Wales faces significant disruptions over the coming years. With fundamental change comes the risk of new inequalities but also the opportunities for far-reaching reform. While global and UK-wide trends such as Brexit and climate change may not be fully within the control of government in Wales, their effects, and who wins and who loses as a consequence, is not predetermined – they will be shaped by public policy decisions and choices here in Wales and at the UK level. At the centre of many of these policy choices will be the skills system and how it can be shaped to meet these 21st century challenges.

In many ways, the opportunities and challenges facing Wales are unprecedented.

**Automation and technological change** will bring significant disruption to the economy and society in Wales. This is already happening, reaching new sectors and skill levels not previously affected by previous waves of automation. However, rather than jobs vanishing, we are more likely to see jobs changing – bringing new demand for reskilling and upskilling – throughout people's careers. Our analysis shows that Wales has a higher than average number of jobs, with 6.5 per cent (or 130,000 jobs) with high potential for automation. With 81.5 per cent of the 2030 workforce in Wales (and 60.8 percent of the 2040 workforce) having already left compulsory education, a focus on young people's skills will not be enough.

**Brexit**, regardless of the future relationship agreed between the UK and EU, is clearly causing significant uncertainty and will continue to cause disruption over the coming years. Currently, hundreds of millions of pounds of EU funding is invested into the skills system in Wales, whether directly or indirectly. It is unclear whether this funding will still be there after the UK has left the EU, and on what basis. Equally, regardless of any final deal, it seems clear that immigration levels from the EU to Wales are likely to reduce, potentially bringing greater demand for the skills system from employers in Wales.

**Climate change** and the changing nature of globalisation is causing, and will continue to cause, significant disruption in Wales. We have seen recent closures in Wales within the car and steel industries, and global trends around increasing trade protectionism, which may continue to reverberate through the economy in Wales. Equally, given the recent Welsh government declaration of a climate change emergency, and targets to reach net-zero carbon emissions by 2050, we will need to see a just transition to a carbon-free economy across Wales. This will bring new challenges and opportunities as the transition takes place, with the skills system at the centre of helping change to take place.

**Demographic change** and an ageing population will also bring huge disruption to Wales over the 2020s and 2030s, with Wales ageing more rapidly than any other nation in the UK. The country will move from having around 33 pensioners per 100 people of working age now, to 36 pensioners per 100 by 2030, and more than 40 pensioners per 100 by the end of the 2030s. The ageing population will mean that Wales needs to do more to get the most out of the remaining working-age population, with the skills system, again, needed to take a key role in helping to manage these changes.

**Economic inequalities** are high in Wales. With significant change there is the risk of new inequalities being created or existing ones widened. However, disruption also creates opportunities for fundamental reform that could address these long-standing weaknesses. While employment and inactivity rates have improved in Wales in recent years – following years of underperformance against the UK average – we have begun to see a worrying increase in zero-hours contract employment over the last year.
Likewise, for young people, we see increasing youth unemployment, increasing rates of young people not in education, employment or training (NEET) and high levels of young workers in insecure work. Almost one in six young workers in Wales are in insecure work, which, while lower than the UK average, is something Wales will need to focus on to ensure young people leave the skills system into high-quality jobs that lead to high-quality careers.

The Welsh government seems to be aware of how important the skills system could be over the coming years, developing a number of strategies relating to skills in recent years. To date, however, the scale of the government’s ambition with reforms has not always matched the scale of the challenge.

The Welsh government is continuing with reforms to how the tertiary education system is structured in Wales, with a new Commission for Tertiary Education and Research (CTER) due in 2023, and its response to automation through the recent Review of Digital Innovation. It is also moving towards a social partnership approach, with a Social Partnership Act and the adoption of the recommendations of the Fair Work Commission. Its level of ambition will need to increase to match the unprecedented level and pace of disruption we will see.

This report marks the second and final report of our project considering what a 21st century skills system needs to look like to meet the challenges and opportunities that Wales faces. Through desk-based research, literature and data reviews, and face-to-face research with a range of stakeholders within and around the skills system in Wales, we have developed an outline of the attributes we believe a 21st century skills system in Wales needs to display, and a series of recommendations for how Wales can get there. We will need action beyond government alone, and we will need to reshape the economy in Wales, with employers, workers and government all pulling in the same direction. The risks of not doing so are significant, but the rewards for getting this right could be huge: meeting the challenges and opportunities facing Wales in a way that narrows inequalities and delivers a fairer and stronger economy in Wales.

THE ATTRIBUTES OF A 21ST CENTURY SKILLS SYSTEM IN WALES

A 21st century skills system for Wales will need the following.

• To have a clear focus on delivering a fairer and stronger economy across the whole of the skills system, helping to manage the effects of automation and ageing – this will likely need close alignment between skills, enterprise and economic policy, as well as a social partnership approach and a focus on fair work. This will give the skills system a greater role in taking the opportunities of automation, and helping to shape who wins and loses through the significant disruptions that Wales faces.

• To deliver a lifelong learning revolution in Wales. A focus on young people will not be enough as the effects of automation, Brexit, climate change and demographic change begin to take place.

• To deliver more modular and bite-sized learning based on skills as much as qualifications. Flexible provision will be key in ensuring a skills system that works for all of Wales, all sectors and businesses in Wales, and works throughout learners careers.

• Flexible and responsive curricula – where change occurs quickly in the economy and society, change needs to happen at a fast pace within the curriculum.

• To work to unlock demand for skills among employers and employees. Wales needs to avoid the risk of a ‘low skill equilibrium’ – where low demand for skills among employers leads to low demand for skills from employees (and vice versa) – in order to get the most out of the remaining working-age population.

• The right balance between autonomy and accountability, to give space to skills providers within an overall policy strategy for the whole of the skills system. Wales should adopt the principle of supported autonomy as a key organising principle for the skills system.
RECOMMENDATIONS: A 21ST CENTURY SKILLS SYSTEM FOR WALES

1. The Welsh government should set clear guidance that a key priority for the skills system as a whole is to support the delivery of a fairer Wales and a stronger economy. This will broaden the role of the skills system into efforts to reshape the economic model in Wales to help to take the opportunities and meet the challenges Wales faces over the coming years, alongside a commitment to education and training as a public good.

2. The Welsh government should replace the existing school leaving age of 16 with a new ‘skills participation age’ of 18 – this would help to ensure all children are learning whether in the workplace or the classroom.

3. The Welsh government should set a clear target to match some of the highest rates of adult skills participation in the world by 2025, seeing 30,000 additional adult learners at a cost of £60 million per year. This would help to drive a lifelong learning revolution in Wales and to manage the effects of automation, Brexit and an ageing population.

4. The UK government should guarantee full replacement of EU funding for skills in Wales following the UK’s departure from the EU. This would ensure secure funding levels to enable long-term planning for the skills system in Wales.

5. The Welsh government should pilot a new ‘master apprentice’ programme aimed at providing routes for older workers to pass on experience to younger generations. This would help to capture and recognise the learning and experience of older workers to help younger generations.

6. The Welsh government should pilot an Open Institute of Technology – this would provide flexible, modular and bite-sized learning through a mix of online and face-to-face provision across the whole of Wales.

7. The Welsh government should work with key partners to undertake reform of curricula across post-16 education and training. This should develop curricula focused on skills and capabilities rather than solely developing knowledge and testing it, helping the skills system to respond quickly to the fast pace of change in the economy.

8. The Welsh government should adopt a ‘fair work first’ approach to the skills system. This would help to influence business practices across the economy, and potentially help to drive a longer-term, sustainable economic model.

9. The Welsh government should review the tax levers within its responsibilities as to how they could better unlock skills investment from business – in particular, the small business rates relief scheme (worth £120 million) could be reformed to encourage skills investment and engagement among smaller businesses in Wales.

10. The Welsh government should pilot ‘progression agreements’ within the parts of the skills system focussed on in-work provision – this would make public investment in some forms of in-work learning contingent on successful completion of learning outcomes by learners, and agreed career progression (such as pay increases or promotion) from employers.

11. The Welsh government should introduce outcome-based agreements across the post-16 system in Wales between national, regional and local levels – this would help to get the correct balance between accountability and autonomy for skills providers in Wales, and promote collaboration rather than competition across the system.

12. The Welsh government should undertake a review of learner and employer engagement to establish new and powerful routes for employer and learner engagement from the classroom up to the national level of the skills system.