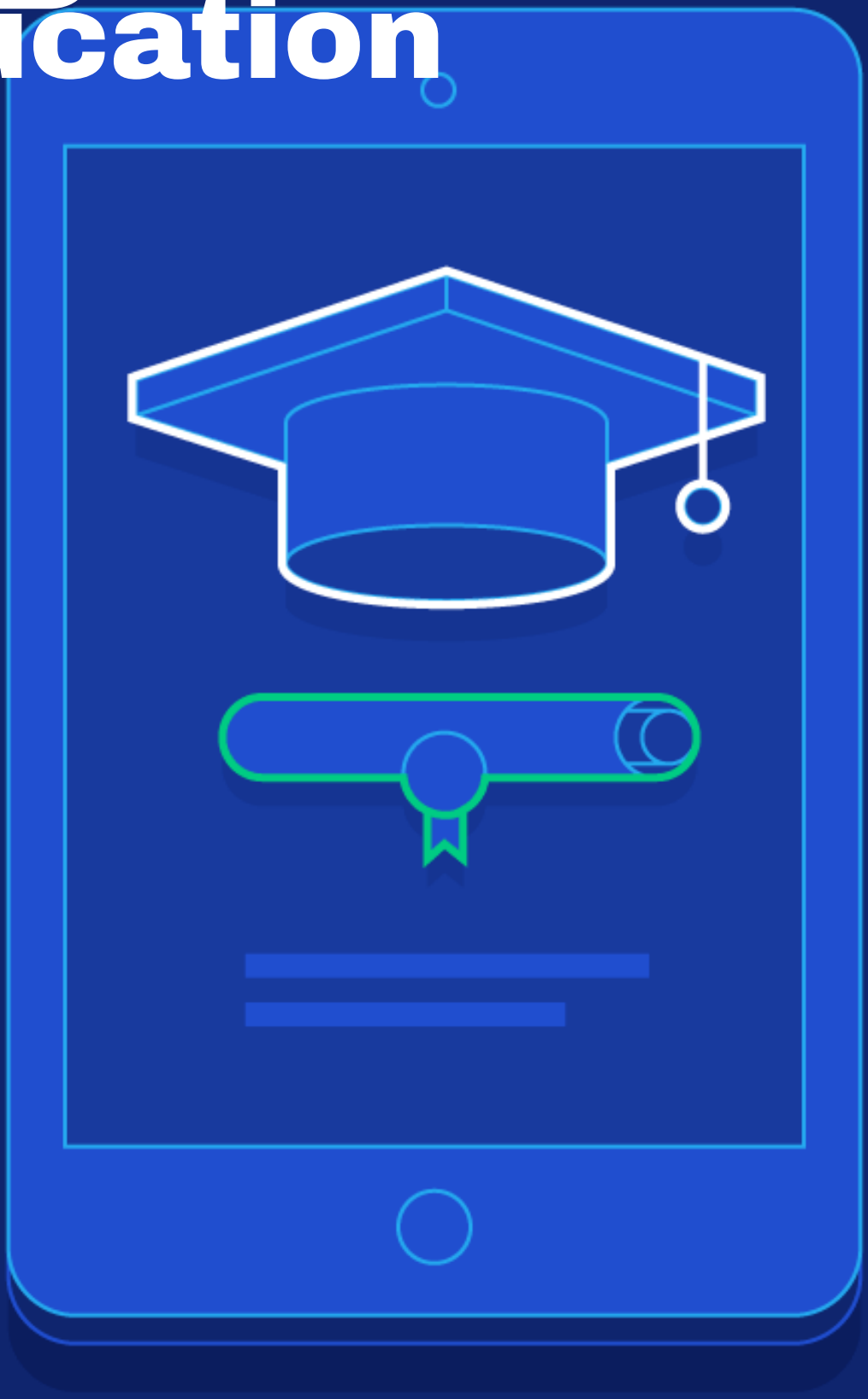
Digital Education

Technology Roadmap



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How the UK Government's Digital Wallet Can Enable a Digital Learning Ecosystem

With the UK planning to soon launch a digital wallet, the next question and step that will follow is who is going to populate it?

The government plans to start with a digital driving licence, which is just one of many, with another keynote scenario being academic credentials.

Technologies like the Blockchain can be used to implement 'Digital Badges', which can then enable a complete framework for a common, industry-wide credential recognition system.

Digital Learning Credentials Ecosystem

They are also referred to as 'micro-credentials', and are offered by Education providers like the Open University and Glasgow University among many others. These directly tie in to improving employment prospects, such as vendors like Microsoft issuing skills-based certifications for their channel partners via digital badge service providers like Credly.

These technologies enable the development of a partner ecosystem for encoding, authenticating and sharing digitized academic credentials. These systems allow employers, educational institutions, and other relevant parties to verify the authenticity of digital certificates quickly and efficiently.

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MyCreds.ca

For example organizations like MyCreds.ca serve as a platform for managing and verifying educational achievements, where employers and educational institutions can verify the authenticity of academic certificates, and students can easily share their credentials with just a few clicks, enabling three million learners across the country to access and share their official digitized post-secondary transcripts and credentials online – anytime, anywhere.

These ecosystems are formed through the core building blocks of:

- **Digital Certificates:** The electronic counterparts of traditional paper certificates, containing all the necessary information about a student's academic achievements, encrypted to prevent tampering.
- **Verification Systems:** These systems allow employers, educational institutions, and other relevant parties to verify the authenticity of digital certificates quickly and efficiently.
- **Credential Wallets:** Digital platforms where students can store and manage their academic credentials securely, and allow them to share their credentials with employers or educational institutions conveniently.

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Blockcerts and Open Digital Badges

The Open Badges standard describes a method for packaging information about accomplishments, embedding it into portable image files as digital badges, and includes resources for web-based validation and verification. Open digital badging makes it easy for anyone to issue, earn, and display badges across the web—through an infrastructure that uses shared and open technical technical standards.

Complimentary technologies include 'Blockcerts', an open source blockchain project for enabling a Universal Verifier that will verify any Blockcert issued by any institution, anywhere in the world. Via their Medium article UniversaBlockchain explore the scenario of Blockchain in Education.

Blockchain in education offers tamper-proof digital records for qualifications, streamlining storage, sharing, and transfer of academic credentials while preventing fraud. It improves data management with a secure, decentralized database for educational records.

In the feature video Indicio, a digital identity vendor, explains how Open Badges 3.0 and verifiable credentials offer an efficient way for educational institutions to issue traditional education documents, such as diplomas and transcripts, directly into a student's personal digital wallet on their mobile device making them portable and easily verifiable.

Example Venture: QualiChain

QualiChain uses Blockchain technology to decentralise lifelong learning and provide lifelong learners with transparent and immutable educational accreditation. At the same time, lifelong learners are provided with personalised recommendations that help them reach their personal and professional learning goals.

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Vendor Landscape

A number of vendor options are available for implementing some or all aspects of these technologies:

Digitary

A leader in this space is Digitary. As they write here Digital Badges in Education offer the ability for learners to establish portfolios and express knowledge. Critically they demonstrate how they can be applied across the entire educational ecosystem, describing in this news how the Irish education sector is adopting this approach:

"EduCampus and Digitary are excited to announce an additional feature under the collaborative framework agreement, enabling all EduCampus clients from Irish higher education institutions to be able to adopt Digital Badges. Sitting alongside the existing Digitary CORE solution for the issuance of academic credentials, such as degree certificates, academic transcripts, European Diploma Supplements (EDS) and other official academic documents; Digital Badges enables institutions to recognise all kinds of learners skills, competencies and learning experiences."

Credly

Another major player is Credly, who raised $11m in 2019 and were recently acquired by Pearson. Their CEO describes how they help foster a more diverse and inclusive workforce.

Users include Frederick College, where they highlight the value of digital badges:

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- Provide a more complete picture of your interests and experience
- Show potential employers evidence of your up-to-date proficiency, relevant skill sets, and achievements
- Help assist employers in matching you to their specific positions
- Reflect your efforts to engage in more flexible ways of learning and scope of knowledge
- Can be displayed on social media channels, LinkedIn, emails, and your resume
- Display current knowledge in your occupational field and reflect professional development

They are widely used across industry, including learning platforms like Skilljar and Intellum, and corporate users like ISC2 and Cisco. They are also a great way to add value to your own technology product, for example Optimizely, a Digital Experience Platform, offers a digital credential using Credly. For developers seeking to achieve something similar there are Zapier integrations.

CertifyMe

CertifyMe is a VC backed SaaS solution, based out of Bangalore India.

Their immutable crypto credentials use advanced technologies like the AWS Quantum ledgers to ensure your credentials are secure. 40+ features includes advanced options like cryptographic signatures based on RSA SHA-1 and Id Tagging.

Each of their credentials is enabled with a unique QR Code. Their Immutable Cryptographic Credentials can further be linked with the awardee's unique identities like a Passport number, drivers licence, etc.

CertifyMe helps your awardee publish your credentials across 50+ social media platforms. Their certificates are also customizable to include a branding banner and a CTA button.

Enterprise Workforce Credentials - Securing Employment Workflows with Digital Identity

A use case scenario that naturally flows on from the Digital Wallets for Education capability is Workforce Credentials.

With a primary goal of academic credentials being to underpin the credibility of candidates for possible employment roles there is a powerful intersection across these use cases.

The value of this ecosystem approach is demonstrated by how employers also benefit, able to validate the skills of potential employees in a faster, more secure manner.

Streamlining Employment Workflow

HR departments are getting overwhelmed with outdated, manual processes that are not responsive to business needs and may introduce significant liabilities to the organization if employees or contractors are not representing their qualifications accurately. There is also an issue of fraudulent certifications.

Therefore leveraging Identity and Blockchain credentialing technologies for digitizing certifications offers employers multiple benefits including speeding as well as securing the process.

Traditionally, people shared their personal information via physical documents upon being hired. By transforming from a “paper trail” to a digital platform that secures data, records and transactions, organizations can move verification into a real time exercise.

Securing Professional Certifications

This use case is demonstrated in this webinar, co-presented by Oxford Computer Group and Credivera, where they demonstrate how they are utilizing Microsoft Entra to support workers with verified credentials to remove cost, risk, and complexity in the HR and IT departments.

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Other Credivera partners include We Know Training, who have launched VerifiableCredentials.ca, to offer employers an LMS (Learning Management System) that can deliver industry skills training which then issues these verified credentials-based training certificates.

This combination with LMS and the production of industry-specific skills and learning content is a key method for addressing this segment. As well as academic institutions there are also trade bodies and corporations themselves who issue professional certifications.

For example Brewdog created an online academy for it's employees to gain new work-specific skill qualifications, and Alzheimer Scotland a virtual academy for their carers. Rather than academic qualifications these are entirely workplace-specific and an immediate relevance to possible job opportunities.

Other industries require very labour-intensive workforce management practices. Trinsic offers this case study explaining how FLEX Health is tackling the complex needs of staffing a healthcare facility, giving healthcare workers access to a verifiable work history and streamlining the onboarding process with digital wallets, where they can keep their verified work history, professional certifications, licenses, background checks, continuing education credits, and more.