities for students. There is great pride in the national and international success of college students in the WorldSkills competitions but frustration that this has not been supported more explicitly through additional funding in Scotland. Some suggested better pathways could be developed for international students from further education into higher education, while some felt, with only a handful of exceptions that most colleges should focus primarily on domestic students' success. There was greater support for cross-sector collaboration to support colleges to build contacts, support international engagement and secure partnerships, either with the larger metropolitan colleges or with university partners.

Theme Ten: Financial sustainability and funding

81. Colleges and universities are operating in a financial environment that is complex, changing and difficult to predict. Colleges report challenges across all indicators of sustainability, and there are different impacts arising from COVID-19 across the sector depending on a college's regional context, size, and mission. Universities are particularly affected by the potential loss of international student income, and losses from commercial income such as residences and conferences. Again, due to the differentiated nature of the sector, financial sustainability varies enormously among individual institutions. While there are indications that many international students still want to start or continue to study at Scottish universities, we do not yet have a complete picture of how many will physically be here, and this will vary by institution. In general, the COVID-19 crisis deepens the impact on institutions that have international exposure and lower levels of recognition overseas, less historically accumulated ballast (such as endowments or donations), existing high levels of borrowing or particular arrangements that require renegotiation with lenders or bond holders, or significant research commitments that are vulnerable to reductions in income surplus generation.
82. All institutions are taking mitigating actions and will need to flex their operations, mix of activities, and business models to remain viable. As part of phase one of this review we are publishing two associated reports that provide further analysis of the financial forecasts and projection in both sectors and a full analysis of the most recent 2018-19 financial statements for all colleges and universities.
83. A large number of respondents to our call for evidence indicated they do not believe the current system of colleges and universities is financially viable into the medium term, with many describing pre-existing financial difficulties that have been exacerbated by COVID-19. Many raise the uncertainties arising from EU Exit, and the need for an increase in the overall level of funding for further and higher education.
84. Responses about college funding highlight the need for:

- Joined up national investment, to bring together disparate budgets that fund initiatives, from across government and its agencies. Ideally, institutions would like a single line budget that includes all the funding for current initiatives (e.g. Flexible Workforce Development Fund) and for apprenticeships.
 - An overall reduction in the complexity of funding models.
 - More certainty through longer term funding, to enable them to plan effectively.
 - A rebalance towards colleges of historic investment patterns between colleges and universities.
 - Greater recognition in budget settlements of the business support and innovation role they play within regions.
 - Removing the 116,000 FTE college activity target.
85. This review has raised again the inability of colleges to borrow from external sources, or to generate and use surpluses because of the classification by the Office for National Statistics (ONS) in 2010 that resulted in colleges being considered as public sector entities. Alongside restrictions on borrowing, colleges cannot accumulate reserves (although some have access to arms-length foundation funding); face greater management challenges in terms of balancing income and expenditure; must provide additional financial returns to SFC due to government accounting arrangements and the cash drawdown system for grant payment; and must seek consent for certain transactions.
86. The Cumberford-Little report, supported by the Royal Society of Edinburgh, recommends the Scottish Government revisit the current classification in order *“to reduce unnecessary bureaucratic constraints and central controls that characterise the current system and which...hold colleges back from making the fullest possible contribution to inclusive growth”*. Many in the sector believe reclassification would provide greater flexibility, the opportunity to manage their finances in a different way, and would encourage a greater culture of entrepreneurial activity. The Educational Institute of Scotland’s response to our review makes clear their support for colleges remaining part of the public sector and democratically accountable through Scottish Ministers and, ultimately, the Scottish Parliament.
87. The classification of colleges could not be altered without changing the role of Scottish Ministers. Colleges have suggested that their existing charitable objectives in relation to the use of their funds should provide comfort in any change of status, and that Scottish Ministers’ powers over the appointment of individual Board chairs and members could be taken on by SFC. We will highlight these points to the Scottish Government.
88. The removal of this classification by the ONS would require primary legislation and Scottish Ministers to remove their powers of direction and consent, their role in the governance of individual colleges, and college requirements relating to the Scottish Public Finance Manual and national bargaining. If Scottish Ministers wish to pursue this option it would require a careful weighing of the benefits and risks, including lessons to be learned from the English college sector where colleges remain classified as private sector bodies; and consultation with all stakeholders.

89. Responses specific to university funding highlight the need for:
- Less reliance on cross-subsidisation from international student income, particularly in research where many argue for greater insulation against the vulnerability to the research and science base thrown into sharp relief by COVID-19.
 - Full economic cost recovery for learning and teaching.
 - Fewer loan-based interventions, given the high gearing already demonstrated across the sector.
 - An exploration of the opportunity to use EU/EEA student funding to leverage better support for Scottish students, for example, by increasing the base price per student and to invest in “bottom-up” strategic initiatives to enhance teaching and learning. Respondents were keen to increase the unit of resource for teaching without reducing opportunities for Scottish domiciled students.
90. Some respondents to this review suggested there should be a re-examination of the current principles around the funding of student tuition and their effect on the shape, size and nature of the tertiary education system. In particular, the need for progressive and flexible options, and a debate on the contributions from individuals and business as well as the state. Some argue that the rules around fee-free tuition for Scottish domiciled students studying in Scotland should be relaxed to bring into the higher education system an additional contribution from students to the cost of their education, in light of the financial sustainability challenges facing universities.
91. Alternative approaches raised included either the student paying tuition fees up front and having access to a means tested repayable tuition fee loan if necessary; or some form of graduate tax where government pays the upfront fees, so that they are free to students at the point of the delivery of their education, but they are repaid by the graduate over time through a higher rate of tax. Some suggested that Scottish students from wealthier families (who may have attended fee-paying schools) should pay more towards their fees or cover more of the public funding for their place at a Scottish university.
92. The Scottish Government’s stated policy is that free tuition helps remove barriers to widening access and participation, and builds a strong social contract with students. The National Union of Students and Union representations to us support the continuation of this Scottish Government policy. We have not taken the issue further given government policy.
93. Respondents across colleges and universities raised some common themes:
- The need for a strategic national capital investment plan, with longer term physical and digital infrastructure in mind.
 - The desire for greater flexibility in funding models to develop short, modular, micro-credential provision.
 - Suggestions for more creative uses of funding so that it is not always attached to accredited qualifications.
 - Mixed views on the benefits of migrating to one tertiary funding model or maintaining the status quo, with two different streams of funding for colleges and universities.

- Greater clarity of roles and differentiation within the tertiary system to help drive funding decisions and reduce duplication and overlap.
94. There were specific suggestions around the development of SFC's funding model:
- Greater use of a common framework, such as SCQF levels and points, to guide funding allocations.
 - Addressing issues relating to SCQF levels 7 and 8, in terms of duplication, anomalies and funding in some instances – for example, where a student completes 6th year at school and an HNC and first year of a degree.
 - Improving the way transition pathways between further education and higher education are incentivised and funded, with encouragement for a bolder, system-wide change.
 - General support for the continuation of some kind of formulaic funding (so long as it is not overly complex) but with greater transparency and better links to delivery and success.
 - The need for greater recognition of the specialisation and differentiation within the system and between institutions.
 - Larger amounts of strategic, non-core funding to support institutions to take risks and be ambitious.
95. Many responses underlined the importance of detailed analysis and transparent reporting of the medium-term financial position to SFC and our job in building a picture of the financial challenges. While the main areas of financial viability risk vary significantly across the sector, given the diversity among institutions, the different contexts they are working within, and their varied missions, these are the key financial risks arising for each sector that we will continue to monitor:
96. For universities:
- International student tuition fee income assumptions, within a competitive and COVID-19 world.
 - Stock market pressures and wider economic challenges that lead to significant drops in regular donations and income from endowments.
 - Commercial income exposures from residence, catering, conference, festivals and sport income.
 - Research income from charities and industry.
 - Employer contributions to pension schemes.
 - Existing debt levels, relationships with lenders and the management of private placement portfolios.
 - UK-wide visa, immigration and international policy.
 - Changes in UK policy on higher education.

97. For colleges:

- Cash and liquidity.
- Employer contributions to pension schemes.
- National pay awards.
- The national bargaining and job evaluation arrangements for support staff.
- Estate and digital infrastructure investment.
- The timing of government funds to support economic renewal in order to undertake effective workforce planning.
- Public funding settlements and the fragmentation of funding streams.

98. We take forward some of the key themes raised in this section in the chapter on SFC's investment and accountability framework, where we propose some changes to our approach to respond to the issues raised and to provide a more granular set of issues to discuss in phase two.

Sustainability into the longer term at institution and sector-wide levels

99. There is no easy answer or one solution to the question of future sustainability. It is a fluid environment, and there are many stakeholders that can affect the future. But, in general, these broad themes emerge:

- Protecting the research and science base by increasing the level of full economic cost recovery associated with the collective actions of governments, SFC, UKRI, and charitable funding, to reduce university cross-subsidisation from international student fees, and considering the quantum and distribution of research funds.
- Continuing to assume some level of cross-subsidisation from international income in universities for learning and teaching, and the delivery of agreed outcomes for the public good – hence the need for a Team Scotland and wider UK approaches on international strategies, and continued modelling of different scenarios to assess how international student trends are developing.
- Mitigation strategies and adjustments to the business models of individual institutions, for example, on workforce plans, estate and digital infrastructure management, wider efficiencies, and loan portfolio management; and collaborative endeavours among institutions that include shared services or new partnership models.
- Considering UK-wide stabilisation packages, SFC Financial Transactions and other transformation funds that can support institutions to adapt.
- Taking forward the themes in this review, such as the further development of a more integrated, differentiated and connected tertiary education and skills system, where colleges and universities work collaboratively, for example, on access, pathways for learners, efficiencies, regional planning and coherent provision.
- The release from activity targets that might enable colleges, in particular, to consider their missions and the level and focus of activity required, through regional planning and skills alignment work.

CHAPTER FOUR: A Renewed SFC Framework

100. Having reflected on the submissions and discussion through the first phase of this review, this chapter picks up several themes and suggests how our approach could develop to champion, challenge and support colleges and universities through four inter-linked and mutually reinforcing elements: Investment, Quality, Accountability, and Insight. The chapter outlines how these elements could evolve to provide a more integrated overall SFC framework, in summary, through:

- The Scottish Government considering the allocation of one tertiary education budget to SFC, to provide greater flexibility in our approach to investment.
- Moving away from activity targets towards participation indicators that would track the proportion of the population who would benefit from college, university or apprenticeship provision.
- Greater alignment with skills and economic recovery planning.
- Reducing the complexity of funding models.
- Performance based funding for student transitions and outcomes, and a simpler approach to premiums focused on access and inclusion, student success, and institutional context.
- Reviewing our use of non-core programme funds and capital investment as this review progresses to align them with renewed strategies.
- The proposal to develop a new national framework for outcomes and impact.
- The need for a review of quality assurance frameworks.

- Options for greater parity of investment in higher education qualifications delivered by colleges and universities, and consideration of the use of SCQF levels for an integrated tertiary funding model.
- The design of a Transformation Investment Fund to support institutions to adjust their operating models and explore options for the future.

101. This chapter aims to give more concrete examples of the way the themes raised through this first phase of the review could influence future SFC approaches.

Towards An Integrated Investment, Quality and Accountability Framework

102. The review suggests that a coherent system of provision and research can be viewed through three main perspectives.

103. For a learner, a coherent system means:

- You have learning, skills and qualifications for life, and they provide knowledge and attributes that are transferable and updatable.
- Wherever you live and wherever you come from, you have regional access to education up to SCQF level 8.
- You have opportunities for continued learning and training that contribute to Scotland's social and economic prosperity over your lifetime, irrespective of mode or level of study.
- You take fewer wrong turns, dead ends, and repeats – you have an efficient learner journey, recognising that we are all human and may need help finding the right path at points in our lives.

104. For an employer or business, a coherent system means:

- Whatever the size and nature of your business, you find it easy to engage with the expertise of colleges and universities, when and where you need it.
- You have access to an educated and skilled workforce that can quickly develop new or specialist skills when you need them.
- You have opportunities to develop the expertise to optimise your business performance and productivity.
- You can work with colleges and universities to accelerate and grow through knowledge exchange and technology transfer, and to plan for the skills you need to change and innovate.

105. For Scotland, the coherent system is:

- Resilient for the future.
- Affordable in the short and long term.
- Effective: capable of delivering new insights, quality provision, employable graduates, excellent research, innovation & enterprise, and tackling inequality.
- Efficient: it operates at the right scale, and with others, to minimise waste and duplication, with optimised digital technology, and green.
- Able to deliver research and teaching at world-class level with global impact.
- Doing the right things for Scotland and our communities.

106. These perspectives help provide focus for the development of our own framework, particularly the outcomes and impacts we are seeking to achieve.
107. Tertiary education in Scotland is funded through a range of sources – direct state grants and indirect state funding (for example, student loans); by students; and through other private sources (for example, from employers, industry, and philanthropy). The total amount of Scottish Government funding for further and higher education is determined through periodic spending reviews. The Scottish Government decides what that total amount should be for the college and university sectors, and SFC decides how best to invest that total resource between different elements of teaching and research, infrastructure, policy projects, and among institutions and fundable bodies. The Scottish Government outlines its priorities in letters of guidance to SFC.

108. The current funding models for learning and teaching in both universities and colleges have evolved over the years, but have not been subject to a more fundamental, holistic review and change for some time. The core model for university revenue funding largely follows the model inherited from the Scottish Higher Education Funding Council (SHEFC). The college funding model changed following a review in 2013, at the time of college regionalisation, with incremental developments since then.
109. Most of our funding for research is channelled through the REG. Supporting excellent research, wherever it is conducted, is the foundation of the REG. Therefore, as well as using factors based on the volume of research conducted and relative discipline costs, our allocations use a research quality factor. The research quality factor is derived from the REF which is the UK's system for assessing the quality of research in UK higher education institutions. It last took place in 2014 and the next exercise will be completed in 2021 (REF2021). Institutions are therefore currently finalising their submissions to REF2021 and consequently it would not be appropriate for us to

indicate possible changes to our approach to research funding in advance of the completion of REF2021, to avoid affecting submissions to the exercise.

110. Our current capital funding for college and university infrastructure comprises one-off investments in major new estate developments and support for ongoing infrastructure maintenance and renewal. Investment in new developments in recent years has concentrated on a small number of major projects in the college sector. Support for infrastructure maintenance and renewal is relatively limited, compared to the available assessments of backlog maintenance requirements.

Non- Core Fund Programmes

111. We also invest around £85 million every year in national programmes and infrastructure that support colleges and universities, particularly where this leads to more efficient procurement or drives forward particular government priorities. These are sometimes ring-fenced funds that we administer on behalf of Scottish and UK Governments, or are investments from SFC's funding settlement. The graphics below provide a high-level sense of our priorities.

112. In terms of quality and accountability, colleges and universities that receive public funds must:

- Meet the terms and conditions set out in accepted offers of grant across a broad range of core funds and specific programmes.
- Agree delivery plans for funding through negotiated Outcome Agreements.
- Comply with the SFC's Financial Memorandum, that includes compliance with the relevant Scottish further and higher education codes of governance and other statutory requirements, such as the Public Sector Equality Duty and Climate Change Reporting requirements,
- Work within the quality assurance frameworks commissioned by SFC, primarily undertaken by Education Scotland and Quality Assurance Agency (QAA) Scotland.
- Fulfil the terms of various concordats and conditions agreed by SFC with other UK funding bodies.
- Provide robust and timely data to SFC and other relevant authorities.

113. SFC can consider the recovery of funds from individual institutions or reduce future funding in particular circumstances.

What happens in other countries

114. In conducting this review we examined the funding and accountability models deployed in other countries. Research, commissioned through Delivery Associates, is available on the SFC website alongside this full report. While every country has its own particular context and drivers, there are debates in common around the methodologies that can be employed to distribute funding of this nature: through a formula, negotiation, contracts, or historical allocations subject to continuation or cuts depending on the health of public finances – or a combination of these approaches.
115. Many countries distribute some element of their tertiary education funds through a formula-based funding methodology, often linked to policy and performance targets. The formula is used to determine the amount of funding allocated to each institution using variables based on a range of indicators. Decisions centre on the amount of the total grant available that is subject to a formula distribution methodology; the nature of the indicators that make up the model; and the way adjustments are made to affect outcomes, policy shifts, cap places or take account of performance.
116. Associated delivery target agreements and contracts are sometimes developed between funders and institutions in other countries, but they vary in their policy intent and ability to determine the level of funding in each institution. In many cases, the funding available is based on historical funding with an accompanying agreement between the funding body and provider that sets out what will be delivered for the funding received. Most funders are aiming to ensure the sustainability of further and higher education by taking some account of the costs of institutions' activities; rewarding and incentivising performance; and enabling institutions to plan and invest in their future.

Our current approach to funding

117. Our approach to funding learning and teaching mirrors many of the elements we see in other countries and is a hybrid system. We provide formula-based grants that are, to some extent, based on historical funding patterns. In learning and teaching our main funding model has three core elements: student numbers; price; and premiums that are reviewed on an annual basis. From AY 2017-18 SFC has provided the college sector with funds to implement national bargaining harmonisation and job evaluation costs, with the intention that these costs could be fully implemented in AY 2019-20. In AY 2020-21 SFC also provided the college sector with funds to support increased pension costs. The costs of national bargaining, job evaluation and pensions differed by individual college and, therefore, not all colleges received the same increases throughout that period. The implementation of national bargaining over the last three years has therefore meant SFC has used a historical funding allocation method, with the addition of an uplift based on each individual college's cost of implementing harmonisation and job evaluation costs. We have been clear throughout that we intended to return to a different investment model at the end of this implementation period.

118. Our research funding is largely formula-driven and contains a more explicit set of performance based measures, based on a periodic, seven year review of excellence, as explained above.
119. In Scotland we introduced the current Outcome Agreement funding system to reflect a 'something for something' relationship between SFC and the institutions we fund. The outcomes achieved do not normally impact directly on the level of future funding allocated; rather there may be recovery of funding where agreements are not fulfilled for a variety of reasons. We propose a different approach to accountability later in this chapter.

Core principles to guide our framework

120. Drawing on the themes emerging from this review and as we consider changes to the way we invest in coherent provision and hold institutions to account, we should be informed by a number of guiding principles. We propose that our approach to investment, quality and accountability:
- **Keeps the interests of current and future students, and equalities, at the heart of our work:** In everything we do, SFC should ensure education is accessible to learners from all backgrounds, and that we support pathways to success. Our approach should make sure learners receive a high-quality, safe and supportive learning environment that equips them to flourish in employment, further study and lead fulfilling lives. We should support their voices being heard and valued, and foster a culture where everyone is treated fairly and with respect.
 - **Takes a system-wide perspective:** The college and university eco-system is interconnected and there are strong connections between funding for education, research, infrastructure, social policy and community engagement at a local, national and international level. It is also connected to the wider school system. Our approach to planning, operational policy and investment needs to consider the implications, interactions and co-funding opportunities alongside other main sources and types of funding, and other parts of the wider system.
 - **Supports local decision-making:** We fund a system of autonomous institutions and public bodies. They should be responsible for their own strategic decisions about the mix of provision to offer, the research to undertake and the best way to fulfil their mission, taking account of national, regional and local needs; learner demand; the policy context set by Ministers and set out in SFC's accountability frameworks; workforce planning for controlled or strategically important subjects or ring-fenced programmes; and conditions of grant.
 - **Secures quality and public value:** Our framework should support coherent and high quality provision that maximises successful impacts and outcomes for students; supports access, participation and progression; and meets Scotland's economic, social and cultural needs. It should also demonstrate a clear line of sight between public investment and desired outcomes.
 - **Is fair:** It should be fit for purpose, recognise the diversity of the system and support equitable investment and accountability decisions.

- **Balances stability and responsiveness:** It should provide a sufficient level of certainty, consistency and stability for key stakeholders, and limited volatility, to strategically plan programmes, provision and accountability mechanisms, or transition effectively to required changes. But it should also be able to adapt to available resources, support strategic policy aims and respond to external changes without significant shifts in the basic structure of our framework.
- **Is proportionate and targeted:** Our framework should be appropriate to attain the objectives we are seeking to fulfil, and should not go beyond what is necessary to achieve those objectives. Where possible, our requirements should dovetail with the assurance mechanisms already in place within institutions.
- **Strives for simplicity and transparency:** While acknowledging the complexity in the system, our framework should be relatively simple, easy to explain, open and evidence-based, and administratively efficient in being proportionate in terms of administration costs and burdens in the sector.

Investing in the Coherent Provision of Learning and Teaching

Student numbers and demographics

121. The main driver of SFC investment is student numbers, for both colleges and universities. The overall number of places we fund is determined by the number of funded places in previous years, adjusted by particular policy objectives and subject to budget availability. The Scottish Government has set an activity target that the college sector should deliver around 116,000 full-time equivalent places (FTEs). In the university sector, we currently fund around 130,000 FTEs.
122. Following the regionalisation of colleges, we developed a demographic funding model, with the aim of providing sufficient college places to meet the needs of each region, while still meeting the Government target. The demographic model uses a range of publicly available data sources to ensure SFC has a strong evidence base to inform a needs-led approach to identify people likely to want and benefit from a college education. We can align this model with policy priorities by adjusting the indicators we use or by changing the weighting we give each indicator. For example, we can provide more places to a region with higher proportions of school leavers who are not at a tertiary level institution, on a programme funded by SDS (e.g. a Modern Apprenticeship) or in employment.
123. The current demographic model indicators for colleges are set out in the box below and at Annex 1 in more detail. (In the college sector we use the credit as a means of measuring the volume of activity. One credit is equivalent to a block of learning of notionally 40 hours):

Demographic model indicators

1. Number of S3-S6 state school pupils in each local authority.
2. 16-17 year olds outwith a positive destination.
3. 18-19 year olds outwith a positive destination.
4. Maintaining full-time places for 20-24 year olds and provide additional places for unemployed 20-24 year olds based on Jobseeker's Allowance numbers.
5. Number of credits for each person with low level qualifications.
6. Regional skills assessments and mid-level job openings.
7. Economically inactive population of working age.
8. Low and mid-level employment (upskilling).
9. Unemployed people aged 25 and over.
10. People living in the 10% most deprived postcode areas.

124. A regional distribution method would not be an appropriate methodology on its own to fund universities. While universities play an important regional role, demand for places is national, UK-wide, and international. The university sector also tends to have higher student mobility, wider travel to study areas, and quite different patterns of travel to work after graduation. In recent years, we have invested in additional student places in the university sector for particular policy objectives, for example, for widening access, supporting students to articulate between colleges and universities, and for certain skills needs. While student demand is a driver, we place limits on overall numbers (see below).
125. The current college demographic model is a distributional model that allocates places between regions. It does not determine the total number of college places that Scotland may need. However, the following paragraphs set out a development of the demographic model that supports better estimates of further and higher education requirements and how we might shift from an activity measure to a participation indicator.

Planning and targets for participation and coherent provision

126. We could develop the demographic model to provide a better regional planning tool – an evidence-based methodology to determine the level of overall provision in a region. Rather than adopt an absolute, fixed student number target, SFC has been developing a measure that could determine the proportion of school leavers who are likely to go on to enrol at a college or university up to the age of 24, or by age 30, to enable us all to plan more effectively.

127. Ideally the model could be developed to provide evidence of the numbers of undergraduates, taught postgraduates, HN provision and further education provision for a region, along with apprenticeships and likely upskilling/reskilling requirements. It would deal only with the numbers of places SFC would fund for Scottish-domiciled students. The model could be enhanced by the development of the skills alignment work underway between SFC and SDS, in order to provide labour market intelligence and skills gap analysis that should help build a regional picture of the type of provision, including by level of study and subject area, that might be required to meet regional and national workforce and other wider requirements.
128. Of course, modelling of this nature will not be an exact science. Students may choose to travel to a particular university or college outwith their local region because of the reputation of the institution, for preference or to study a particular subject or take part in a particular programme; non-Scottish domiciled students will study in Scottish institutions self-funded through tuition fees. And some national institutions will not naturally fit a regional planning model - for example, provision from the Royal Conservatoire of Scotland, Glasgow School of Art, the Open University in Scotland and SRUC. So, the model would need to flex to accommodate variety in the system.
129. We would like to explore this approach because it should provide a more sophisticated approach to determining demand, rather than setting absolute activity targets. For this model to work, we would need to have the flexibility to move places between and across colleges and universities and will engage with the Scottish Government on the future of the college 116,000 FTE target, the option of a participation target for the tertiary sector, and the appetite for the Scottish Government to allocate one tertiary education budget to SFC, to provide flexibility in our approach to investment.
130. We currently have separate volume targets for colleges, universities and apprenticeships. We suggest that over time we move from an approach based on a series of individual volume targets, to a system of planning based on the ability of colleges, universities and the apprenticeship system to serve the right proportions of our population and as efficiently as possible – getting people into work at the right pace, without unnecessarily repeating levels of study – and having an upskilling system that supports people in the rapidly changing workplace. The following input and output measures may provide a better fit with skills alignment and reflect the changing needs of our society.

Sample participation targets or indicators, for illustrative purposes

- From 2021 onwards, 70% of school leavers will have progressed to study on a further or higher education course, or progressed to an apprenticeship.
- By age 24, 85% of those school leavers will have enrolled at a college or university.
- By age 30, 57% of those school leavers will have participated in Higher Education Courses – while increasing the numbers on degree and graduate apprenticeship programmes.
- We will maintain the outputs of nationally recognised qualifications achieved.

131. By expressing the target in this way we can be clearer on the reach of the college, university and apprenticeship system and the proportion of the population who benefit.

Student number controls

132. Given the current COVID-19 pandemic and the vital role being played by colleges and universities in the economic and social recovery of Scotland and the wider UK and beyond, it would not be appropriate to reduce student numbers now. The Scottish Government has assured universities that additional undergraduate places, relating to the 2020 SQA results, will be funded and we are currently working with the Scottish Government to fund some expansion of the college sector, particularly to fund unemployed young people where an apprenticeship offer is no longer available. Therefore, we will need to expand the further and higher education system for the next two years, through the economic recovery period. This review is pushing beyond these COVID-19 'emergency' years, to encourage a debate about what sort of system we want for 2022-23 and beyond.
133. Student demand is a key driver of our funding models. However, the university undergraduate system is capped for full-time Scottish/EU students, and the demographic trends and shifts across Scotland are affecting demand for college courses. In recent years the college sector has exceeded its credit target by around 1%, although many individual colleges have found it challenging to meet their credit targets; and the university sector has exceeded its funded places by around 10% (this figures includes Taught Post-Graduates). Given the likelihood of continuing financial pressures in the college sector, and the level of cross-subsidy from international fee income embedded in models of support for home students in the university sector, we should address the sustainability of returning to pre-COVID student numbers.
134. The university Transparent Approach to Costing (TRAC) is an activity-based costing system, adapted for an academic culture in a way which also meets the needs of the main public funders of higher education. It was introduced across the UK higher education sector in 1999 as a government accountability requirement and to support institutional management through a better understanding of costs within individual institutions. By complying with the requirements of TRAC the sector received substantial financial benefits through increased funding, particularly in support of research sustainability. By adopting the TRAC methodology, universities are providing confidence to funders and stakeholders that the sector is well managed financially. TRAC is a process of taking institutional expenditure information from consolidated financial statements, adding a margin for sustainability and investment to represent the full 'sustainable' cost of delivery, and then applying cost drivers (such as academic staff time allocation and space usage) to allocate these costs to academic departments and to specific activities.
135. TRAC data shows that in 2018-19 non-publicly funded teaching, which is mainly non-EU international students, provided a surplus of £222 million. This was used to cross-subsidise Scottish-domiciled and EU students, which generated a deficit in funding of £157 million, as well as cross-subsidising research funding. The average research

funding gap from 2015-16 to 2018-19 stands at £328 million. TRAC also shows an overall deficit of £96 million which equates to -2.3% of total income.

136. The use of TRAC data is currently under review. Universities are often complex organisations and it can be difficult to track costs accurately. The choices they make affect their cost base, for example, about the size of classes or mix of subjects offered. We could encourage greater collaboration, a move to teaching pooling across institutions, or the consolidation of small courses across fewer universities, where courses are not cost-efficient to run within individual institutions or appear to perform poorly in terms of outcomes for students. This is likely to become an increasing area of focus for us.
137. We may also wish to explore the option of reducing student numbers and maintaining current levels of funding – in effect, increasing the unit of resource – or providing greater flexibility around controls and greater alignment between colleges and universities. In exploring transitioning away from the current student number controls for non-controlled subjects we might consider:
- Recovering funding if a university or college recruits below its allocation of funded places/credits by more than 2%.
 - Imposing a penalty if a university or college recruits above its 'consolidation'/credit numbers by more than 3% or 5%.
138. This would mark a significant change for the college sector as there is currently no flexibility for under-recruitment. It would also be a significant change in relation to over-recruitment in both the university and college sectors, as the current university over-recruitment threshold (for full-time undergraduate students) is 10% for most subject areas, and colleges currently have no upper cap. We would therefore need to consider what limits to set and how best to transition to new limits, if this approach were adopted.
139. Through this review and the recent expansion of student places associated with the 2020 SQA results, some universities have asked us to consider funding additional places that currently only attract tuition fee ('fees-only') students. The admission of fees-only students remains a mission-based and marginal costing decision for individual universities.
140. The next sections consider the funding formulas for colleges and universities and propose changes to the current arrangements. We have not considered changes in student support funding as there was an independent review of student support and we are implementing the changes that were recommended and agreed by the Scottish Government. We will need to consider the impact of changes, particularly around the volume of student activity and reprioritisation of this activity, and the unequal impact of COVID-19, on potential calls on bursaries, childcare and discretionary funds.

College funding for learning and teaching

141. SFC's investment in colleges broadly covers:
- Learning and teaching funding (over £487 million in AY 2020-21).

- Student support through colleges, for learners on non-advanced further education programmes. This covers bursaries, childcare and discretionary funds.
- Non-core funds and employer-led programmes, including delivery of additional activity under a European Social Fund programme and employer-led funds such as the Flexible Workforce Development Funding. We also fund sector-wide support for quality assurance, national bargaining, staff development, and digital network infrastructure.

142. As noted in para 117 above, for the last three years our college funding model has been suspended in order to fund the implementation of national bargaining harmonisation and job evaluation costs in the college sector, with the intention that these costs could be fully implemented in AY 2019-20. This has meant that the teaching grant uplift for each college/region has been based on staff salary information and the amount needed to fully meet the additional costs of salary and pension costs. We have signalled our intention to return to a 'price × volume' (+ premiums) investment model. You will find more detail in Annex 1 but in summary:

- Prices are based on course subjects, with five price groupings devised in partnership with the college sector, based on the cost of delivery across different subject areas.
- The volume relates to the number of 'credits' for which we provide funding, which we use as a means of measuring volume of activity (with one 'credit' being equivalent to a 40 hour block of learning and 15 credits equating to 1 full time course).
- The premiums we pay recognise the additional costs of certain teaching environments and also act as a policy incentive. These premiums include funding for access and inclusion, deprived areas (SIMD), and rural and remoteness.

143. We propose to continue with a formulaic approach to distribution, although we should re-examine the price subject groupings and consider how we can better align them with the university price groups for higher education. We are also keen to explore moving from a credit-based calculation to an FTE calculation, which again would align with the university model. We might also explore how our credit system can better support engagement with employers.

University funding for learning and teaching

144. SFC's funding of universities includes teaching, research and non-core programmes. The majority of SFC's funding is concentrated on teaching funding, including both SFC and ring-fenced Scottish Government funding. Teaching funding is predominantly focused on the Main Teaching Grant (£641.8 million in AY 2020-21), with additional grants for specific policies or areas of need. Annex 3 outlines the way our current funding model works for the distribution of learning and teaching funds. In summary:

- Prices are based on subjects, with six price groups based on the cost of delivery – ranging from high cost clinical medicine and dentistry to less expensive 'classroom-based' subjects.
- Volume relates to the number of student places for which we provide funding.

- Premiums and other teaching grants include funding for small specialist institutions, widening access and retention, and upskilling.

145. As set out in Annex 3, there is currently a complex ‘validation’ process of making adjustments to the Main Teaching Grant allocations to compare them with the previous year’s allocation, and then against the ‘price × volume’ result. It has always been SFC’s intention to revert to a more simple and transparent approach and transition back to a straightforward price × volume model.

Performance-based funding and the use of premiums

146. We pay premiums as part of our teaching fund distribution to colleges and universities. Annex 4 outlines the current approach.

147. We propose bringing greater coherence to the use of existing premiums, and to introduce a stronger outcome factor into our teaching and learning funding model, in line with many respondents in our review, who felt we did not sufficiently recognise achievement and success. Our aim is to design and consult on performance-based premiums that align with the needs of students, government policy, and public value expectations. Our current system already contains some performance incentives: for example, we fund a student place after they have completed 25% of their year of study; we have number controls and activity targets; and we publicly report and release data that show performance across a range of indicators and measures. We believe we could strengthen our focus on outcomes that matter most to students and to recognise institutional success more. Review respondents were keen that we review some of the definitions that underpin the assumptions in existing premiums and we will bring that work through into the further design of revised premiums.

148. We propose that we examine the efficacy of three funding model premiums for:

- Access and inclusion.
- Institutional context.
- Successful student outcomes.

Access and inclusion

149. We recognise the importance of continuing to provide a premium that recognises the additional costs of recruiting and retaining students from areas of multiple deprivation. As it is an area-based measure, the Scottish Index of Multiple Deprivation (SIMD) is not the best indicator of individual disadvantage; however it does provide a reasonable basis for allocating a premium. We propose to continue to have an access/retention

premium but review the indicators that we use to allocate this, including the option of connecting additional funding with outcome measures connected with getting the planned qualification or employment.

Institutional context

150. We will consider adjusting funding for particular institutional characteristics in line with economies of scale or the particular geographies and demographics they serve. It will remain important to protect rural and remote provision. Similarly, we will want to support and champion small, specialist national provision. We will bear in mind the importance of these premiums in providing institutional sustainability as we transition pay and pension funding into new funding models.

Successful student outcomes

151. Overall, Scottish institutions perform well on both a UK and world context with six in the top 20 in the 'Guardian Best UK University Guide 2021' and two in the world top 100 in the 'Times Higher Education World Rankings 2021'. Scottish colleges are highly successful in Worldskills competitions. We should be proud of their achievements and how they support successful outcomes for students, employers, and Scottish social and economic needs. But there are considerable differences in terms of outcomes between institutions and across measures of success. We know that this can sometimes be correlated with certain student characteristics or the individual circumstances of institutions. We are also aware that structural inequalities in the system may skew results. So, any performance-based premium elements would need to be designed with care, but there were a number of respondents to our review who wanted to see a better model of rewards and incentives linked to outcomes and delivery.

152. In broad terms, a performance-based premium for successful student outcomes would need to be relevant for the outcome we are seeking to achieve; within the control of the institution; and use reliable evidence. It is likely to require benchmarks to be set that have an achievable stretch; track changes in performance; and are context-specific.

153. Potential indicators of successful student outcomes include:

- Access and participation by student background, including school pupils from deprived areas direct to university or higher education at college.
- Articulation between college and university, with appropriate credit for prior student learning.
- First-year retention and progression rates.
- Successful student completion within agreed timeframes.
- Student satisfaction, recognising the many factors that make up satisfaction.
- Graduate outcomes (employment or further study), recognising the complexity of individual choice and the wider employment market.

154. Further work would be required on the measures, including their weighting, the benchmarks, and the level of funding that should be attributed to this performance-based premium.

Integrated tertiary institutions

155. There are currently two integrated tertiary institutions in Scotland – UHI and SRUC. Their funding comes from the college resource budget for further education provision and from the university resource budget for higher education provision. We currently pay higher prices through our college model for SRUC (as a result of the subject mix and rurality premiums) and for UHI (high rural and remoteness payment plus pay harmonisation). It is likely that our common funding model would take future sustainability into consideration. However, it does not follow that we would need to retain our current further education and higher education volume targets.
156. We should explore the opportunity to set a single target for UHI and SRUC and enable these institutions to agree with us the appropriate mix of FE and HE places they should deliver. This would support a greater focus on the needs of the local economy, outcomes for students and a more efficient learner journey, and may lead to some rebalancing of FE and HE provision. A single target would enable these institutions to develop more advanced, integrated tertiary strategies for future years. This could help inform future regional strategies across Scotland.

Towards an integrated tertiary funding model

157. SFC was established in 2005 in order to bring greater collaboration across the two sectors. A huge amount has been achieved in that time, particularly around widening access, articulation between colleges and universities, and in supporting student success. The paragraphs above have outlined ways we could explore bringing greater cohesion between the sectors, while recognising their diversity. A more integrated tertiary funding model is likely to require a more flexible approach to the current operation of separate funding models and to the separate ring-fenced budgets for colleges and universities from the Scottish Government.
158. If we are to support more integrated planning at a regional level between appropriate clusters of institutions, and by the two most integrated tertiary institutions in Scotland, we need to support the movement of places between colleges and universities. This means also being able to move resource between the two sectors, with one Scottish budget line for colleges and universities.
159. We could extend this further to develop one funding model which would encompass all activity and pay the same price for the same subject at the same SCQF level, regardless of which type of institution is delivering it. A single funding model could encourage further collaboration across our sectors and help to establish more integrated approaches to tertiary education within Scotland. It should also support the types of new partnership arrangements starting to emerge at regional level between colleges and universities.
160. We could design an integrated funding model in a number of different ways depending on the policy drivers we are trying to achieve. If an efficient learner journey is paramount, for example, in a common price × volume model we could pay a lower but equal price for activity levels up to, and including, SCQF level 8, and a higher price for levels 9 and above. Such an approach could help incentivise a more efficient learner journey where more school pupils from the senior phase could move direct to year two

at a college or university. It should also be a positive step for widening access, with greater incentives for universities to work more closely with colleges to increase the volume of students completing early years at college before progressing to higher level study at the university. In this approach, university funding could be re-balanced by lower funding at levels 7 or 8 with a higher price for delivering SCQF levels 9 and above. We would clearly need to operate such a model in a way that mitigated unintended consequences – for example, in controlled subjects – and the development of this option would require significant engagement with local government and schools.

161. In an integrated tertiary investment model we would consider appropriate, common performance-based premiums. We could, for example, pay colleges and universities a set price for each graduate they produce. This could also vary by SCQF level. We would check whether the student had previously graduated from the institution or college before awarding the graduate premium. This could deliver a more efficient learner journey. This graduate premium could be calibrated to recognise the successful completion of studies by a student who, for example, comes from an area of multiple deprivation or who was care-experienced, or we could have separate premiums for certain groups of students. Altogether, we would aim to introduce a simpler funding model across the sectors that would include the graduate premium and the access and retention premium. We could review the institutional elements in order to support sustainable institutions, but allied to set criteria and an annual challenge to ensure institutions deliver required efficiencies.

Quality and Accountability

162. Outcome Agreements (OAs) were introduced in AY 2012-13 as part of the “something for something” funding settlement in the Scottish Government’s spending review. They were intended to:
- Support individual institutions to demonstrate their fulfilment of Scottish Government priorities.
 - Improve the reporting, and contribution, of the sectors as a whole to national priorities.
 - Bring greater transparency and accountability for public expenditure.
 - Make a shift towards relationship-based engagement within SFC so that we could take account of the differentiation in the sector and understand each institution’s broader ambitions.
163. Since then, OAs have retained these broad objectives but have evolved and developed over four main phases:

164. It is our view that they have been instrumental in helping to articulate the contribution of the sectors to key government priorities and they reshaped the SFC's relationship with the sector, with Outcome Agreement Managers (OAMs) providing account management-style engagement and points of contact across a broad range of issues for individual institutions. Institutions remain positive about their working relationships with OAMs and their grasp of an institution's characteristics and particular challenges. However, the review provides a helpful opportunity to consider the further evolution of this element of our approach to both supporting and holding institutions to account.

165. Through this review and in discussion with the sector, these are the issues that have been raised in relation to the current approach to OAs:

- SFC's accountability system is broader than OAs. SFC should be clearer how its accountability system works and make a greater distinction between managing specific programmes on behalf of the Scottish Government, with associated grant conditions, and the strategic outcomes that should form the agreement.
- Allied to the point above, the Scottish Government's letter of guidance has increasingly stipulated issues that should become part of the OA. It is important that the letter of guidance outlines government priorities but it should stop short of specifying how SFC will ensure those priorities are met. It should also help SFC and institutions focus on the key priorities for further and higher education.
- The process of designing and concluding OAs has become relatively resource intensive and time-consuming for both institutions and SFC.
- Institutions contribute significantly across the broad elements of Scotland's National Performance Framework (NPF), and to the economic, social and cultural development of the country. However, OAs focus relatively narrowly on Scottish-domiciled student activity and do not always provide an opportunity for institutions to demonstrate their full impact across the NPF.
- There are too many measures and we often focus on inputs and outputs rather than outcomes and impact.
- There is a mismatch between requiring institutions to make three year OA commitments on the basis of indicative one year funding announcements.
- While there is better alignment now between the OA process and an institution's planning process, we could do more to draw from an institution's existing performance reporting systems.
- We could do more to reflect the unique characteristics of each institution.
- Audit Scotland has highlighted the need for target setting against some outcomes, the absence of a link between performance and funding, and a lack of documented escalation where institutional performance was weak.

“...this has become a labour intensive process, rarely meeting the aim of setting out succinctly what an institution is delivering for its public sector investment, and diverting precious resource from focusing on improved delivery.” (The Cumberford-Little Report)

Developing a National Outcome and Impact Framework

166. We propose moving to a simpler system, with greater impact, by consulting on and designing a national Outcome and Impact Framework that makes outcomes and expectations clear for everyone (institutions, students, researchers, employers, government, and tax-payers) and more clearly connects with Scotland’s National Performance Framework. Annex 5 provides an outline of four key areas of impact that have been highlighted as important throughout the first phase of our review, and 20 outcomes that could form the starting point for the framework. We are aiming to introduce a streamlined version of our Outcome Agreements, with a smaller-than-usual number of measures, for AY 2020-21.

167. A national Outcome and Impact Framework would aim to:

- Make a more explicit connection with Scotland’s National Performance Framework to enable institutions to demonstrate their impact across a broad range of outcomes, for the common good and for public expenditure, in terms that are relevant to their particular situation.
- Provide a clear focus on key outcomes – to distinguish this from specific programme monitoring or grant conditions.
- Set out more transparent expectations for all stakeholders and for all institutions.
- Help to moderate and contextualise targets and performance based funding premiums, if adopted.
- Support self-evaluation and work in tandem with an institution’s own performance system as these outcomes should already be evaluated.
- Help to focus the quality assessment frameworks of other bodies.
- Recognise that the outcomes are not mutually exclusive and not all outcomes will be relevant to every institution – they can flex to accommodate the diversity in the sectors. They are deliberately broad to capture big ambitions, collaborative approaches and collective challenges.
- Be used by each individual institution, but also adaptable for use by more integrated tertiary partnerships, particularly in relation to outcomes for students, where joint reporting may work best for certain aspects of the framework.

168. Reaching agreement on specific targets before the start of the AY would become a simpler and separate process, and an Impact & Accountability Statement at the end of each AY from each institution would self-assess what has been achieved, in a way that recognises the diversity of institutions and missions. We would publish these

statements. Alongside the collection of data, these statements would provide a narrative about performance, and would better reflect national level analysis, themed insights, and joint work between SFC and the sectors, and other stakeholders. It should also bring focus to quality assurance activity undertaken on behalf of SFC.

Accountability considerations

169. In this phase one review paper, we have set out propositions that could lead to a clearer accountability framework for institutions and a more cohesive approach to investment, quality and accountability. This includes:

- Changes to our funding models that support demographic modelling but could also explicitly link an element of our investment to performance outcomes for students – providing more funding where successful outcomes have been achieved.
- Shift targets away from fixed activity metrics to proportions of the population engaging with education.
- The continuance of incentives, such as our rule that we will only fund an institution for a full year of a student's course if they get beyond the first 25% of their course year and do not drop out.

170. For performance that meets or exceeds the expectations set out in the national Outcomes and Impact Framework or in the measures linked to outcomes for students, we could:

- Award premiums.
- Publish data that highlight excellent institutional performance.
- Publish case studies that celebrate good practice for all to learn from.
- Give preference to those institutions when discretionary funding opportunities arise.

171. Where we find under-performance or a breach of the Financial Memorandum we would decide how best to support improvement in a proportionate, targeted and risk-based way. The list below sets out options that we might consider, depending on the nature of the issue in play:

- Give the institution an opportunity to explain and discuss under-performance, including the provision of additional information or evidence.
- Require an improvement plan.
- Increase the frequency or intensity of engagement.
- Conduct a special inquiry.
- Ask Education Scotland or QAA to address key areas of focus in their normal engagement or by conducting a more specific engagement.
- Amend conditions of future funding.
- Adjust future funding allocations based on performance.
- Give preference to others when discretionary funding opportunities arise.
- Reallocate funds to others who could deliver more effectively.
- Recover public funds.

Proportionality and burdens

172. As we address the challenges of the pandemic and look to the future, we are keen to help the sector deliver what really matters - core high-quality teaching, research and innovation. Responses to our phase 1 consultation indicated widespread support for a more meaningful, outcome focused, and streamlined approach to accountability and reporting. Strong views were expressed about the administrative complexity and resource intensity of the REF. Stakeholders encouraged us to look widely at the reporting requirements of other agencies in the round and opportunities to join up to streamline returns or act as an interlocutor for the sectors where duplicative or burdensome requirements needed a form of mediation.
173. In parallel with our own review, the UK Government has asked the Office for Students (OfS) to conduct a series of reviews to reduce bureaucracy on higher education providers in England³. These reviews will touch on areas of UK wide activity including Data Futures, TRAC and NSS, and OfS has committed to engage with the devolved nations in taking this work forward. In the next phase of the review we will work with the sectors and our partner agencies on these UK-wide reviews and to further assess how we strike the right balance between the burdens on colleges and universities while ensuring accountability, transparency and the highest standards of good governance. Views will be sought on:
- The timing and frequency of data collections.
 - Improvements to data collection systems that could support institutions in their planning and accountability processes as well as fulfil national accountability requirements.
 - How data collections might be consolidated and refined.
 - Risk-based approaches to reporting, accountability and quality assurance.

Quality Frameworks

174. The review feedback contained mixed views about the current quality assurance frameworks. We will turn to these issues in later stages of this review, as changes to our funding and accountability frameworks, and our work on proportionate burdens, will affect our assessment of the current quality arrangements that work on our behalf to fulfil our statutory functions.

Insight

175. Underpinning our entire approach to investment, quality and accountability will be our ability to generate and provide better insights from our data collection and analysis in order to support institutions' own quality assurance and management processes; the regular publication of data with focused analysis and insight briefs; the development of benchmarking groups to explore shared learning and good practice; sector-wide and

³ <https://www.gov.uk/government/publications/reducing-bureaucratic-burdens-higher-education/reducing-bureaucratic-burdens-on-research-innovation-and-higher-education#ministerial-foreword-ministers-donelan-and-solloway-and-lord-bethell>

specific briefings on particular topics of interest; policy focused material to generate debate; and focused research.

176. We will also be considering how best to gather insights from students, employers, partner agencies, and local and national governments in order to keep our framework relevant and responsive.
177. Throughout this review we have been struck by the need for better debate and discussion about the future of further and higher education in Scotland and the lack of a suite of evaluative research that might help us all consider the best interventions we might make to support the continued success of these sectors so vital to Scotland's economic and social wellbeing and to the lives of thousands of students. We will engage with stakeholders through this review in order to consider our role in evaluative research and analysis in key areas for the future.

Agencies and government working together

178. Just as collaboration is a theme for the way the college and universities work together, our institutions expect us to work better with our partner agencies, particularly around skills planning, regional collaboration, with UK counterparts and to enhance collective funding decisions, and to clarify lines of responsibility where there is perception of overlap or duplication. The need for join-up within the Scottish Government across portfolio interests and policy areas was also highlighted. This is helpful feedback and we will consider it further.

Supporting change: A Transformation Investment Fund

179. The COVID-19 crisis has had a profound impact on colleges and universities and is likely to change the way that they operate for the foreseeable future. Colleges and universities are facing a significant loss of income across a range of sources, including for teaching, research and commercial activities, as well as a wide range of other impacts, including on future plans for investment and development.
180. At the time of writing this report, there is still uncertainty about the scale of the problem that colleges and universities are likely to face in 2020-21 and beyond. However, the evidence that we have gathered as part of this review tells us that most institutions are considering how best to secure their future. We also know that many institutions are also considering the opportunities to do things differently.
181. We need to ensure that colleges and universities are able to weather the current storm and face the future with confidence, not least because further and higher education will be central to Scotland's economic and social recovery. We propose to establish a fund that will help facilitate change in the sectors; that helps to strengthen and secure the future of colleges and universities. The emphasis of the fund will be on funding activities that institutions could not or would not normally fund from their own resources.
182. The objectives of a Transformation Investment Fund would be to facilitate strategic change which:
- Protects the welfare of students and enhances the student experience.

- Improves the learner journey and ensures that students can move smoothly through their studies from school through to college, university and into further study or employment.
- Strengthens the role that colleges and universities play in their regional and local economies through the provision of high-quality learning and skills provision that aligns with the needs of employers and business.
- Protects and enhances the quality of the research base and its international reputation.
- Supports innovation and the links between colleges and universities and business and the public sector, including the NHS.

183. We anticipate that this fund could support a range of activities, including:

- Development of business cases or proposals for new forms of institutional collaboration or alliances.
- Restructuring or redevelopment of the staff base.
- Development of new teaching blended learning methods or restructuring of the model of teaching and learning.
- Re-alignment of provision for learning and skills to better suit local and regional needs and migration from, or discontinuation of, existing provision.
- Development of shared services or other initiatives that provide better value-for-money or material savings to be re-invested in teaching and learning.

184. These lists are not exhaustive but provide an outline of possible objectives and activities for a Transformation Investment Fund. Our university Financial Transactions programme may also form part of our transformation programme where necessary and appropriate. We will develop further details once we have had an opportunity to consider further the scope and use of the fund with the government, sectors and other partners.

Conclusion

185. Leading this review is a huge privilege for SFC and we would like to thank everyone who participated in this first phase. Many people and organisations have helped shape these findings and themes for the future. Our engagement with respondents has confirmed the vital role of Scotland's tertiary education and research in transforming lives, enabling students to succeed, supporting economic and social renewal, and forging global networks. Our institutions are, indeed, national assets and key anchors in their communities

186. Key areas for development in phase two will include:

- A continued focused response to the COVID-19 pandemic, particularly in the areas of health and safety; supporting students to succeed; economic and social recovery; and financial sustainability.
- Assessing the feasibility and prioritisation of options outlined under theme three in moving towards an integrated, connected tertiary and skills eco-system for learners and employers.

- Working with UK partners to protect and enable investment in research and innovation and ensure its outcomes are aligned to future requirements such as health, societal changes and the economy.
- Development, with SDS and stakeholders, of skills alignment, and the funding and planning of Foundation and Graduate Apprenticeships.
- Engagement with employers and industry to ensure their views and expertise help inform and improve student outcomes.
- Exploring how we can collectively enhance and support digital and blended learning options
- Developing further SFC's Outcome and Impact framework, funding methodologies, quality assurance arrangements, options for targets and measures, and a Transformation Fund.
- Engagement with multi-college regions on next steps.
- Making sure student views are threaded through our considerations. We will establish a student advisory group to facilitate this.

187. The ability to come together around a shared national mission, and the need for collective system leadership in this inter-connected, complex and rapidly changing world, are two key themes from the Muscatelli and Cumberford-Little reports. This report underscores just how vital that sense of mission and collective leadership will be. By continuing to debate the issues and collaborate on the options and solutions, we can build and invest in a system together that will benefit future generations and will support Scotland to flourish.

Feedback and engagement

188. We would welcome your feedback on this report. Please email us at: reviewsecretariat@sfc.ac.uk. We will be setting up further engagement to develop the themes in this report.

ANNEX 1 Demographic funding model indicators for colleges

DEMOGRAPHIC FUNDING MODEL INDICATORS FOR COLLEGES

1. Number of S3-S6 state school pupils in each local authority (7%)

- We allocate around 120,000 'credits' for senior phase school pupils based on the school populations in S3-S6.
- This is higher than in previous years to account for Foundation Apprenticeships (FAs).
- Colleges currently deliver around 80,000 credits plus FAs funded by SDS.

2. 16 - 17 years olds outwith a positive destination (13%)

- We currently estimate the number of 16 or 17 year olds who do not have a place at school or tertiary level institution, or in a Modern Apprenticeship, or in employment.
- Not all of this cohort will choose to go to college, so we allocate 1 FTE for 60% of this group outwith a positive destination.
- We base our 60% calculation on observed uptakes from previous years.
- In 2018-19 colleges claimed 218,486 credits for full-time students aged 16 or 17. The current model allocates 219,285.
- This is only a slight increase as colleges are also engaging with older age groups.

3. 18 - 19 years olds outwith a positive destination (22%)

- We estimate the number of people aged 18 or 19 who do not have a place at school or a tertiary level institution, or on a Modern Apprenticeship, or in employment.
- Not all of the people in this group will choose to go to college, so we allocate 1 FTE for 60% of this group outwith a positive destination.
- This gives us an allocation of 378,822 credits for this age group, while in 2018-19 colleges delivered 389,640 credits to full-time students of this age.
- This is a small reduction but colleges are doing more with older age groups and we are keen for colleges to reduce full-time courses from 18 to 16 credits.

4. Maintain full-time places for 20 - 24 year olds plus give additional places for unemployed 20 - 24 year olds based on Jobseeker's Allowance (JSA) claimant numbers (15%)

- We estimate the number of full-time students aged 20 to 24 at college and then add the numbers claiming JSA aged 20 to 24.
- We allocate 8 credits for each person in this group, which gives a total allocation of 267,928 credits.
- In 2018-19 colleges claimed 283,961 credits for full-time students, which represents a small reduction on historic levels.
- This reduction enables us to support colleges to target more places to older age groups or for those in employment, etc.

5. Number of credits for each person with low level qualifications (5%)

- The annual population survey shows the number of people in the working age population in each Local Authority who are qualified below SCQF level 6 (Highers).
- There are over one million people who are not qualified to Higher level (S5) across the 16 to 64 age groups.
- We allocate 5% of our places to this group (87,000 credits).
- There is an element of overlap in this indicator with our allocation to people from SIMD 20 areas and those claiming JSA, or who are economically inactive.

6. Regional Skills Assessments, low and mid-level job openings between 2018 & 2028 (5%)

- Regional Skills Assessments (RSAs) are a single, agreed evidence base for both SFC and SDS to use for our future investment in skills.
- This is based on Oxford economic estimates for future demand.
- We allocate 5% of our places to this group.
- We also allocate additional credits (237,000) for those in current low and mid-level positions for upskilling.

7. Economically Inactive population of working age (5%)

- The Annual Population Survey shows that there are 777,680 people in Scotland aged 16 to 64 who are economically inactive.
- We have allocated 5% of our credits (89,000) to this group which is a very small allocation per individual but it is intended to provide some focus on helping individuals get back to work. This would include those on career breaks after starting a family or those who are long-term sick. This indicator will overlap with our SIMD20 indicator, for example, where people are long-term sick.

8. Low and mid-level employment (upskilling) (13%)

- The Annual Population Survey provides a breakdown of the working population by Standard Occupational Classification. This shows that there are 1.5m employees in low or mid-level employment out of a total of 2.7m in employment overall. We have allocated over 13% of our credits (237,000) for this group. This is intended to provide a greater focus on upskilling and reskilling and general training for those in employment.
- It is worth noting that we provide an additional 5% of our credits to target future skills requirement from the Regional Skills Assessments.

9. Unemployed aged 25 & over (5%)

- We update our demographic model indicators when required. There are currently 90,000 individuals in this age group claiming JSA as at December 2019 (previous funding round). We would expect these numbers to increase and can build assumptions of future unemployment rates into our model. Once again we allocate 5% of our credits on this basis but there is significant overlap with SIMD20, low level qualifications, etc.

10. People living in the 10% most deprived postcode areas (10%)

- We allocate 10% of our credits to those from the 10% most deprived areas (SIMD 10).
- This is intended to help level the playing field as this group of people are likely to be less well qualified, unemployed, long-term sick etc.
- We have used the 10% most deprived areas to offer a more targeted approach but also because it aligns with our outcome targets.

ANNEX 2 College teaching funding distribution model

We normally refer to our college teaching funding model as ‘price × volume + premiums’. The volume relates to the number of credits SFC provides funding for. In the college sector we use the credit as a means of measuring the volume of activity. One credit is equivalent to a block of learning of notionally 40 hours. In AY 2020-21 we asked the college sector to deliver 1.73 million credits for which we paid £443 million. We also measure activity in terms of full-time equivalent (FTE) students, where 1 FTE relates to 15 credits of activity. As set out earlier, the sector has been asked to deliver an activity target of 116,000 FTEs each year, as a Scottish Government manifesto commitment on college places.

Each college course is categorised into one of five price groups (PGs) dependant on the academic subject area (Subject Mix). The groupings were devised in partnership with the college sector in 2014 based on the cost of delivery across those subject areas, including staff/student ratios, specialist equipment, etc. PG1 includes low cost subject areas, PG2 mid cost and PG3 high cost subjects. Over 90% of FTEs are categorised within these three PGs. PG4 is for specialist agricultural courses only (1.6% of FTEs) and PG5 for students with additional support needs (7%).

The gross price per credit is the average price across the subject mix including all tuition fees. Therefore the gross price per credit varies, depending on the subject mix across colleges as shown in the table below.

The box below explains how the college credit funding is calculated, noting that SFC credit funding makes up 89% of college funding from SFC in AY 2020-21.
190.

College credit funding calculation

Tuition fees are only included where credits have been claimed from SFC. If 'College A' enrolls a student on a full-time HE computing course comprising 15 credits and 'College B' enrolls a student on a full-time FE computing course comprising 15 credits, then the gross funding they would receive would be the same; computing courses are PG3

($15 \times £314 = £4,710$).

However SAAS pays tuition fees for full-time HE students and SFC does likewise for full-time FE students. Therefore tuition fees from outside SFC would be set at £1,285 for College A and £0 for College B.

SFC credit funding would therefore be £3,425 (£4,710 – £1,285) for College A and £4,710 for College B. College A would receive the difference of £1,285 from SAAS. You can multiply the 'tuition fees from outside SFC' by the credit target to work out the total tuition fees from outside SFC.

At the Scotland level, tuition fees account for £112m, of which SFC pays £52m. External fees therefore account for £60m of credit funding. External fees are not evenly distributed across Scotland, with City of Glasgow College reliant on these for 15% of their total credit funding in comparison to only 4% for Perth College and 11% on average across the college sector in Scotland.

The gross price per credit minus tuition fees from outside SFC gives us the SFC price per credit. The SFC price per credit multiplied by the credit target gives us the SFC credit funding. SFC credit funding makes up 89% of college funding from SFC in AY 2020-21.

ANNEX 3 University teaching funding distribution model

In our price × volume model for the university sector, the volume relates to the number of funded student places SFC pays for. We measure this in terms of full-time equivalent (FTE) students where 1 FTE relates to 120 credits of activity. There are also eligibility rules around which students are counted against SFC funded places. In the main, at present, this includes Scottish and EU-domiciled students. In AY 2020-21 SFC distributed a total of 129,101 FTE funded places.

Most of the funded places we allocate (84%) are non-controlled; that is, they are not allocated for any specific subject area. Universities are free to use these places for either undergraduate or taught postgraduate provision, and for any subject area. The balance of our places is controlled, which means they can only be used for particular subjects. The controlled subjects involve Scottish Government workforce planning and setting intake targets each year. These subjects are Medicine, Dentistry, Pre-registration Nursing and Midwifery Education, and Initial Teacher Education. In addition, a new Paramedic Education programme has been introduced for AY 2020-21, and SFC is also funding additional Childhood Practice places on a time limited basis.

Controlled funded places are split between SFC funding and additional ring-fenced funding from Scottish Government. In AY 2020-21 the breakdown was:

- 108,050 FTE non-controlled places.
- 8,009 FTE controlled places funded by SFC.
- 13,042 FTE controlled places funded by the Scottish Government (mainly Pre-Registration Nursing and Midwifery).

Calculation of grant (prices)

We calculate the Main Teaching Grant based on a ‘top-down’ calculation (under which each university’s funding is based on the previous year’s allocation multiplied by a standard amount), which is validated against a ‘bottom-up’ model, based on the number of funded student places multiplied by the teaching funding price (net of tuition fees) for each of the six subject price groups, as shown in the table below.

191.

Subject Price Group	Description	AY 2020-21 Price (net)
1	Clinical Medicine / Dentistry, and Veterinary Science	£17,155
2	More expensive STEM	£9,734
3	Less expensive STEM, Pre-clinical Medicine / Dentistry, Art & Design, and Performing Arts	£8,627
4	Nursing & Midwifery, IT, Archaeology, and Other Education	£7,510
5	Initial Teacher Education, and classroom-based (more expensive)	£6,639
6	Classroom-based (less expensive)	£5,411

When the current funding model was introduced in AY 2012-13 we included a tolerance threshold of 5% on the 'validation' calculation (i.e. we would only adjust the Main Teaching Grant if a university's funding allocation under the top-down calculation was greater than +/- 5% different to the allocation calculated under the bottom-up model). This allowed universities a gradual transition from the previous price \times volume model (which had a greater number of subject price groups) to the current one. The tolerance threshold has since been reduced to +/- 2% but has not changed for a number of years. This means that we have still not yet fully transitioned back to a price \times volume model based on the reduced number of price groups introduced in 2012.

When validating the Main Teaching Grant we also include the assumed tuition fees, associated with our funded student places, which a university will receive (we exclude fees-only students, rest of UK students, and international students). The assumed tuition fee income is based on splitting each university's funded student places into the following categories because different tuition fees apply: taught postgraduate £5,500; undergraduate £1,820; sub-degree/part-time pro rata to £1,285. The assumed tuition fee income associated with funded student places in AY 2020-21 is approximately £220 million.

There is a fairly complex process of making adjustments to the Main Teaching Grant allocations to compare them with the previous year's allocation, and then comparing the allocation against the more straight-forward calculation approach of price \times volume.

ANNEX 4 Current premiums for colleges and universities

Our current premiums recognise the additional costs of certain teaching environments, and also act as a policy incentive.

For colleges these premiums include:

- Access and Inclusion funding (£52 million).
- Access – SIMD premium (£8 million), based on the share of the general population from the 20% most deprived areas resident in each college region, in order to increase access to colleges, to recognise the tendency towards higher withdrawal rates, to enable colleges to support the other challenges these students face in their lives.
- Rural and remoteness funding (£10 million) to recognise that colleges that provide learning and training opportunities in remote (including sparsely populated), rural and island communities across Scotland are often small organisations that cannot always make economies of scale, host smaller class sizes, operate over multiple campuses, and support additional staff travel. These colleges provide essential services to their local areas and we take account of those additional costs in this premium.
- Historical efficiencies: although not a premium within the model, in 2012-13 / 2013-14 at the time of regionalisation and mergers, agreements were reached with the larger college regions to deliver some credits at a lower price to reflect the expected efficiencies of scale.

In the university sector, we have other teaching grants and premiums that recognise additional costs and act as a policy incentive:

- Small Specialist Institution (SSI) grant (£10.1 million) to our three SSIs – Glasgow School of Art, the Royal Conservatoire of Scotland and SRUC – in recognition of the importance of the specialist nature of their provision and the specific challenges faced by these smaller institutions. The criteria for an SSI were introduced in AY 2000-01 and may now require review.
- Widening Access and Retention Fund (£15.3 million) has only been allocated to eight universities, though all are expected to continue to demonstrate and maintain a significant commitment to the support, retention and successful outcomes of students from the most disadvantaged and deprived backgrounds.
- Upskilling fund (£6.6 million) to ensure universities could respond effectively to the needs of employers and industry to upskill and reskill their workforces for Scotland's economic future. This was inspired by the collective leadership of the Enterprise and Skills Strategic Board, of which SFC is a member, and provides an opportunity for universities to design more agile short and industry-focused higher level skills requirements and respond to local and national economic challenges. It

is likely that we will maintain this funding stream but provide separate guidance on its development, particularly to respond to the COVID-19 economic downturn.

- Disabled Students Premium (£2.8 million) to assist institutions with the costs that they incur in providing additional materials and services for students with disabilities.
- Compensation for expensive strategically important subjects (£17.5 million) was established when student tuition fees were introduced in the rest of the UK. However, the compensation is largely based on student numbers that are now more than eight years old, so there is a strong case for reviewing this funding.
- Other additional costs: SFC has also provided funding to support specific costs, for example, £4.7 million in AY 2020-21 as a contribution towards the increasing costs of the universities' Scottish Teachers' Superannuation Scheme (STSS). We also provide a Fee Anomalies grant line (£1.8 million in AY 2020-21) to provide compensation to universities for fee income lost when rUK students embark on a year abroad through the ERASMUS programme or where fee income may differ from our fee assumptions in the model (for example, accelerated courses or through articulation).

ANNEX 5 A Sample Outcome and Impact Framework for further discussion

Sample Outcome and Impact Framework
<p>1. Outcomes for Students</p> <p>1.1 Fair access and transitions: Education is accessible to learners from all backgrounds and learners are supported through successful pathways.</p> <p>1.2 Quality learning, teaching and support: Learners receive a high-quality, safe and supportive learning experience that enables them to succeed in their studies.</p> <p>1.3 Learning with impact: Students are equipped to flourish in employment, further study and lead fulfilling lives.</p> <p>1.4 Partnership and participation: Students find it easy to participate, have their voice heard and valued, and influence their educational and student experience.</p> <p>1.5 Equalities and inclusion: Every student has their individual needs recognised in terms of protected characteristics; and everyone is treated fairly and with respect.</p>
<p>2. Outcomes for Research</p> <p>2.1 Research excellence: Universities produce excellent research that changes the world around us.</p> <p>2.2 Nurturing research talent: Universities improve the environment and culture within which research is conducted.</p> <p>2.3 Research collaboration: Researchers are supported and encouraged to work together to produce new knowledge that leverages the different expertise across all collaborators.</p>
<p>3. Outcomes for Economic and Social Renewal</p> <p>3.1 Economic renewal: Institutions play their part in the national mission to recover from the COVID-19 public health emergency.</p> <p>3.2 Innovation and engagement with industry: Institutions develop long-term collaborative relationships with industry across a range of activities, for maximum impact.</p> <p>3.3 Work-ready graduates and employer needs: Students are equipped to take up employment and succeed; and institutions are responsive to employer and industry needs and to current and future skills requirements.</p> <p>3.4 Entrepreneurial activity: Institutions provide leadership in creating entrepreneurial thinking and action in their students and staff, including from research and knowledge exchange activities.</p> <p>3.5 International reputation and impact: Institutions help secure economic and reputational gain through their international activities, networks, collaborations and excellence.</p> <p>3.6 Anchor institutions: Institutions act with agency and civic purpose to sustain and renew places and communities; and play a key role in a creative, vibrant society, supporting public engagement and our understanding of the world around us.</p>

4. Governance and Sustainability

- 4.1 **Good governance:** Institutions demonstrate adherence to high standards of governance and accountability, show leadership and integrity in their decision making and the way they conduct their business, comply with SFC's requirements, and have regard to the principles of Fair Work.
- 4.2 **Financial viability:** Institutions plan and manage their activities to secure a financially sustainable future or to transition to other arrangements.
- 4.3 **Public health emergency:** Institutions are responsive, have assurance mechanisms in place to comply with guidance, communicate well with students and communities, and remedy situations as they arise.
- 4.4 **Equalities and inclusion:** Equalities outcomes are actively pursued and legislation complied with.
- 4.5 **Collaboration:** There is active collaboration with other institutions to support coherent, sustainable provision, research and financially viable institutions in Scotland.
- 4.6 **Climate emergency:** Institutions take urgent action to help reduce or halt climate change, avoid irreversible damage, and support environmental sustainability measures.

We might develop clear expectation statements to support each of the 20 outcome areas, alongside key measures and indicators of success. For example:

SAMPLE - Outcome 1.1: Fair access and transitions

Expectations:

- People from deprived areas are supported to have fair access to further and higher education.
- Prior learning is taken into account in the learner's journey, with an increase in the number of students articulating with advanced standing.
- Institutions apply good practice in contextualised admissions.
- Transitions and pathways for students are supported and signposted, with flexible entry and exit points to reduce inefficiencies in the learner journey.
- Institutions work with schools and other institutions to support successful, efficient pathways for students.
- Institutions provide student support that helps students overcome disadvantage and barriers to success.
- Retention and success rates for learners improve.

Measures and indicators of success:

- Numbers of students against different priority backgrounds.
- Widening access and participation measures.
- Progression rates at particular schools with traditionally low progression.
- College to university transitions.
- Retention rates.
- Credit for prior learning.
- Graduate outcomes.