

# TOWARDS A SKILLS-FIRST SCOTLAND: PATHWAYS TO PROSPERITY

A DISCUSSION PAPER

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## EXECUTIVE SUMMARY

Scotland stands at a pivotal moment. Amid accelerating technological change, persistent inequality and economic uncertainty, the nation's current skills system is falling short of its full potential. A country that once fuelled the world's industrial revolution must now lead a skills renaissance.

Too many learners fail to transition into fair and productive work. Graduate underemployment is rising and labour market disconnection is deepening, especially among disadvantaged young people. At the same time, economic transformation, driven by artificial intelligence (AI), automation and green technologies, is reshaping job requirements faster than the current system can respond to. Legacy models rooted in 20th-century industrial structures hinder progress in a 21st-century 'learning economy' where agility, creativity and lifelong adaptability are paramount.

This paper presents a bold vision for a **skills-first Scotland** – a unified, responsive and future-focused system that helps individuals to think-do-grow-adapt and contribute meaningfully to sustainable and inclusive employment. A skills-first approach recognises that deep expertise, transferable capabilities and adaptable mindsets must be developed across all educational contexts: schools, colleges, universities and the workplace. Work should be a central outcome of skills policy, not a secondary consideration. This is not about reducing education to job training, it is about building a balanced system where different skills pathways are valued equally, integrated coherently and aligned with economic opportunity.

The paper outlines a framework for reform based on **five key pillars**: making work the central purpose, aligning the skills system to economic priorities, employer-led skills development, rebuilding colleges as enablers of opportunity and a flexible skills system.

A future-ready skills system must also address the patchwork of organisations, outdated qualifications and low employer engagement. This includes simplifying and modernising the current set-up, embedding skills pathways in the senior phase of school, having more high-quality apprenticeships and expanding the high-quality apprenticeships already available, and introducing an effective way of helping individuals build skills not just for their first job, but for every stage of their life. A clear strategy and skills policy, along with good leadership at all levels, are critical foundations for this renewal.

This paper also includes a series of **priority policy recommendations**, from the establishment of a national skills strategy and integrated pathways to funding reform and regional skills accelerators, that provide a practical roadmap for achieving the vision. These recommendations are designed to drive early progress while setting the stage for deeper, long-term improvements.

Scotland faces a choice: either to nurture the ambitions and realise the promise of our young people or watch a generation's potential slip through our fingers.

# INTRODUCTION

## THE STARTING POINT

Over £2bn<sup>1</sup> per year of public money is invested in the post-16 education and skills system, yet too many learners in Scotland are not progressing into fair, sustainable work. This undermines **productivity**, stalls social mobility and limits the return on public investment in this area. Despite having one of the most highly qualified populations in Europe:<sup>2</sup>

- Scotland has the second highest proportion of graduates working in roles that do not require a degree in the UK<sup>3</sup>
- the proportion of vacancies that are skills shortage vacancies has risen from 24% in 2015 and 2017, 21% in 2020, up to 31% in 2022<sup>4</sup>
- economic inactivity is worse in Scotland (23%) than in England (21%) as of 2024 (Q4).<sup>5</sup>

The changing nature of work also demands a new approach. Keeping skills up to date across a lifetime is no longer optional: it is essential. Education and training must not just prepare young people for their first job but provide the foundations for long-term employability and ensure individuals can successfully progress from entry-level roles into jobs that require higher levels of technical expertise and productivity. More than ever, mastering a role demands the ability to adapt to changing occupational requirements and to acquire new skills and knowledge.

There is a danger that our ideas of skills are trapped in a 19th-century model, when people from lower social classes received limited education and training, preparing them only for work in manual occupations. It is necessary to re-conceptualise learning as a progression where knowledge, skills and ways of thinking are the bedrock of all education. Young people entering the labour market need a stronger foundation built on numeracy, literacy and oracy developed in school. A successful career increasingly depends on four capabilities: the ability to think, to do, to develop and to adapt.

Technological and economic change, including the growth of AI, automation and digital platforms, are reshaping work and jobs at pace. This places a premium on having the capacity to adapt. A wider range of skills and knowledge are required to thrive in the 21st-century labour market. While technical skills, procedural and practical knowledge remain important, conceptual knowledge and cognitive skills are becoming increasingly essential and complementary.

Modern skills development must better bridge the gap between learning and employment. It should integrate industry practice with theoretical insight to enable workers to adapt, innovate and thrive. Skills should be contextualised to the world of work and to Scottish society more generally.

## SKILLS FOR A DYNAMIC WORLD

Over the past two decades, the nature of work has undergone a profound transformation, challenging the traditional structures of vocational education and training. In Scotland, estimates suggest that between 0.5 and 1.2 million jobs (out of a workforce of 2.5 million) could be significantly reshaped or displaced by automation and the wider effects of the **fourth industrial revolution/Industry 4.0** by 2030.<sup>6</sup> This underscores the need not only to upskill and reskill workers, but to redesign the system that develops their capabilities, to ensure the prevention of skills bottlenecks in a fast-changing economy.

The rise of generative AI, now capable of completing many tasks once reserved for highly educated professionals, is disrupting long-held assumptions about the value of advanced cognitive skills. While some roles will disappear, in most cases AI acts less as a substitute than as a force for redesign by automating routine tasks, expanding human capacity and shifting the focus of work onto creativity, adaptability and interpersonal expertise. This rapid evolution demands a rethinking of how education and training prepare people for the future of work, and how policies can keep pace with technological and occupational change.

Scotland's labour market profile suggests potentially divergent trajectories for different segments of the labour market. Administrative and clerical roles, which tens of thousands are employed in, face some of the highest risks of displacement as AI automates scheduling, documentation and transactions. By contrast, skilled trades are more likely to be reshaped than replaced: electricians, mechanics and construction workers will need to master green technologies, digital diagnostics and new processes. There are mixed signals in the labour market about the future of professional and associate professional roles. Whether or not they are likely to vanish, they are likely to be substantially reshaped.

AI is already absorbing many routine, entry-level tasks, such as drafting, research or analysis: jobs that once provided entry points into careers. This raises the risk of further polarisation in professional occupations, where those with advanced creative, interpersonal and strategic skills can thrive, while more junior or task-focused roles face displacement or reduced opportunities for progression. These variations underline the need for a skills system that anticipates nuanced impacts and invests in targeted retraining, role redesign and AI-augmented capabilities.

Yet many aspects of Scotland's skills system remain rooted in an earlier era. Too much of the vocational model still reflects a 20th-century, production-line logic, built for narrowly trained workers in mass-production industries. Today's economy, shaped by globalisation, digital technology and rapid innovation, demands a more flexible, adaptive approach. In what some economists call the 'learning economy', success depends as much on creativity, adaptability and collaboration as on technical efficiency. Rigid qualifications and one-off, early-career training are no longer enough. Lifelong and continuous learning are now essential.

Bridging the gap between education and a highly dynamic labour market with a shrinking lifespan of skills necessitates preparing people for both their first job and for ongoing adaptation. High-quality **occupational standards** remain vital, but they must be living frameworks: responsive to technological change, reflective of real work situations and integrated with flexible pathways that support continuous upskilling.

## **RETHINKING THE POST-16 SKILLS SYSTEM**

A future-ready system of skills development that supports both productivity and adaptability must transcend traditional delivery models and boundaries. It should support technical progression, foster intellectual agility and cultivate the situational awareness necessary to thrive in a world where change is one of the few constants.

A skills-first approach is required: a unified, inclusive and future-focused vision that prioritises skills across the entire education and training system. A complete rethink of how we do things is needed to deliver this renaissance, to recognise that skills are developed in work and life, as well as in school, college and university.

Reframing work as an educational context and outcome concerns some who feel it could narrow the purpose of education or diminish education by aligning it with the immediate demands of the labour market. Others worry that a focus on employment could undermine broader intellectual, social and cultural aims that are traditionally associated with more academic pathways.

Work is not the only outcome of education, but for many, it is both a primary and an essential one. Access to sustainable and fair work is a foundation for personal agency, independence and active participation in society. A stronger, more deliberate skills system can provide routes to these outcomes through high-quality vocational and technical education, including apprenticeships and other work-based pathways that align with employers' needs, economic opportunities and learners' aspirations.

Importantly, this is not about reverting to narrow and utilitarian job training. It is about building a coherent system where every learner has the chance to succeed, to develop their potential by learning in different environments (such as the workplace) and by using different types of learning, and to apply their skills in both life and work. It also highlights the need for a high-quality, all-age careers guidance service to help individuals navigate the changing world of work.

A balanced system can strengthen the overall offer rather than devalue any single part of it, whether apprenticeships, university or college. For example, universities can play a vital role in the skills system through **graduate apprenticeships** and professional education, collaborating with industry to ensure academic study remains connected to evolving labour market realities. Colleges and local authorities can create more coherent pathways from school into work and post-16 vocational education that strengthen links with employers and employment opportunities for young people.

A clear skills strategy, in this context, becomes a unifying force linking industrial strategy, employers and learners in a shared commitment to better outcomes. A clear strategy also helps focus the collective efforts of the organisations and institutions that make up the Scottish skills system to maximise the return on the investment the public has made in them.

## WHY WE URGENTLY NEED TO REFORM SCOTLAND'S SKILLS SYSTEM

### A SYSTEM NOT DELIVERING ON ITS POTENTIAL

There are some 173,745<sup>7</sup> Scottish students currently studying at the 19 autonomous higher education institutions, attracting an annual investment from the Scottish Government of in the region of £1.12bn<sup>8</sup> – a public cost per student five times greater than in England.<sup>9</sup> The 24 colleges in Scotland have around 218,145<sup>10</sup> learners and attract some £726m in funding from the Scottish Government.<sup>11</sup> While Skills Development Scotland receives approximately £100m<sup>12</sup> to support 37,215<sup>13</sup> **modern apprenticeships**.

Various reports published over the course of 2024/25 highlighted the funding challenges facing both the college and the university sectors in Scotland.<sup>14 15 16</sup> While the gross level of funding for post-16 education and training is at a historic high, this has been undermined by the impact of inflation (particularly on wage costs and the maintenance of estates) and a decline in the number of overseas students. Delivery models have not, in the main, been able to adjust and keep

pace with the changing operating environment and, too often, increasing public investment is seen as the only solution.

The Scottish education and skills systems have many strengths, but there are challenges facing all parts of the sector, including:

- **Labour market disconnection:** The last published data showed that less than half (48.4%) of those who completed a college course went directly into work.<sup>17</sup> Apprenticeship starts for young people have dropped 28% since 2015/16.<sup>18</sup> Recent research from the Organisation for Economic Cooperation and Development (OECD) suggests that the aspirations of young people at school are too narrow,<sup>19</sup> with roughly half of young people aiming to work in one of just 10 jobs.
- **Declining returns on investment:** Graduate premiums are falling: over a third of graduates are in jobs they are overqualified for and are earning less than £20,000 per year. One in three graduates in Scotland is underemployed (overqualified for the job they are doing).<sup>20 21 22</sup> Social mobility has flatlined and university participation among the poorest 20% has stalled at 16%.<sup>23 24 25</sup> Young people also have limited access to apprenticeships despite the levy funding.
- **Institutional fragmentation:** College outcomes are declining at further education level, with completion rates falling to 63.6%.<sup>26</sup> The system remains overly focused on qualifications, with poor coordination across schools, colleges and industry. Employers report chronic skills gaps, yet employers are investing less in training.

## YOUNG PEOPLE ARE NOT BEING SET UP TO SUCCEED

Educational performance is slipping too. The [Programme for International Student Assessment \(PISA\)](#) scores for maths and science in Scotland, once among the best, have declined to average or below-average levels in the OECD.<sup>27</sup> Absence rates,<sup>28</sup> classroom disruption and pupil violence are compounding pressures on schools already tasked with addressing social inclusion and improving attainment.

Yet, despite real progress in closing parts of the attainment gap, particularly among younger pupils, the current system is still too narrowly focused on university education. Nearly 40% of school leavers go into higher education,<sup>29</sup> yet many do so without a clear view of the labour market or their future. At the same time, valuable vocational routes through colleges and apprenticeships remain under-promoted, undervalued and under-funded.<sup>30</sup> Career aspirations are becoming narrower and more socially stratified, with young people from disadvantaged backgrounds less likely to pursue higher-status roles even when they have the ability.

In short, Scotland's skills system is becalmed and responding too slowly to a rapidly changing and complex economy and labour market, failing to meet the needs of the modern economy or its young people. We must invest in a reformed system that embraces vocational education, apprenticeships and work-integrated learning as equal options and vital pathways.

## MIXED SIGNALS IN THE YOUTH LABOUR MARKET

Scotland's current skills and education system is failing to keep pace with the rapidly changing demands of its economy and the evolving needs of its young people. While youth unemployment in Scotland (12.4%)<sup>31</sup> is slightly above the OECD average (11.2%),<sup>32</sup> this masks deeper structural issues that urgently require

reform. Other countries, like Switzerland (8.6%) and Germany (6.6%), show what is possible with modern vocational systems.<sup>33</sup> By contrast, Scotland remains in the middle of the pack, far from being world leading.

One of the most pressing issues is the already high and rising rate of young people who are not in education, employment or training (NEET). The last published figures in 2023 showed a rate of 16.2%.<sup>34</sup>

Long-term sickness, especially mental health-related illness, has become the main reason for economic inactivity: the last published data in 2021/22 showed 34% of 18- to 24-year-olds reporting conditions like anxiety and depression.<sup>35</sup> This not only harms individuals, it also weakens the future workforce and the participation of individuals in society. Since 2013, sickness-related inactivity among young people has nearly doubled, especially among those with fewer qualifications. This has the potential to become both a social and an economic emergency.

Meanwhile, traditional post-school education options are losing credibility among young people. A growing number are choosing to leave school early, many without clear or sustainable destinations.<sup>36</sup> Participation in education or training has always dropped significantly by age 19. In 2024 it went from 99% at age 16 to 85.3% at 19.<sup>37</sup> Scotland's skills system is not inspiring confidence or providing the flexibility and relevance young people need.

The current system is geared towards keeping young people in full-time education. Too little resource is directed towards helping young people access the labour market and find jobs. A more integrated careers guidance service would support this, alongside helping young people access training to develop their skills on a part-time, flexible basis.

## **ECONOMIC IMPACT IS UNDERPOWERED**

Despite a return to modest growth in the UK economy following the recession, underlying weaknesses persist. Forecasts from the International Monetary Fund (IMF) and Bank of England project growth of around 1.3% for the UK in 2025.<sup>38</sup> Scotland's prospects are weaker still due to subdued investment and tighter fiscal conditions,<sup>39 40</sup> and household incomes 9% below the UK average, which itself is 16% lower than in Germany.<sup>41</sup>

Scotland enjoys high employment rates, but this is undercut by low productivity, weak **gross value added growth** and a concentration of labour in low-wage, low-productivity sectors such as care, health and hospitality. At the heart of Scotland's economic challenge is a productivity gap driven by underinvestment, limited innovation and a labour market increasingly polarised between high-skill, high-wage sectors and insecure, low-paid work.

To improve productivity, Scotland must capitalise on its strengths, such as its world-class research, skilled workforce and globally competitive sectors like energy and finance, while addressing long-standing structural issues stemming from deindustrialisation. The shift away from manufacturing and extractive industries has not been sufficiently matched by a coordinated industrial policy or reinvestment strategy. Despite the windfall of North Sea oil, the absence of a sovereign investment fund (as seen in Norway) has resulted in short-term fiscal gaps being filled rather than long-term industrial capacity being developed.

Employer investment in training has plummeted: down 28% in the UK since 2005 and 20% in Scotland since 2011.<sup>42</sup> The **apprenticeship levy** has done little to reverse this trend, particularly in Scotland, where funds are absorbed into the general budget, weakening the link between employer contributions and skills outcomes. Apprenticeship starts among young people in Scotland have decreased by 28% since 2015/16, raising concerns about future workforce pipelines.<sup>43</sup>

## THE RISK OF STAGNATION WITHOUT REFORM

There are compelling economic and sociopolitical reasons for tackling the issues set out above. For example, PwC estimate that the economy could be boosted by 1% if all UK regions lowered their NEET rates to the level of the South West, which is around 9.5% for the 16 to 24 age group. In Scotland this could equate to an additional £2.19bn per year in terms of gross domestic product (GDP).<sup>44</sup>

Looking forward, a green and digital transition represents a major economic opportunity. The expansion of green jobs, up threefold in Scotland since 2021, demonstrates this potential. However, job quality and fair work standards remain a concern.<sup>45</sup> Unlocking green growth must therefore be matched with clear workforce development strategies, not only to meet climate targets but to drive inclusive growth. Skills Development Scotland's projected £230bn<sup>46</sup> investment pipeline by 2030 in the energy, construction and manufacturing sectors could be transformative if matched by skills investment and a system that is able to respond to opportunities and deliver outcomes.

With Scotland's **dependency ratio** projected to rise to 79 by 2072,<sup>47</sup> the labour market must maximise the participation of groups such as parents, older workers and those in low-wage sectors. A skills strategy aligned to economic transformation, employer needs and regional opportunity is central to boosting productivity, attracting investment and fostering economic growth while creating a fairer and more equal society.

From a social perspective, the rise in political populism across the globe reflects widespread frustration by citizens who feel excluded from economic opportunity and who are uncertain about their futures. Scotland is not immune to these pressures. If too many young people remain outside education, training or sustainable and fulfilling employment, the risk of long-term disaffection will grow.

Educational attainment and social class are critical factors in whether someone will support populism in the UK – 46% of supporters left school at 16 or younger and only 26% continued in education beyond the age of 21.<sup>48</sup> Without sustained engagement in learning pathways that build skills and support employability, youth inactivity may not only weaken Scotland's economic prospects but also risk fuelling the social divides that populism seeks to exploit.



## A SKILLS STRATEGY BUILT AROUND WORK

Addressing the opportunities and the shortcomings outlined above requires more than incremental fixes. It calls for a coherent national strategy that places work at the heart of Scotland's skills system. A policy framework built around employment outcomes, rather than solely inputs or qualifications, will provide the clearest route to delivering both economic growth and social mobility.

By embedding skills development in the real work situations, aligning provision to economic priorities and strengthening accountability for clearer outcomes, Scotland can create a system that is more effective and more equitable. The following section sets out the **five key pillars** of such a strategy and the policy choices needed to achieve it.

**Making work the central purpose:** At the core of a distinctive skills strategy is clearly defining success as progression into sustainable employment, and work being a platform for both economic and social contribution. This will require long-term tracking, publishing outcomes, such as employment, wage gains and learner satisfaction, and tying public funding closely to performance across the system.

**Aligning the skills system to economic priorities:** It is equally important to ensure that there are direct links between the skills strategy and the national (UK) industrial strategy, Scottish economic development priorities and opportunities at a regional level across Scotland. Well-aligned skills development will reflect demand and the key areas of future growth as well as critical skills, such as nursing, care and teaching, and high-quality entry-level opportunities in the labour market. More generally, productivity could be improved in all occupational areas by greater investment in skills development, underpinned by high-quality occupational standards.

**Employer-led skills development:** Putting employers in greater control of designing and validating occupational standards and associated curriculum will foster their commitment and buy-in. Reforming the apprenticeship levy should also incentivise new entrant training, not just upskilling. Ensuring that the workers voice is represented through the involvement of trade unions will support quality employment opportunities.

**Rebuilding colleges as enablers of opportunity:** Building on the strengths of the existing system, college and work-based learning provision should be aligned with regional and sectoral workforce demand and link more closely with other parts of the system promoted at both local and national levels. Modular learning pathways that are designed by employers and are aligned with the **Scottish Credit and Qualifications Framework (SCQF)** should be at the heart of delivery. They should incorporate greater use of part-time provision linked to employment. The focus should be on completion, progression and work outcomes rather than measures of activity, such as qualification attainment.

**A flexible skills system:** Building a more open, portable (so people can have their skills recognised if they move between employers or even between learning providers) and flexible skills system with coherent skills pathways would enable re-entry at all life stages, as well as for career switching and part-time upskilling. The use of modular and part-time learning opportunities will be key to this approach. Such a system will require the recognition and validation of prior learning and workplace experience, supporting partner institutions to share credit frameworks to create seamless progression.

## KEY OPPORTUNITY SPACES

Turning strategy into impact requires clarity on where policy interventions can deliver the greatest return. We can maximise outcomes by focusing on critical transition points such as school-to-work pathways, direct entry into employment, college progression and large-scale reskilling for those whose roles are at risk of automation. The following areas for opportunity highlight where targeted action can produce the most immediate and measurable benefits, while laying the foundation for long-term system reform.

**Each year, 55,000 school leavers need better preparation for work:** There is an opportunity to embed vocational pathways into the senior phase of secondary education, helping young people engage meaningfully with the world of work. Work-based learning experiences would support career awareness and informed decision-making, while also improving transitions into further education, training or employment. An example of this is the **foundation apprenticeship** model run in Aberdeenshire.<sup>49</sup> From a systems perspective, it could reduce the number of NEET young people (the latest data gives this as 16.2% of 16- to 24-year-olds) and reduce dropout rates from post-school education and training provision.

**Over 12,500 school leavers enter the workforce each year and require tailored skills support:** We need to recognise that many young people move directly into employment, often without training, and we need to provide more support for them. To address this, consideration should be given to increasing the number of modern and graduate apprenticeship places to provide more young people with structured, high-quality training. This is particularly important as currently three in five potential apprentices cannot access a place.<sup>50</sup> For jobs where a full apprenticeship is not feasible, developing a modular, flexible approach aligned with existing qualification frameworks would help young people to develop an occupational identity, gain and certify skills.

**Improving on the 48% of college leavers who progress directly into employment:** A stronger emphasis on employment outcomes is needed. This includes improved employer engagement, enhanced careers guidance and better alignment of college-based provision with local and regional economic needs. Such action could also help reduce graduate underemployment, which currently affects 34% of university leavers.<sup>51</sup> A more efficient, outcome-focused system would contribute directly to higher productivity and economic competitiveness.

**Supporting up to 1.2 million workers whose jobs are currently at risk from AI and automation:** To address the profound impact of AI and automation on the workforce, Scotland needs a large-scale reskilling and upskilling strategy. Priority should be given to supporting adults in at-risk sectors by providing accessible, modular training opportunities that focus on transferable and future-proof skills, particularly in digital, analytical and green technologies. By leveraging occupational standards that reflect real work situations and using the SCQF, a stronger, more integrated approach to skills development could be developed. Employers also have a critical role to play in supporting in-work learning, while regional skills planning partnerships can help identify and respond to emerging local labour market needs.

## FUTURE READY

To chart a path toward a skills-first Scotland, it is important to understand the policy choices facing us. The future of the skills system is not fixed or predetermined, it will be shaped by a range of influences and drivers, including how we respond to two critical questions:

- 1. How integrated is the system?** Are education, training, employment and economic policy aligned around a common strategy and shared outcomes, or are they fragmented across institutions and silos?
- 2. How well is the system funded/how effectively are the resources used?** Is public and private investment sufficient to support high-quality delivery, innovation and lifelong access or are resources stretched and declining? Are the resources being used to their fullest effect?

The interaction of these two variables creates four possible future scenarios which are set out in [Appendix 2](#). Each represents a strategic choice about where Scotland might go and what kind of system we could build.

While a well-funded and strategic aligned system would be the ideal way to deliver a truly skills-first future, there is little possibility of moving towards this scenario in the short to medium term due to pressures on public funding and the system's capacity for change. Therefore, focusing on greater efficiency and efficacy to get more from the current investment while building the capacity of the system are both essential. Meeting Scotland's ambitions for inclusive growth, economic resilience and national renewal will require not only sustained investment, but also a focus on change making and on 'how' the strategy is implemented effectively.

## CHANGING THE SYSTEM

'Reform fatigue', scepticism, apprehension and a reluctance to embrace change within the system are all dangers. Implementing a national skills strategy will demand brave, visible leadership that can drive both vision and action across the sector. Real change relies less on structural reforms and more on shifting mindsets and behaviours within and across organisations. Leaders must model the desired culture, encourage collaboration and create environments where learning and experimentation are rewarded.

Established practices and vested interests create entrenched patterns that hinder the momentum for change. Overcoming this requires genuine engagement, early visible progress and incentives that nudge stakeholders decisively toward new ways of working.

Success also requires a systemic perspective, recognising the links across the skills landscape. The system is more than a jigsaw puzzle of organisations, it is a set of relationships, embedded capabilities and interdependencies which may not always be immediately obvious.

Change plans should be phased and iterative. Each stage should be designed to test assumptions; trial approaches; build capacity in key areas, such as employer engagement; scale practice; manage risks and respond to emerging challenges. Given the limitations of funding and capacity in the system, change plans should be focused on a small number of high-impact actions to help generate momentum.

Equally critical is securing cross-party political consensus to provide a stable runway, ensuring reforms endure beyond election cycles. By sequencing initiatives carefully, embedding feedback loops and building broad-based support, policymakers can sustain momentum, mitigate resistance and achieve lasting impact.

## **PRIORITY POLICY RECOMMENDATIONS**

The following policy actions aim to achieve a transformational shift in the performance of the Scottish skills system and have both short and longer-term impacts on efficacy and efficiency.

### **SYSTEM STRATEGY AND REFORM**

Create a more coherent, focused and responsive system that puts outcomes for learners and the economy at its core:

- **Establish a distinct, national skills strategy** focused on sustainable work outcomes with shared goals, outcomes and success measures across the skills system.
- **Develop a clear transformation plan** and roadmap to implement the strategy, recognising the importance of changing culture in successful reform.
- **Strengthen regional and national system leadership**, including through empowered regional delivery boards and a national skills council that bring together providers, employers and civic institutions.
- **Create skills accelerators** at a regional level to support more innovative, industry focused skills delivery and promote flexible delivery models that bring together employers, colleges, universities and other providers to meet real world needs.
- **Simplify the approach to skills accreditation/qualifications** by using the SCQF and occupational standards as the backbone of a more flexible approach that allows progression over time across different learning environments and different types of learning.

### **LEARNER PATHWAYS AND CREDENTIALS**

Make it easier to build, combine and transfer skills throughout life – across different sectors, institutions and stages:

- **Create a more unified and coherent skills system** that allows progression from the senior phase of school through different levels of achievement and different types of learning in work, college and university.
- **Embed career development and skills pathways** earlier in the learner journey, including through reform of the senior phase of school and structured transitions from age 16.
- **Embed a common meta-skills framework** across the entire education and skills system.
- **Reform school-to-post-school transitions** to ensure all learners have access to supported, high-quality pathways, not just those pursuing traditional education routes.

- **Introduce modular, stackable qualifications** that allow learners to build credit flexibly across different types of learning (academic, technical, in-work), supported by a personal journey planner – a structured and self-directed tool to plan learning and achieve development goals.
- **Coordinate system navigators, careers guidance, and coaching and learner support**, particularly at key transition points (e.g. leaving school or re-entering work after unemployment).

### **EMPLOYER ENGAGEMENT AND ECONOMIC ALIGNMENT**

Put employers at the heart of system design, delivery and validation, so that learning leads to real opportunity:

- **Employers should co-design occupational standards** that reflect the real work situations that employees will face and the skills they need to develop.
- **Develop new models of co-designed provision**, where employers shape content, provide employment and help assess skills gained through work – particularly in key growth sectors and critical occupations.
- **Create greater transparency around the use of the apprenticeship levy** in Scotland and find ways to incentivise and increase employer investment in skills development.
- **Link economic opportunities to skills provision** by introducing future-ready roadmaps that generate dynamic skills projections for key sectors and occupations.
- **Invest in high-growth, high-priority sectors**, such as digital, green, care and advanced manufacturing, through targeted workforce and skills strategies.
- **Use public procurement and contracts to drive demand** for skills, especially in infrastructure, net zero and health/social care.

### **FINANCE AND GOVERNANCE**

Ensure the system works and is delivering both value and impact for everyone – learners, employers, providers and the government:

- **Introduce a modernised and simplified funding model** to incentivise and support the implementation of the skills strategy and its outcomes.
- **Develop better and more consistent performance information** across the entire system to enable the tracking of impact and outcomes.
- **Ensure there is a common quality framework** across all parts of the skills system.
- **Require providers to demonstrate progress** on achieving the strategic outcomes, engaging with employers, widening access and learner outcomes in return for public funding.
- **Support practical and meaningful innovation** to drive better outcomes and develop capacity in the system, particularly in areas such as the direct engagement of employers.

# CONCLUSION

## FROM INTENT TO ACTION

Scotland's skills system is at a critical juncture. The rapid acceleration of economic, technological and social change has already outstripped the capacity of a system that is fragmented, becalmed and, increasingly, outdated. Without bold leadership and reform, the opportunity cost will be measured not only in lost growth, but in the wasted potential of a generation.

A skills-first Scotland offers a different future. One where every young person and learner can see a clear pathway into meaningful work, where every employer can find the talent they need and every community can share in the benefits of a dynamic, fair and inclusive economy. A labour market where work is not just a job but a platform for personal and societal prosperity, where opportunity is accessed equitably by all.

This is about nothing less than renewing Scotland's social contract, ensuring every young person a fair route into meaningful work, no matter their background. Achieving this demands more than marginal tweaks and incremental changes, it demands a shared national mission that transcends political boundaries and unites government, industry, education and civic society in re-engineering the skills system around a shared mission to deliver greater impact, critical skills and lifelong opportunity.

Brave and decisive leadership is essential. This paper offers a blueprint for change, but blueprints do not change the future – people do. Scotland can either harness the potential of a genuine skills renaissance or be shaped by it from the sidelines in a rapidly changing global economy.

By acting with urgency, coherence and ambition, Scotland can set a new global benchmark as a nation where skills are not just acquired but used fully and continually renewed.

## APPENDIX I: ABBREVIATIONS AND KEY TERMS

**Apprenticeship levy** – a UK government policy introduced in 2017 to fund apprenticeship training. It requires all employers with an annual wage bill of over £3m to contribute 0.5% of their payroll to the levy. Employers in Scotland cannot directly draw down their own levy contributions, instead they access funding through national programmes, such as **foundation, modern and graduate apprenticeships**, which are delivered by Skills Development Scotland and partner training providers.

**Dependency ratio** – the ratio of economically inactive individuals to those who are economically active, typically the ratio of people aged 14 or younger and 65 or older compared to the working-age population – those aged 15 to 64. It is an indicator of the economic burden being placed on the productive population to support those who are not in the labour market. The higher the ratio is, the greater the pressure on public services such as social security, for example.

**Foundation apprenticeships** – are part of the Scottish apprenticeship family. They are a work-based learning programme for pupils in the senior phase of school (typically S5 and S6). They allow young people to gain industry recognised qualifications while still at school, combining classroom-based learning with real-world experience. They help young people develop practical skills at the same time as exploring career pathways and progression into apprenticeships and further study.

**Fourth industrial revolution (4IR)** – a broad term describing the global social, economic and technological transformation caused by the fusion of digital, physical and biological technologies. It is about the wider impact on society, work and daily life, not just industry. **Industry 4.0** is a more specific term that refers to the digital transformation of manufacturing and industrial processes. It focuses on smart factories, automation, cyber-physical systems, the Internet of Things and real-time data.

**Graduate apprenticeships** – in Scotland, these are work-based programmes that combine academic learning to degree level with paid employment and the attainment of industry/professional qualifications. They are designed to provide higher-level skills that meet the needs of the economy and support career progression.

**Gross value added growth** – is the rate at which the value of goods and services produced in an economy (minus intermediate outputs) grows over time. Gross value added growth figures help policymakers assess productivity, regional and sectoral trends and the underlying drivers of gross domestic product. It is a key indicator of economic performance and reflects the contribution of firms, industries and sectors to regional and national economic growth.

**Meta-skills** – are broad capabilities (such as creativity, critical thinking, resilience and self-management) that support learning, adaptability and problem solving in a range of contexts. They are transferrable and help individuals to respond to change, develop new competencies and remain effective in an evolving labour market and in life situations.

**Modern apprenticeships** – in Scotland these provide people with the opportunity to earn while they learn, by combining paid employment with work-based training leading to industry recognised qualifications. They are available across a wide range of sectors and skill levels, helping people gain practical experience and develop career-specific skills. Funded and supported by Skills Development Scotland, modern apprenticeships benefit both the learner, by improving their employability, and the employer, by developing a skilled and motivated workforce tailored to business needs.

**Occupational standards** – are formal descriptions of the skills, knowledge and behaviours required to perform a job effectively. They provide a common reference point that defines what competent practice looks like within a particular occupation or sector. By establishing this benchmark, occupational standards play a crucial role in aligning the expectations of employers, workers and training providers. For employers, they offer a reliable basis for recruitment, training and career development. For workers, they clarify what is expected in their role and outline pathways for progression. For education and training providers, they ensure that curricula and qualifications remain relevant to real workplace needs. More broadly, occupational standards underpin policy objectives such as improving productivity, safeguarding quality and safety, and foster a workforce with skills that are both recognised and transferable across the labour market.

**PISA** (Programme of International Student Assessment) – is an international survey that measures the skills and knowledge of 15-year-old students in reading, maths and science. It also assesses how well students can apply their learning to real-world challenges. It is conducted by the OECD every three years and enables countries to benchmark their national education systems against other countries across the world.

**Productivity** – is a measure of efficiency and how much output is produced for a given amount of input. A common measure is labour productivity. Productivity growth shows whether the economy is producing more value without simply adding more workers or worker hours.

**SCQF** (Scottish Credit and Qualifications Framework) – is a national framework for comparing and recognising qualifications. The SCQF helps learners, employers and educators to see how different qualifications relate to each other. It also supports progression by recognising prior learning. It does this by assigning levels and credit points to a wide range of learning experiences, including school, college, university, work-based learning and other forms of skills development.



## APPENDIX 2: STRATEGIC SCENARIOS

**Scenario A: Scotland works** – The most inclusive, future-ready and economically effective path.

High integration | High investment

This is the skills-first future in action. A well-funded, integrated system supports learners to transition into meaningful work throughout various life stages. Academic and vocational pathways are aligned, modular and portable. Colleges, universities and employers are fully embedded in regional economic planning. Public funding is targeted on outcomes, with a clear focus on inclusion, progression and productivity. The system is agile enough to respond to new technologies and economic shocks. Parity of esteem is no longer aspirational – it is culturally and structurally embedded.

**Scenario B: Splintered gold** – A system rich in resources but poor in coherence and impact.

Low integration | High investment

In this scenario, funding remains relatively strong, but the system continues to operate in silos. Schools, colleges, universities and work-based learning evolve independently, with little coordination. Learners face confusing and inefficient transitions. High-quality provision exists, but it is unevenly distributed and difficult to navigate. Employers remain at the margins of system design. This model risks entrenching inequality, limiting return on investment and missing the opportunity to prepare for future economic shifts.

**Scenario C: Lean and aligned** – A more efficient, but underpowered skills system.

High integration | Low investment

Here, policymakers achieve better alignment across the system, but with limited resources. Delivery models are streamlined and more connected to employer needs, but the scope and scale of provision are constrained. Apprenticeships, retraining and innovation are rationed. Quality suffers in underserved areas. While more coherent than today, this system struggles to scale up access or drive economic transformation. It risks reinforcing a low-growth, low-skill equilibrium in the absence of a leaner and more efficient approach.

**Scenario D: Fractured futures** – The worst-case scenario without urgent change.

Low integration | Low investment

This is the path of decline. With fragmented institutions and declining investment, the system becomes reactive, outdated and inequitable. Learners fall through the cracks. Employer trust erodes. Regional and sectoral gaps widen. Innovation stalls. The link between education and work weakens further, leading to rising youth disconnection, skills shortages and long-term productivity loss.

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