

Written Testimony on Learning and Employment Records

Hearing on Building a Talent Marketplace: How LERs Empower Workers and Expand Opportunity

US House of Representatives

Subcommittee on Higher Education and Workforce Development

Presented by Alex Kaplan

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Chairman, Ranking Member, and distinguished members of the Subcommittee, thank you for the opportunity to testify today about Learning and Employment Records.

Over the past decade my professional work has centered on using advanced technologies which can make it easier to connect learners with jobs. Having recently retired from IBM, I am advising the American Association of Collegiate Registrars and Admissions Officers on the creation of a national infrastructure to support Learning and Employment Records. In addition, I am advising them on the application of Artificial Intelligence in helping learners better navigate their careers and employers find the talent they need. I should note that in 2018, I presented to the American Workforce Policy Advisory Board on behalf of IBM - a presentation that helped catalyze the coalition efforts I describe today. I speak today based solely on my technical expertise and commitment to expanding workforce opportunity.

Seven years ago, as one of IBM's representatives on the American Workforce Policy Advisory Board (AWPAB), I spoke at the White House about a path to a vision: that the technology existed for American workers to own a dynamic, lifelong record of their learning and work achievements which could be instantly verified and shared. And that this record would make it easier for people to understand their career options and connect with jobs. Today, that vision is in reach and is spreading across the United States. The AWPAB catalyzed many organizations to collaborate on the nuts and bolts of bringing the vision to life.

As one of the experts on LER, I am here today to share my perspective on the current state of LERs and the path forward. I will discuss what Learning and Employment Records are, why they

matter, the private sector's interest in LERs, how Artificial Intelligence impacts LERs, the importance of data privacy and interoperability, and suggestions for how to proceed.

The Basics of LERs and Why They Are Important

I'm going to start with a story about Maria, which illustrates why Learning and Employment Records are essential infrastructure for a skills-based economy. After serving in the military, Maria started college, but family circumstances prevented her from finishing her degree. She's been working in retail for ten years—managing inventory systems and analyzing sales data. She has developed exactly the skills needed for supply chain analyst positions to advance her career. But her resume just says, "retail associate," and fails to communicate any of the relevant she learned during her military service or from her incomplete college work. All an employer sees is her job title, retail associate, which tells only a fraction of her story and is not going to get her the job. She is stuck and her skills are invisible.

The lack of skills information on Maria's resume puts her in the company of more than 70 million¹ American workers whose skills were earned through alternative routes. This includes the 36 million who have some postsecondary education but no credential². Because these Americans lack a traditional four-year degree or a skills-based credential, challenges in making their competencies visible hinder career advancement. LERs are designed to solve that problem. With an LER, Maria will be able to demonstrate the skills needed to be considered a serious candidate for the job.

Maria's LER transforms how employers see her qualifications. Her secure, skills-rich digital credential showcases her competencies gained from education, work experience, and military service. A job title alone cannot convey the breadth of skills she has learned. With an LER, employers will be able to verify her skills, match them precisely to skills needed for the position,

¹ U.S. Chamber of Commerce Foundation, "Solving Challenges Around Learning and Employment Records with SkillsFWD," January 19, 2024.

² National Student Clearinghouse Research Center, "Some College, No Credential Student Outcomes: Annual Progress Report," 2024.

and discover qualified candidates they might otherwise have overlooked. The LER makes Maria's full capabilities visible—revealing skills that would otherwise remain hidden.

By surfacing verified skills across a lifetime of learning, LERs empower people, like Maria, with information they can use to take a more active and informed role in navigating their careers. The LER helps them evaluate opportunities aligned to their abilities, understand the skill gaps they have and identify the right pathways to close those gaps. For employers it opens the aperture to qualified candidates they may have overlooked and creates a better qualified candidate pool. For our economy, this means leveraging millions of skilled workers currently under-utilized by outdated hiring practices.

LERs provide agency for the individual and employer, enabling career mobility based on proven skill and ability, not pedigree.

Why LERs are important

America has approximately 169 million workers³, 6 million employers⁴, over one million unique credentials⁵ from 60,000 providers⁶, 27,000 apprenticeship programs⁷, and 4,000 institutions of higher education⁸ issuing over four million degrees annually⁹. All the talent management systems that support this complexity operate in silos with almost no ability to communicate with each other about the skills and qualifications an individual has or employers' need. It's a lot of complexity, very difficult to navigate, and impedes the flow of people in and out of both jobs and schools across their entire career journey. I've had direct experience with this complexity over the course of my career, and I found it to be a frustrating mess. I'm sure most of you and your families have had the same experience.

The results of this complexity are measurable: workers struggle to demonstrate their full capabilities, and employers struggle to identify qualified candidates. This contributes to the skills

³ U.S. Bureau of Labor Statistics, "Employment Situation Summary," November 2024.

⁴ U.S. Census Bureau, Statistics of U.S. Businesses (SUSB).

⁵ Credential Engine. Credential Engine press release, December 7, 2022

⁶ Credential Engine. Credential Engine press release, December 7, 2022

⁷ U.S. Department of Labor, Employment and Training Administration.

⁸ National Center for Education Statistics lists approximately 3,900-4,000 degree-granting institutions

⁹ NCES Condition of Education 2023, Digest of Education Statistics 2023

mismatch we see in today's labor market, where we have both unfilled jobs and underemployed workers. Despite 7.2 million job openings¹⁰ in the U.S., many positions remain unfilled because employers cannot efficiently identify candidates with the right credentials and skills. Studies show that 87% of employers struggle with these skills gaps¹¹, yet the fragmented credentialing system makes it difficult for employers to verify and understand workers' qualifications. The U.S. skills credential gap alone is expected to cost \$2.5 trillion over the next decade¹².

This complexity is particularly acute as learners navigate increasingly non-linear educational journeys that often span multiple institutions, employers, life experiences, and learning environments. Traditional models of credit recognition fall short in capturing the full picture of what today's learners know and can do. The American Association of Collegiate Registrars and Admissions Officers' (AACRAO) Learning Mobility¹³ initiative is focused on providing the ability for everyone to have one's full range of knowledge and experience recognized, valued, and transferred as one moves through education and employment. This offers a compelling alternative that centers learners, values their complete learning journey, and builds efficient pathways through higher education and their careers. LERs extend this vision beyond education into employment, providing the infrastructure that makes Learning Mobility possible at scale and enabling seamless transitions between learning and work.

Imagine if all this complexity could be reduced: how many more jobs could be filled, people promoted and resources redirected toward workforce development and career mobility rather than navigating fragmented credentialing and talent recruitment systems?

Private Sector Interest and What LERs Can Do for Employers

The private sector is aware of this complexity and cost and isn't waiting for the government to solve the problem. 81% of employers globally now use skills-based hiring, with 95% agreeing it will be the dominant method of the future¹⁴. And the momentum is accelerating: 25% of

¹⁰ U.S. Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS). August [2025].

¹¹ McKinsey & Company, "A New Future of Work: The Race to Deploy AI and Raise Skills in Europe and Beyond," 2023

¹² Deloitte and The Manufacturing Institute, "2018 Deloitte Skills Gap and Future of Work Study," 2018

¹³ AACRAO. (2025). *Learning mobility: Empowering educational journeys beyond traditional pathways*.

¹⁴ TestGorilla, "The State of Skills-Based Hiring 2024 Report," June 2024.

companies have already dropped or plan to drop degree requirements for certain positions¹⁵, 77% of business leaders now prioritize work experience and demonstrated skills over formal education¹⁶, and nearly half of employers are working to eliminate bachelor's degree requirements¹⁷.

Why this Shift is Happening

Employers are eliminating degree requirements because they are an imperfect proxy¹⁸ for job fit, exclude half to two-thirds of workers, impede access to a broader talent pool, and are not good predictors of job success¹⁹. But without degrees as a screening tool, employers need another way to verify capabilities. That's exactly what LERs provide—verified so we know it's true and granular evidence of what someone actually knows and can do, regardless of where they learned it. Companies want to hire based on skills, but they need trustworthy ways to verify those skills. LERs are an important part of the solution for trustworthy and verifiable skills.

How LERs Create Value for Employers

LERs address two fundamental challenges employers face: identifying the right talent and doing so efficiently.

Consider two graduates with the same degree title—perhaps both have bachelor's degrees in business administration. Despite sharing the same credential, they may have left their programs with vastly different levels of knowledge and ability. One might have focused on data analytics and completed multiple internships, while the other concentrated on marketing theory with minimal practical experience. Traditional resumes and transcripts don't reveal these distinctions. LERs solve this problem by allowing employers to see not just what someone studied, but what

¹⁵ Intelligent.com, Reported by CBS News, July 23, 2024.

¹⁶ <https://www.naceweb.org/talent-acquisition/trends-and-predictions/nearly-two-thirds-of-employers-use-skills-based-hiring-practices-for-new-entry-level-hires>

¹⁷ "65 key skills-based hiring statistics for 2025," December 30, 2024; also cited in SSR's "100+ Recruitment Statistics Every HR Should Know in 2025

¹⁸ Burning Glass Institute and Harvard Business School, "The Emerging Degree Reset" (2024) Google's Laszlo Bock, SVP for People Operations

¹⁹ Chamorro-Premuzic, T., "Does Higher Education Still Prepare People for Jobs?" Harvard Business Review (2019); Van Iddekinge et al., "Work experience poor predictor of future job performance," Personnel Psychology (meta-analysis of 80+ studies)

they can actually do. This granular view helps employers distinguish between candidates based on demonstrated skills, not just degree pedigree. The result is a more accurate assessment of fit and capability.

The expanded aperture LERs provide employers allow them to find talent in new places. Rather than filtering candidates by whether they attended certain schools or hold specific degrees, employers can search verified skill profiles that reveal capabilities regardless of where they were acquired. A self-taught programmer with verified competencies becomes visible alongside a computer science graduate. A veteran with logistics training can be matched to supply chain roles. Workers with skills developed on the job—like Maria managing inventory systems—can finally demonstrate their true capabilities. This broader lens helps employers access a more diverse pool of qualified candidates they might otherwise have overlooked.

The operational benefits are equally compelling. Today's hiring process is painfully slow and expensive, taking an average of six weeks and costing thousands of dollars per hire. Much of this time and expense goes toward manual verification—calling universities to confirm degrees, checking references, and trying to assess whether someone's resume actually reflects their capabilities. LERs eliminate this verification burden. Because the credentials are digitally signed and cryptographically verifiable, employers can instantly confirm their authenticity. This streamlined process can significantly reduce both hiring timelines and costs.

Forward-thinking employers are also using LERs for internal mobility—mapping their existing talent and identifying employees who are ready for advancement but might be overlooked by managers who only see job titles. When a company needs someone with specific skills for a new project or promotion, LERs make it possible to discover hidden talent already on the payroll, rather than defaulting to external hiring.

The Artificial Intelligence Accelerant

Eighty-seven percent of hiring managers now use AI in recruitment²⁰. Some companies report receiving four times more applications than two years ago²¹ because AI makes it trivially easy for candidates to apply to hundreds of jobs. At the same time recruiters are less confident than ever about finding the right people amid this flood.

AI presents challenges and opportunities as it transforms the talent marketplace in three profound ways. First, it's creating a crisis of trust—employers drowning in AI-generated applications can't distinguish authentic capability from polished presentations, while job seekers don't trust AI screening systems that reject qualified candidates based on under-trained AI matching algorithms. This mutual distrust undermines the entire hiring ecosystem. Second, it's making skills-based hiring both possible and necessary, as AI can match skills to jobs far better than humans, if it has verified skill data at scale to work with. Third, it's accelerating skill obsolescence, making static credentials like degrees less relevant than dynamic records of current work and learning, while at the same time opening the door to new and powerful ways to recognize and make skills more important than ever.

This is why LERs aren't just helpful—they're essential infrastructure for the AI age. They solve the verification problem, provide the structured data AI systems need to create good algorithms, and enable workers to document current skills rather than relying on credentials that may be years out of date. By creating a trusted, interoperable system for skill verification, LERs address all three challenges simultaneously. Without LERs, AI in hiring will perpetuate and amplify existing complexities. With LERs, AI can deliver on its promise of simpler and more efficient talent matching. For Maria, an AI system with access to verified LER data would identify how her military logistics experience translates to the supply chain role she'd like to get—a match that under-trained screening algorithms might miss.

²⁰ DemandSage, "AI Recruitment Statistics 2025 (Worldwide Data & Insights)" (June 2025); All About AI, "AI Recruitment Statistics 2025: Adoption, Automation & Market Trends" (August 2025)

²¹ Workday Workforce Report (2024), cited in Fortune, "Job applications in 2024 four times higher than new openings" (September 19, 2024)

Imagine a world where the job finds you, rather than submitting hundreds of resumes into a void and hoping to get picked. Wouldn't that be great?

Real-World Evidence

LER use is not theoretical – it's already happening across America and momentum is building.

Many states are leading the way in the process of implementing comprehensive LER initiatives. As an example, Alabama²² launched a statewide skills-based talent marketplace in 2024, connecting learners, educational institutions, and employers through verified digital credentials. This marketplace serves all residents, across nineteen state agencies. Connecticut, Arkansas, Tennessee, Kentucky and California have similar initiatives. In addition, over twenty-five states have removed degree requirements²³ for public sector jobs, potentially opening opportunities for millions of qualified workers who lack four-year degrees but possess the necessary skills.

The private sector is also moving forward. IBM, Walmart, and other major employers are already issuing and accepting LERs for hiring and workforce development. Even the federal government has begun this transition. The Department of Defense has piloted LER systems for service members transitioning to civilian careers, and federal agencies are experimenting with skills-based hiring approaches.

This momentum is building, but congressional action can accelerate these efforts to scale nationally with proper standards, interoperability, and privacy protections.

²² Competency-Based Education Network (C-BEN), "Building a Talent Marketplace: A Playbook for States" (2024); Alabama Governor's Office, Alabama Talent Triad Official Launch (December 6, 2023); WorkShift.org, "Alabama Bets Big on a Talent Marketplace" (May 8, 2024)

²³ Justin Heck, Blair Corcoran de Castillo, Peter Q. Blair, and Papia Debroy, "Tearing the Paper Ceiling: The Impact of State Commitments to Remove Degree Requirements on Public Awareness and Job Opportunities for STARs," NBER Working Paper 33220 (December 2024); National Governors Association, "Empowering Progress: Harnessing Skills-Based Strategies to Drive Public Sector Excellence" (February 2025)

The Critical Importance of Data Privacy and Interoperability

As we build this infrastructure, two principles must be non-negotiable: privacy and interoperability.

Learner Sovereignty: Privacy as Foundation

An essential feature of LERs is that individuals own and control their achievement records—learner sovereignty²⁴. This isn't just good policy—it's their data and they should control it. LERs place learners at the center, empowering them with ownership of their data on skills and achievements, regardless of whether acquired through formal education, work experience, or other pathways. In practice, this means individuals will control their credential and skill data and decide what to share, with whom, and when.

LERs are fundamentally different from other data systems where institutions or platforms control individual information—LERs invert that model. Unlike traditional transcript systems or proprietary platforms, LERs are distributed and interoperable. The national infrastructure will be a distributed and interoperable network which enables all this to occur, without any central repository of information.

Why Interoperability Is Non-Negotiable

For LERs to reach their potential, they must work seamlessly across different systems, platforms, and organizational boundaries. Without interoperability, we create a fragmented landscape of incompatible systems that defeats the entire purpose. Already we are struggling with interoperability between states, business and education institutions. A credential issued by an Alabama community college may not be readable by a Kentucky employer's hiring system, and a worker's verified skills from IBM may not transfer to their university transcript.

The initiatives underway make it clearer than ever that they must be interoperable. People move around.

²⁴ Digital Promise, "Empowering Learners: Learner Sovereignty over their Micro-credential Data" (February 22, 2024); Digital Promise, "The Promise of LER Technology" (September 28, 2022).

The good news is that the technical foundation and standards for interoperability already exist. Over the past seven years a coalition of non-profits, universities, think tanks, business, government and philanthropies have been working on the interoperability problem²⁵. Think of this technical foundation as the plumbing that makes everything work together, similar to how credit cards from any bank work at any merchant. Federal support for the LER standards can accelerate adoption and ensure we build one national system, not fifty state silos.

The Role of Governance

Technical interoperability alone is insufficient. We also need governance structures to establish trust in who can issue credentials, how privacy is protected and how the ecosystem is governed fairly and transparently. This includes establishing trust frameworks for credential issuers, creating accountability mechanisms for data privacy, and ensuring access to infrastructure for all stakeholders. The model envisioned is industry-governed through multi-stakeholder standards bodies and locally controlled much like credit cards. No single entity owns the infrastructure, but common standards allow everyone to participate.

The good news is that this governance model is working today. The coalition of non-profits, universities, think tanks, businesses, government, and philanthropies focused on LERs has organically evolved over the past seven years. As an example, the US Chamber of Commerce Foundation's Talent, Technology, and Transparency (T3) Innovation Network, launched in 2018, focuses on a fundamental workforce challenge: the lack of a modern, transparent infrastructure for sharing information about people's skills, education, and work experiences. Similarly, the American Workforce Policy Advisory Board (AWPAB)²⁶, established in 2018 by President Trump, brought together industry, education, and government leaders to develop recommendations for modernizing workforce credentials. All these types of initiatives have focused on the need and capability to create a national LER system. Continuing Federal

²⁵ The T3 Innovation Network, launched in 2018 by the U.S. Chamber of Commerce Foundation and Lumina Foundation, now includes over 500 organizations. Technical standards have been developed by the World Wide Web Consortium (W3C), 1EdTech, Credential Engine, and others. The American Association of Collegiate Registrars and Admissions Officers LER Acceleration Coalition launched to accelerate the adoption of LERs (2024, April 17).

²⁶ American Workforce Policy Advisory Board, "Call to Action for Learning and Employment Records" (2020); White House, "Final Report to the President of the United States" (June 2020)

leadership for these LER initiatives and coalitions can strengthen it, legitimize the structure, and provide additional resources to accelerate the LER work.

The Challenges of LERs

Broadscale adoption of LERs is not without its challenges. We must establish robust verification to prevent credential fraud and secure them against fraudulent use. We must protect against surveillance and misuse of credential data - ensuring that learner sovereignty isn't just a principle, but a technical reality enforced through distributed architecture and strong data governance. We must ensure digital LERs don't create new barriers for people without the resources or ability to use digital credentials. We must monitor both for algorithmic bias in AI-powered matching and ethical use of AI. And we must support workers, employers and institutions through the transition. These concerns are manageable, have been thought through and approaches are available to address them. But we shouldn't pretend these concerns don't exist.

Despite these challenges, the alternative—maintaining our current fragmented, inefficient system—is far more costly. These are implementation and governance challenges, not insurmountable barriers. With proper coordination and multi-stakeholder governance, we can address each of these concerns while building the infrastructure American workers desperately need.

Suggestions

Guiding Principles

The guiding principles behind my suggestions to the Subcommittee are:

- *Data Connectivity — A Living Ecosystem:* LER work is not about static dashboards or visualizations. It's about building a distributed living network of data systems that reinforce each other. This living network forms the foundation of a dynamic talent ecosystem powering talent marketplaces and supporting getting talent in the right place at the right time.

- *Validation of Skills — Trust Through Data Integrity:* The true value of an LER lies in two things: verified data and validated demonstrations of skill attainment. These records are only as credible as the authenticity and quality of the data behind them. This is particularly important as AI assumes an ever larger role in the talent ecosystem.
- *Interoperability — Enabling Real Mobility:* LERs only have impact when they are usable. If locked inside proprietary systems, they provide little value to learners, workers, or employers. Every individual should be able to tell a complete and portable story of their skills and experience.

I suggest Federal action in three areas:

Federal Leadership

1. Encourage Skills-Based Hiring in Federal Employment so the federal government leads by example.
2. Convene the organizations that have led LER development over the past seven years to advise the federal government on the path forward.

Infrastructure

3. Support collaborative investment to scale the LER infrastructure establishing the foundation for a robust and impactful LER ecosystem.
4. Employment reporting at the state and federal level is foundational to both LERs and the artificial intelligence models increasingly driving most decision making in the talent ecosystem.
5. Privacy is foundational to establishing trust for those using LERs. Users need to know that their data is owned and controlled by them and that only they are empowered to make it available.
6. Promote interoperability through standards adoption to ensure the technical backbone for a distributed national infrastructure can do its job, much like the way credit cards and ATMs work.

Enabling Adoption

7. Modernize regulations by removing barriers to the use and issuance of all sorts of credentials and employment information, the key to the quality of the LER record.
8. Invest in education and awareness about both the potential and challenges of LERs
9. Encourage private sector entrepreneurship and innovation so that we get improved services and solutions that make the entire talent ecosystem work better for everyone involved.

Conclusion

Seven years ago, the bipartisan AWPAB concluded that American workers deserve to own and control their learning and employment records. They were right. That vision is now within reach. The infrastructure is tested and ready to scale. The coalition has done the work. States and employers are starting to implement LER solutions. What's needed now is the accelerant of federal leadership to achieve nationwide adoption with the right governance, standards, and privacy protections.

The choice before us is clear: we can build a verified credential infrastructure that enables AI to expand opportunity for millions of Americans, or we can allow AI to perpetuate the inefficiencies of our current talent ecosystem.

Let's return to Maria. In the future we are creating, LERs where Maria owns her records of skills earned. Her credentials and skills paint a complete picture of how she would be successful in the analyst position. The recruiting firm saw she was a great match for the position and valued the skills she built from her military service, college courses, and life experience.

This helped Maria get the job. Her LER revealed capabilities her resume alone never could. The employer found Maria, an unexpected find given her background, as the best candidate. Seventy million Americans with non-traditional backgrounds deserve the same chance to show what they can do.

My colleagues and I are building a real solution for real people. We are passionate about this work, and it's already made a difference.

I urge this Subcommittee to help us build the national capability that can support all the Marias out there to realize their ambitions and get the job they want.

Thank you, and I welcome your questions.

Appendix

I. THE BASICS OF LERS AND WHY THEY ARE IMPORTANT

What is a Learning and Employment Record (LER)?

A Learning and Employment Record is a digital system that contains verifiable information about a person's achievements spanning education, training, and workplace experience²⁷. It is also an enabling innovation which removes barriers to economic mobility.

In September 2025, the Proposed Priority and Definitions—Secretary's Supplemental Priority and Definitions on Career Pathways and Workforce Readiness²⁸ formally defined a Learning and Employment Record as:

"A digitally secured, interoperable, comprehensive record of an individual's formal and informal learning and workforce achievements, which may include credentials, competencies, projects, work experiences, and other verified information that can be shared and verified in a privacy-preserving manner across educational institutions, employers, and other authorized parties."

Unlike traditional resumes or transcripts, LERs are:

- **Verifiable:** Digitally signed and cryptographically secure, allowing instant verification without contacting the issuer.
- **Comprehensive:** Documenting learning and work experience wherever it occurs—from formal degree programs to workplace training, military experience, apprenticeships, online courses, and community-based learning.
- **Granular:** Revealing specific skills and competencies, not just degrees, course titles or job positions.

²⁷ As defined by IEEE Learning Technology Standards Committee, LERs are "an open standards-based, machine-actionable, digital record of an individual's formal and informal learning and employment that is constructed as a World Wide Web Consortium (W3C) Verifiable Credential (VC or equivalent) that can be combined with other digital records useful in supporting an individual's education, employment, and supportive services.

²⁸ <https://www.federalregister.gov/documents/2025/09/25/2025-18639/proposed-priority-and-definitions-secretarys-supplemental-priority-and-definitions-on-career>.

- Portable: Controlled by the individual and shareable across platforms and systems.
- Machine-readable: Enabling automated matching, analysis, and integration with hiring and education systems

According to the American Workforce Policy Advisory Board's (AWPAB) 2020 white paper²⁹, LERs can "seamlessly record, verify, transmit, and interpret information about learning achievements between learning institutions, businesses, and individuals."

The Problem LERs Solve

Our current credentialing and talent system is fragmented and inadequate for the rapidly changing needs of the modern workforce. Traditional methods fail to:

- Capture the full range of skills and competencies workers acquire through diverse learning pathways.
- Provide easy verification of employment, credentials and competencies.
- Enable portability across and between jobs and educational institutions.
- Communicate what workers actually know and can do, versus where they studied or the position they held with an employer.

Consider the scope of this challenge: America has approximately 169 million workers³⁰, 6 million employers³¹, over one million unique credentials³² from 60,000 providers³³, 27,000 apprenticeship programs³⁴, and 4,000 institutions of higher education³⁵ issuing over four million degrees annually³⁶. All the talent management systems that support this complexity operate in silos with almost no ability to communicate with each other about the skills and qualifications an individual has or employers' needs. It's a lot of complexity, very difficult to navigate, and impedes the flow of people in and out of both jobs and schools across their entire career journey.

²⁹ www.commerce.gov/sites/default/files/2020-05/AWPABCcalltoActionFINAL051520.pdf

³⁰ U.S. Bureau of Labor Statistics, "Employment Situation Summary," November 2024.

³¹ U.S. Census Bureau, Statistics of U.S. Businesses (SUSB).

³² Credential Engine. Credential Engine press release, December 7, 2022

³³ Credential Engine. Credential Engine press release, December 7, 2022

³⁴ U.S. Department of Labor, Employment and Training Administration.

³⁵ National Center for Education Statistics lists approximately 3,900-4,000 degree-granting institutions

³⁶ NCES Condition of Education 2023, Digest of Education Statistics 2023

Recent data from Credential Engine confirms that while over one million digital credentials³⁷ are currently offered in the United States, there remain significant barriers to adoption and employer recognition. Workers struggle to prove what they know and can do in efficient ways. Verified data about learning and work histories remain scattered across institutions, employers, and third-party aggregators³⁸.

The Social and Economic Imperative

The need for LERs has continued to grow as all parties' experience vulnerabilities in our labor market matching systems. According to the AWPAB's "Call to Action" report from May 2020³⁹: "American workers deserve to own a dynamic and lifelong record of their learning and work experiences and achievements that can be instantly verified and shared directly and easily with educational institutions and employers."

LERs address several critical workforce challenges:

1. Skills Gap: According to the National Governors Association "many states have zeroed in on learning and employment records—essentially digital resumes with verified records of people's skills, educational experiences, and work histories as a way of making pathways to good careers accessible to a wider segment of the workforce and opening up new pools of talent for employers". Technology will play a key role for LERs enablement of skills-based hiring that looks beyond traditional degree requirements to identify capable candidates.
2. Economic Mobility: For the 62% of working-age Americans without four-year degrees⁴⁰, LERs provide a pathway to demonstrate skills acquired through alternative routes—work experience, apprenticeships, military service, community college, and online learning.
3. Labor Market Efficiency: The Society for Human Resource Management⁴¹ reports that the average time to fill a position is 42 days with an average cost per hire of \$4,129. LERs can dramatically reduce these timelines and costs by better candidate matching

³⁷ https://credentialengine.org/wp-content/uploads/2023/01/Final-CountingCredentials_2022.pdf.

³⁸ <https://credentialengine.org/credential-transparency/>.

³⁹ <https://trumpwhitehouse.archives.gov/pledge-to-americas-workers/>.

⁴⁰ <https://www.thirdway.org/report/worlds-apart-the-non-college-economy>.

⁴¹ www.shrm.org.

made possible by insights into both the candidate's skills and competencies and the requirements for success in the job.

4. Bias in Hiring: Skills-based hiring supported by LERs can reduce bias in hiring by focusing on demonstrated competencies rather than proxies like institution names or traditional credentials or AI bias, opening more opportunities for all.
5. Youth Workforce Development: Digital Promise and other K-12 focused organizations are also pioneering LER applications for young learners. Through micro-credentials and competency-based learning records, students can begin building verifiable achievement records during their school years, creating seamless education-to-career pathways. These early credential systems help students explore career interests, demonstrate readiness for advanced coursework or early college programs, and connect classroom learning to real-world applications.

The National Governors Association and National Association of Counties have recognized LERs as essential infrastructure for "advancing a skills-driven workforce" that creates "more ... efficient hiring."

Exemplars of Federal Policy Foundations

The federal government has established important policy foundations for LER adoption. As an example, the National Cyber Workforce and Education Strategy⁴² (NCWES), released in July 2023, explicitly calls for modernizing learning and credentialing systems to address critical cybersecurity workforce gaps. The NCWES recognizes that traditional degree-based hiring cannot keep pace with the dynamic cybersecurity threat landscape and recommends skills-based approaches supported by verifiable digital credentials.

Key NCWES recommendations relevant to LERs included:

- Expanding the use of skills-based assessments and alternative credentials in federal cybersecurity hiring
- Supporting industry-recognized certification programs with verifiable digital credentials

⁴² Office of the National Cyber Director. National Cyber Workforce and Education Strategy: Unleashing America's Cyber Talent. Executive Office of the President, 31 July 2023.

- Creating pathways from K-12 and community college programs into cybersecurity careers through competency-based progression
- Investing in infrastructure to verify and validate skills acquired through diverse learning pathways

The cybersecurity workforce represents a test case for LER implementation, with over 700,000 unfilled positions nationwide and urgent national security implications. Success in this sector could accelerate adoption across other high-demand fields.

II. THE AI IMPERATIVE: AI AND LERs

The Rapid Transformation of Hiring Through AI

Eighty-seven percent of hiring managers now use AI in recruitment⁴³. Some companies report receiving four times more applications than two years ago⁴⁴ because AI makes it trivially easy for candidates to apply to hundreds of jobs. At the same time recruiters are less confident than ever about finding the right people amid this flood.

This AI transformation extends directly into higher education, where institutions are preparing students for an AI-mediated labor market. According to Ellucian's 2024 AI in Higher Education Survey⁴⁵ of 445 administrators, AI adoption in higher education has surged 2.3-fold in just one year—from 26% of respondents in 2023 to 61% in 2024 reporting use of AI for both personal and professional purposes. Perhaps most striking, 93% of higher education administrators anticipate their use of AI for work purposes will increase over the next two years.

Organizations implementing AI-powered hiring report dramatic results: time-to-hire reductions of 30-75%, hiring cycle acceleration of 25%, and cost savings of approximately 30% through reduced reliance on external recruiters⁴⁶. AI systems can now scan millions of candidate profiles in seconds, conduct initial screening interviews through conversational interfaces, analyze video interviews for both content and communication patterns, and use predictive analytics to forecast candidate success and retention.

Higher Education's Parallel AI Adoption

The parallel adoption of AI within higher education institutions creates both opportunity and urgency for Learning and Employment Records infrastructure. Eighty percent of higher

⁴³ DemandSage, "AI Recruitment Statistics 2025 (Worldwide Data & Insights)" (June 2025); All About AI, "AI Recruitment Statistics 2025: Adoption, Automation & Market Trends" (August 2025)

⁴⁴ Workday Workforce Report (2024), cited in Fortune, "Job applications in 2024 four times higher than new openings" (September 19, 2024)

⁴⁵ <https://lp.ellucian.com/ai-innovation-survey.html#:~:text=Artificial%20intelligence%20is%20no%20longer,%2C%20enrollment%20management%2C%20and%20marketing.>

⁴⁶ Corea, G., & Kumar, P. (n.d.). The evolving role of AI in recruitment and retention. Society for Human Resource Management (SHRM) Labs. <https://www.shrm.org/labs/resources/the-evolving-role-of-ai-in-recruitment-and-retention>

education administrators report adopting AI primarily to boost efficiency and productivity across institutional functions. Predictive analytics has emerged as the most valued AI capability, with 48% of administrators identifying it as having the greatest positive impact on their departments—a 15 percentage point increase over the previous year⁴⁷.

This enthusiasm for predictive analytics directly intersects with the LER vision. Administrators expect significant increases in the use of predictive models for enrollment (85% expecting increase), student success (83% expecting increase), and advancement (77% expecting increase) over the next two years. These predictive capabilities can only be as effective as the quality and standardization of the data that feeds them—creating a compelling case for verified, interoperable credential data.

The Growing Trust Deficit and Data Quality Imperative

However, this AI revolution has created significant verification challenges and growing concerns. As AI makes it increasingly easy for candidates to generate polished applications, resumes, and cover letters, employers face a mounting trust deficit. Eighty-eight percent of hiring managers believe they can detect when candidates use AI to craft application materials⁴⁸, though other research shows that while 60% of hiring managers believed they could identify AI-generated materials, 75% were actually unable to do so in blind testing⁴⁹, creating a troubling dynamic—an arms race between AI-generated applications and AI-powered screening tools, with neither employers nor candidates confident in the authenticity of presented credentials.

Within higher education, parallel concerns are escalating⁵⁰:

- **Data Privacy:** 59% of administrators express concerns about data security and privacy related to AI use—up from 50% the previous year

⁴⁷ Ellucian. (2024). *AI in Higher Education: Understanding the present and shaping the future* [Survey report]. <https://www.ellucian.com/assets/en/infographic/ai-higher-education.pdf>

⁴⁸ Insight Global. (2024). *2025 AI in Hiring Survey Report*. <https://insightglobal.com/2025-ai-in-hiring-report/>

⁴⁹ Software Finder. (2024). *AI and the job search: 75% of job seekers using AI to apply*. <https://softwarefinder.com/resources/ai-and-the-job-search>

⁵⁰ Ellucian. (2024). *Ellucian's AI survey of higher education professionals reveals surge in AI adoption despite concerns around privacy and bias*. <https://www.ellucian.com/news/ellucians-ai-survey-higher-education-professionals-reveals-surge-ai-adoption-despite-concerns>

- **Algorithmic Bias:** 49% are concerned about bias in AI models—up from 36% the previous year
- **Academic Integrity:** 78% of administrators expect AI to have a negative impact on academic integrity
- **Critical Thinking:** 53% anticipate negative impacts on critical thinking skills

The trust deficit is measurable beyond campus: 66% of American adults report they would not apply for a job that uses AI to make hiring decisions⁵¹. This hesitancy reflects legitimate concerns about algorithmic bias, loss of human judgment, and the inability to showcase unique qualities that don't fit standard patterns.

The Skills-Based Hiring Convergence

Simultaneously, American employers are undergoing a second major shift: the movement toward skills-based hiring. Major employers including Google, Apple, and IBM, Walmart and many others have eliminated degree requirements for numerous positions, recognizing that valuable skills can be acquired through multiple pathways. Survey data shows that 74% of hiring managers believe AI can effectively assess the compatibility of an applicant's skills with specific positions⁵².

This convergence—AI-powered hiring tools meeting skills-based hiring practices—creates both tremendous opportunity and urgent challenges. The UpSkill America study⁵³ commissioned by Western Governors University with support from the Gates Foundation provides crucial insight into employer needs. Through interviews with hiring managers across multiple industries, researchers found that while employers view digital credentials positively as signals of growth mindset and self-improvement, they struggle with three critical challenges:

⁵¹ Rainie, L., Parker, K., & Igielnik, R. (2023). *AI in hiring and evaluating workers: What Americans think*. Pew Research Center. <https://www.pewresearch.org/internet/2023/04/20/ai-in-hiring-and-evaluating-workers-what-americans-think/>

⁵² Insight Global. (2024). *2025 AI in Hiring Survey Report*. <https://insightglobal.com/2025-ai-in-hiring-report/>

⁵³ Glover, H. (2024). *Employer insights on digital credentials and skills profiles: Lessons learned*. UpSkill America, The Aspen Institute. <https://www.aspeninstitute.org/publications/employer-insights-on-digital-credentials-and-skills-profiles-lessons-learned/>

First, they lack clarity on how to interpret and validate what digital credentials indicate about a person's actual knowledge and skills. **Second**, they find the lack of uniformity among digital credentials problematic, making it difficult to evaluate credibility and value. **Third**, they have not developed systematic approaches to integrate these credentials into existing hiring systems and applicant tracking platforms.

Why LERs Are Essential Infrastructure for AI-Powered Systems

The AI revolution in both hiring and higher education can only reach its full potential with access to high-quality, verified data about competencies. AI systems are only as good as the information they process. When these tools rely on traditional resumes—which are unstructured, unverified, and often incomplete—they are hampered in making accurate matches or reducing bias.

However, when AI can access standardized, verified digital credentials through Learning and Employment Records that reliably signal specific competencies, it can:

- Surface qualified candidates from non-traditional pathways who would be filtered out by degree-based screening
- Focus on demonstrated skills rather than proxy indicators like institutional prestige
- Reduce bias by evaluating objective, verified competencies rather than subjective resume language
- Enable more sophisticated skills matching that identifies transferable competencies across roles
- Power the predictive analytics that higher education institutions increasingly rely upon for enrollment, student success, and workforce alignment

Learning and Employment Records are therefore not merely a solution to problems created by AI—they are a prerequisite for AI to deliver on its promise of a more inclusive and efficient labor market and education system. Without standardized, verifiable digital credentials:

- AI hiring tools will continue to rely on traditional proxies like degree prestige, perpetuating existing inequalities
- Employers will struggle to distinguish authentic competencies from AI-generated fabrications
- Workers who develop skills through non-traditional pathways will remain invisible to automated screening systems
- The efficiency gains from AI will be undermined by a fundamental trust deficit
- Higher education institutions will be unable to leverage predictive analytics effectively for student success and workforce alignment

The Support and Infrastructure Gap

Despite growing enthusiasm, significant barriers remain. Among higher education administrators, the top institutional barriers to AI adoption mirror the challenges facing LER implementation⁵⁴:

- Limited understanding of the technology (44% cite this barrier)
- Cost of implementation (41%)
- Data security and privacy concerns (54%)
- Need for training and support (70% want training on AI and its applications)
- Inadequate budget and resources (57% cite this need)

These parallel challenges suggest that federal policy supporting LER infrastructure would simultaneously address critical needs in the AI adoption ecosystem. By establishing verified credential infrastructure, federal investment would enable both more effective AI-powered talent matching and the trustworthy data systems that higher education institutions need to leverage AI responsibly.

⁵⁴ Ellucian. (2024). *AI in higher education: Understanding the present and shaping the future* [Survey report]. <https://www.ellucian.com/assets/en/infographic/ai-higher-education.pdf>

Industry analysis indicates that digital credentials backed by cryptographic verification have become increasingly important in the talent marketplace, enabling real-time skills verification. The technology exists to verify competencies instantly and securely. However, without standardized frameworks and interoperable systems these tools cannot reach their potential.

The question is not whether verified digital credentials will become essential—both the labor market and higher education have already answered that question. The question is whether the United States will develop this infrastructure deliberately and in the public interest, or whether we will allow a fragmented, proprietary system to develop that leaves millions of workers behind while failing to provide the data quality necessary for effective AI deployment.

This is why LERs are urgent NOW.

III. PRIVATE SECTOR MOMENTUM AND REAL-WORLD EVIDENCE

Growing Private Sector Momentum

Private sector interest in LERs has accelerated dramatically. Recent surveys and initiatives demonstrate this momentum:

- According to TestGorilla's "State of Skills-Based Hiring 2024⁵⁵" report:
- 81% of employers globally now use some form of skills-based hiring, with 95% agreeing it will be the dominant recruitment method of the future.
- Technology and finance sectors lead adoption, with 88% of tech companies and 87% of finance companies implementing skills-based hiring practices.
- The T3 Innovation Network⁵⁶ (an initiative of the U.S. Chamber of Commerce Foundation) has grown to over 1,500 individuals and organizations working to advance LER adoption.

What LERs Can Do for Employers

When properly implemented, LERs offer substantial benefits to employers:

1. More Efficient Talent Identification

LERs enable employers to search across verified skill profiles rather than relying on imperfect proxies like resumes, degree pedigree, years of experience or non-verified employment history. Using LERs a hiring manager looking for specific technical competencies can identify candidates who possess those skills regardless of how they acquired them. As one practitioner noted at the 2025 Digital Credentials Summit, LERs help employers "save resources by finding and verifying the best candidates with data algorithms" and "identify talent based on what people know and can do."⁵⁷

⁵⁵ TestGorilla. (2024, June). *The state of skills-based hiring 2024*. <https://www.testgorilla.com/skills-based-hiring/state-of-skills-based-hiring-2024/>

⁵⁶ U.S. Chamber of Commerce Foundation. T3 Innovation Network. www.t3networkhub.org/

⁵⁷ 1EdTech. (2025). *Digital credentials*. <https://www.1edtech.org/workstream/credentials>

2. Reduced Time and Cost to Hire

By eliminating manual verification processes and enabling automated skills matching, LERs can significantly reduce the 42-day average hiring timeline. Verified credentials eliminate the need for time-consuming background checks on educational credentials.

3. Skills-Based Internal Mobility

LERs aren't just for external hiring. Forward-thinking employers use them to map internal talent and identify employees ready for promotion or lateral moves. This supports workforce planning and employee retention by creating visible career pathways. As documented in the AWPAB pilot with Walmart⁵⁸, the company used LERs to showcase retail workers' skills and "unlock opportunities" for advancement. Walmart associates could share their learning achievements with managers through digital wallets, enabling recognition of progress and internal mobility.

4. More Effective Upskilling and Reskilling

LERs help employers identify skills gaps in their workforce and design targeted training programs. When employees can see clear pathways from their current skills to advancement opportunities, they become more engaged in professional development.

5. Enhancing the effectiveness of the AI Revolution in Hiring

The AI revolution in hiring can only reach its full potential if it has access to high-quality, verified data about candidate competencies. AI systems are only as good as the information they process. When these tools rely on traditional resumes—which are unstructured, unverified, and often incomplete—they cannot make accurate matches or reduce bias effectively. However, when AI can access standardized, verified digital credentials that reliably signal specific competencies, it can surface qualified candidates from non-traditional pathways and focus on demonstrated skills rather than proxy indicators like institutional prestige. Learning and Employment Records are therefore not merely a solution to problems created by AI—they are a prerequisite for AI to deliver on its promise of a more inclusive and efficient labor market.

Exemplars of Skills and Workforce Aligned Verification Initiatives

Large-scale partnerships are demonstrating the practical application of LER technology at scale:

SkillsFWD Initiative

In 2023, Rockefeller Philanthropy Advisors, with support from Ascendium Education Group, the Charles Koch Foundation, Strada Education Foundation, Walmart, and other funders, launched SkillsFWD⁵⁹—a bold initiative to advance skills-based hiring and economic mobility through the development and application of digital learning and employment records (LERs). SkillsFWD issued six inaugural grants in December 2023 to fund projects focused on solving challenges around the adoption and accessibility of LERs:

1. Alabama Talent Triad Pathways - Leveraging Alabama workforce systems
2. Accelerate Montana's Validated Skills - Piloting statewide LER infrastructure connecting learners, education providers, and employers
3. Direct Care and Behavioral Healthcare - Addressing urgent talent shortages by using LERs to efficiently match skills and talent to opportunity
4. SchooLinks Early Career Talent Matching - Powering new modes of early career talent and employer matching at scale via LERs
5. Student Worker Employment for Skills-Based Success - Empowering students to gain meaningful employment through a scalable LER-driven job marketplace
6. Scaling the Skills-Based Workforce System (LER Initiative): Expands the state's skills-based hiring ecosystem, leveraging Learning and Employment Records to bridge the skills gap, foster better employment practices, and set a scalable model for nationwide workforce development.

According to SkillsFWD, LERs will help create systems where "skills become the language that is the basis for hiring," providing a comprehensive picture of workers' knowledge and abilities

⁵⁸ American Workforce Policy Advisory Board. (2020). *Call to action for learning and employment records* [White paper]. U.S. Department of Commerce. <https://www.commerce.gov/sites/default/files/2020-09/LERwhitepaper09222020.pdf>

⁵⁹ Rockefeller Philanthropy Advisors. (2023, December 7). *SkillsFWD awards six inaugural grants* [Press release]. <https://www.skillsfwd.org/newsandinsights/skillsfwd-awards-six-inaugural-grants>

that helps employers identify the best candidates for roles. However, challenges remain. A September 2024 Brookings Institution⁶⁰ analysis noted that "only 15% of HR Professionals say they can hire using digital credentials," due to issues with recruitment technology adoption and validity concerns. A 2024 study by UpSkill America⁶¹ (commissioned by Western Governors University with support from the Gates Foundation) found that while "employers view digital credentials as a positive signal of a prospective or current employee's growth and self-improvement mindset," they struggle with "the broad variety of digital credentials available and don't know how to equate a specific credential to a specific skill set and then to a specific job." The Aspen Institute has observed that employers are "not engaged at all" or have "only been marginally consulted" in development of many LER products.

Exemplars of Major State-Level Implementations

1. Alabama Talent Triad

Alabama has created a comprehensive skills-based talent marketplace that launched its TalentPlaybook⁶² which went statewide in Fall 2023. The Playbook has three integrated components: the Alabama Credential Registry for transparent credentials, a Skills-Based Job Description Generator for employers, and the Alabama College and Career Exploration Tool (ACCET) which serves as Alabama's digital wallet for Learning and Employment Records.

Key features:

- Uses the Alabama Occupational Ontology as competency-based "DNA" that enables job seekers and employers to be matched based on alignment of skills, with the LER valued by employers because it eliminates cumbersome background checks and offers discrete information about what candidates know and can do.
- Alabama considers this a "population-level solution" and believes it to be the nation's first talent marketplace, with strategies focused on competency-based learning and skills-based hiring⁶³.

⁶⁰ www.brookings.edu/articles/exploring-the-disconnect-digital-credentials-and-employer-demand/

⁶¹ UpSkill America, *Employer Insights on Digital Credentials and Skills Profiles: Lessons Learned*, commissioned by Western Governors University with support from the Bill & Melinda Gates Foundation (October 2024), <https://www.aspeninstitute.org/wp-content/uploads/2024/10/UpSkill-America-Report-final.pdf>.

⁶² Chrome extension://efaidnbmnnibpcajpcglclefindmkaj/https://www.talentplaybook.org/sites/default/files/2023-04/alabama_talent_triad_-_overview.pdf

⁶³ <https://workshift.org/alabama-bets-big-on-a-talent-marketplace/>

- Free for all Alabamians to build their LERs through retirement
- Engages 19 state agencies in coordinated implementation

2. *Connecticut Scaling the Skills-Based Workforce System*

In December 2023, Connecticut's Office of Workforce Strategy launched a project as part of the national SkillsFWD initiative called "Scaling the Skills-Based Workforce System in CT⁶⁴," which expands the state's skills-based hiring ecosystem, leveraging Learning and Employment Records to bridge the skills gap, foster better employment practices, and set a scalable model for nationwide workforce development.

3. *Arkansas LAUNCH⁶⁵*

This initiative is a comprehensive, skills-based platform designed to connect job seekers with training and employment opportunities, and to help employers find the skilled workers they need. It is not specifically an LER (Learning and Employment Records) initiative, but it leverages similar data-driven, skills-based matching principles. The primary goal is to close the state's labor gap, accelerate economic growth, and prepare the workforce for the future by making the job search and hiring processes faster, easier, and more efficient for everyone involved

Key Features:

- Skills-Based Matching: The platform uses advanced data analytics and artificial intelligence to match a person's individual skills, experience, education, and preferences to available jobs and relevant training programs within Arkansas's high-demand industries.
- Two-Sided Platform: Arkansas LAUNCH consists of two integrated tools:
 - LAUNCH for Jobseekers: Provides personalized career path recommendations, helps users track job search activities for unemployment insurance claims, and connects them with supportive services.

⁶⁴ <https://learnworkecosystemlibrary.com/organizations/connecticut-office-of-workforce-strategy/>

⁶⁵ <https://launch.arkansas.gov/>

- LAUNCH for Employers: Allows businesses to quickly find qualified candidates by focusing on specific skills and experiences needed for open positions, moving beyond traditional resumes to adopt skills-based hiring practices.

The Arkansas LAUNCH platform was developed by the State of Arkansas in partnership with RIPL (Research Improving People's Lives), a non-profit organization that uses data and technology to improve public services. The initiative received support and funding from Walmart and the Walmart Foundation, with pro bono technology support for the CiviForm application process provided by Google.org.

4. *California Cradle to Career*⁶⁶

California's Cradle-to-Career system demonstrates that states can build infrastructure connecting education and workforce data at scale, with appropriate privacy protections considerations built in from the start. This system provides a unified platform with tools for students, parents, and educators to manage college and career planning, financial aid processes, and track student progress.

California Cradle to Career is a statewide longitudinal data system that connects:

- Early childhood education data
- K-12 education records
- Postsecondary education (community colleges, CSU, UC, private institutions)
- Workforce and employment outcomes
- Social services data

Its goal is to track educational and workforce trajectories to improve outcomes across California.

⁶⁶ c2c.ca.gov

Higher Education Implementations

1. Western Governors University (WGU) Achievement Wallet⁶⁷

Launched in September 2025 the WGU Achievement Wallet supports more than 588,000 students and alumni, providing a digital platform that empowers their learners to track skills gained through WGU coursework, on-the-job experience, military service, volunteer work or self-directed learning, and generates résumés highlighting skills and verified digital credentials.

Key features:

- Beta testing with over 3,500 WGU students revealed overwhelmingly positive feedback: 88% found value in having career and education information in one place, 78% agreed that seeing gaps between existing and missing skills clarified job qualifications, and 75% expected the Achievement Wallet to enable career advancement.
- By publishing credential and skill information as linked open data in the Credential Registry, WGU enables the Achievement Wallet to deliver meaningful, portable, and verifiable credential records that allow learners to carry achievements with them for pursuing opportunities and communicating skills to employers.

2. Arizona State University

The Trusted Learner Network (TLN) is a digital credentialing initiative developed at Arizona State University that's very much in your wheelhouse. TLN describes a new, secure, and decentralized approach to recording, curating, and sharing learner data on abilities and skills across a learner's lifespan.

Key Components of TLN are:

- Technology Infrastructure: The TLN Credential Platform uses a distributed ledger architecture that ensures institutional autonomy and data ownership while creating a shared trust framework, with support for W3C Verifiable Credentials and JSON-LD for high interoperability.
- Learner Applications:
 - ASU Pocket - designed for ASU students

⁶⁷ <https://www.wgu.edu/newsroom/press-release/2025/09/wgu-launches-achievement-wallet-half-million-students-showcase-career-ready-skills.html>

- MySkills Pocket - built for learners transitioning into or across the workforce, making verifiable credentials accessible, shareable and actionable through a free-to-download wallet

3. Tennessee Board of Regents

The Tennessee Board of Regents is leveraging linked open data to drive statewide innovation in skill recognition and student mobility through its Comprehensive Learner Record initiative called TBR CRED⁶⁸, which enables students across Tennessee's 37 public postsecondary institutions to access portable, verifiable records of their skills and achievements.

This represents one of the largest statewide implementations of LERs in the country, covering:

- community colleges
- 23 colleges of applied technology (TCATs)
- TN eCampus (online)
- Approximately 140,000 students annually

These pilots demonstrate that LER technology is technically feasible and can deliver value.

Exemplars of Philanthropic Investment in Skills-First Hiring

Major foundations have invested significantly in advancing skills-based hiring and LER infrastructure. This is representative selection of some of the leading philanthropies active in supporting the LER movement

Walmart Foundation Leadership⁶⁹

Walmart has emerged as a leader in the skills-first and LER movement, both as an employer and philanthropist. The company hosted its first-ever Opportunity Summit in 2024, bringing together large employers, government officials, workforce experts, and education leaders to invest in American jobs through a skills-first approach. Through grants from Walmart, initiatives have been launched including:

⁶⁸ <https://credentialengine.org/2025/07/14/empowering-learners-with-skills-tennessees-comprehensive-learner-record-initiative-case-study/>

⁶⁹ Walmart. (2025). *Creating opportunity for all American workers*. Walmart Corporate. <https://corporate.walmart.com/news/2025/04/07/creating-opportunity-for-all-american-workers>

- The Skills-First Workforce Initiative with Burning Glass Institute and major employers (Accenture, Bank of America, Blackstone, Home Depot, Microsoft, Nordstrom, PepsiCo, Verizon) to develop a groundbreaking framework for skills-first hiring. This initiative unveiled Skills-First.org in April 2025, housing skills profiles for nine common jobs representing over 11 million U.S. workers.
- \$5 million to Rockefeller Philanthropy Advisors to lead local pilots testing the flow of information in skills-based systems with real workers and employers in 5-8 communities
- \$2.15 million to Education Design Lab's micro-pathways program with 30 community colleges
- \$1.5 million to the Competency-Based Education Network's Center for Skills (CFS x C-BEN) to create objective, reliable ways to assess and validate skills
- \$3.4 million to Jobs for the Future to champion skills-first practices and address systemic issues in education, hiring, and advancement
- Support for the LER Accelerator coalition through 1EdTech to accelerate adoption of Learning and Employment Records in postsecondary education

Walmart itself is investing \$1 billion by 2026 in skills-based training and education, removing college degree requirements where possible, and creating career pathways to jobs with greater responsibility and higher pay.

Gates Foundation Support⁷⁰

The Bill & Melinda Gates Foundation has supported multiple LER initiatives, including:

- The "Experience You" initiative through the U.S. Chamber of Commerce Foundation's T3 Innovation Network, which engaged innovators to develop AI solutions for generating

⁷⁰ U.S. Chamber of Commerce Foundation. (2023). *Experience You: Accelerating the future of work*. <https://www.uschamberfoundation.org/workforce/experience-you-accelerating-future-work>

LERs from learning and employment information scattered across disparate sources. Eight teams completed prototypes demonstrating how AI tools can generate meaningful digital records.

- Grants to multiple states and institutions to publish credentials to the Credential Engine Registry using the Credential Transparency Description Language (CTDL), making credential information transparent and accessible
- Support for the UpSkill America study examining how employers interpret and integrate digital credentials in hiring systems
- Partnerships with community colleges and regional councils (Land of Sky P20 Council, Our Future UNiSON in North Carolina, Bristol Community College, and others) to map regional credential data and improve workforce development
- Funding for research on digital credential ecosystems through ERIC (Education Resources Information Center), resulting in peer-reviewed studies documenting implementation challenges and success factors across diverse institutional contexts

Strada Education Foundation Research

Strada Education Foundation works to clear the path between education and opportunity, focusing on individuals who face the greatest barriers. Its mission centers on strengthening the education-to-employment ecosystem so learners can realize the economic value of their education while employers gain access to the skilled talent they need. Through a combination of research, grantmaking, investing, policy efforts, and other initiatives, Strada fosters collaboration among educational institutions and employers. Guided by evidence and partnership, its work drives large-scale, systemic change to expand access to good jobs that offer both fulfillment and economic mobility.

Education Design Lab. (2023). *Empowered by experience: How AI can generate LERs at scale for the current workforce* [Report]. <https://eddesignlab.org/resources/empowered-by-experience-the-experience-you-phase-1-demonstration-report/>

Lumina Foundation⁷¹

Lumina's mission is to make opportunities for learning beyond high school available to all Americans. It is working toward a national goal that by 2040, 75% of adults in the U.S. labor force will have a college degree or another credential of value leading to economic prosperity.

Lumina Foundation is a significant funder supporting the development and implementation of LERs. It supports initiatives like AACRAO's LER Accelerator coalition and projects within the U.S. Chamber Foundation's T3 Innovation Network™ that are working to create data standards and technical protocols for LERs.

LERs are a key part of Lumina's vision for a more navigable and responsive education and training system that meets the nation's talent needs. By making skills and credentials transparent and machine-readable, LERs can help connect individuals to better job opportunities and help employers identify qualified candidates based on specific skills rather than just traditional degrees.

Lumina provided early grants which helped jump start the LER work. These grants supported work on comprehensive learner records, the precursors to LERs. The Phase 1 Comprehensive Learner Record (CLR) work (2015-2017) involved initial pilot programs to explore and develop models for a new form of student record goes beyond the traditional academic transcript. The Phase 2⁷² work (2017-2020) focused on scaling the implementation and addressing technical challenges to move CLRs from an innovative idea to a broadly adoptable standard within higher education. These foundational efforts were primarily led by the American Association of Collegiate Registrars and Admissions Officers (AACRAO) and the Association of Student Affairs Professionals (NASPA).

⁷¹ AACRAO. (n.d.). *Signature initiative: CLR/LER Phase II report* [PDF]. https://www.aacrao.org/docs/default-source/signature-initiative-docs/clr/clr-phase-ii-report.pdf?sfvrsn=3841d042_4

⁷² www.aacrao.org/docs/default-source/signature-initiative-docs/clr/clr-phase-ii-report.pdf?sfvrsn=38414042_4

IV. DATA PRIVACY, SECURITY, AND INTEROPERABILITY: THE TECHNICAL FOUNDATION

The Core Principles of Learner-Controlled Credentials

One of LER's most important features is the principle of learner sovereignty—individuals own and control their achievement records. As the Digital Credentials Consortium explains, "LERs place the learners at the center of a dynamic ecosystem, empowering them with the ownership of their own data on skills and achievements, regardless of whether these skills are acquired through a college or university degree program, independent online learning, or work experience."

Development of Technical Infrastructure for an Interoperable National LER Infrastructure

The emerging technical standards for a national LER infrastructure have been a collaboration between many organizations. These organizations have a shared vision of creating the interoperable infrastructure in the US which will support all users of LERs. This complex infrastructure is essential to LERs fulfilling their promise.

The body of work these organizations have created and tested over the past few years has been laid the groundwork for a national expansion of an LER infrastructure.

W3C Verifiable Credentials 2.0⁷³

The World Wide Web Consortium's Verifiable Credentials Data Model v2.0 provides the foundational standard for LERs. VCs are cryptographically signed and tamper-proof, meaning they are secure and anyone receiving them can trust and verify the information contained within. As explained in the W3C recommendation, VCs enable verification without revealing unnecessary personal information and without requiring contact with the original issuer—addressing both privacy and efficiency concerns.

⁷³ <https://www.w3.org/TR/vc-overview/>

W3C Verifiable Credentials provide the technical standard enabling LERs to be instantly verified without contacting the original issuer—similar to how a digital signature works. This 'plumbing' allows credentials to work seamlessly across different systems while preserving privacy through features like selective disclosure.

*1EdTech*⁷⁴

The 1EdTech Consortium has developed critical standards for educational credentials which serve as a basis for LERs. These include:

- Comprehensive Learner Record (CLR) Standard 2.0: The CLR Standard is "the next generation of secure and verifiable learning and employment records supporting all nature of academic and workplace recognition and achievements, including courses, competencies and skills, and employer-based achievements and milestones." The CLR 2.0 is designed as Verifiable Credentials as defined by W3C, making credentials cryptographically signed, tamper-proof, and universally verifiable. CLR 2.0 improves both portability and verifiability, giving learners control of their credentials and the agency to store and share them when and where they want throughout their educational careers. The CLR Standard has been selected by the American Association of Collegiate Registrars and Admissions Officers (AACRAO) as the recommended standard for lifetime learning records.
- Open Badges 3.0: Open Badges are the world's leading format for digital badges, providing verifiable and shareable digital recognition of accomplishments. Open Badges include information on the issuing organization, the criteria for earning the badge, evidence, issuance date, and verification data. Over 75 million Open Badge credentials had been issued as of 2022, with dramatic growth continuing. Open Badges 3.0 makes it easier to share credentials between digital wallets.

1EdTech is the "technical plumbing" - they build the actual standards that make credentials portable, verifiable, and interoperable across the entire ecosystem. Without 1EdTech's standards, LERs would just be a concept with no technical implementation.

⁷⁴ <https://www.1edtech.org/>

*American Association of Collegiate Registrars and Admissions Officers (AACRAO)*⁷⁵

The LER Accelerator Coalition

In 2024, twelve leading national associations adopted a unified set of core principles for advancing Learning and Employment Records through the LER Accelerator initiative with support from Walmart, marking a pivotal step toward aligning learning and skills development with workforce needs and ensuring access to verifiable credentials. The coalition is working to:

- Raise awareness of LERs among learners, educators, employers, and institutions
- Advocate for policy changes supporting LER development and use
- Integrate LERs into courses and curricula
- Develop resources and guidelines for institutions
- Measure the impact of LERs on student learning, retention, graduation, and career success

AACRAO has developed specific guidance for registrars and institutional records offices on implementing LERs. Their resources address practical concerns including transcript integrity, record retention policies, security protocols, and integration with existing student information systems. AACRAO emphasizes that registrars play a critical gatekeeper role in ensuring LER data quality and institutional accountability.

Project Infuse

Project Infuse is a collaborative public-purpose initiative aligned with America's Talent Strategy to modernize how learning and employment achievements are recorded, verified, and shared. It proposes a federally regulated, locally controlled, and industry-governed model for low-cost/no-cost digital credential infrastructure in higher education, enabling improved access for learners and institutions nationwide.

⁷⁵ <https://www.aacrao.org/who-we-are>

By creating a secure, interoperable, and AI-enhanced Learning and Employment Record (LER) ecosystem, Infuse will help advance skills-based hiring, worker mobility, and improved access to economic opportunity.

The problems Project Infuse is designed to address are:

- Limited learner agency—Individuals lack control over their own verified learning and skills data.
- Low adoption of digital credentials—Especially among resource-limited institutions due to high costs and technical barriers.
- Poor interoperability—Disparate systems and proprietary formats hinder data exchange.
- Slow uptake of skills-based hiring—Employers lack reliable, standardized skills data for candidates.

AACRAO bridges the gap between traditional academic records (their core expertise) and the emerging LER ecosystem, making them essential to any LER adoption strategy in higher education. Their involvement gives legitimacy and practical implementation pathways for institutions.

Credential Engine⁷⁶

Credential Engine is a nonprofit organization that provides a suite of web-based services to create a clear and consistent centralized Credential Registry housing up-to-date information about credentials, a common description language to enable credential comparability, and a platform to support customized applications to search and retrieve information.

Key Components:

1. Credential Registry - A cloud-based registry that hosts detailed information about credentials and skills, allowing providers to upload information such as learning outcomes, cost, and market value. Currently houses over 1 million credentials.
2. CTDL (Credential Transparency Description Language) - A schema, or common language, that people and systems can use to understand each other, unifying data and

⁷⁶ <https://credentialengine.org/>

making it easier for learners, businesses, researchers, and systems to discover and understand different credentials Credential Engine.

3. Credential Finder - A search tool that lets people explore and compare credentials.

Credential Engine is a key infrastructure player in the credentials ecosystem and directly supports LER interoperability through CTDL standards and registry services.

The Digital Credentials Consortium⁷⁷

The Digital Credentials Consortium (DCC) is exploring how recent advances in credential data standards and cryptographically signed credentials can be used to rethink the way we recognize and transact with academic achievements.

Building on earlier efforts by participating institutions, DCC is designing a governance system and technology infrastructure for academic credentials—transforming credentials into tokens of social and human capital that can create new opportunities for participation in education and industry.

Key Components:

1. Issuer registry research and pilot which is exploring the current state of issuer registries, stored lists of data which verify the identity of an issuer of a credential.
2. Contributes to the efforts of open standards bodies that foster interoperability and collaboration around verifiable credentials.
3. All of the software developed by DCC for issuing and verifying credentials, its wallet and verifier, and underlying libraries are open source and available on Github.
4. Supported digital academic credentials can be verified at DCC's VerifierPlus website. This fully functional verifier is one of many verification sites envisioned for digital academic credentials.
5. The DCC maintains a number of registries to enable a verifier to confirm that a given Verifiable Credential was signed by a known issuer.

⁷⁷ <https://digitalcredentials.mit.edu/>

Digital Credentials Consortium (DCC) is critical to the advancement of LERs by focusing on the technical and governance infrastructure necessary for a trusted, interoperable ecosystem

The Challenge of Interoperability

For LERs to reach their potential, they must be interoperable—able to work seamlessly across different systems, platforms, and organizational boundaries. This requires:

Common Technical Standards

Organizations must adopt compatible technical specifications. The convergence around W3C Verifiable Credentials, 1EdTech's CLR and Open Badges standards, and the Credential Transparency Description Language (CTDL) from Credential Engine creates a foundation for interoperability.

Semantic Interoperability

Beyond technical compatibility, systems need shared understanding of what credentials mean. The T3 Innovation Network has conducted semantic mapping of data standards to support LERs. To achieve trust and interoperability, a common language for learners, educators and employers needs to be used in talking about skills.

*Credential Engine's Credential Transparency Description Language (CTDL)*⁷⁸ provides this common language. CTDL schemas enable rich descriptions of credentials and their requirements, with data in the Credential Registry accessible via web-resolvable URIs. LER records for individuals can reference CTDL data in the Registry, which "reduces data duplication and maintenance, but opens the door to powerful search queries and data analytics."

*The Learn & Work Ecosystem Library*⁷⁹ provides comprehensive documentation of emerging LER standards and implementations. This publicly accessible resource includes the LER Ecosystem Map, case studies, technical specifications, and implementation guides. The library serves as a central knowledge repository for practitioners, policymakers, and researchers working to advance interoperable credential systems.

⁷⁸ <https://credentialengine.org/credential-transparency/ctdl/>

⁷⁹ <https://learnworkecosystemlibrary.com/>

Digital Wallet Infrastructure

LERs require digital wallets—secure applications where individuals store and manage their credentials. Digital wallets enable learners and workers to store and share artifacts of their achievements as they pursue opportunities for advancement.

Governance and Trust

Technical interoperability alone is insufficient. As the 2025 report "Governance Framework for Issuer Identity Registries⁸⁰" by Credential Engine and the Digital Credentials Consortium explains, LER ecosystems require governance structures to establish trust in who can issue Credentials used in LER contexts. The AWPAB recommended "a loosely federated governance structure for LERs" that balances innovation with coordination, avoiding both heavy-handed centralized control and complete fragmentation. AACRAO's Project Infuse⁸¹ is working with a coalition of 35+ members to develop a governance strategy for a national LER infrastructure.

⁸⁰ <https://credentialengine.org/resources/issuer-identity-registry-research-report-governance-framework/>

⁸¹ <https://www.aacrao.org/our-work/learning-mobility/infuse>

V. CURRENT STATE OF ADOPTION

Learning and Employment Records (LERs) are gaining momentum in their adoption, with a convergence of efforts from the public and private sectors to establish a national LER infrastructure.

Key Drivers of LER Adoption

- *State-Led Initiatives:* Several states, including California, Alabama, and Arkansas, are developing and implementing LER initiatives. Additionally, over 25 states have removed degree requirements for many public sector jobs and are involved in efforts to focus on skills.
- *Higher Education Momentum:* Several Universities, including Western Governors University and Tennessee Board of Regents are developing and implementing LER initiatives. In addition, coalitions of national associations, are working to promote LER adoption in postsecondary education. These would include AACRAO's Project Infuse and Learning Accelerator. The aim is to help institutions articulate skills and competencies valued by employers. While widespread LER credential issuance is still developing, a significant increase is anticipated in the coming years based on institutional plans.
- *Private Sector and Employer Acceptance:* LER adoption is scaling rapidly, with increasing interest from the private sector. Reports indicate that a large percentage of employers globally are using skills-based hiring. The T3 Innovation Network is growing, with many individuals and organizations focused on advancing LER adoption.
- *Technological Infrastructure:* The use of open standards, such as W3C Verifiable Credentials and 1EdTech's Open Badges and Comprehensive Learner Record (CLR) standards, is creating a foundation for interoperability. A new standard for resume data, the LER-Resume Standard (LER-RS), was released in 2024. The number of credential platforms and digital wallets is also expanding.
- *Growing Credential Volume:* A major credentialing platform, Accredible, issued millions of verifiable credentials in 2024, demonstrating increasing demand.

Despite this progress, challenges remain, including varying levels of adoption among HR professionals, issues with recruitment technology, and a need for greater standardization in equating credentials to skills. However, there is alignment between the public and private sectors, and individuals are gaining access to verifiable data that employers are beginning to integrate into their systems.

VI. GUIDING PRINCIPLES AND SUGGESTIONS FOR FEDERAL POLICY

Guiding Principles

The guiding principles behind recommendations to the Subcommittee are:

Data Connectivity—A Living Ecosystem

LER work is not about static dashboards or visualizations. It's about building a living network of data systems that reinforce each other. Each Learning and Employment Record (LER) should be linked to relevant sources—such as a credential registry today, and potentially employment data systems like JEDx in the future. These connections form the foundation of a dynamic talent ecosystem that power talent marketplaces and ultimately support with getting talent in the right place at the right time.

Validation of Skills—Trust Through Data Integrity

The true value of an LER lies in two things: verified metadata and validated demonstrations of skill attainment. In other words, these records are only as credible as the authenticity and quality of the data behind them.

Interoperability—Enabling Real Mobility

LERs only have impact when they are usable. If locked inside proprietary systems, they provide little value to learners, workers, or employers. Every individual should be able to store their verified records in the digital wallet of their choice and share them seamlessly with platforms such as Arkansas Launch, Alabama Talent Triad and or HRIS systems—telling a complete and portable story of their skills and experience.

I suggest federal action in three areas: federal leadership, infrastructure and enabling adoption.

Federal Leadership

1. Encourage Skills-Based Hiring in Federal Employment

The federal government should lead by example. Executive Order 13932 (June 2020) on "Modernizing and Reforming the Assessment and Hiring of Federal Job Candidates" began this work. As the AWPAB recommended: "Adopt skills-based hiring practices" across government to demonstrate their effectiveness and signal their legitimacy to private employers".

Federal policy could:

- Ensure federal agencies have resources to implement skills-based hiring
- Require agencies to accept LER information where appropriate
- Require Federal contractors to accept LER information where appropriate
- Mandate LER use in government funded programs at the Federal and State level where digital credentials are issued of skills attained through a federally funded program
- Track and report on outcomes of skills-based federal hiring
- Integrate LERs into appropriate reauthorization legislation
- Prioritize skills-based hiring for critical workforce areas as identified in America's Talent Strategy
- Provide Federal support for states to update and standardize employment reporting
- Ensure worker access/control of verified employment histories
- Connect to skills-based job profiles and demand modeling
- Address algorithmic accountability in AI-powered hiring systems used by federal agencies and contractors

2. Convene Key Stakeholders and Experts to Advise on the Path Forward

- Host convenings that bring together employers, educators, non-profits and technology providers who have been actively engaged in the development of a national LER infrastructure
- The Federal Government could consult with this group on challenges and opportunities around the path forward.

Infrastructure

3. Support Infrastructure Development

Support continued investment in an LER infrastructure which establishes the foundation for a robust and impactful, national LER ecosystem.

Federal policy could:

- Accelerate research and pilot programs to test LER systems at scale
- Encourage the development and maintenance of open-source tools and standards to encourage public good options
- Provide technical assistance and implementation support
- Fund appropriate infrastructure creation at the State and Federal level
- Create a
- collaboration with the Government to accelerate the use of LERs

The AWPAB's original 2019 recommendation for "fast-track prototyping" has proven prescient—continued support for projects will accelerate adoption and refinement.

4. Modernize Employment Reporting

Employment reporting information is foundational to the effectiveness of LERs. It is also foundational to the artificial intelligence models which increasingly drive decision making in the talent ecosystem.

Federal policy could:

- Provide support and encourage states to update their employment reporting standards.
- Ensure workers can access and control their verified employment histories. This would empower individuals to document their experience and skills more effectively and to share those records across opportunities.
- Provide accessible skills-based job profiles and new models for recognizing job demand. This will create a path for informing training models and individuals on career paths that align with economic needs.

5. Protect Privacy While Enabling Portability

Privacy is foundational to establishing trust for those using LERs. Users need to know that their data is owned and controlled by them and that only they are empowered to make it available.

Federal policy could:

- Ensure learner and business control over appropriate credential data
- Prohibit tracking or surveillance through credential verification
- Establish consequences for privacy violations or misuse of LER data
- Support privacy-preserving technical standards like those in W3C VC 2.0

6. Support Access for All

Access for all is critical to broadscale adoption of LERs.

Federal policy could:

- Ensure LER systems are accessible to individuals with disabilities
- Support digital literacy programs so all Americans can use LER technologies

- Prevent LER adoption from creating new digital divides
- Support K-12 and youth-focused LER initiatives to build early career pathways

7. Promote Interoperability Through Standards Adoption

The technical backbone of a national LER infrastructure is interoperability. I envision a variety of LER solutions tailored to the needs of states and regions. These solutions must be able to communicate with each other in order to have a decentralized national solution.

Federal policy could:

- Encourage federal agencies to adopt open standards for credentials
- Support standards development organizations working on LER interoperability
- Require interoperability when federal funding supports credential systems
- Fund research on skills ontologies and semantic interoperability

Enabling Adoption

8. Modernize Regulations

Regulations can be both an enabler and obstacle to board scale LER adoption. As the Request for Information: Regulatory Reform on Artificial Intelligence states⁸² – “Most existing Federal regulatory regimes and policy mechanisms were developed before the rise of modern AI technologies. As a result, they often rest on assumptions about human-operated systems that are not appropriate for AI-enabled or AI-augmented systems.” This is equally true in the talent marketplace as it is in other parts of our economy.

Federal policy could:

- Remove barriers to recognizing non-traditional credentials
- Remove penalties/risks for alternative competency education models
- Mandate specific credential types that are skills-based aligned
- Support reciprocity and portability of credentials across state lines

⁸² <https://www.regulations.gov/document/OSTP-TECH-2025-0067-0001>

- Enable LERs to reduce regulatory burden by having them serve as a legitimate tool for regulatory reporting, where appropriate
- Eliminate regulatory barriers to using other data sources e.g. employment verification which can improve the quality of the LER record

9. Invest in Education and Awareness

LERs and AI are relatively recent concepts for many people. Adoption and use of LERs requires education, awareness and trust.

Federal policy could:

- Assist in raising public awareness about LER benefits
- Assist in training HR professionals on skills-based hiring
- Provide resources for educators on implementing LER systems, including registrar-specific guidance from AACRAO
- Provide information for workers on how to build and use LERs

10. Encourage Entrepreneurship and Innovation

The talent marketplace continues to need innovation and entrepreneurship to create services and solutions which makes the entire talent ecosystem work better for everyone involved. Overtime growth and sustainment of the ecosystem will rely on innovation.

Federal policy could:

- Remove regulatory barriers to the use of innovative technologies which better match employers with job seekers
- Encourage the application of artificial intelligence to improve the talent marketplace

VII. FINAL THOUGHTS

Learning and Employment Records represent an enabling innovation giving us a once-in-a-generation opportunity to modernize how America develops, recognizes, and deploys talent. The technical foundations are in place. Private sector interest is growing. Standards have been tested in real use and are ready for broad scale adoption. Pilot programs are demonstrating value.

Federal policy frameworks like *America's Talent Strategy: Building the Workforce for the Golden Age* and the *Proposed Priority and Definitions—Secretary's Supplemental Priority and Definitions on Career Pathways and Workforce Readiness* are reflecting the need for LERs.

What we need now is sustained commitment to building out this infrastructure with attention to four core principles:

First, learner and employer empowerment and control. LERs must put individuals and employers—not institutions—at the center, giving workers and employers agency over achievement records and hiring.

Second, trust through privacy and security. LER systems must be designed from the ground up to protect privacy, ensure security, and maintain verifiable integrity.

Third, interoperability for universal value. LERs will only achieve their potential if credentials can move seamlessly across systems and contexts, requiring continued commitment to open standards and an interoperable national infrastructure.

Fourth, a collaboration between education, non-profits and employers should lead the way. The LER movement and its precursors reflect the work of many individuals and organizations. It is this group which will be most impacted by it and are best equipped to lead the nation forward for LERs.

That future is within reach. With thoughtful policy support, adequate investment, and continued collaboration across sectors, we can build an LER ecosystem that serves all Americans—creating opportunity, reducing inequality, and strengthening our economy.

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