

SKILLS ECONOMY TOOLKIT

ACTION GUIDE: THE ROLE OF TECHNOLOGY IN SKILLS WORK

Introduction

Technology is the enabling infrastructure for a skills-based economy. The right platforms make skills visible, credentials portable, data interoperable, and matching efficient. Without robust technology systems, even the best policies and practices won't scale.

This guide will help you understand the technology landscape, evaluate platforms, and make strategic technology decisions that support your skills transformation goals.

Why Technology Matters

Technology is the infrastructure that enables a skills economy. You can't manually track, validate, and verify thousands of skills and digital credentials; manually help workers port verified skills across employers; or align training with real-time labor market demand without it.

- Spreadsheets and databases really help.
 - Digital badges prove competencies across platforms.
 - Learning and employment records (LERs) track achievements across jobs.
 - Skills taxonomies embedded in applicant tracking systems help employers find overlooked talent.
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Without technology, skills-based and skills-first approaches stay small and often siloed, good ideas that never scale. Yet, the technology landscape is complex. It includes credentialing platforms such as *Credly*, comprehensive record systems such as *Territorium and Velocity Network*, skills ontologies from providers such as *Lightcast*, and open standards such as *Open Badges* and *Verifiable Credentials*, amongst hundreds of others. No single solution does everything, and most boards require multiple technologies that integrate with one another. Understanding this landscape matters because boards must make smart choices.

All that said, you don't need to become technology experts, but you need enough literacy to ask good questions: *Will this system work with our partners' platforms? Does it support open standards? Can workers take their data with them?*


You can also start by mapping what technology your partners already use, what platforms local issues use to issue credentials, what systems local employers use for hiring, and what your technology career and workforce centers operate. Then prioritize interoperability over features, choose open standards to avoid vendor lock-in, and start small with one use case before expanding. Technology without strategy creates expensive digital clutter. When technology works well, it becomes invisible, credentials flow seamlessly, employers find talent efficiently, and workers advance based on verified skills.

In this action guide, we provide some steps and tools for scoping the skills technology landscape, asking good questions of vendors, and trying solutions before rolling them out to learners, workers, and workforce staff.

Step 1: Understand the Technology Landscape

The skills technology ecosystem includes multiple platform types, each serving different functions. Most organizations need several integrated systems. We provide an overview of different types in the table below.

Platform Type	Purpose	Example Platforms
Skills Management Systems	Central platforms for cataloging, mapping, and managing skills data across an ecosystem	<i>Workday Skills Cloud, Degreed, EdCast, Cornerstone</i>
Credential Wallets or Portfolios	Personal platforms where individuals store and share digital and verified credentials	<i>Credly, Badgr, Learning Machine, MyCredentials</i>
Job Matching Platforms	Skills-based job boards and talent marketplaces that match candidates to opportunities	<i>Indeed, LinkedIn Skills, Phenom, Eightfold.ai</i>
Assessment Tools	Platforms for validating and verifying skills through testing and evaluation	<i>HackerRank, Codility, Vervoe, SkillSurvey</i>
Labor Market Analytics	Data and intelligence on skills demand, supply, and trends	<i>Lightcast (EMSI/BurningGlass), CHMURA, Econovue, Revelio</i>
Case Management	Workforce center systems for managing job seeker services and tracking outcomes	<i>Geographic Solutions, America's Job Link, SkillSmart, MyOneFlow</i>

 **Action Item:** Use the Technology Needs Assessment (Tool 1) to identify which platforms your ecosystem requires.

Step 2: Establish Platform Evaluation Criteria

Not all platforms are created equal. It is important to develop clear criteria to evaluate vendors and solutions that align with your board's policies, regulations, and the skills approach you are adopting. Here are some examples of criteria to help evaluate technology solutions and vendors to

Factor	Questions to Ask
Standards Compliance	Does it support Open Badges, CTDL, CLRs, or other open standards? Can credentials be exported and used elsewhere?
Integration Capabilities	Does it have APIs? Can it connect to your existing systems (case management, LMS, HRIS)? Are integrations well-documented?
Taxonomy Support	Which taxonomies does it support (O*NET, ESCO, custom)? Can you map between taxonomies? Is the taxonomy current and maintained?
Holder Experience	Is it intuitive for non-technical people? Mobile-friendly? Accessible (ADA/WCAG compliant)? What training is required?
Security & Privacy	What security certifications does it have (SOC 2, ISO 27001)? How is data encrypted? Who owns the data? Privacy controls for individuals?
Vendor Viability	How long has the vendor been in business? Financial stability? Customer base size? Product roadmap and update frequency?
Total Cost of Ownership	License fees, implementation costs, training, ongoing support, customization, data migration? Hidden costs?

 **Action Item:** Use the Vendor Evaluation Scorecard (Tool 2) to systematically compare platforms.

Step 3: Plan Your Integration Strategy

Skills technology doesn't exist in isolation. It must integrate with existing workforce, education, and employer systems to be effective. Here we share some of the considerations for ensuring systems integrate.

Common Integration Patterns

Integration Type	Use Case	Implementation Approach
Skills Platform ↔ Case Management	Job seekers' skills profiles flow into workforce center systems for better matching	API integration, single sign-on, regular data sync
Credential Wallet ↔ Training Providers	Credentials issued by training programs automatically flow to learner wallets	Open Badges standard, automated badge issuance upon completion
Job Matching ↔ Employer ATS	Skills-based matches flow directly into employer applicant tracking systems	API partnership, job board feeds, and candidate profile sharing with informed consent
Analytics ↔ State Systems	Labor market data feeds regional and state workforce planning	Data sharing agreements, secure file transfer, and dashboard access

Pro Tip: Start with 2-3 core integrations rather than trying to connect everything at once. Build incrementally as you prove value.

Step 4: Follow Implementation Best Practices

Technology projects fail when organizations underestimate the need for change management and training. Success requires equal focus on people and platforms. Here, we share some implementation success factors from skills project technical demonstrations.

Implementation Success Factors

- **Executive Sponsorship:** Secure visible support from the board and leadership
- **Dedicated Project Team:** Assign staff with protected time, not just added duties
- **Pilot First:** Test with a small group before full rollout
- **Comprehensive Training:** Budget 20% of project cost for training and support
- **Change Champions:** Recruit early adopters to advocate and assist peers
- **Iterative Approach:** Launch with core features, add complexity over time
- **Measure and Communicate:** Track adoption metrics and celebrate wins

Common Implementation Pitfalls to Avoid

✗ Pitfall	✓ Better Approach
Buying platforms without clear use cases	Define specific problems to solve before evaluating solutions
Underestimating data migration complexity	Plan 3-6 months for data cleaning, mapping, and migration
Skipping testing with actual people who hold skills-rich credentials and information	Conduct usability testing with job seekers, employers, and staff before launch
Assuming staff will adopt new tools automatically	Invest in hands-on training, ongoing support, and incentives for adoption
Vendor lock-in without an exit strategy	Ensure data portability and export capabilities in contracts

● **Action Item:** Use the Implementation Checklist (Tool 3) to plan your technology rollout.

Technology Tools & Templates

Use these tools to assess technology needs, evaluate vendors, and manage implementation.

TOOL 1: Technology Needs Assessment

Identify which technology platforms your ecosystem requires.

Platform Type	Priority	Current Solution
Skills Management System		
Credential Wallet or Portfolio		
Job Matching Platform		
Assessment Tools		
Labor Market Analytics		
Case Management		

Priority: High (Need Now) | Medium (Next 12 months) | Low (Future)

TOOL 2: Vendor Evaluation Scorecard

Score vendors on key criteria (1-5 scale; 5 = excellent).

Criteria	Vendor A	Vendor B	Vendor C
Standards Compliance			
Integration Capabilities			
Taxonomy Support			
Holder and Staff Experience			
Security and Privacy			
Vendor Viability			
Total Cost of Ownership			
Customer Support			
Training & Documentation			
TOTAL SCORE	/45	/45	/45

TOOL 3: Implementation Checklist

Essential tasks for successful technology rollout.

Task	Complete?
Define specific use cases and success metrics	<input type="checkbox"/>
Secure executive sponsorship and budget approval	<input type="checkbox"/>
Form an implementation team with dedicated time	<input type="checkbox"/>
Complete vendor evaluation and selection	<input type="checkbox"/>
Negotiate a contract with data portability provisions	<input type="checkbox"/>
Create a detailed project plan with milestones	<input type="checkbox"/>
Assess data quality and plan migration	<input type="checkbox"/>
Design integration architecture	<input type="checkbox"/>
Develop training materials and schedule	<input type="checkbox"/>
Recruit learners, workers, job seekers, and staff to test/trial	<input type="checkbox"/>
Configure the platform with branding and settings	<input type="checkbox"/>
Load test data and validate accuracy	<input type="checkbox"/>
Conduct acceptance testing	<input type="checkbox"/>
Launch pilot and gather feedback	<input type="checkbox"/>
Iterate based on pilot learnings	<input type="checkbox"/>
Execute full rollout with training	<input type="checkbox"/>
Monitor adoption metrics weekly	<input type="checkbox"/>
Provide ongoing support and troubleshooting	<input type="checkbox"/>
Celebrate wins and share success stories	<input type="checkbox"/>

Schedule regular reviews and optimization



Next Steps

Technology is an enabler, not a solution in itself. Successful implementation requires strategic planning and strong change management.

- **Assess technology needs** based on your strategic goals
- **Evaluate vendors systematically** using the scorecard
- **Plan integrations** with existing systems
- **Start with a pilot** before full deployment
- **Invest in training** and ongoing support
- **Monitor adoption** and optimize continuously

Additional Resources

- **Action Guide:** Skills Data Governance
- **Action Guide:** Skills and Credentialing Taxonomies
- **1EdTech Open Badges:** Technical specifications and implementation guides
- **USCCF LER Resources:** Platform comparison and selection guides
- **HR Open Standards:** Data exchange specifications

Questions or feedback?

Contact the National Association of Workforce Boards

www.nawb.org