Digital Badging Commission

From skills to growth: A plan for digital badging in the UK

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RSA

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Foreword

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Digital badging is a solution to a widespread and widely acknowledged problem. The UK is rich with talent, energy and creativity. But too little of that is acknowledged by the skills and qualification system. This means that many people find themselves denied opportunity because they cannot prove or articulate what they know, understand or can do. This makes for an unacceptable waste of human potential and of national opportunity.

In our work with the Digital Badging Commission we have deepened understanding of why this is, and identified practical ways forward. We have found a skills system that is fragmented, confusing and opaque. We have found that although learners and workers across the UK build skills through life, work and study, these skills often remain invisible, unrecognised and unused. We have found people and organisations responding to extraordinary change in technology, work and society – but the way we recognise learning has simply not kept up. For millions of people, especially those outside traditional educational routes, the system fails to serve them.

This report makes the case for change. It outlines a route to a simpler, more transparent way of recognising skills through trusted digital badges. It calls for action from the Government and employers to transform opportunity in the UK. It identifies benefits for all. We can give people the language to describe what they can do, the proof to back it up, and the tools to progress further and faster. We can provide employers with routes to faster hiring, helping them find and nurture the talent they need. Our report gives Government tools which will bridge the gap between qualifications and real capabilities, enabling more effective skills investment, and driving productivity and growth.

This is not just about economic statistics, though the gains could be immense. It is about inclusion, opening career progression for millions, and the right to be recognised for their skills, wherever and however they are developed. It is about making our workplaces more effective and our communities stronger.

The UK needs a coherent, modern system of digital credentials that works for everyone: learners, workers, employers and the nation. This report sets out a plan for skills-driven opportunity and growth. It is practical and achievable provided Government puts the core digital infrastructure in place to support skills through badging at scale. We come away from this commission with a conviction that now is the moment for the Government to act.

Digital Badging Commission
Launched in May 2024, the Digital Badging Commission has brought together leading experts from across higher and further education, commerce and technology to broaden the understanding, development and adoption of digital badges and credentials.

The Commission is led by The RSA (the royal society for arts, manufactures and commerce) and Ufi VocTech Trust.

Executive summary

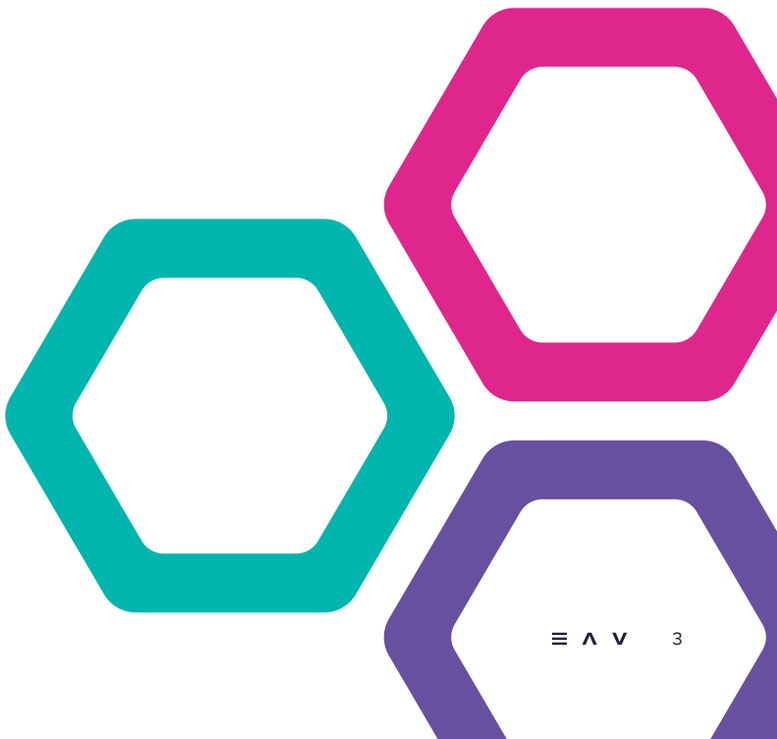
The UK's current systems for recognising skills and experience are not fit for purpose.

They are failing to keep pace with the needs of learners, employers and the wider economy, contributing to persistent economic inactivity, skills gaps, inequity and stalled productivity. The weaknesses impact everyone: individuals cannot easily show what they can do, employers struggle to assess capability, and regions and national government lack clear data on who has what skills, at what level and where. A system more explicitly focused on specific, verified skills – alongside qualifications – would unlock opportunity, motivate learners, help employers invest with confidence and allow policymakers to target skills investment more effectively. Economic modelling commissioned for this report shows that such a system could make a substantial contribution to addressing the UK's persistent growth and productivity problem by reducing duplicated training, accelerating hiring and improving workforce retention.

This report makes the case that a trusted, UK-wide digital badging infrastructure with associated national skills wallets, built on open technical standards and embedded in formal and non-formal learning, is now an essential step in economic and educational modernisation. It would make skills more visible, portable and economically valuable. It would help employers to source and develop the skills they need. It would enable government to unlock talent and address the challenges of economic inactivity. Digital badges, if designed and deployed well, can help solve the challenge that the current formal certification system gives us, because:

- They offer a way to make skills discoverable, usable, trusted and verifiable.
- They can bring clarity to a fragmented system, helping people to show what they know and employers to find the talent they need.
- They can underpin a more agile and responsive labour market, where skills – not just qualifications – drive opportunity and productivity.

But right now, the potential of digital badges and credentials is held back by the absence of both a shared infrastructure and national coordination.



The challenge: skills, productivity and economic inactivity

The UK has a profound and deeply embedded productivity problem. That much is well known and widely acknowledged. But productivity will not rise without skills, and skills cannot deliver unless they are visible and valued.[1] Employers consistently report that formal qualifications do not always reflect the skills they need. It is also increasingly difficult to recruit based on formal qualifications rather than skills because the skills needed outpace the agility of traditional education to deliver.

This problem is substantial. There are 9.3 million people in the UK who are economically inactive due to a combination of factors including caring responsibilities, early retirement, rising health-related inactivity and a post-pandemic shift in work-life priorities[2]. Meanwhile, individuals – especially those outside formal education or in insecure work – lack clear signals of what skills are in demand and where to go to gain them or demonstrate them.

Current methods for recognising skills and experience fall short of what learners, employers and society need. They limit individual opportunity and hold back productivity. A skills-focused system could:

- Motivate learners by opening new opportunities and helping more people reach their goals.
- Encourage employers to value and invest in skills as a driver of productivity.
- Help government at all levels better understand skills gaps and promote lifelong, work-relevant learning.

Digital badges offer a solution to these challenges that traditional forms of recognising skills cannot: they can reflect smaller, job-relevant capabilities, gained through formal or non-formal learning, in ways that are portable, verifiable and aligned to employer needs. Realising the potential of digital badging depends on a shared national infrastructure that develops trust and ease of use. This report sets out how a digital credentialing infrastructure, underpinned by common standards and aligned to economic needs, can form the foundation of a more transparent, efficient and inclusive UK skills system.

Getting this right has huge potential for the people of the UK.

There are three things that now need to happen in order to realise the potential of digital badging for people, businesses and the economy: designing a system, empowering action and building trust. A well-designed system of badges can make skills visible in a way that qualifications alone often can't. Mayoral Combined Authorities and national government could better understand skills supply and demand, with digital badges illuminating capabilities gained through volunteering, short courses, non-formal learning and work-based training, surfacing skills that otherwise remain hidden. In this way, individuals could navigate their own development, seeing where opportunities lie and how to reach them.

However, making skills visible is only useful if visibility can be acted on. Although there is policy momentum around digital skills and modular learning, there is no regulated technical infrastructure to support digital badges and the mechanisms to display and share them. Digital badges are built on open standards and can plug directly into job platforms, CV tools, learning management systems and skills wallets. This can allow employers to search for candidates with verified capabilities and enable individuals to access tailored opportunities based on their current skills profile. Digital badges could also integrate with emerging digital identity initiatives, forming part of a broader infrastructure that connects education, employment and economic strategy.

To realise such an ecosystem of skills, trust is critical. Trust has several components: employers must know that a badge is authentic, that it has been issued by a reputable organisation and that it reflects a verified skill. Learners need confidence that the badges they earn are credible and valuable. Government needs a consistent, quality-assured framework that enables rigorous analysis of skills data and its relationship to productivity outcomes. If built to common, transparent standards, digital badges can meet this threshold, providing the trust that underpins genuine system change.

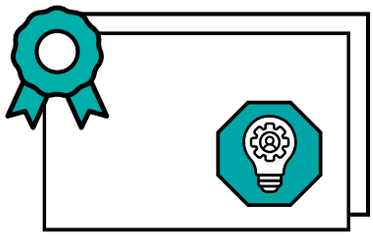
Digital badges are not replacements for qualifications. Instead, they are a useful tool that can enhance the traditional qualification approach and have a wider impact outside of formal qualifications, providing a means to support learners, employers and employees. They can capture capabilities, knowledge, skills and behaviours that exist outside or alongside formal qualifications, including practical, social and digital capabilities that are often overlooked in current formal curricula. They can represent small units of learning, support and motivate modular progression and provide a more flexible response to changing labour market needs. Badges can also enhance qualifications themselves, by surfacing the underlying competencies learners have developed and making them more visible to employers.

Our recommendations

The Digital Badging Commission's recommendations directly address the current gaps in trust, coordination and infrastructure outlined above. Our recommendations align with government ambitions around digital transformation, skills reform and economic growth. If implemented, together they will unlock the full potential of capabilities, knowledge, skills and behaviours across the UK workforce and ensure that digital badges enable a robust, future-facing credentialing ecosystem, driving stronger growth and higher productivity.

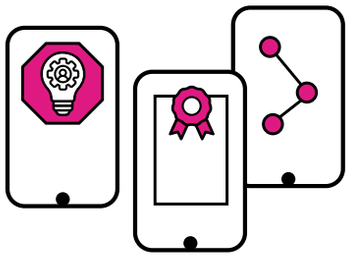
Our key recommendations are provided in summary form here and explored in more detail in Recommendations (page 24). The recommendations, taken together, will establish an effective, usable and interoperable infrastructure for digital badging that can underpin their use by government, employers and individuals. They are designed to address the current blockages to wider use of digital badging in the UK.

1. Digital badges and credentials should be integrated into post-16 formal education and training



Digital badges and credentials should be integrated as a core feature of lifelong learning programmes, including within the Lifelong Learning Entitlement (LLE) and Skills Bootcamps, to ensure the system is fit for a modern, dynamic economy. This would allow learners and employees to clearly demonstrate a broader and more work-relevant range of competencies – including functional, technical and transferable skills – that are critical for economic growth. This will directly support the government's ambition to better align learning with labour market needs, while boosting learner engagement, motivation and progression. Employers will gain faster, more reliable insights into what individuals can do, enabling smarter hiring and making the skills system more responsive, efficient and productive.

2. A national skills wallet should be established that supports lifelong learning, using interoperable open standards



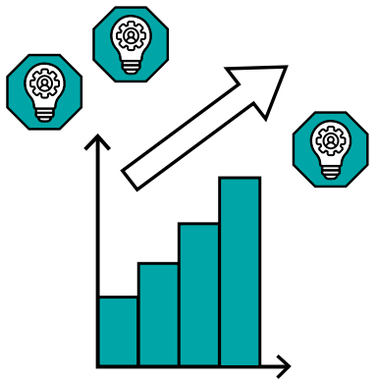
Governments across the UK should develop a national skills wallet that is accessible to all, building upon existing formal digital education records. This wallet should initially hold formal qualifications for young people leaving school (eg GCSEs and A levels) and be available (unpopulated) to adults already in the workforce. Crucially, the wallet must use open standards to integrate easily with existing proprietary skills wallets, digital education transcripts, credential systems and emerging digital identity tools. Learners will be able to export qualifications from it and digital badges and professionally recognised certifications into it. Such a wallet, linked to the GOV.UK One Login,[3] will provide a trusted means to unlock lifelong skills recognition and support clearer pathways through education and employment.

3. A national registry for digital credential quality assurance should be established

A national registry for digital credential quality assurance is now essential to ensure consistency, comparability and credibility across digital badges and credentials. It should provide transparent frameworks, nationally recognised standards, and easily accessible guidance for employers, learners, and credential and wallet providers. This will create the trusted infrastructure required for a scalable and secure digital credentialing ecosystem – one that can underpin government ambitions for a more agile and skills-led economy.

Economic impact of a digital credentialing ecosystem

We have attempted to assess the potential economic impact of implementing a digital badging infrastructure. The work we have commissioned suggests that a UK-wide digital credentialing ecosystem that combines formal qualifications and digital badges in interoperable digital skills wallets could generate substantial economic value by addressing inefficiencies in training, hiring and workforce mobility. Analysis conducted for this report suggests that such a system could reduce duplicated training across sectors, lower recruitment costs through faster hiring, and improve workforce retention through better-recognised upskilling.



Illustrative, high-level modelling estimates savings of over £100m annually in the NHS alone from reduced duplicated training and onboarding time. Accelerated hiring nationally could yield between £1.6bn and £5.3bn per year in increased productivity and reduced HR costs. Improved reskilling and employee retention could generate a further £290m in economic benefits annually to the UK. These figures highlight the case for investment outlined in the recommendations to support a more productive and effective UK economy.

Now is the moment to act

The UK can lead in building a digital credentialing system that works for learners, employers and the economy. The Digital Badging Commission's recommendations provide a blueprint for how to achieve this: by embedding digital badges into formal systems aligned with the ambitions of digitally enabled, personalised learning, standardising the infrastructure and ensuring quality and trust. This would enable talent to be recognised wherever it is developed, including through non-formal learning, community programmes or lived experience. It would create a route back in for disengaged young people and a way to unify academic and vocational pathways through one trusted digital language of skills. New economic analysis commissioned by the Commission shows that adopting a coherent, interoperable credentialing system could unlock billions in annual savings and productivity gains across key sectors.

Addressing the current fragmentation in this space does not just provide technical fix – it is a strategic imperative.

Contents

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Introduction

Ufi VocTech Trust and the RSA have partnered to support the Digital Badging Commission, whose vision is to transform how learning and skills development are recognised, catalogued and rewarded in the UK. This collaboration combines Ufi's commitment to vocational technology with the RSA's expertise in social change, fostering a consensus on the development and adoption of digital badges and credentials among government, education and employers.

This final report from the Commission is intended for policymakers, government departments, regulators and strategic decision-makers across education, employment and digital infrastructure. It is also relevant to employer representative bodies, educational institutions, awarding organisations and technology providers working to modernise skills recognition in the UK. Its recommendations aim to inform and support national policy development, investment strategies and cross-sector collaboration to establish a trusted digital credentialing ecosystem that drives inclusive economic growth.

The Commission brought together key stakeholders in education, technology, work skills frameworks and employer bodies to discuss and research the current UK and international landscape of digital credentials and credential wallets, and their relationship with both formal and non-formal education. The report explains what digital badges and digital credentials wallets are today in the context of their growth and the global movement towards the interoperable open standards that underpin them.

In reviewing global activities around the use of digital badges and credential wallets, the Commission has revealed how technology is running ahead of culture and practice in the deployment of digital badges to reward and motivate non-accredited learning. This gap creates problems for learners, for employers and for the economy. Closing the gap between technology and practice is not straightforward, but it is achievable and would make a huge difference.

Because the UK currently lacks the tools to consistently recognise and validate capabilities, skills and behaviours, it is hampered in its ability to support labour market efficiency and workforce mobility. Hence, the Commission's work has not been simply about focusing on the technological potential of digital badges and skills wallets, but also about confronting a systemic issue in how skills are identified in education and trusted across sectors.

Our recommendations aim to set out the mechanism by which the UK can deliver a new vision in how it approaches skills, using the opportunities afforded by robust digital credentialing technology and standards. The recommendations offer realistic and actionable steps to build a UK digital credentialing ecosystem that is aligned with existing and planned national digital and education infrastructure. When implemented, digital badges can become a core enabler of Education 4.0 – an inclusive, learner-centred approach to skills development that supports a dynamic and responsive economy.

Explainer: terms used in this report

In the fast-moving world of education and skills policy, it's easy for terms like *digital badges, digital credentials, open badges* and *micro-credentials* to be used interchangeably, but they don't all mean the same thing and can be applied in different settings. This explainer sets out how these terms are used in this report to help ensure clarity and consistency, especially for policymakers and decision-makers who may encounter these terms across different contexts.

Digital badging

In this report, *digital badging* refers to the practice of awarding *digital badges*—visual, portable records of achievement or skill. A digital badge contains embedded information about what a person has learned or demonstrated, who issued it, and how it was verified. They are accompanied by a recognisable, badge-like, visual image, which supports their appeal. Digital badging allows individuals to collect and showcase a wide range of skills, including those developed through work, volunteering or non-traditional routes. A digital badge is like an envelope—it securely contains verified information that can be shared with others.

Digital credentials

Digital credentials is the broader term. It includes digital badges but also encompasses other digital forms of recognising learning and qualifications such as e-certificates, digital diplomas and verified records of formal qualifications. Whilst digital badges can also contain information about more formal qualifications, they have been most usually applied at a more granular level since their inception. Think of digital credentials as the umbrella under which digital badges sit. Where this report refers to the digital credential ecosystem, we are referring to the full set of tools and systems used to record, verify and share knowledge, skills and achievements digitally.

Open Badges

Open Badges are a specific type of digital badge built to an open technical standard (originally developed by Mozilla and now managed by 1EdTech). This standard ensures badges can be shared across platforms and verified independently. In basic terms, the Open Badge standard is a common set of rules that ensures each badge contains the same key information—like who issued it, what it's for and when it was earned—so it can be trusted, read and used by different systems. Not all digital badges meet this open standard, but where they do, they are more easily integrated into wider systems such as digital wallets, CV platforms or learner records. In short, *all open badges are digital badges, but not all digital badges are open badges.*

Micro-credentials

Micro-credentials are short, focused learning experiences that develop specific knowledge or skills. They were initially designed to formally recognise assessed learning outcomes, often carrying small units of academic credit and aligned with qualifications frameworks and professional standards. In this report, we use the term to describe learning that can be modular and flexible that may be delivered by employers, online platforms or education providers. Micro-credentials may be used to support progression towards a qualification. Importantly, *a micro-credential could be recognised with a digital badge,* allowing the achievement to be shared and validated.

In summary:

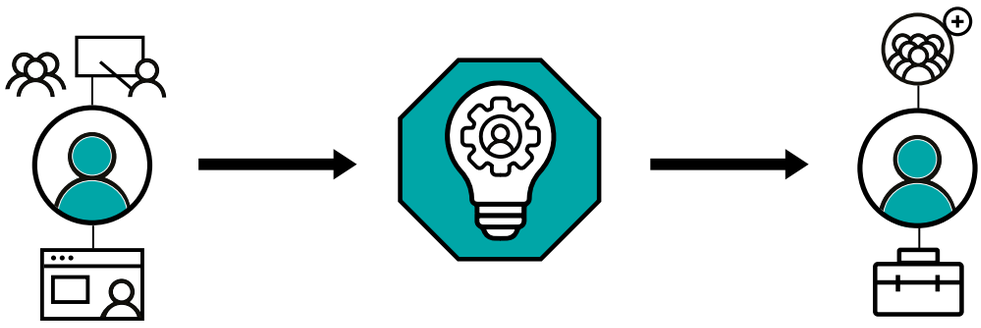
- *Digital credentials* are the broadest category.
- *Digital badges* are a specific type of digital credential; a digital expression of information.
- *Open badges* are digital badges built to an open, portable standard.
- *Micro-credentials* are short pieces of learning that can carry credit and in some circumstances, could be recognised with a digital badge.

What is a digital badge?

A digital badge is a small, visual symbol that shows someone has gained a skill, completed a course or achieved something of value. It might look like a simple image or icon, but it carries detailed information – called metadata – that explains who awarded the badge, what the person had to do to earn it and when they earned it, and sometimes includes links to evidence such as a project, assessment or certificate.

Badge Name
Badge Description
Badge Criteria
Evidence
Issued Date
Expiration Date
Issuer
Recipient
Endorsement

A digital badge is a verified, shareable record of achievement. It is not just a token of participation – it is a verified, shareable record of achievement. It can represent learning from formal education, short online courses, workplace training, volunteering or personal development.



Learner completes learning experience

Digital badge is issued to learner containing information about achievement

Learner shares with social network, tutor, employer or in job applications to show skills

Digital badges can be seen and shared online, on CVs, LinkedIn profiles, email signatures or digital portfolios, making them useful for those who want to understand someone's capabilities, knowledge, skills and experience at a glance.

Digital badges are relatively recent in origin. The concept of the digital badge was introduced in 2011 by the Mozilla Foundation, which developed the original Open Badges standard.[4] This innovation aimed to create a common, verifiable way to acknowledge learning that occurs outside conventional academic pathways. Since then, the digital badge landscape has expanded significantly. According to 1EdTech (formerly IMS Global), which now maintains the Open Badges standard, more than 75 million badges had been issued globally by 2022, with more than half a million distinct badges available to earn.[5]

More recently, in April 2025, the credentialing platform Accredible shared with the Commission that it had issued more than 113 million digital badges worldwide. These numbers highlight the continued growth of digital credentials and their adoption by educational institutions, employers, training providers and third-sector organisations.

In terms of content, digital badges are used to signify achievements across four broad categories: academic skills, professional and technical development, transferable ('soft' or 'durable') skills and personal growth. The latter categories include capabilities such as critical thinking, teamwork, communication and leadership – skills that are highly sought after by employers but rarely captured in traditional qualifications.

Context

The UK has so far been slower than some other nations in adopting digital badges and micro-credentials, in part due to their irregular adoption across education and employment and an associated lack of coordination. This lag hinders the UK's ability to address skills gaps effectively and meet the demands of a rapidly evolving job market. In contrast, other countries have integrated digital badges into their education and training systems, enhancing workforce flexibility and employability (page 14). One purpose of this report is – for the first time – to provide a summary of how they are being used in the UK.

The global digital badge market itself is experiencing significant growth, with projections estimating an increase from US$312.2m in 2025 to US$969.7m by 2032, reflecting a compound annual growth rate of 17.6%.[6] This expansion underscores the growing recognition of digital credentials as valuable tools for skills validation and professional development.

The growth of badges is being driven by both technical and user-focused benefits. Technically, badges offer digital verification, secure metadata and compatibility with digital wallets and portfolios, making them easy to store, share and present to employers.

From the user's perspective, digital badges serve as a motivational tool, acknowledging progress and participation in accessible and flexible ways, allowing the earner not only to visually share their achievements, but also to articulate skills gained. As such, digital badges are well suited to a landscape increasingly focused on personalised, lifelong and skills-based learning.

This dual appeal has led to their increasing use as a tool for supporting employability, engaging underserved learners and promoting more inclusive and dynamic models of learning recognition. It also aligns with the government's objectives to enhance vocational training and support economic growth through a skilled and adaptable workforce. Crucial to this success is supporting a digital mechanism whereby badges can be trusted and employers recognise and value them.

However, this expansion has also brought challenges to the fore. There remains wide variation in badge quality, a lack of shared standards and limited awareness among employers. Without shared standards, digital badges will not be trusted sufficiently to deliver their potential. Uneven access to digital badging programmes also risks deepening existing inequalities, particularly where infrastructure or funding is lacking. While digital badges offer clear potential to enhance the UK's skills and employability landscape, realising this potential requires coordinated action to ensure consistency and trust across the system.

The Learning and Work Institute highlights a skills divide between different regions, with areas like London and the South East attracting more highly qualified workers compared with other parts of the country.[7] This regional disparity and mismatch between qualifications and job requirements is a constraint on growth and skill development. There is an opportunity to align skills policy with the global trend towards formally recognising skills acquisition with digital badges. Specifically, integrating digital badges into the UK's regional growth policies could address long-running challenges by providing a more granular and flexible approach to skills recognition.

This opportunity aligns with a range of current government strategies and priorities. The LLE aims to make education more flexible and accessible across a lifetime, and digital badges are well placed to support this through their modular and portable application.[8] The Skills for Jobs white paper stresses the importance of employer-led, responsive training systems, particularly post-16, where digital badges can help translate learning into clear, job-relevant outcomes.[9] The UK Digital Strategy identifies digital inclusion and tech skills as essential to productivity and innovation.[10] In parallel, the Levelling Up the United Kingdom white paper emphasises the need to tackle regional inequalities – again, digital badges could support this by giving local authorities and employers better tools to surface, understand and respond to regional skills gaps.[11] The Growth and Skills Levy aims to make training and development more accessible and impactful for businesses of all sizes.[12]

The focus on reducing economic inactivity, which rose significantly in the aftermath of the pandemic due to factors such as ill health, caring responsibilities and disrupted career pathways, points to the need for more flexible ways to engage people out of work – groups who could benefit from earning and showcasing digital credentials at their own pace. With digital badges and credentials fitting squarely within wider productivity and growth agendas, they are not just a tool for recognition, but a practical lever for economic renewal and regional growth.

Case Study: Bradford City Council

Bradford has been at the forefront of using digital badges to align education with employment, particularly for young people.[13] The city began its journey in 2020 through the RSA's Cities of Learning programme, building on existing partnerships between local employers and educators to co-design sector-based learning pathways. With education outcomes below the national average and low job density, Bradford saw digital badges as a way to elevate young people's skills, validate non-formal learning and open access to meaningful employment.

Since then, more than 500 badges have been developed across 12 sector areas, with around 5,000 badges issued to April 2025. More than 150 local businesses have contributed to badge design and around 40 have endorsed or helped deliver them, embedding the employer voice into the system. These badges recognise both technical and transferable skills and are used to motivate learners and showcase employability. The programme is aligned with local and regional economic priorities and continues to evolve through feedback from learners and employers.

Within this, initiatives like Girls Into Sport and a legal careers partnership with law firm Schofield Sweeney have demonstrated how digital badges are being used to spotlight career routes and raise aspirations, giving young people recognition for the skills they develop.[14,15] Bradford's work illustrates that when digital badges are well designed and co-produced with employers, they can offer real value, not just as motivational tools, but as meaningful credentials that connect education with the needs of the local economy.

Careers and Technical Education Partnership Director Alexandra Willans commented on the programme:

> *Digital badges have significantly enhanced the visibility of the Bradford district's careers and technical education curriculum. The digital badges' portability and the detailed information about the skills and knowledge acquired by earners surpass what traditional paper certificates can offer. We believe digital badges are crucial for recognising informal learning and providing the effective connectivity needed to keep a curriculum current and provide the in-demand sector skills that employers seek.*

Findings

Global use of digital badges

Mapping the global use of digital badges presents a challenge due to the sheer number and diversity of systems, platforms and issuing organisations involved. From nationally coordinated schemes to institution-led initiatives, digital badges have been adopted across a wide spectrum of formal and non-formal education contexts. While some countries have developed centralised platforms aligned with national qualifications frameworks, others have seen a more decentralised but equally significant uptake, driven by the growing need to recognise a wider range of learner achievements and capabilities. This variation highlights both the scale and flexibility of digital badge use worldwide.

The examples below reveal how digital badges are being embedded into different education systems, either through coordinated national infrastructure or widespread institutional adoption, to support skills-based recognition of learning. The table is not exhaustive, given the pervasive application of digital badges across education globally, but highlights a range of different use cases.

Australia and New Zealand	My eQuals is the tertiary credentials platform, providing secure digital access to certified academic documents. As of now, the platform encompasses 90 education providers across both countries, including all public universities, many Technical and Further Education (FE) institutions, and a growing number of professional training organisations.[16] Education providers upload certified digital academic documents e.g. degree transcripts, certificates and diplomas, where they can be shared securely with employers and other institutions as needed. Alongside formal qualifications, digital badges are issued to recognise other achievements and skills.
Europe	Many European universities are now issuing digital badges incorporated into micro-credentials to showcase specific skill sets. Institutions in Ireland, Finland, Spain, Slovenia and Germany are actively piloting these schemes to enhance alignment with labour market needs. They also engage with established frameworks like the Bologna Process, European Qualifications Framework (EQF) and European Credit Transfer and Accumulation System (ECTS) to promote transparent skill recognition.[17] The European Commission is rolling out the European Digital Credentials Infrastructure (EDCI) to support interoperable, verifiable credentials across the EU with over 18 countries participating in the pilot.[18]
Latin America and the Caribbean	Digital badges have become a key feature of capacity-building efforts at the Inter-American Development Bank (IDB), supporting both internal learning and wide-scale engagement across Latin America and the Caribbean (LAC). Since launching its badge initiative through BIDAcademy in 2021, IDB had issued over 200,000 digital credentials (to May 2023), with recipients including IDB staff, public officials, development professionals, university students and lifelong learners participating in online courses and technical workshops.[19, 20] The badges recognise a broad range of skills and are issued via the secure credentialing platform CredencialesBID. The IDB Digital Credential Framework guides this work, promoting trusted, verifiable credentials that support lifelong learning and development goals. The programme is fully operational and expanding, with more than 300 badge types available. By making skills visible and portable, the IDB's digital credentialing initiative is helping to build a skills-focused regional development model.

The Netherlands	In 2020, SURF, the IT cooperative of Dutch education and research institutions, launched Edubadges, a national platform for issuing verifiable digital credentials across the education sector. All Dutch universities and several colleges use the system to award digital badges that recognise both formal and non-formal learning achievements linked to eduID, a lifelong, cross-institutional digital identity, enabling learners to collect and share credentials throughout their education and career. Because Edubadges are designed to be comparable, stackable and interchangeable, their value is enhanced for learners transitioning between institutions or entering the workforce. The system reflects a national commitment to flexible, skills-based learning recognition, aligned with evolving educational needs and the demands of a dynamic labour market.
USA	Whilst there are no government-led digital credentialling systems in the USA, digital badges have been widely taken up by universities and colleges in support of skills recognition within and alongside formal education programmes. During the first half of 2022, more than 1,700 organisations issued 1.7 million digital credentials in the US, according to Accredible, the largest digital certification platform[21]. Corporate training issuers had started to outpace higher education institutions (who had been the top issuers in 2021) with 31% of all digital badges provided in the first half of 2022, with higher education institutions accounting for 21%. Whilst Accredible offer digital badges and digital certificates for learning achievements, 79% issued by them in 2021 were digital badges, 15% were digital certificates and 6% included both.[i] i) Other types of organisations issuing digital badges and certificates covered in their study include professional and product certification providers (21%); associations and nonprofits (17%); and Learning Experience Platforms (5%).

Case Study: Hull College

Hull College (UK) are leading a bold shift in how achievement is recognised, embedding digital badges across a dynamic suite of online courses for staff and students alike. These micro-credentials focus on high-impact, transferable skills that go beyond the traditional curriculum, equipping learners for the real world. With over 12,000 badges issued annually, Hull College is not just supporting employability, it's redefining it. Deb Millar, Executive Director of Digital Transformation commented on the programme:

Badges are the future of CVs. This is about making every skill visible, portable, and powerful so our learners stand out in a noisy job market and own their development journey.

Technology

The open standards ecosystem for badges and credentials

Digital badges are more than just visual tokens of achievement; they sit within a broader ecosystem of tools, technologies and standards that ensure they can be trusted, verified and meaningfully used across sectors. An open standard is a publicly available technical specification that allows different systems to talk to one another. In the case of digital badges, the Open Badges standard ensures that each badge carries embedded information – or metadata – such as who issued it, what it recognises and when it was awarded, and sometimes a link to evidence of the achievement. This means badges can be issued by a variety of organisations provided they follow the same standard.

In 2023, 1EdTech (a global non-profit membership organisation, formerly called IMS Global, that manages a suite of open standards for educational and workforce technologies) released version 3.0 of the Open Badges Specification, which aligns badges with other emerging tools in the digital learning and employment space, most notably the Comprehensive Learner Record (CLR) and Learning and Employment Records (LERs), both discussed below.[22] These developments represent a shift towards more comprehensive digital records that combine formal qualifications with skills-based achievements, work experience and micro-credentials.

In short, the Open Badges Specification is part of a broader ecosystem of open standards, and in practical terms, open badges are interoperable with broader wallet and credential systems.

Case Study: Pearson

Pearson is currently piloting digital credentials through FE colleges, using the Credly platform as part of a wider ambition to modernise how learners evidence their achievements. Learners will receive a single digital credential at the end of their qualification, combining their formal qualification certificate, a detailed Notification of Performance (unit-grade breakdown), and clear recognition of both technical and transferable skills developed across the full programme.

This digital credential can be stored digitally and shared and verified via a QR code, reducing the risk of loss or fraud. For example, learners completing a construction qualification can immediately apply for industry-recognised cards such as the Construction Skills Certification Scheme card, removing delays traditionally associated with managing paper-based certificates. Through this pilot, Pearson aims to showcase how integrated digital credentials empower learners to clearly communicate their achievements and give employers quick access to trusted evidence of skills.

Donna Ford-Clarke, VP, Vocational Qualifications at Pearson, comments:

> *The granular skills recognition included in our digital credentials enables learners to showcase their skills and competencies and gives them the language to confidently articulate what they can do. This is critical as the working world moves more to skills-based hiring.*

Digital skills and education wallets systems

In today's digital age, traditional paper-based certificates are evolving into dynamic and verifiable digital formats.

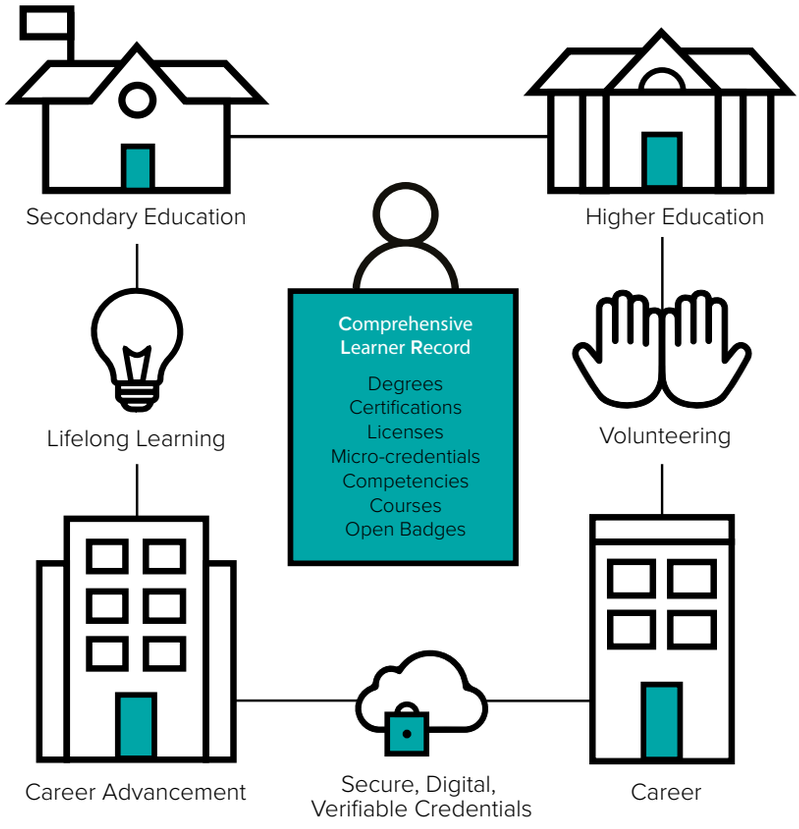
As the UK considers a national approach to digital badges and credentials, it is important to be aware of related systems already being adopted internationally. CLRs and LERs are digital formats that capture a broader picture of an individual's achievements across education, employment and life experience, offering a richer view than traditional qualifications alone. Understanding the key components of these systems and their relationship to digital badges is important to futureproofing and compatibility.

- **Comprehensive Learner Records (CLRs)** are detailed digital records that capture a learner's achievements across various domains, including academic accomplishments, co-curricular activities and workplace experiences. They provide a holistic view of an individual's skills and competencies, often incorporating micro-credentials and digital badges.

- **Learning and Employment Records (LERs)** encompass a broader spectrum, combining educational achievements with employment history. They serve as a comprehensive portfolio, detailing qualifications, certifications, job roles and other relevant experiences. LERs are designed to be interoperable, ensuring that information can be seamlessly shared across institutions and employers.

- **Digital wallets** are secure digital platforms where people can store and manage their CLRs, LERs, digital badges and other credentials. Digital wallets empower users to control access to their records, allowing them to share specific information with employers, educational institutions or other stakeholders as needed.

All these digital record types are designed to give individuals ownership and control over how and when they share their verified knowledge, skills and achievements. This is relevant to the UK as the Commission's recommendations – particularly around interoperability, integration with formal education and a national registry of trusted frameworks – rely on systems that are compatible with or can develop into CLRs and LERs.



The Comprehensive Learner Record (CLR) showing a complete picture of lifelong learning.[ii]

ii) Image redrawn and reproduced with kind permission of the 1EdTech® Consortium.

International use of credentials and wallets

The adoption of digital skills wallets and LERs is gaining momentum globally, with the aim of providing individuals with verifiable records of their skills and experiences to enhance employability. The notion of a skills passport for use in the UK is not new. In 2022 the Council of Skills Advisers (chaired by David Blunkett) recommended creating a Learning and Skills passport - a modular, assessment-based record that individuals can build up over time and add to throughout their working life, working in tandem with Individual Learning Accounts.[23] More recently, as part of the Industrial Strategy, the government has confirmed that Skills England will engage industry partners to develop skills passports.[24]

The European Union (EU) is developing a European Digital Identity Wallet that will allow citizens to securely store and share verified digital credentials (such as identity documents and qualifications) via a mobile app. This wallet will form part of the EU Digital Identity Framework and is currently being tested in several member states, with full rollout expected in 2026. One of the wallet's key functions is to support educational and training credentials, building on the Europass Digital Credentials Infrastructure (EDCI).[25]

Because the wallet will be fully integrated with Europass, people will be able to store their credentials in one place and share them with employers or education providers across the EU. By combining it with the European Digital Identity (EUDI), the EU aims to create a trusted infrastructure for recognising skills and qualifications across member states. The uptake of the system is being driven by national governments, education providers and employers participating in pilot projects, with a target for 80% of EU citizens to use a digital ID by 2030. The integration of digital credentials into the wallet marks a major step forward in promoting cross-border learning and employment, and supports the EU's ambition for a more flexible, skills-based digital economy. While direct badge imports (eg from Open Badge-issuing platforms) are not yet widely supported, this is expected to evolve as Europass expands its digital credentialing capabilities.

The US Department of Commerce explored the implementation of LERs to support workforce development and economic growth in 2020.[26] At time of writing, it is unclear whether the current US government is actively pursuing the development of LERs; however, other organisations continue to advance LER adoption. In April 2024, a coalition supported by Walmart launched the LER Accelerator initiative to promote the use of digital credentials in post-secondary education. This coalition includes various stakeholders such as 1EdTech and the American Association of Collegiate Registrars and Admissions Officers.

These developments reflect a broader global shift towards more interoperable, learner-centred systems for recognising and sharing skills. Whether through government-backed initiatives like the EU Digital Identity Wallet or multi-stakeholder coalitions in the US, digital skills wallets and LERs are increasingly seen as key enablers of more agile and responsive education and employment ecosystems. By leveraging open standards and collaborative initiatives, they have the potential to transform the education-to-employment landscape, promoting lifelong learning and workforce mobility.

Case Study: Network Rail

Since 2018, Network Rail have incorporated digital badges into their internal skills development and promotion opportunities for employees. Their digital badges work in conjunction with existing engineer-focused recognition frameworks and complement formal qualifications, accrediting additional relevant skills. Network Rail state that a key motivation for awarding badges internally is for their organisation to have a solid understanding of the skills their employees have in order to support internal upskilling, professional development and promotion. They note that an overarching limitation they've observed is around the value and portability of Network Rail badges, due to a potential lack of integration with other organisations' HR departments that an employee may come into contact with when they leave.

Related UK initiatives

Education Record – Department for Education (England)

The Department for Education (DfE) is currently developing a national Education Record as part of its ambition to provide all learners with a secure, digital way to access and share their qualifications.[27] This digital record is designed to capture GCSEs and A levels, primarily to ease transition and enrolment in further education.

An extended pilot is now under way in Greater Manchester and the West Midlands, which all secondary schools in those areas are invited to participate in, as part of a phased approach intended to build deeper understanding before scaling nationally. The next phase is to make the Education Record available to all secondary schools in England.

The record currently contains key information such as GCSE results, but in the longer term it will include A levels and AS levels, along with wider qualifications captured in the DfE's Learning Records Service, with agreement from the awarding organisations. Early pilot students could begin to see A level results from 2026.

Learner feedback so far has been positive, with young people responding well to the idea of owning and accessing their qualifications via mobile devices. The next step will be to engage the further education sector to incorporate a digital handshake between the Education Record and further education providers as growing numbers of young people come to use it.

Wider opportunities for the Education Record are emerging, from working with the Department for Science, Innovation and Technology and the GOV.UK One Login wallet, to supporting individuals in applying for higher education and employment.

Case Study: IBM

IBM has led the way in using digital badges to recognise and validate skills, both internally and externally, since launching their Digital Credentials Program in 2015. In 2025, the company issued its 10 millionth IBM-badged digital credential.[28]

Externally, IBM Training offers courses in high-demand areas like AI, cybersecurity and data analysis, many of which lead to IBM-branded, industry-recognised credentials.[29] These badges make non-formal learning visible and shareable with employers, helping learners demonstrate job-ready skills. Internally, digital badges are embedded into IBM's talent system, with its employees encouraged to earn and display credentials. These are tracked in staff records and help highlight and guide individual skills and development. Internal research by IBM found a clear correlation between badge earning and positive workforce indicators including employee performance, employee engagement scores and reduced attrition.

All badges follow the IBM Digital Credentials Framework, ensuring consistency and quality across levels, from Foundational to Certified Professional. This case study shows how digital badges have been deployed both as a marker of achievement to externally facing programmes and internally, to drive upskilling, support workforce planning, and carry meaning in the labour market.

My Profile – (Scotland)

In Scotland, a national co-design group of educators and partners supporting learners 3-18+ years has led the development of a new national approach. Co-facilitated by Education Scotland and Skills Development Scotland, the co-design group used the Scottish Approach to Service Design to consider the challenge of capturing and understanding a more holistic range of achievement and skills development for individual young people and cohorts of learners. The group reviewed practice in Scotland and internationally and conducted extensive user research with children and young people. The educators and partners were given time and space to develop a concept solution and to engage, along with children and young people, in testing and prototyping. This led to the release in January 2025 – in 'Early Experience' stage – of My Profile.[30]

My Profile is hosted on the My World of Work digital platform. My World of Work is Scotland's national online careers service, delivered and funded by Skills Development Scotland (SDS), a non-departmental public body supported by the Scottish Government. The platform is designed to help individuals of all ages explore career options, understand their strengths, access learning and training opportunities and make informed decisions about their future.

For young people in particular, My World of Work acts as an online companion throughout school, supporting the development of employability skills and career management from the first year of secondary school. It integrates with Scotland's curriculum and aims to strengthen links between education and the world of work. The platform offers tools such as skills assessments, personal statements and CV builders, which are often used in conjunction with face-to-face support from careers advisers and teachers.

Looking ahead, SDS and Education Scotland, led by the national co-design group, are exploring how My World of Work can evolve to provide a richer digital profile for each learner, potentially incorporating formal qualifications.

While it does not currently function as a formal digital wallet, its foundations offer a way for young people to display online, and share, extra-curricular achievements relevant to work and ongoing formal education pathways.

Case Study: Workers' Educational Association

The Workers' Educational Association (WEA) offers short, modular courses aimed at making learning more accessible, particularly for adults from lower socio-economic backgrounds.[31] In a case study interview, the WEA highlighted how digital badges have helped build confidence and motivation among learners starting at foundational levels. In addition to recognising course completion, the WEA issues 'champion' badges for individuals who demonstrate durable, community-focused skills such as leadership.

While the WEA remains committed to expanding the use of digital badges across its programmes, it notes that most low-level learners (around 90%) request a paper certificate alongside their badge, given a lack of engagement with online CVs and LinkedIn.

With respect to the aims of the Commission, the WEA noted their desire for digital badges to remain an informal marker of achievement, as it is this informality in relation to skills acquisition that has been part of the appeal to their learners.

Quality assurance and the question of trust

As discussed earlier, digital badges are increasingly being used to recognise skills gained outside traditional qualifications and, while their flexibility is a strength, it's also part of the problem: not all badges are built the same nor valued equally, and this inconsistency risks undermining their wider value.

At the heart of the debate is the question of trust. Some badges are trusted because they are issued by well-known institutions or employers, are clearly linked to recognised skills frameworks, or come with evidence that shows what the badge holder can actually do. Others lack this clarity, making it difficult to know whether a badge has real value.

When discussing trust in the context of non-accredited skills learning, it typically refers to the credibility and recognition that stakeholders assign to learning experiences and the credentials associated with them, where formal accreditation from regulatory bodies or institutions is lacking. Trust also depends on the integrity and security of the systems that issue, store and share digital badges. Learners need confidence not just in what a badge says, but also in who has access to it, how their data might be used, and whether they remain in control.

As it currently stands, quality frameworks and standards can be referenced within badges' metadata to align and contextualise an achievement. Doing so provides a simple method by which to evaluate their relevance. The badge issuer can – but does not have to – align a badge to an appropriate, relevant framework to signal that the learning relates to an external source of trust.

Case Study: Evolve Advice

The teacher training company Evolve Advice has developed modular courses awarded with digital badges for schoolteachers as evidence of essential teacher training – in this case, the skills required to take children on school excursions.[32] Evolve have developed their own definitions and explanations for the skills associated with their training, as there is no existing framework that covers this area of expertise. Furthermore, they have developed a public register for every person who has gained this skill and earned a digital badge, and who is then eligible to take children on excursions. (As of January 2025, this register includes 5,500 teachers who have opted in to be on it.) Through the register, teaching staff have a publicly accessible online profile where they can add further information about their skills and experiences.

Evolve Advice report that the schools who require their teachers to be trained accept only an associated paper certificate as evidence of course completion and are not familiar with, nor asking for, a digital badge as evidence of training. They also note that they are unable to provide digital badges for all of the course types they offer (despite wanting to) due to the cost of issuing them – a barrier to more widespread use.

The importance of signposting to a framework or standard for non-accredited learning was highlighted in the Commission's workshop on frameworks and standards. The message from this workshop was clear: if we want digital badges to play a credible role in the UK's skills and employability agenda, we must build trust into the system. This means developing national guidance, encouraging alignment with established frameworks, and ensuring data protection and learner agency. Together, these proposed developments underscore the need for a robust national infrastructure that can protect learner data, support system-level interoperability, and underpin a secure and trustworthy credentialing ecosystem, supporting organisations to design badges that are of high quality and easily understood.

From a technical perspective, the open educational standards organisation 1EdTech has been behind two key developments to support the credibility of trust in digital badges:

- The Open Badges 3.0 standard (2024) saw endorsements evolve to become their own type of credential. This change now allows endorsements to function as standalone credentials that reference the original badge, including in the endorsement metadata the endorser's identity and the subject of the endorsement.
- The TrustEd Credential Framework was created in 2024 by a consortium of education leaders, education technology providers and employers to address concerns about the varying levels of quality and trust in digital credentials.

While there are badge-issuing platforms that have become early adopters of the TrustEd Credential Framework, it is important to note that uptake of the Open Badges 3.0 standard for endorsements is more heavily dependent on individual platform development timelines and priorities. Together, these developments underscore the need for a robust national infrastructure that can protect learner data, support system-level interoperability and underpin a secure and trustworthy credentialing ecosystem.

Case Study: Open University

The Open University's free learning platform, OpenLearn, uses digital badges to motivate non-formal learners and its own students in courses covering core study skills, key topic areas associated with the formal curriculum, transferable skills, and employability and upskilling.[33] Offered on completion of free courses and associated online assessments, the digital badges provide a way to bridge non-formal and formal learning, with more than 342,000 badges having been issued to April 2025. The platform is based on Moodle (an open-source learning management system) and learners can host and share their achievements through a digital profile.

All 24-hour badged courses on OpenLearn are CPDSO-accredited, each awarding 24 CPD points. Learners receive a digital badge and a printable Statement of Participation as evidence of CPD-accredited learning. Completing a set number of CPD hours or points annually to maintain chartered status or licences is a requirement that varies by profession and individual organisation.

Research highlights that 77% of OpenLearn badge earners felt a sense of achievement at earning a badge, 50% felt it aided their motivation and 82% said they were likely to share their badge with an employer.[34]

The use of frameworks in the UK

In the UK, hundreds of frameworks are used to benchmark competencies and knowledge in education and training, ranging from generic frameworks applicable across sectors to specialised frameworks tailored to specific industries and more than 200 frameworks used in apprenticeships. Not every industry has a formalised, universally recognised skills framework for professional certification, and the presence and robustness of skills frameworks vary widely by sector.

In terms of general skills frameworks used to guide professional certification, career pathways and CPD – applicable to much of the non-accredited learning landscape – the Skills Builder Universal Framework is widely used in UK schools, colleges and workplaces to build essential skills (communication, collaboration, creative problem-solving and self-management skills).[35]

These skills are reflected in the Standard Skills Classification (SSC), which was proposed in a report published by the Department for Education to provide a detailed and structured taxonomy of more than 3,000 skills (including 13 core skills) that underpin the UK labour market.[36]

The UK government has developed the essential digital skills framework, which defines basic digital skills needed for life and work;[37] the Alan Turing Institute has created and manages an AI Skills for Business Competency Framework;[38] and the National Association of Colleges and Employers has developed career readiness competencies.[39]

Related to this, the European Skills, Competences, Qualifications and Occupations classification system (ESCO) is a taxonomy to classify occupations and skills, creating a common language for describing work and roles across different languages and countries and in a variety of employment and educational settings.

Adopting and aligning a digital badge with a skills taxonomy bolsters trust in the credential and supports the earner's ability to describe skills gained. Furthermore, each of these frameworks can be published in a machine-readable form based upon the open Competencies and Academic Standards Exchange (CASE) standard, for better integration with credential issuing systems and digital wallets.[40]

The Scottish Credit and Qualifications Framework (SCQF), Scotland's national qualifications framework, provides a way of comparing and understanding the wide range of qualifications and learning programmes available in Scotland, including school, college, university and workplace learning.[41] The framework has 12 levels, which indicate the level of difficulty of a qualification, and assigns credit points to show the size or amount of learning involved. For example, National 4 qualifications sit at level 4, Higher qualifications at level 6, and Honours degrees at level 10. The SCQF helps learners and employers understand the level and volume of different qualifications and is widely used by schools, colleges, universities, employers and professional bodies to assess qualifications, plan learning pathways and recognise prior learning. While the SCQF is currently designed to support formal qualifications, it has the potential to align with non-accredited learning awarded with digital badges.

Although these examples are by no means exhaustive, they demonstrate that there is no shortage of opportunities to benchmark digital credentials to associated frameworks, taxonomies or standards, and that the associated technical infrastructure exists to support this.

Recommendations

Across the UK, there is remarkable innovation in how digital badges and credentials are being used to recognise learning and skills beyond the confines of formal qualifications. From employers and community organisations to further education colleges and universities, thousands of badges are being issued to reward achievements that matter – whether that's teamwork, digital skills, industry-specific knowledge or community engagement. The potential here is vast: digital credentials could support millions of people to gain recognition for learning, improve their prospects and support the wider skills and economic agenda. But the challenge is scale. Despite pockets of strong practice, the system is fragmented. To unlock the full potential of digital credentials, we must now address some of the underlying barriers around trust, quality assurance, interoperability and visibility among employers and learners alike.

The Commission's central problem statement is therefore this: how do we move quickly from a landscape of experimentation and promise to one of strategic, scaled adoption? The recommendations that follow aim to provide that next step in building the infrastructure, trust mechanisms and shared standards needed to help digital credentials flourish as a trusted and widely used part of the UK's lifelong learning system.

The recommendations align with the Commission's objectives and are grounded in extensive research, convening and analysis. They recognise the significant potential of digital badging to positively impact UK economic growth, enhance employer engagement, and increase participation in learning among millions of people. By addressing the integration of extracurricular achievements, work-based skills and formal education, and by supporting education reform, sector-specific training and greater employer involvement, the recommendations aim to broaden understanding and adoption of digital badges across accrediting bodies, policymakers and employers. In doing so, they offer a pathway to transform how lifelong learning is recognised and rewarded in the UK. The following sections expand on these recommendations in detail, showing their relevance and impact on key groups.

1. Digital badges and credentials should be integrated into post-16 formal education and training

The integration of digital badges into formal education is an important step because it would transform the UK's education and skills and capabilities landscape. By embedding digital credentials into post-16 and lifelong learning programmes, we can create a more comprehensive record of learner achievements that will extend beyond traditional qualifications, link learning to jobs and showcase skills, for a holistic approach to education.

What	Why	Who benefits
The four nations governments should integrate digital credentials into post-16 formal education. **Government should require educational products aligned with the LLE and DfE Skills Bootcamps to issue digital badges to learners.**[42,43]	Incorporating digital badges into formal education and training programmes, to validate vocational and functional skills, supports the government's focus on enhancing post-16 education and developing skills in priority areas. While some qualifications and education sectors (notably FE) are relatively strong in aligning skills with employer needs, the recognition of these skills is not explicitly surfaced from within or alongside formal qualifications.	**Learners:** The recognition of skills and capabilities through digital badges will allow learners to build and display additional relevant achievements and skills, linking their education to future employment. Introducing digital badges for foundational and functional skills will support students who struggle with traditional assessments. **Employers:** This approach will provide employers with more granular insight into candidates' capabilities. Rather than relying solely on degree classifications or course titles, employers can access verified evidence of specific competencies. This approach enables more informed recruitment decisions based on concrete skills that align with organisational needs. **Education providers:** Institutions will benefit from increased learner engagement as badges recognise incremental achievements throughout learning journeys. This approach will transform the learning experience from a single high-stakes assessment into a series of meaningful milestones, potentially reducing drop-out rates. Stronger alignment with employer needs will strengthen institutions' market position and build more effective industry partnerships. **Policymakers:** Integrating digital badges within formal education provides a more responsive skills ecosystem that can rapidly adapt to labour market changes both nationally and regionally, addressing skills shortages more effectively than traditional qualification frameworks alone.
Skills England and four nations governments should use digital badges to enhance validation of vocational and functional skills.	**For functional skills, this approach could be easily targeted at numeracy, aligning with reforms in mathematics education.**	

2. A national skills wallet should be established that supports lifelong learning, using interoperable open standards

The governments of the four nations should establish and provide a national, interoperable skills wallet for all learners and workers, linked to the GOV.UK One Login,[44] which initially incorporates the digital Education Record for those leaving school, holding formal qualifications such as GCSEs and A levels. For adults already in employment who do not have an existing Education Record, an empty version of this wallet should be available, enabling users to import and securely store digital badges and professional development credentials earned from formal education and training, volunteering and skills development. For both groups, this becomes a portable, verifiable and interoperable lifelong learning record.

Crucially, any national wallet must adopt open, interoperable technical standards, facilitating seamless integration with proprietary or sector-specific skills wallets, digital credentialing platforms, regional skills profiles or national education records (eg the expanded My World of Work record in Scotland, or the forthcoming equivalents in Wales and Northern Ireland). By embedding open standards into this national wallet from the outset, the government can ensure credentials remain portable, verifiable and valuable across multiple sectors and employers.

Without this approach, the Education Record risks excluding the lifelong learning agenda and misses the opportunity for young people and adults to recognise and present skills obtained outside formal education – it can do much more than removing the need for paper certificates. Adopting open standards ensures that skills gained anywhere can be securely imported and shared within the national education and skills ecosystem.

This infrastructure creates the foundation for a truly lifelong learning record that can accompany individuals throughout their careers, bridging formal education, workplace learning and self-directed development.

> National qualifications wallets risk excluding the lifelong learning agenda.

(See table on next page)

What	Why	Who benefits
The governments of the four nations should develop and offer a national interoperable skills wallet, starting with the current DfE Education Record and expanding to include equivalents in Scotland, Wales, and Northern Ireland. This wallet will also be available (unpopulated) to adults already in employment. **Skills wallets should adopt open standards for interoperability compatible with, for example, the Comprehensive Learner Record.[45]**	Learners currently lack agency over their Education Record. Extending this to become a national interoperable skills wallet means that individuals can securely store and selectively share both formal qualifications and wider skills credentials. This approach supports young people transitioning from education to employment, as well as adults already in the workforce, enabling a genuine lifelong learning journey.	**Learners:** Learners gain greater agency over their skills records, increasing employability. By giving individuals more control over their formal digital education record, and the ability to export qualifications from it and professionally recognised certifications into it, there is an opportunity to support people not only as they move through formal education systems, but also as they navigate a lifetime of learning, work and public service access. **Employers:** Employers benefit from reduced administrative burdens, easier verification and richer insight into candidate capabilities. Standardised digital education records and skills wallets will reduce the administration burden during recruitment by eliminating manual verification of qualifications, certifications and training history, as well as eliminating credential fraud. They will reveal not just a person's formal qualifications, but a holistic picture of skills and competencies. Estimated cost savings to the sector overall around reduced training costs, reduced time to hire, and recruitment and retention are outlined in detail in Economic implications (page 30). **Education providers:** Adopting open standards to deliver formal education records digitally will simplify processes around credit transfer, recognition of prior learning and collaborative programme delivery with other providers or employers. **Policymakers:** For government, delivering qualifications digitally using interoperable standards will enable integration with a trusted ecosystem of national digital education records and proprietary skills wallets. The resulting data ecosystem will provide visibility of skill distribution across the country, supporting more targeted interventions to address skills gaps. By integrating with digital identity frameworks, eg the GOV.UK One Login, standardised, interoperable digital credentials will enhance both security and privacy within the skills ecosystem. Making the DfE Education Record bend and flex should not be to the detriment of market solutions – a national, accessible education and skills wallet must interact with proprietary wallets, sector-based wallets and devolved national and regional equivalents.
JISC should facilitate the adoption of digital qualification transcripts by post-16 educational institutions using open standards.	Educational transcripts that accompany formal qualifications are issued on paper and in PDF format, rarely exposing the depth of content of a qualification. Digital transcripts of formal education records (FE and HE) using open, interoperable standards will provide enhanced security and a means to capture and detail skills and competencies gained within a qualification (including digital badges), and be interoperable with open standards skills wallets.	

3. A national registry for digital credential quality assurance should be established

A national registry should be developed to support quality and consistency across digital badges and credentials. This should include transparent frameworks, shared standards and accessible information for employers, learners and providers. It would provide a foundation for trust in a growing ecosystem.

The establishment of a national registry for digital credential quality assurance is important because it would provide a governance mechanism to ensure the integrity and value of the UK's digital badging ecosystem. This registry would provide the necessary oversight and standards frameworks to build confidence in digital credentials across all stakeholder groups. Ensuring its use by learning providers in the issuance of digital badges will help build trust in their credibility.

To ensure long-term success, a UK digital credentialing ecosystem would benefit from a clearly designated institutional home. This could be an existing public body with the capacity to oversee quality assurance, standards and interoperability. One option is a cross-sector consortium commissioned by the DfE, in partnership with devolved administrations, establishing a dedicated Skills Data and Credentialing Authority to ensure coherence across regions, learning sectors and labour markets. Whichever route is taken, it will be essential to locate this function within an organisation trusted by employers, education providers and learners alike.

(See table on next page)

What	Why	Who benefits
The four nations governments should mandate that frameworks – in an open standards format – are referenced in digital credentials for non-accredited learning.	Ensuring trust in digital badges is key to their adoption by employers. While badge-issuing platforms and learning management systems (LMS) provide guidance on how to write digital badges, it is not mandatory to align badges to skills standards and frameworks, despite their wide availability and ease of access.	**Learners:** Quality-assured digital badges make skills visible that often remain hidden in conventional qualifications. Learners can confidently invest their time and effort in training, knowing the credentials they earn carry genuine recognition, and eliminating any uncertainty around which digital badges will be valued by employers. **Employers:** For businesses, a national registry addresses a fundamental concern: how to distinguish high-quality, reliable credentials from those with limited rigour or value. The registry would provide employers with clear quality indicators and trusted frameworks against which to evaluate digital badges presented by candidates. By consulting the registry, employers can confidently identify credentials that genuinely represent meaningful skill acquisition rather than merely participation. **Education providers:** Training providers will benefit from clear guidelines on credential design and implementation. The registry would establish benchmarks for quality that help providers develop credentials that have genuine currency in employment markets. Additionally, alignment with the registry would enhance the perceived value of a learning provider's credentials. **Policymakers:** A national skills framework registry (centralised, or four-nations specific but linked) creates a foundational infrastructure for skills policy development by establishing a common language for describing and measuring skills acquisition that can be referenced across education, employment and lifelong learning initiatives. By aligning with the four nations' governments, the registry can help create a unified approach to skills and behaviours development that transcends traditional institutional boundaries while respecting regional contexts and needs.
The four nations governments should establish national registry for digital credential quality assurance frameworks with government, educators and industry.	Aligning a badge to a framework contained within a national registry of skills frameworks will provide a layer of trust in transactions between individual badges and digital skills wallets or digital education records. It will enable interoperability where multiple frameworks exist.	

Economic implications

The Commission asked Frontier Economics to undertake what is the first attempt to assess the impact of a digital badge infrastructure on economic growth. According to their analysis, the most immediate and measurable economic benefits of engaging with interoperable digital skills and credentials wallets are:

1. Reduction in duplicated training costs.
2. Reduction in time to hire.
3. Enhanced reskilling and retention.

Potential to reduce duplicated training costs

Mandatory certifications – particularly in sectors such as healthcare, that have strict compliance requirements – need to be repeated when individuals move between roles or employers, due to the lack of portable and trusted records of prior training. This is wasteful. Because digital badges can provide a granular record of learning, they can identify skills gaps, avoiding the need for someone to be put through an entire course of learning when they already have many of the required skills.

A digital wallet with secure and verifiable digital credentials could significantly reduce inefficiency. The extent of duplicative training that can be avoided without compromising service quality is difficult to establish. However, Frontier Economics have developed a framework for estimating the size of the prize using the NHS as a case study. According to Skills for Health,[iii,46] streamlined training management and reducing duplicative training could save hospital trusts up to £30m annually across the NHS (or 0.8% of the NHS training budget).

The true savings are likely to be larger, however. NHS England data suggests that staff moves can result in up to two days of administration and training each time a move occurs.[47] Of the approximately 370,000 nurses in the NHS in England, there is a leaver rate of around 10%, or 37,000 nurses per year, of which 30% (11,000 people) are estimated to move to other NHS jobs each year (eg nursing auxiliaries and assistants, midwives, adult social care nurses).[48,49,50] If each of these moves resulted in two days of duplicative training, that would lead to a loss of 22,000 days from patient or clinical care. If these lost days are filled with agency staff (at an average cost per day of between £946 and £1,841), the value of this lost output equates to £35m per year (based on average nurse pay of £34,000 per year).[51,52]

Of course, nurses represent only a proportion of all NHS staff – around 21% of the 1.7 million people employed by the NHS.[53] If the same logic was extended to other occupations, the avoidable costs that can be saved increase to over £100m per year, or 2.5% of the NHS training budget.[54] These calculations underscore the potential of a digital credentialing system, particularly where mandatory regulated training is critical. The NHS example shows how verified, interoperable training records would deliver tangible cost savings.[iv,55,56]

Even these estimates understate the full potential for cost savings in the NHS, as they exclude administrative cost savings, the cost of the training itself (whether paid to internal or external providers), benefits to individual workers, and spillover effects such as faster onboarding and reduced errors. It is possible, and indeed probable, that similar inefficiencies exist in other sectors. Applying the same ratios of avoidable costs to overall training expenditure (0.8%–2.5%) would indicate annual savings of between £12m and £40m in construction and between £7m and £22m in the green energy sector.

iii) Skills for Health is a not-for-profit organisation committed to the development of an improved and sustainable healthcare workforce across the UK. The study referenced is their impact assessment of the London Streamlining Programme, a collaboration between HR for London, NHS Employers and Skills for Health aiming to unlock cost savings, mainly by identifying delays and duplication in junior doctors' changeovers, statutory and mandatory training, and pre-employment processes.

iv) The use of an NHS Digital Staff Passport to reduce duplication of employment checks and mandatory training has been recommended by the NHS workforce plan. The Digital Staff Passport programme, introduced in 2024, has since been deprioritised as part of the broader NHS England integration with the Department of Health and Social Care.

Reduction in time to hire

The second key benefit of digital skills and credentials wallets relates to reducing the time it takes to fill job vacancies. Delays in hiring increase recruitment costs and mean foregone output while roles remain unfilled. A verified, interoperable digital credential system could help employers assess candidate qualifications more quickly and confidently, reducing friction in the hiring process and enabling faster onboarding.

Frontier Economics' analysis draws on findings from digital hiring platforms that suggest digitised verification can reduce time-to-hire by between 25% and 40%.[57] Applying this to the UK labour market – where the average time to hire is 36 days and there are around 7.4 million hires annually – suggests meaningful gains.[58,59] They assume, taking an extremely conservative stance, that a partial rollout of digital credentials would affect between 5% and 10% of roles, acknowledging that some occupations are more suited to this approach than others. While no formal estimate has been produced for duplicated training costs across the whole economy, a cautious extrapolation based on the £100m in estimated annual savings for the NHS – representing roughly 15% of public spending – suggests that total savings across the wider public sector and economy could plausibly exceed £1.5bn annually if similar efficiencies were realised at scale.

Under these parameters, faster hiring (both internal- and external-facing) could reduce HR- and recruitment-related costs by over £300m per year. However, the largest source of value lies in restoring lost productivity from vacancies. Based on average daily output per worker (calculated using national productivity estimates), faster hiring could generate over £1bn in additional gross value added each year.[60] Taken together, these benefits amount to a total annual gain of between £1.6bn and £5.3bn.

These figures are illustrative, based on high-level conservative assumptions and scenario modelling. They should be interpreted with care, as they do not account for all the complexities of the labour market and rely on broad generalisations. Nonetheless, they offer an indication of the significant macroeconomic value that could be unlocked by reducing hiring friction at scale.

Reskilling and retention

A third area of benefit of digital skills and credentials wallets lies in their potential to improve reskilling outcomes and reduce staff turnover. In a fast-evolving labour market, workforce adaptability is essential to maintaining productivity and economic resilience. Digital credentialing can support this by making training opportunities more visible, accessible and recognised, thereby encouraging uptake and improving retention.

Evidence from corporate case studies, such as IBM's adoption of digital micro-credentials, highlights the potential impact: their internal programme led to a 226% increase in training completion rates and a 694% increase in certification pass rates.[61]

To explore what this might mean at a national level, Frontier Economics developed illustrative scenarios using conservative assumptions applied to the UK workforce of approximately 29 million people.[62] Key parameters included a national turnover rate of around 27%, an average cost of £40,700 per turnover (including recruitment costs and productivity losses), and up to 14% productivity uplift associated with training (they assume 7% in the low scenario).[63,64,65] To take an extremely conservative approach, they assumed that:

- Digital credentialing could help retain between 1% and 2% of leavers.
- Between 1% and 2% of jobs in the economy might be affected, depending on uptake.
- The actual increase in course completion is around 50%.
- The training completion rate at baseline (before the introduction of digital credentialing) is between 1% and 2%.

Under these scenarios, it is estimated that improvements in training completion and recognition could increase the number of trained workers by 2%–3%, leading to aggregate productivity gains of over £260m.

At the same time, better recognition of workers' skills could reduce turnover by retaining an estimated 80,000 to 160,000 employees each year, generating further savings of between £33m and £130m in avoided turnover costs. When taken together, the total economic benefit from improved reskilling and retention could exceed £290m annually.

Though the preceding figures are illustrative and assumption-driven, they are designed to give a sense of the possible scale of benefit, relying on simplified parameters and extrapolations from limited case study evidence. As such, they should be interpreted with caution and seen as indicative rather than definitive. Even so, on these assumptions, a digital badging infrastructure could generate annual savings of ca £5bn.

This £5bn makes no assumptions about the potential of digital badging to provide a route into the labour market for the currently economically inactive.

The role of AI

Adopting interoperable digital skills wallets that contain digital badges, digital credentials and formal education records directly supports personalised learning experiences and the advancement of Education 4.0. With access to digitally badged learning experiences that can be imported into skills and education wallets, learners could experience education that adapts in real time to their evolving needs and preferences, enabling them to build tailored skill sets effectively. While we acknowledge that the application of AI to the UK skills problem is vast, the following sets out several opportunities for application in this area.

Via an AI-supported skills wallet, learners could receive recommendations for relevant courses based on their existing credentials and career goals, facilitating faster and better-informed educational decisions. An AI assessment of a person's digital education credentials and badges could provide recognition of prior learning, enabling easier transfer between educational institutions and smoother career transitions.

Digital badges combined with AI could realistically create a dynamic 'skills cloud', allowing organisations, communities and regions to quickly identify skills gaps and target training precisely. By analysing badge metadata, AI-driven insights could inform workforce planning and proactively guide investments in talent.

AI could play an important role in the future in enhancing the functionality of digital skills wallets, analysing someone's existing skills and credentials against real-time local labour market data and then 'nudging' users by identifying available job roles suited to their current skill set. If a skills gap exists, the wallet could recommend targeted educational opportunities, complete with associated digital credentials and badges, speeding up the transition from learning to employment.

AI could also proactively support ongoing professional development by reminding individuals when mandatory training certifications held digitally are approaching expiration, and suggesting timely training refreshers or upgrades available nearby or online. This would not only ensure regulatory compliance, but also make workforce management more efficient.

Challenges to implementation

Digital skills and credentials wallets could offer a scalable, secure and interoperable solution by consolidating verified educational and professional records in trusted platforms or apps. Leveraging open standards and frameworks, access to education, and skills apps would enable individuals to demonstrate a trusted digital presentation of qualifications and skills, reducing duplication and administrative costs.

The potential for workforce development aligned with growth and skills policies, and the opportunities for learners, employers, education providers and policymakers, were outlined earlier, but they are not without their challenges. These are unpacked below, alongside broader economic benefits.

Low uptake and understanding by employers

The Commission's research revealed that employers in the UK and US, on the whole, did not recognise digital badges in recruitment, nor issue digital badges for internal CPD. This is due to a range of reasons relating to trust, lack of awareness, reliance on existing HR systems that are not set up to 'read' digital badges, and organisations relying predominantly on traditional qualifications as benchmarks for person specifications. Learnings from IBM in the US, the RSA's Cities of Learning programme and other organisations discussed earlier reveal that badges are highly valued where employers are engaged, in the following ways:

1. When a local employer is involved in the development of courses of learning awarded with digital badges.
2. When an employer issues them to recognise internal CPD (seeing a rise in job satisfaction).
3. When employers engage with skills-based hiring.

David Leaser, founder of IBM's digital badging programme and advocate of skills-based hiring, suggests that awareness-raising is key to adoption:

> *The hesitation around digital badges isn't about resistance — it's about uncertainty and trust. Employers and stakeholders don't know which badges (or if badges) can be trusted as signals of achievement, skill and value. They need proof, not promises. If we want badges to gain traction, we must show badges lead to better outcomes: students landing real jobs, workforce centre clients earning more, and businesses seeing measurable performance gains. The value of a badge must be visible, verifiable and validated by results.*

Cost associated with large-scale badge issuing

The cost of issuing digital badges varies significantly depending on the platform, the volume, and how the system is integrated. Some providers charge per badge issued, while others use subscription or bulk pricing models based on the number of badges created or distributed. For example, platforms might charge a few pence to a few pounds per badge, or offer packages where institutions pay an annual fee for unlimited or high-volume issuing.

For further education colleges and other awarding institutions, costs can quickly escalate if large numbers of learners are involved, particularly where multiple badges are awarded per learner, or where providers need to create custom designs or align badges with specific frameworks. For institutions using a virtual learning environment (VLE) or learning management system (LMS) that includes integrated badging features, the direct cost of issuing badges is minimal to zero. However, even with this set-up, staff time, training and support infrastructure are still needed to ensure meaningful use.

The cost of issuing digital badging, particularly when paired with limited budgets and stretched resources, can be a barrier to adoption. This was highlighted in interviews with further education colleges and the Evolve Advice training organisation, who have to limit the number of badges they issue due to the costs involved.

If proposing that institutions embrace the issuing of digital badges and credentials for the recognition of skills, mitigation could be around:

- Subsidising platform fees for institutions piloting badge programmes.
- Providing centralised infrastructure or procurement frameworks to reduce duplication and costs.
- Offering guidance and support on using free or low-cost badging tools effectively, particularly in settings with existing VLEs.

For providers already under pressure to reduce costs, additional expenditure on badging may seem difficult to justify without clear advice or funding support.

Modification of student information management systems (SIMs)

Adopting open standards in education and digital skills systems is not always straightforward, particularly in environments where legacy systems have been modified incrementally over several years. For many institutions, both large and small, modifying SIMs and integrating open standards to bring them into line with the CLR standard will require significant overhaul of systems, as well as underpinning investment in staff training. However, the implementation of the LLE is requiring all institutions to explore the extent to which their student record systems are fit for purpose, and this represents a real opportunity to think broadly about what systems will be required in the future.

Digital learning records bring real benefits to institutions, to learners and to society. At the simplest, adopting digital transcripts of formal education records offers several advantages over traditional paper transcripts. Increasingly, paper transcripts feel like an outdated approach to the management of learner achievement, and eliminating them offers obvious efficiency savings for institutions. But the potential goes far beyond modernisation. Digital transcripts offer institutions and learners the opportunity to integrate with other systems to provide a more holistic view of a student's educational journey. For example, they can include information about work placements, transverse skills and experiences beyond traditional course grades. They bring an outward-facing potential to be interoperable with skills and education wallets generated at other stages of a learner's development. And they have system-transformative potential too: digital transcripts could facilitate easier exchange with other educational institutions, supporting student mobility and institutional collaboration.

It can't be emphasised enough that open, interoperable standards are the backbone of digital credential and education record portability and usability, but their full potential is still emerging. To unlock the benefits of digital badges and wallets at scale, a coordinated effort is needed across policy, technology, education and employment to increase adoption, integration and recognition. It isn't necessary for every institution to adopt the same system, but there are powerful advantages if interoperability is a design feature of all revised student record systems.

The digital divide: technical and cultural issues around portability

Introducing digital infrastructure for skills wallets and digital credentials undoubtedly offers significant opportunities but also brings risks of marginalisation, particularly through the digital divide and portability issues.

The digital divide remains a substantial challenge across the UK, disproportionately impacting individuals from rural communities and lower socio-economic backgrounds, older people and those with disabilities. These groups often face limited access to reliable internet connections, insufficient digital literacy or barriers in affording the necessary technology. Without deliberate intervention, transitioning towards digital skills wallets, issuing digital badges for recognition of non-accredited learning and investing in credential systems could unintentionally exclude these individuals, exacerbating existing inequalities.

Technical and cultural portability further compounds these challenges. If digital credentials and skills wallets are not designed to be easily transferable and universally compatible, learners and workers risk becoming locked into proprietary platforms. Cultural resistance to digital tools among certain demographics may also create additional barriers, eg hesitance or reluctance to embrace digital technology, not merely due to technical limitations, but due to perceptions, habits, attitudes, or a lack of confidence or trust in technology.

For example, older adults or those with limited previous exposure to digital systems may prefer traditional, non-digital methods due to concerns about privacy or security, or simply discomfort in shifting from familiar ways of working. Similarly, cultural factors such as language barriers, distrust towards online systems, or concerns about data handling can lead to reduced uptake of digital solutions.

Simply providing technology and training may not fully overcome these barriers. Instead, mitigating through proactive engagement, tailored communication, reassurance on security and privacy, and involving trusted local or community figures in promoting these solutions can be crucial to overcoming cultural resistance. This approach will help ensure equitable participation in, and benefit from, digital credentialing and skills wallets, ensuring that alternative methods of delivery, where requested, should be made available to avoid further marginalisation.

Outreach

The recommended adoption of interoperable open standards to augment trust in digital badges, supported by a national registry ensuring quality assurance, would directly benefit employers by improving reliability in recruitment. Active participation from business organisations will be essential in advocating for a nationwide campaign, raising awareness of the economic value and trustworthiness of digital badges. Their involvement would accelerate adoption, ensure the relevance of skills frameworks and maximise the recommendation's effectiveness in addressing real-world employer needs.

To achieve this, a coordinated outreach strategy should include:

- Clear messaging and guidance for employers on how to read and use digital badges in recruitment.
- Targeted communications through employer representative bodies such as Chambers of Commerce, sector councils and local skills improvement plans (LSIPs).
- Case studies that show how badges are already adding value in practice.

Public awareness could also be raised through media campaigns, digital platforms and social media, including endorsements from high-profile employers and badge-earners.

In addition, pilot projects with anchor employers in key sectors or regions could help demonstrate impact and build momentum. Combined Authorities should be supported to integrate badges into local skills strategies, while schools and colleges should be encouraged to promote badge visibility as part of careers education.

Conclusions

The UK faces significant workforce challenges, both nationally and regionally, around access to and demonstration of skills. Amid a range of complex issues, this problem is also compounded by a lack of digital integration between formal education credentials and non-accredited skills acquired throughout working life that enable people to demonstrate their employability potential. Workers frequently repeat training or struggle to prove qualifications due to fragmented systems and reliance on paper-based records, creating inefficiencies across sectors and barriers for individuals.

The Digital Badging Commission's research and recommendations offer timely alignment with the UK's current skills policy objectives, notably addressing gaps in skills visibility, employability and regional economic disparities. In the context of the UK skills policy environment, they offer a practical pathway to increase learner engagement, strengthen employer confidence and bolster regional economies by embedding verifiable digital badges into both formal and non-formal learning. This will also help bridge the divide between academic and vocational routes, offering a unified, credible way to recognise all types of learning.

For combined regional authorities facing pronounced skills gaps, initiating a targeted pilot programme based on these recommendations would provide significant leverage. An initial programme could prioritise embedding digital badges within local education institutions and training providers, aligned specifically with regional skills shortage areas. Digital badges would clearly communicate verified skills to local SMEs and larger employers alike, directly addressing local skills mismatches and contributing towards equitable economic growth. Critically, a regional pilot would provide a demonstrable blueprint, enabling subsequent expansion across other regions and sectors.

The importance of engaging industry representatives, particularly SMEs, cannot be overstated. SMEs frequently struggle to identify appropriately skilled talent due to the range of qualifications available to young people and an accompanying lack of transparency when it comes to recognising workforce skills.

In the longer term, establishing the infrastructure proposed – based upon interoperable, open technical standards for badges, wallets and education records, alongside a national registry of skills frameworks – would set a foundational standard for skills recognition across the entire UK economy. This approach not only supports immediate employment outcomes, but also builds an adaptable skills ecosystem capable of responding swiftly to future economic shifts. Policymakers would have unprecedented visibility into skill distribution and development, allowing targeted policy interventions that strategically tackle skills shortages, reduce regional inequalities and sustainably drive national economic competitiveness.

Now is the moment to act.

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Resources

Digital Badging Commission:
www.badgingcommission.org

The RSA Badge Standard:
www.thersa.org/design-for-life-our-mission/social-infrastructure/digital-badging

Exemplar digital badges:
www.badgingcommission.org/exemplar-badges

RSA

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