THE FUTURE IS
PORTABLE

Designing Equitable Credentialing Ecosystems

ESG | Education Strategy Group

TS THIRD SECTOR

ACKNOWLEDGMENTS

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Executive Summary

Non-degree credentials (NDCs)—including certificates, certifications, licenses, and badges—are increasingly important for advancing equity and economic mobility. Yet, the current landscape is fragmented: learners struggle to understand which credentials hold real value, while employers face challenges deciphering which credentials are quality and relevant to their industry. Both groups are often confused by the jargon and inconsistent language used to describe credentials and digital tools. Digital wallets, which allow individuals to store and share verified records of learning and work, offer a promising solution to these challenges. While digital wallets do not, on their own, make credentials more transparent and learner-owned, they provide a learner-controlled space to aggregate credentials that are often otherwise siloed across issuers and platforms. When paired with open standards, issuer transparency, and thoughtful design, digital wallets can support greater credential transparency and enable learners to access and use their records without relying on credential issuers. Together, NDCs and digital wallets can serve as foundational infrastructure to enhance economic mobility by elevating skills-based education and workforce training.

This report explores these opportunities and barriers in depth, and provides targeted recommendations and an actionable framework for key stakeholders, including states, employers, institutions of higher education, and end users (the learners) to work toward a cohesive digital wallet ecosystem that is responsive to the needs of learners and employers alike. Rather than telling learners what they need to do, the recommendations in this report recognize that the real work lies with institutions and systems. The report emphasizes that it's the ecosystem—not the learner—that must adapt to ensure non-degree credentials are clear, accessible, and effective. To build this system for learners, stakeholders must prioritize strong design and aligned action.

Each recommendation in this report is anchored in a set of principles—**standardization, equity, usability, and collaboration**—gleaned from interviews conducted with experts across the field, and designed to guide implementation in real-world settings.

DESIGN PRINCIPLES

▸ **STANDARDIZATION:** Establish a shared language and universal quality standards

▸ **EQUITY:** Ensure equitable and affordable access to digital tools and credentials

▸ **USABILITY:** Develop standards to improve workflow interoperability across stakeholders

▸ **COLLABORATION:** Develop an economically-based value proposition for both learners and employers

Based on these design principles, we offer a set of tailored recommendations for key stakeholder groups.

What is a Digital Wallet?

As it relates to Learning and Employment Records (LER), "digital wallet" refers to digital tools that store and share verified records of an individual's learning and employment. The term "digital wallet" clearly conveys the idea of a portable, learner-owned resource that promotes mobility and accessibility in the labor marketplace.

RECOMMENDATIONS

STATES
Invest in digital infrastructure and adopt shared standards

EMPLOYERS
Shift toward the inclusion of skills-based hiring and career advancement, and recognize verified credentials

INSTITUTIONS
Embed NDCs in academic pathways and advising

Collaboration across these groups is essential to create a transparent, inclusive, and future-ready credentialing ecosystem. To transform the credentialing ecosystem, stakeholder-specific actions must be aligned through intentional cross-collaboration. While each stakeholder has a distinct role, only a coordinated approach can break down silos, ensure interoperability, and build a system that is transparent, equitable, and responsive to both learners and labor market needs.

INTRODUCTION
Unlocking the Potential of Digital Wallets and Non-Degree Credentials

To understand the promise and complexity of digital wallets and non-degree credentials (NDCs), it helps to begin with a simple, familiar comparison—one that shows what's possible when systems are truly connected, intuitive, and centered around the user.

The last time Maya moved to a new city, finding a new doctor felt daunting. But this time, it was different. At her first appointment, the doctor simply asked, "Do you have your health record?" Maya nodded, tapped her phone, and within seconds, her electronic health record (EHR) and full medical history—prescriptions, past diagnoses, test results—was in the doctor's hands. No long explanations, no forgotten dates. Just care that started right where the last one left off.

Months later, Maya found herself facing a similar challenge, but in a new context: a job opportunity in a field she'd been training for. This time, however, she was scrambling to pull up transcripts, dig up old certificates, and craft a resume that would fully communicate her skills and experience.

A portable and verified learning and employment record (LER) has the same potential as an EHR. Instead of relying on outdated transcripts or resumes, the learner can present a trusted record to schools, employers, or training providers, navigating opportunities with confidence and control. Much like her health record, Maya's LER could move with her. Wherever she went, it told her story—accurately, confidently, and in her control.

This vision is especially important as non-degree credentials (NDCs)—such as certificates, licenses, micro-credentials, and badges—play an increasingly vital role in expanding access to postsecondary opportunities. NDCs can create pathways to high-wage jobs for learners who traditional systems have historically underserved. Despite their promise, the degree and credential landscape remains fragmented. Learners struggle to identify which credentials hold real labor market value, employers lack consistent signals about skills and competencies, and institutions must navigate an expanding, unregulated marketplace of credential providers.

> ### Evolving Language and Terminology
> The term non-degree credential is widely used—but not without critique. By defining these credentials by what they are not, the label can unintentionally diminish their value. States like Montana and Louisiana are leading the way in adopting more affirming language, such as "validated skills training" or "career-aligned credentials," to better reflect the purpose and impact of these learning pathways. For the purposes of this report, we continue to use the widely adopted term non-degree credentials (NDCs) to ensure clarity and consistency across the field—while recognizing the importance of evolving toward a more asset-based language. As the field evolves, so too should our language.
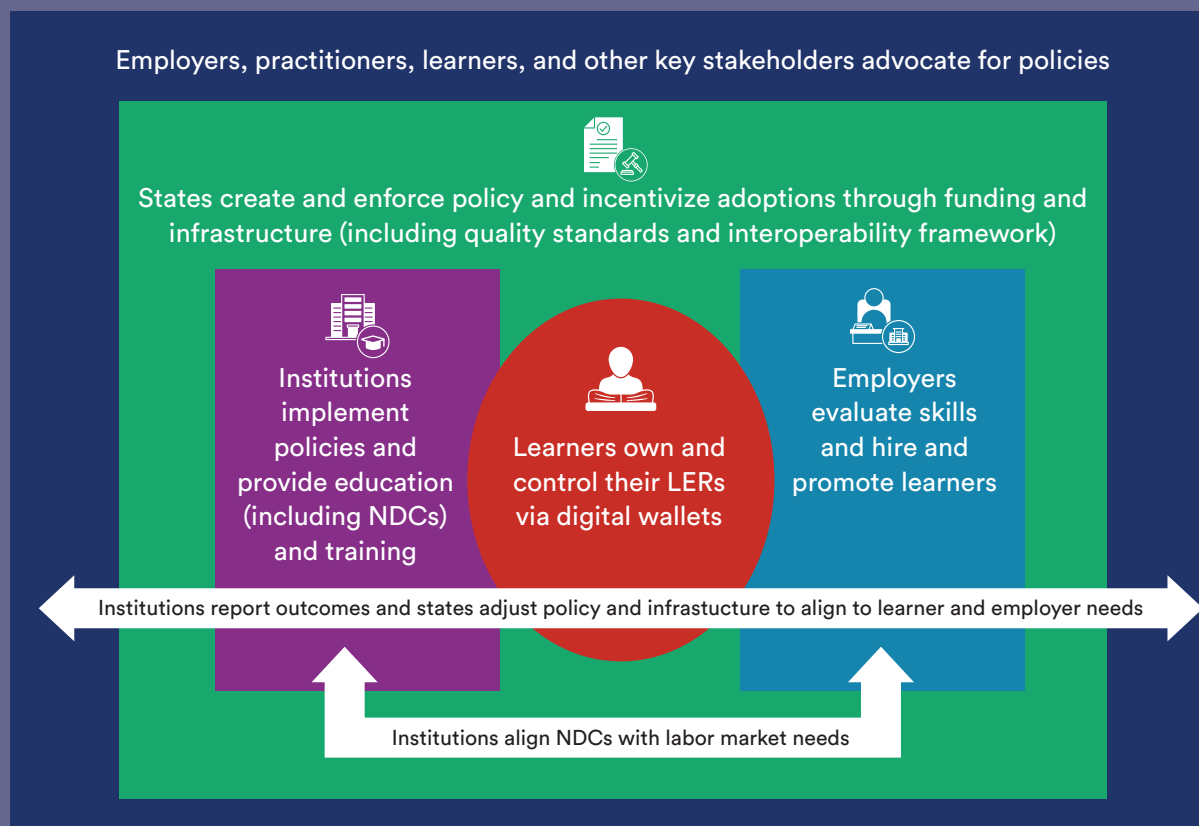
LERs and digital wallets have emerged as promising solutions to address these challenges. By making credentials more transparent, portable, and verifiable, digital wallets help learners demonstrate their achievements, enable employers to match talent to job needs, and raise the bar for credential quality across the education and workforce landscape.

Throughout this report, we use the term "digital wallet" to describe tools that store and share verified learning and employment records. While the field often uses "Learning and Employment Record" (LER) to refer to the verified data itself—whether a single record or an aggregate of records—the digital wallet is the tool that holds and transmits these records. Importantly, the wallet itself is not verified; the *records* it contains are. We favor "digital wallet" for its intuitive, learner-centered framing. Still, the lack of consistent language—and the technical and policy standards that should accompany it—remains a key barrier to scaling these tools equitably. That's why this report centers on public, system-level approaches to digital wallets. Unlike private-sector solutions limited to internal use, public-facing infrastructure has the potential to ensure that every learner, regardless of background or employer, can access and control their verified records.

We explore the current digital wallet ecosystem through insights from learners and practitioners across the field. Alongside promising models—like Alabama's Talent Triad and Colorado's credential quality framework—we surface persistent challenges, such as limited interoperability, uneven employer adoption, and inequitable access in rural and underserved communities.

Finally, we offer a set of actionable recommendations tailored to the key actors shaping this space: states, employers, and institutions. These groups not only influence the adoption of digital wallets and high-quality NDCs—they also stand to benefit the most from a more coherent, equitable, and skills-based credentialing system that supports learners throughout their lifelong career journey.

The Digital Wallet Ecosystem

Employers, practitioners, learners, and other key stakeholders advocate for policies

States create and enforce policy and incentivize adoptions through funding and infrastructure (including quality standards and interoperability framework)

Institutions implement policies and provide education (including NDCs) and training

Learners own and control their LERs via digital wallets

Employers evaluate skills and hire and promote learners

Institutions report outcomes and states adjust policy and infrastructure to align to learner and employer needs

Institutions align NDCs with labor market needs

THE PRACTITIONER LANDSCAPE
Where Progress Meets Friction

States, institutions, and employers are working to integrate non-degree credentials and digital wallets into workforce systems, but differences in language, technical standards, and priorities for outcomes and uses create barriers to success. Additionally, while some states are advancing efforts to make NDCs portable across regions and sectors, others face challenges in aligning credential quality across different geographic and economic contexts.

Over the past few years, practitioners at every level have shifted from talk to action, building tangible systems that bring non-degree credentials (NDCs) and digital wallets to life. In the case studies below, we highlight examples and learnings from Colorado, Alabama, Western Governors University, Motlow State Community College, and others to illustrate how states, institutions, and employers are testing and advancing the use of digital wallets and NDCs in real-world settings.

Behind these headline pilots lies another, more subtle shift: learners are beginning to expect agency over their own records. Hundreds of Hoosiers have the ability to carry their Indiana Achievement Wallets like digital passports—no longer bound to an institution's siloed database but instead able to share verifiable proof of Occupational Safety and Health Administration (OSHA) certifications, bootcamp badges, or even student-government leadership (when provided by issuing institutions/entities) with a simple link. These small but compelling experiments demonstrate that, when designed around real-world use cases, digital wallets and verifiable credentials can leap from proof-of-concept into the hands of everyday learners.


Ongoing work across the field reinforces the importance of building the infrastructure to support high-quality, equitable noncredit pathways. One such initiative is ESG's Noncredit Mobility Academy, launched in partnership with the State Higher Education Executive Officers (SHEEO) Association and Opportunity America at the Progressive Policy Institute. This two-year initiative supports six states—Louisiana, Maryland, Massachusetts, Montana, Texas, and Virginia—as they develop the policy and data systems needed to improve mobility for learners who begin in noncredit programs. The Academy helps states establish shared taxonomies of quality, improve noncredit data collection, align funding strategies, and strengthen public communication about high-value noncredit offerings. This work exemplifies the kind of coordinated, cross-system action needed to ensure that non-degree and noncredit credentials are not just accessible, but meaningful stepping stones to further education and economic opportunity.

Perhaps most importantly, states and institutions are beginning to formalize what constitutes a "credential of value" to guide both learners and employers toward those credentials that offer recognized labor market value. While no national consensus yet exists, frameworks like Alabama's Compendium of Valuable Credentials and Colorado's wage threshold and demand criteria provide useful models for assessing whether a credential delivers real economic opportunity. Additionally, the Credential of Value Index (CVI) developed by the Burning Glass Institute offers a data-driven tool that evaluates the real-world outcomes of over 20,000 non-degree credentials, with the goal of helping users understand which programs lead to wage gains and career mobility. These emerging frameworks are helping shift the focus from simply earning credentials to ensuring they have labor market relevance, industry validation, and career impact to ultimately signal quality to learners, employers, and communities alike. Policymakers, educators, and employers increasingly acknowledge that high-quality NDCs are essential tools for promoting upward mobility, especially for learners historically underserved by traditional degree pathways. Programs aligned with local workforce needs, such as those developed by community colleges and workforce intermediaries, demonstrate how targeted, skills-based credentials can open doors to well-paying jobs. This growing recognition is helping to reposition NDCs as a legitimate and vital part of the education landscape.

Several states are already taking steps to define "credentials of value" by building clear, evidence-based frameworks that identify which credentials are worth learners' time and investment. Education Strategy Group (ESG)'s Building Credential Currency toolkit offers one such resource, providing a practical methodology for K–12, postsecondary, and workforce leaders to identify and scale high-value non-degree credentials. The toolkit outlines a step-by-step approach to define priority credentials based on labor market data, validate them with employers, and incentivize attainment through funding, articulated credit, and strong accountability systems. By using tools like these, states can ensure that credential quality is not left to interpretation but instead rooted in transparent, data-driven criteria that empower institutions, employers, and learners to make informed decisions.

1. Identify High-Value Non-Degree Credentials

2. Validate the Preliminary List of Priority Non-Degree Credentials

3. Incentivize Attainment of Priority Non-Degree Credentials

4. Report on Attainment of Priority Non-Degree Credentials

Finally, a handful of early experiments are testing whether credentials can break free of state and sector boundaries to ensure credentials earned in one context are recognized in others. Efforts led by Accelerate Montana to integrate NDCs into regional workforce strategies, alongside digital wallet pilots focused on rural learners, offer early lessons about the importance of portability across geographies and industries. Although progress is nascent, these experiments point to the potential for cross-state credential recognition to expand economic opportunity.
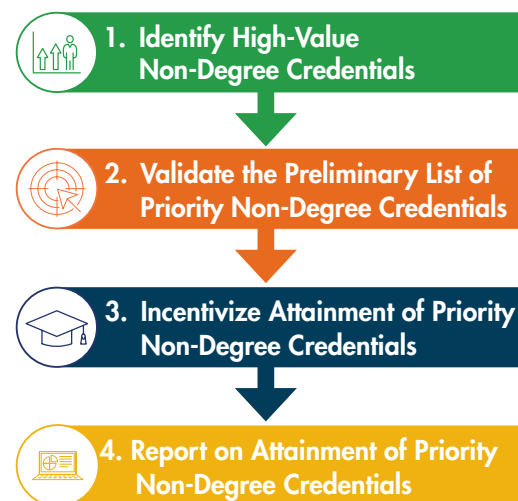
CASE STUDIES
Early Adopters

States, institutions, employers, and learners are experimenting with ways to integrate non-degree credentials and digital wallets into workforce and education systems. Early progress is promising, but gaps in scalability, portability, and quality assurance remain.

STATES

States are playing a critical role in laying the groundwork for a more transparent, portable credentialing ecosystem. Through investments in digital wallets, credential quality frameworks, and skills-based hiring initiatives, several states are working to make NDCs and digital wallets more accessible and valuable for learners and employers alike.

In Alabama, the Talent Triad has evolved from a static registry into a living ecosystem: each certificate, license, and badge is mapped to employer-validated competencies, creating a common vocabulary for learners, educators, and hiring managers alike. Colorado's SkillsFWD funding has propelled a two-pronged strategy, coupling a statewide NDC quality framework that is anchored in wage-threshold data with behavioral-health micro-credentials that flow seamlessly into the MyColorado digital wallet and MyColoradoJourney platform. Meanwhile, states like Indiana are piloting digital wallet initiatives to enable learners to store and share their educational and employment records securely.

Each state's approach reflects its specific economic context, labor market needs, and technological readiness. Yet common themes are emerging: a focus on credential transparency, a drive toward interoperability, and an emphasis on empowering learners to own and leverage their records across education and employment transitions.

CASE STUDY

Expanding Non-Degree Credential Access in Montana's Rural and Tribal Regions

Through the efforts of organizations like Accelerate Montana, the state has focused on broadening access to workforce-relevant credentials, with a particular emphasis on regions where higher education opportunities are limited or unavailable. Montana's efforts are notable for their focus on trust-building and local relevance. Employers in sectors like construction, health care, and information technology have historically relied on close relationships with local training providers, placing a premium on reputation and personal connections over digital verification systems. Recognizing this dynamic, Montana's strategy has focused on strengthening existing community trust while gradually introducing digital credentialing tools.

See the appendix for the full case study on Montana's efforts.

INSTITUTIONS

Higher education institutions are emerging as critical innovators in integrating non-degree credentials and digital wallets. Across the country, institutions are experimenting with ways to embed NDCs into degree programs, create stackable credential pathways, and provide learners with greater ownership over their educational records. Motlow State Community College is weaving non-degree credentials throughout its curricula—from stackable certificates in logistics to badges recognizing soft-skill mastery—so that every learner action becomes part of a portable, enduring record. Institutions like Western Governors University (WGU) are actively issuing verifiable credentials tied to competencies and skills, all aligned with data in the Credential Transparency Description Language (CTDL) and published in the Credential Registry. These efforts are part of a broader shift toward more flexible, skills-based learning models that meet the needs of adult learners, working professionals, and populations historically underserved by traditional higher education systems. In addition to offering digital degrees (e-diplomas), micro-credentials, and certifications through a Unified Credential Framework, WGU is also piloting the expansion of course-level digital credentials to further enhance credential granularity and learner agency.

Institutions face both opportunities and challenges in this work. On one hand, embedding NDCs into degree pathways provides learners with new entry points and stackable options that support lifelong learning and career advancement. On the other hand, institutions must navigate employer skepticism, technical barriers to issuing non-degree credentials, and the need to balance innovation with accreditation and regulatory requirements. From a learner perspective, one of the greatest challenges is the lack of a clear infrastructure for stacking credentials—students often bear the burden of cross-referencing programs themselves to determine what a credential may lead to and what options are available next.

CASE STUDY

Motlow State Community College—Building Homegrown Pathways to Regional Opportunity

Motlow State in Tennessee offers a strong example of how institutions can lead locally driven innovation in non-degree credentialing. Recognizing the growing demand for industry-aligned skills, Motlow has developed a homegrown system that embeds NDCs directly into associate degree pathways. Rather than treating non-degree credentials as standalone offerings, Motlow integrates them as part of a broader learner journey. Students can earn short-term certificates in areas like advanced manufacturing, health care technology, and logistics, each aligned with regional labor market needs, while simultaneously progressing toward an associate degree.

See the appendix for the full case study from Motlow State Community College.

EMPLOYERS

Employers are essential actors in the shift toward skills-based hiring and the broader adoption of NDCs and digital wallets. Across industries, some forward-looking companies and employer coalitions are beginning to experiment with new approaches to talent acquisition, credential recognition, and skills transparency. Employer-facing intermediaries, such as the Dallas Regional Chamber (DRC), the Institute for Workforce Excellence at the Indiana Chamber of Commerce, and the U.S. Chamber of Commerce, are playing a critical role in supporting this shift. By providing training, policy advocacy, and technical support, these organizations are helping employers reframe their hiring strategies around skills and competencies rather than degrees alone.

Across sectors, employers are increasingly acknowledging the limitations of degree-centric hiring practices. Major national employers such as JPMorgan Chase and Bank of America have announced formal shifts toward skills-based hiring models, removing degree requirements for a range of roles. Regional business coalitions are following suit, with initiatives like the DRC's Talent Labs program convening senior HR leaders to rethink how job descriptions and talent pipelines are structured around verified skills rather than degrees alone. However, early efforts suggest that adoption remains uneven. While C-suite and corporate communications often endorse skills-based hiring, day-to-day hiring practices at the local level still default heavily to traditional degree screens. As DRC leaders noted, tactical tools and internal alignment, particularly between HR departments and hiring managers, remain significant barriers to operationalizing skills-based strategies.

Conversations with employers also highlight the importance of framing credentialing innovations around practical talent needs. Leaders at the Institute for Workforce Excellence emphasize that while employers rarely use terms like "LERs" or "micro-credentials" in practice, they are receptive to tools that improve talent acquisition, reduce recruitment friction, and provide clearer visibility into candidate competencies. Successful engagement often starts not with technology adoption, but by demonstrating how non-degree credentials can directly solve pain points around hiring, upskilling, and internal mobility. This insight underscores a critical lesson for broader adoption efforts: systems and platforms must focus on value creation for employers as end users, not just on advancing educational or technical ideals.

CASE STUDY

Dallas Regional Chamber's Talent Labs—Building a Skills-Driven, Learner-Centered Talent Ecosystem

The Dallas–Fort Worth region offers a powerful demonstration of how a metropolitan convener can catalyze collaborative, skills-based talent strategies and elevate the importance of quality non-degree credentials. Through its inaugural Talent Labs cohort (January–June 2025), the Dallas Regional Chamber (DRC) brought together 50 senior talent and HR leaders to co-design and pilot real-world solutions for attraction, retention, and development—anchored in shared regional data, national best practices, and hands-on action planning.

See the appendix for the full case study on the Dallas Regional Chamber's Talent Labs.

LEARNERS

Students and young adults bring essential perspectives to the effort to reimagine non-degree credentials (NDCs) and digital wallets. Yet too often, their real-world experiences with education, credentials, and career transitions are not centered in system design. Focus group discussions with Young Invincibles and Merit America alumni reveal critical gaps in understanding that

point to deeper systemic issues. Many students reported confusion about the credentials they had earned, such as medical certifications or concurrent enrollment credits, and were unsure whether these were industry-recognized, credit-bearing, or meaningful to employers. Much of this uncertainty stems from overly technical or jargon-laden language that fails to resonate with learners. Terms like "stackable," "portable," or even "non-degree credential" were unfamiliar or unclear to participants, leaving them disconnected from the full breadth of opportunities that those credentials might unlock. Often, students only discover the relevance of a credential when applying for jobs or transferring schools, far too late in the process.
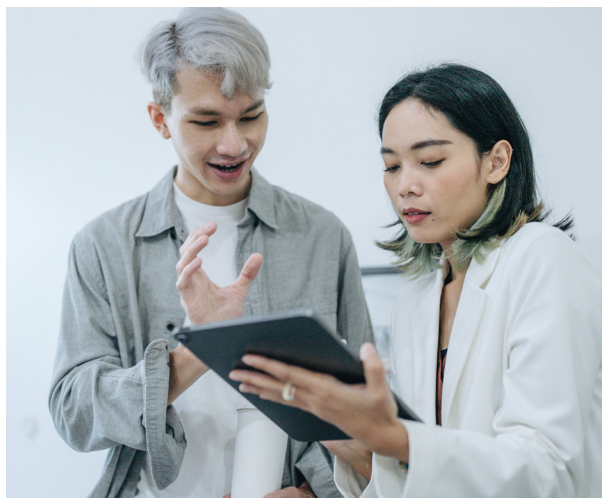
Financial pressures also weighed heavily on students, particularly those from immigrant and working-class backgrounds. Many felt compelled to prioritize short-term return on investment over personal interests, and some expressed concern about the growing perception that a bachelor's degree is no longer enough. This anxiety, paired with unclear credential pathways, contributes to a sense of credential fatigue and confusion. Few students were familiar with digital wallets before the discussion. While the concept of a centralized place to store and share credentials was appealing, participants questioned whether employers and institutions would recognize or use these tools. They emphasized that unless digital wallets are seamlessly integrated into everyday platforms, like job applications or college admissions, they risk becoming just another disconnected tool. Overall, students called for credentialing systems that are not only technically sound, but also clearly communicated and easy to navigate. Their feedback highlights a critical design flaw: if learners can't understand or trust the system, they won't use it, no matter how advanced the technology behind it.

CASE STUDY

Stacking Credentials to Build Opportunity

The experience of Nieves, a learner focus group participant, illustrates both the promise and the friction within current systems. After a decade-long gap in her education, Nieves returned to college and earned multiple certifications under a federal grant program, stacking credentials in Health Information Technology, Medical Administrative Assistance, and Medical Coding. She later re-enrolled to pursue teacher certification.

See the appendix for the full learner experience case study on Nieves.

ROADBLOCKS TO SCALE

Despite promising developments in digital wallets and credential registries, interoperability across systems remains a persistent and serious barrier. The lack of widely adopted data standards means that credential information is often trapped within silos, unable to move fluidly between education providers, workforce boards, and employers' HR systems. As a result, learners are forced to manage and share records manually, undercutting the very promise of learner-centered, portable systems. Until states and national actors coalesce around shared technical frameworks, digital wallets will struggle to scale beyond isolated pilots.

> **Challenges in Scaling Digital Wallet Use**
>
> 1. Lack of Interoperability
> 2. No Common Definition of Credential Quality
> 3. Gaps in Employer Adoption
> 4. Limited Credential Portability

One of the clearest friction points in the ecosystem is the absence of a shared definition of what constitutes a "quality" credential. States like Alabama and Colorado have developed their own frameworks based on labor market outcomes and employer validation, but there is little consistency across states, institutions, or industries. For example, while Alabama prioritizes wage gains and job placement rates, institutions like WGU emphasize competency-based demonstration of skills. Meanwhile, employers, such as those represented by the Dallas Regional Chamber and the Indy Chamber, often prioritize immediacy and usability as indicators of credential quality over formal frameworks. This misalignment creates confusion for learners, who must navigate a patchwork of quality signals without clear guidance. It also slows employer adoption, as hiring managers may not know how to interpret or trust emerging credentials without standardized benchmarks.

Even as states and institutions invest in building digital wallets, a gap persists between what learners are equipped to showcase and what employers are prepared to value. In Montana, for example, employers hiring for skilled trades still heavily rely on personal recommendations and local program reputations rather than digital records. Similarly, even in industries piloting skills-based hiring, such as advanced manufacturing or behavioral health, HR systems are often not designed to parse machine-readable non-degree credentials. Skills transparency doesn't just ease the transition from education to the workforce for learners. Employers stand to benefit from larger pools of qualified applicants whose skills are more narrowly aligned to the vacant role, cost savings in the HR process from more efficient placements, and overall improved retention from direct alignment to the skills of the chosen candidate. Employers may support the *idea* of skills transparency

> **Statewide Growth of Digital Wallets**
>
> ■ Advanced   ■ Intermediate

in theory, but in practice, they still default to resumes, degrees, and traditional proxies when making hiring and promotion decisions. Without major shifts in employer-side systems and stronger incentives for HR departments to recognize credentials—including non-degree and digital credentials, embedded skills and competencies, and self-attested or informally acquired skills from life experiences, military service, volunteerism—learners may invest in these tools only to find limited practical advantage on the job market.
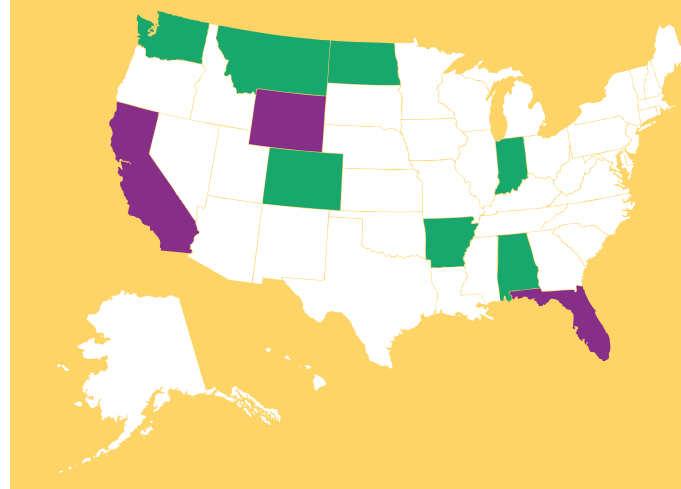
A final barrier is the inconsistent recognition of non-degree credentials across regions, industries, and employers. For example, a health care micro-credential earned at a Colorado community college may be highly valued within Colorado's behavioral health system, but not recognized by employers in neighboring states. Similarly, credentials tied to specific workforce needs in Montana's rural labor markets, such as certain construction certificates or early childhood education credentials, may have little portability outside the region. The lack of cross-sector and cross-geography credential portability undermines one of the core promises of digital wallets: enabling learners to move flexibly across careers and geographies with trusted proof of their skills. Without stronger mechanisms for credential recognition across jurisdictions, workers remain trapped in localized markets and lose out on broader economic opportunities.

Recommendations to Bridge Gaps in Digital Wallets and Credentials

The case studies above highlight encouraging momentum across states, institutions, employers, and learners—but they also surface persistent challenges that hinder widespread adoption, scalability, and impact. The recommendations that follow are designed to address these pain points and amplify what's working in the field. They elevate the most promising elements of the case studies—from integrated statewide systems to institutional innovation and learner input—and translate them to a set of concrete, actionable strategies.

To maximize impact, NDCs and digital wallets must reflect the principles of standardization, equity, usability, and collaboration. Importantly, these recommendations offer a roadmap for aligning efforts across key stakeholders—ensuring that states, institutions, employers, and learners are all working together to build a transparent, equitable, and skills-based education-to-workforce ecosystem. The recommendations that follow are not aimed at learners themselves; rather, they reflect the belief that the burden of navigating complex, fragmented systems should not fall on end users. Instead of prescribing what learners must do, these strategies focus on how systems must change to better serve them.

Standardize Language for Non-Degree Credentials	⟷	Emphasize Accessibility, Affordability, and Equity in Credentialing	⟷	Activate User-Centered Design and Promote Career Advising
EFFECTIVE NDC-DIGITAL WALLET SYSTEM				

To realize the full potential of non-degree credentials and wallets, they must be more than interoperable—they must be intuitive, trusted, and widely adopted. Learners, employers, and educators need clear reasons to use these tools over traditional methods like resumes or LinkedIn. When designed with user-friendliness and equity in mind, non-degree credentials can offer a more transparent, portable, and inclusive way to capture and communicate skills—especially for those historically left out of traditional hiring and education pathways. Realizing this vision requires action on three fronts:

RECOMMENDATION 1

STANDARDIZE LANGUAGE FOR NDCs AND DIGITAL WALLETS

The current credentialing landscape is fragmented and confusing. Key terms like "certificate," "badge," "industry-recognized credential," and even "digital wallet" or "Learning and Employment Record (LER)" are jargon-heavy and also used inconsistently across states, institutions, and employers. These field-specific terms (and the inconsistencies in how they are used) make it difficult for learners to understand which credentials matter, for employers to interpret what credentials signal, and for systems to interoperate. It also limits adoption and trust, particularly among those who stand to benefit most from a skills-first, credential-enabled system.

States, credentialing bodies, and national organizations should work together to develop and adopt a shared taxonomy and language for non-degree credentials and digital wallets. This includes defining credential types, establishing quality indicators tied to wage and employment outcomes, and using accessible, consistent terminology in both policy and practice. Institutions should align their programs and advising around this language, while employers and platforms incorporate it into job postings, verification systems, and training. Standardized language will improve transparency, comparability, and trust across the ecosystem. It will help learners make informed decisions, enable institutions to clearly signal program value, and give employers confidence in the credentials they use to evaluate prospective employees. Ultimately, it lays the groundwork for a more connected, skills-based education-to-employment system.

RECOMMENDATION 2

EMPHASIZE ACCESSIBILITY, AFFORDABILITY, AND EQUITY IN CREDENTIALING

While non-degree credentials and wallets offer enormous promise, their benefits are not evenly distributed. Access remains a barrier for working adults, rural communities, opportunity youth, and learners of color. Additionally, learners can face barriers like a lack of reliable internet access, digital literacy support, or tools designed with their lived experiences in mind. At the same time, the growing number of credential providers—many operating outside of traditional quality assurance systems— risks flooding the market with offerings of uncertain value. This puts additional pressure on K–12 schools and postsecondary institutions to help learners navigate an increasingly complex and unequal ecosystem.

States and institutions must build equity into the design of credentialing systems from the ground up. This includes funding and scaling mobile, low-cost, and multilingual platforms to ensure access; embedding culturally responsive delivery models; and integrating clear guidance on how credentials stack and translate into further education or employment. Disaggregated data must be collected and acted upon to address disparities. States should also establish mechanisms to vet and approve credential providers based on transparent equity and quality criteria. Embedding equity and accessibility in credential design will ensure that all learners—regardless of geography, background, or income—can access and benefit from high-value credentials. It will also create greater consistency and accountability in the rapidly expanding credential marketplace, enabling institutions and states to focus resources on what truly works. Over time, this will build a more inclusive credentialing system that supports economic mobility and workforce diversity.

RECOMMENDATION 3
ACTIVATE USER-CENTERED DESIGN AND PROMOTE CAREER ADVISING

Even the most powerful credential tools won't succeed if learners don't understand how to use them. Today, digital wallets often operate in isolation from the systems learners and jobseekers already engage with—like academic advising, career coaching, or workforce development programs. Advisors and institutions frequently lack the training or infrastructure to incorporate these tools into daily practice, and learners are left without clear guidance on how to interpret or apply the credentials they earn. **Digital wallets must be integrated into the broader system of learning and career navigation. Institutions, workforce agencies, and platform providers should work collaboratively to embed digital wallet access and support into onboarding, advising, and job placement systems. States should provide funding and incentives for training advisors, case managers, and career coaches to use and promote digital wallets. Employers should also partner with institutions to ensure these tools align with real hiring needs and workflows.**

When learners can access, understand, and use their credentials through platforms that are intuitive and trusted, adoption and impact will grow. Embedding digital wallets in advising systems and career pathways will empower users to make informed decisions, showcase their skills, and navigate complex education and employment landscapes with confidence. This will help scale usage and reinforce the value of digital wallets as essential infrastructure, not just digital repositories, for equitable talent development.

ACTION STEPS
Implementing Recommendations Across Stakeholders

To make our recommendations actionable and dismantle the silos fragmenting today's credentialing landscape, we've distilled three core strategies for key stakeholders: States, Employers, and Institutions. While each group has distinct responsibilities, their efforts must be synchronized and mutually reinforcing. Too often, states set policy without employer input, institutions innovate in isolation, and learners are left to navigate disconnected systems. This fragmented approach slows adoption, undermines trust, and limits the potential of digital wallets and non-degree credentials to deliver real value.

That's why, with each recommendation, we outline not only stakeholder-specific actions but also cross-sectoral activities designed to build shared language, interoperability, and accountability. These collaborative actions are critical to aligning systems, clarifying credential value, and ensuring learners can move seamlessly across education and employment pathways. **Realizing these recommendations—and scaling high-quality NDCs via interoperable digital wallets—demands coordinated progress on policy, technology, hiring practices, and learner engagement.**

ACTION STEPS FOR RECOMMENDATION 1

STANDARDIZE LANGUAGE FOR NDCS AND DIGITAL WALLETS

FOR STATES:

▸ Convene key stakeholders including employers and institutions to develop shared language and interoperability standards across agencies.

▸ Develop and adopt clear quality standards for NDCs that include and go beyond wage, demand, and growth thresholds.

▸ Adopt and publish a common credential and wallet taxonomy across all agencies.

▸ Engage platform/vendor partners, where applicable, as part of cross-agency efforts to implement shared taxonomies and interoperability standards. Encourage providers to align with state-adopted credential and wallet frameworks to ensure consistency and scalability across systems.

FOR EMPLOYERS:

▸ Partner with education and workforce organizations to co-design credentials and validate their relevance.

▸ Advocate for industry-wide adoption of transparent, skills-based hiring frameworks.

▸ Map job descriptions and hiring criteria to a comprehensive skills and credentials taxonomy that enables alignment across local, state, and national labor markets.

FOR INSTITUTIONS:

▸ Work with faculty to identify trusted credential providers that meet rigorous standards and lead students to good jobs or pathways to continued education and training. In many cases, the institution itself can serve as a non-degree credential provider and should embed high-quality credentials directly into the curriculum to enhance relevance and learner outcomes.

▸ Ensure alignment between credential programs and real workforce needs, informed by employer partnerships.

▸ Align program catalogs and course outlines to the shared credential framework.

▸ Develop comprehensive certification to credit crosswalks to ensure earned credentials lead students to quality employment opportunities and ongoing longer-term education and training.

▸ Tag every NDC with the standardized skill and credential labels.

▸ Engage platform/vendor partners to support the integration of shared taxonomies and interoperability standards into institutional systems (e.g., SIS, LMS, CLR/ELR tools).

WORKING TOGETHER:

We recommend that states convene standing cross-sector bodies—including representatives from employers, education and training providers, and learner advocacy groups—to meet regularly and collaboratively refine definitions, onboard new credentials, and coordinate updates. While this structure does not yet exist in most places, it offers a practical model for implementing shared language and standards.

▸ JOINT GLOSSARY PORTAL: A single, public-facing website—curated by state and institutional partners, seeded with employer examples—where everyone can explore, compare, and ask questions about NDC and wallet terminology.

▸ ENCOURAGE CROSS-STATE COLLABORATION: To promote broader consistency, neighboring states could align their cross-sector efforts and glossary frameworks. States are uniquely positioned to lead this work, serving as conveners across regions to support credential portability, reduce duplication, and accelerate adoption of shared standards.

ACTION STEPS FOR RECOMMENDATION 2

EMPHASIZE ACCESSIBILITY, AFFORDABILITY, AND EQUITY IN CREDENTIALING

FOR STATES:

▶ Create or expand digital wallet infrastructure that integrates digital wallets and supports credential portability through linked learning objectives and skills taxonomies.

▶ Incentivize cross-sectoral partnerships between education and workforce to ensure training and credential quality and align NDC offerings with labor market demand through hosted convenings.

▶ Support equitable, affordable access by investing in technology infrastructure and learner outreach, especially for underserved communities.

FOR EMPLOYERS:

▶ Adopt new hiring practices such as skills-based job descriptions, credential-aware applicant tracking systems, or structured skills assessments to recognize and value NDCs and skills captured through digital wallets.

▶ Provide feedback to states and institutions on the quality and utility of NDCs and digital wallets based on their use and participation with these systems.

FOR INSTITUTIONS:

▶ Embed high-quality NDCs into degree and non-degree pathways to provide flexible, stackable options for learners.

▶ Empower learners to understand the value of NDCs and how to use digital wallets to demonstrate their skills through existing student coaching and mentoring structures.

WORKING TOGETHER:

▶ Create feedback opportunities through focus groups or surveys where learners can share their experiences navigating non-degree credentials and digital wallets with the state or institution managing the digital wallet system in order to inform continuous improvement.

ACTION STEPS FOR RECOMMENDATION 3
ACTIVATE USER-CENTERED DESIGN AND PROMOTE CAREER ADVISING

FOR STATES:

▸ Ensure that digital wallet systems are designed with learner privacy, transparency, and control at the center through strong data governance standards.

▸ Align state career-navigator platforms with institutional and employer systems so learners see one unified dashboard.

FOR EMPLOYERS:

▸ Open your ATS (applicant-tracking system) for pilot integrations with digital wallet platforms.

▸ Co-host "real skills" workshops where hiring managers review learner portfolios live, giving candid feedback.

FOR INSTITUTIONS:

▸ Integrate digital wallet navigation and use into academic advising, career navigation services, and employer engagement strategies.

▸ Train faculty and staff on how to support learners in building and using digital wallets effectively.

WORKING TOGETHER:

▸ Build a joint, annual event—co-sponsored by state workforce boards, employer coalitions, and institutions—where learners come to map career paths, build wallets on the spot, and get rapid feedback from all three sectors.

CONCLUSION
The Path Forward

The evolving work landscape demands a more responsive, transparent, and equitable approach to recognizing learning and skills. Non-degree credentials and digital wallets offer powerful tools to make learning visible, skills portable, and career mobility more accessible. But realizing this vision requires more than new technologies or one-off programs—it demands ecosystem-level change.

This report has explored the promise of NDCs and digital wallets through case studies, emerging practices, and the perspectives of learners, educators, and employers. What emerges clearly is that our current system is too fragmented. Learners are burdened with navigating a maze of credentials. Employers struggle to trust what those credentials mean. Institutions face pressure to innovate without consistent guidance or shared standards. States are investing in infrastructure, but without full coordination across key stakeholders. Our recommendations bridge these divides by aligning definitions, validating credential quality, building public infrastructure, and empowering learners with tools and information.

The examples in this report demonstrate that progress is possible when stakeholders work together. However, this progress is fragile without sustained collaboration, shared accountability, and a common vision for change. Now is the time for action. States must lead in building the connective tissue across systems. Employers must shift from passive consumers of talent to active co-creators of credential ecosystems. Institutions must reimagine their role as both providers of learning and stewards of equitable opportunity. Learners must be recognized not just as recipients of credentials but as agents of their own career mobility. The future of equitable access to economic opportunity depends on our collective ability to break down silos and scale what works. The call is clear: Let's build the system learners deserve—together.

Let's unite—states, employers, institutions, and learners—to build transparent, equitable systems that align with real workforce needs, innovate relentlessly through research and policy to sharpen the value of NDCs and digital wallets, and break down silos so every credential is portable, clear, and trusted, empowering people and powering economies.

APPENDIX
Case Studies

EXPANDING NON-DEGREE CREDENTIAL ACCESS IN MONTANA'S RURAL AND INDIGENOUS COMMUNITIES

Montana offers a compelling example of how a rural, community-centered state is approaching the integration of non-degree credentials and digital wallets. Through the efforts of organizations like Accelerate Montana, the state has focused on broadening access to workforce-relevant credentials, with a particular emphasis on regions where higher education opportunities are limited or unavailable. Montana's efforts are notable for their focus on trust-building and local relevance. Employers in sectors like construction, health care, and information technology have historically relied on close relationships with local training providers, placing a premium on reputation and personal connections over digital verification systems. Recognizing this dynamic, Montana's strategy has focused on strengthening existing community trust while gradually introducing digital credentialing tools.

A key area of innovation has been the state's engagement with tribal colleges and indigenous communities. Recognizing the unique barriers faced by learners in indigenous communities, including limited broadband access, skepticism toward centralized data systems, and a strong emphasis on local validation of skills, Accelerate Montana and its partners have worked to tailor credentialing initiatives to indigenous culture and contexts. This includes offering mobile training units to remote areas, designing programs in collaboration with indigenous leaders, and exploring culturally responsive ways to integrate digital learner records.

While Montana's work remains early-stage, it highlights critical lessons for the broader field:

▶ **Deliver innovation through trusted local partners.** Montana's experience shows that learners and employers engaged more meaningfully with credentialing tools when they were introduced by familiar, community-based institutions and trusted workforce providers, rather than external or unfamiliar systems.

▶ **Prioritize mobile and low-barrier credential access.** In rural and indigenous communities, infrastructure challenges like broadband limitations require credentialing systems to meet learners where they are. Montana's use of mobile training units and flexible, hybrid delivery models helped expand the reach and reduce participation barriers.

▶ **Design credential systems that respect local context.** Efforts to promote digital learner records and credential transparency must recognize cultural, historical, and community-specific dynamics. Montana's work emphasized that building trust, not just introducing technology, is essential to equitable adoption.

▶ **Center learner and employer needs over technology adoption.** Montana's approach demonstrates that success depends not on technology alone, but on solving real problems for learners and employers. Digital solutions must fit into existing trust networks, career pathways, and local economic needs.

Montana's experience suggests that rural and indigenous communities can be powerful innovators in the credentialing ecosystem, provided that systems are designed with their unique needs and strengths at the center.

MOTLOW STATE COMMUNITY COLLEGE— BUILDING HOMEGROWN PATHWAYS TO REGIONAL OPPORTUNITY

Motlow State in Tennessee offers a strong example of how institutions can lead locally driven innovation in non-degree credentialing. Recognizing the growing demand for industry-aligned skills, Motlow has developed a homegrown system that embeds NDCs directly into associate degree pathways. Rather than treating NDCs as standalone offerings, Motlow integrates them as part of a broader learner journey. Students can earn short-term certificates in areas like advanced manufacturing, health care technology, and logistics, each aligned with regional labor market needs, while simultaneously progressing toward an associate degree. This approach ensures that every credential a learner earns has both immediate workforce value and long-term educational stackability. Motlow's model is rooted in close collaboration with regional employers. Through advisory boards, industry partnerships, and continuous feedback loops, the college ensures that its credential programs reflect real-time labor market demands. This helps both learners and employers see the relevance of NDCs, building trust in the credentialing process.

In addition to curriculum innovation, Motlow is exploring ways to give learners greater agency over their records. By embedding competencies into student information systems and exploring opportunities for digital credentialing, the college is laying the groundwork for future integration of digital wallets, ensuring that learners can carry verifiable proof of their skills as they navigate education and employment opportunities.

Motlow's experience highlights several key lessons:

▶ **Stackability matters.** Integrating NDCs into degree pathways creates flexible on- and off-ramps for learners.

▶ **Employer engagement must be continuous.** Programs must evolve alongside regional labor market shifts.

▶ **Homegrown innovation is powerful.** Institutions do not have to wait for national solutions to begin building systems that better serve learners.

DALLAS REGIONAL CHAMBER'S TALENT LABS— BUILDING A SKILLS-DRIVEN, LEARNER-CENTERED TALENT ECOSYSTEM

The Dallas–Fort Worth region offers a powerful demonstration of how a metropolitan convener can catalyze collaborative, skills-based talent strategies and elevate the importance of quality non-degree credentials. Through its inaugural Talent Labs cohort (January–June 2025), the Dallas Regional Chamber (DRC) brought together 50 senior talent and HR leaders to co-design and pilot real-world solutions for attraction, retention, and development–anchored in shared regional data, national best practices, and hands-on action planning.

A key area of innovation in Talent Labs has been its use of standardized Talent Briefs, practical capstone action plans, and strong cross-sector partnerships. Each session opens with a consistent set of Dallas-area labor-market metrics and skills-demand trends, exemplifying this report's call for a commonly shared language and benchmarks. Participants workshop live organizational challenges— such as redesigning job descriptions for frontline retention or launching AI-powered onboarding pilots—under the guidance of DRC facilitators and Jobs for the Future (JFF) experts, iterating their Talent Action Plans at every convening.

While still early in its first cycle, Talent Labs highlights several lessons for regional talent innovation:

▸ **Establish shared data standards.** Standardized Talent Briefs create a common frame of reference, enabling consistent diagnosis of skills gaps and benchmarking across organizations.

▸ **Embed accessible opportunity from the outset.** Workshops on cultural competency and job-design audits ensure that talent strategies actively address barriers for underchampioned groups.

▸ **Prioritize usability with action-oriented tools.** Capstone-style action plans function like portable portfolios, translating strategic concepts into immediately implementable roadmaps.

▸ **Leverage strategic partnerships.** The DRC–JFF collaboration combines local convening power with national research and coaching, amplifying resource access and expertise.

▸ **Limit cohort size for deep engagement.** A 50-participant cap fosters trust, candid sharing of proprietary challenges, and heightened accountability for pilot follow-through.

Dallas Regional Chamber's Talent Labs suggests that when regional conveners operationalize standardization, accessibility, usability, and collaboration, they can create scalable talent ecosystems, transforming cohort-based learning into measurable improvements in attraction, retention, and workforce development.

STACKING CREDENTIALS TO BUILD OPPORTUNITY

The experience of **Nieves,** a learner focus group participant, illustrates both the promise and the friction within current systems. After a decade-long gap in her education, Nieves returned to college and earned multiple certifications under a federal grant program, stacking credentials in Health Information Technology, Medical Administrative Assistance, and Medical Coding. She later re-enrolled to pursue teacher certification and participated in the Young Invincibles Young Advocates Program. While pursuing a teaching career, Nieves is a strong advocate for parent learners, first-generation students, and other underrepresented communities in higher education.

For Nieves, stacking credentials opened doors that traditional pathways had not. Earning multiple certifications allowed her to re-enter the workforce and build skills in a flexible, incremental way that fit her life circumstances. However, she also faced significant challenges transferring credits between states and institutions, encountering inconsistent recognition of her prior learning and difficulties demonstrating the cumulative value of her non-degree credentials. Her story highlights both the transformative potential of NDCs and the urgent need for systems that make skill acquisition transparent, portable, and broadly recognized.

Nieves' experience surfaces several key lessons that should guide future system design:

▸ **Stackable credentials create real access points,** especially for adult learners balancing work, family, and other responsibilities. When structured thoughtfully, they offer flexible on- and off-ramps to education and employment.

▸ **Recognition across systems and geographies is critical.** Without consistent frameworks for recognizing non-degree credentials, learners risk having their achievements diminished or invalidated as they move between institutions, regions, and employers.

▸ **Navigational support and credential transparency matter.** Learners need clear information upfront about how credentials stack, how they are valued in the labor market, and how they can be applied toward future educational or employment goals.

▶ **Learner trust in digital tools depends on real-world utility.** Unless digital wallets and learning and employment records are integrated into academic or training programs as well as actual hiring and transfer processes, they risk being perceived as additional administrative hurdles rather than empowering resources.

Nieves' story highlights that while the path forward is complex, centering learner realities offers the best blueprint for designing a system that works.

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