



# Supporting the Digital Transformation of the Talent Marketplace through Data Interoperability

September 8, 2022

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# Building a Quality Workforce System

Employer-Led Partnerships



Modernized  
Data



Improved Quality



Innovative  
Financing



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# Competing on Data

- While we have improved our workforce data, major gaps remain
- We need better data on education and training outcomes, including skills
- We do not know enough about in-demand jobs and when they change, and we know even less about employment and earnings outcomes
- Existing LMI has been very useful, but we need a leap forward and more and better primary source data about jobs and employment
- In order to improve the quality, value, and usability of education and workforce data, it must be skills-based, interoperable, and structured (i.e., data about learning, people, and jobs)



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# The T3 Innovation Network

The T3 Innovation Network's mission is to enable the digital transformation of the talent marketplace by promoting data interoperability and harmonization across diverse stakeholders, including:

- Employers;
- Education, training, and credentialing providers;
- Government agencies; and
- Technology partners.

This digital transformation will ensure that (1) all learning counts; (2) skills are used like currency; and (3) learners and workers are empowered with data to pursue education and employment opportunities.



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# The T3 Innovation Network

In 2018, Phase 1 identified data interoperability challenges and developed a roadmap to address them. From 2019-2022, Phase 2 implemented the roadmap through eight projects.

The T3 “Network of Networks” was launched in 2021 to convene, align, and support stakeholders working on core data infrastructure components required for the digital transformation of the talent marketplace. The four founding networks include:

- Data and Technology Standards (DTS) Network
- Open Competency Frameworks Collaborative (OCFC) Network
- Learning and Employment Records Network (LERN)
- Jobs and Workforce Data (JWD) Network



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# T3 Networks

**DTS Network:** Catalyzing for collaborative incubation and adoption of standards-based specifications and services that enable the learning and employment ecosystem.

**OCFC Network:** Improving the discovery and use of skills and competencies to power the talent ecosystem at scale.

**LER Network:** Piloting and establishing equitable and inclusive best practices for the creation and sharing of secure and standards-based records containing education, training, work, and individually acquired skills and knowledge.

**JWD Network:** Improving how employers and their HR technology service providers develop, organize, and share standards-based jobs and workforce (workers in jobs) data to create value for public and private stakeholders.



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# T3 Network Workgroups

## DTS Network

- Market Signals Steering Workgroup
- Technical Steering Workgroup
- Data Standards Use Workgroup

## OCFC Network

- Requirements Workgroup on Skills and Competencies
- Technical Advisory Workgroup

## LER Network

- Adoption and Implementation Workgroup
- Presentation Scenarios Workgroup

## JWD Network

- Stakeholder Steering Workgroup
- Technical Workgroup



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# Defining Characteristics of LERs

- **Standards-Based:** Based on a data standard that structures the data within it
- **Vendor Neutral:** Able to be issued by multiple vendors without vendor lock-in
- **Verifiable:** Trusted claims can be made and delivered about what someone knows and is able to do
- **Content Rich:** The content includes rich skill and competency data
- **Machine Actionable:** The record and its content can be processed as data (not an image file or attachment)
- **Self-Sovereign:** Individuals are given control over their records including who sees what and when
- **Interoperable:** Records move seamlessly across digital wallets, platforms, and technology stacks
- **Equitable:** Records are equitably distributed and utilized by all populations, most especially opportunity populations facing barriers to education and employment



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# An LER is not Inherently a Resume

- LERs themselves are likely insufficient to enable true skills-based hiring and advancement
- For an HRIS to ingest LER data it will require them to be presented through a specification
- The T3 Innovation Network is collaborating through HR Open Standards Consortium to build the resume profile specification
- This specification will allow an individual to assemble data elements from one or multiple LERs to build a resume that can then be machine actionable with an employer HRIS



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# Supporting the Skills Data Workflow for LERs

- **Standardization:** Enable the ability to create machine actionable skills data
- **Conversion:** Convert existing unstructured skills data to machine actionable data
- **Authoring:** Author new skills data as structured, machine actionable data
- **Curation (Host & Present):** Store and make available structured skills data
- **Search:** Make structured skills data searchable and discoverable
- **Use:** Access and put structured skills data to use (e.g., applications in learning, curriculum alignment, employment services, hiring, career advancement, etc.)
- **Translation:** Compare and translate between skill languages



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# Standardization and Conversion

**Data Ecosystem Schema Mapper (DESM)** – Developed to ease the burden of creating crosswalks using spreadsheets, to make the mappings of properties and classes more expressive and to support future data harmonization

**Competency Framework Extraction Module (CFEM)** – An open-source competency management solution to make competency and skill data machine-actionable and exportable to a variety of standard digital formats used by learning, training, and credentialing software

## View Object Alignment

[Export](#)[Close](#)**T3 / CEDS**

Competency Framework Item

Highest overall match ▾

Property:

**Competency Framework Item Statement**

The text of the statement. The textual content that either describes a specific competency or describes a less granular group of competencies within the taxonomy of the competency framework.

Origin:

CEDS

Vocabulary:

N/A

Organization

Object

Property

Alignment

CASE

CF Item

full Statement

Identical

CTDL/ASN

Statement

description

Identical

PESC

CommonCredentials / Course / Learning Outcome

LearningOutcome

Identical

HR Open

DefinitionStatementType

statementText

Identical

MedBiquitous

lom

general:description

Intent

CASS

Competency

schema.org:name  
schema.org:description

Disaggregated

Schema.org

CreativeWork

schema.org:description

Reworded

Ed-Fi

Learning Standard

Description

No Match



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# Authoring Examples: Frameworks, Collections, Jobs, and Employment Records



JobSIDE  
Application

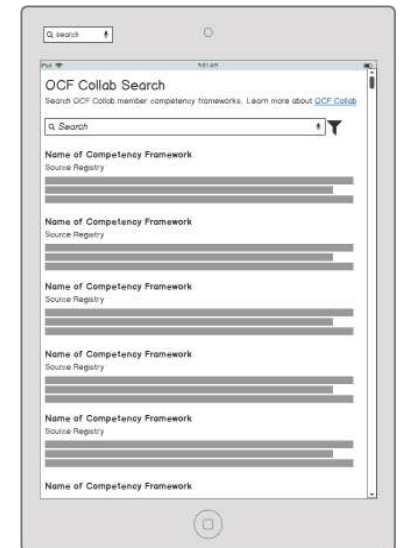
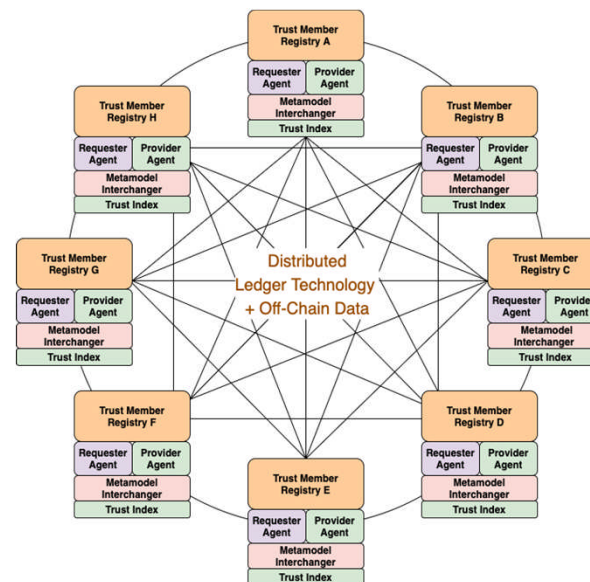


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# Curation & Search: Library Examples and Networks (OCFC)



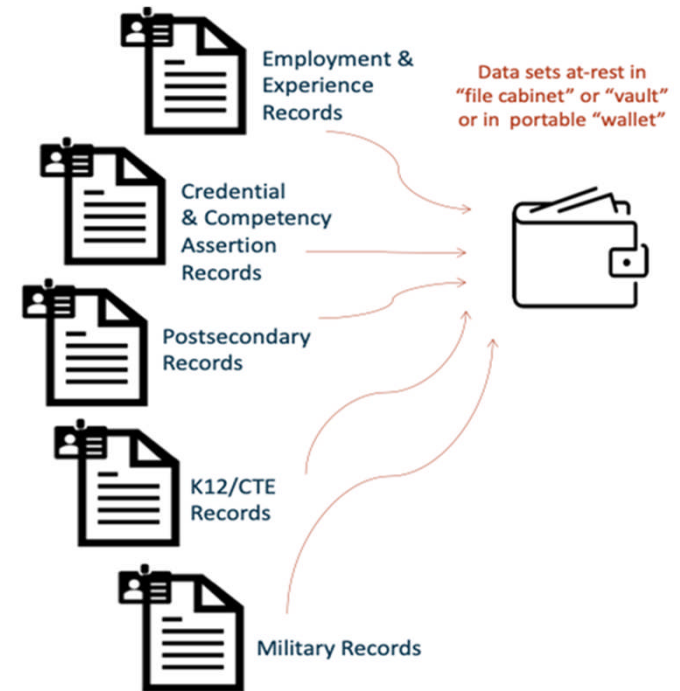
## Open Competency Frameworks Collaborative (OCFC)



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# Use Example: Skills for LERs

- The T3 Network is supporting the production, sharing, and scaling of skill and competency-based LERs for use by learners and workers
- Making all learning count and empowering learners and workers with data.
- Addressing gaps in the data infrastructure to make LERs more interoperable:
  - (1) Digital wallet specification
  - (2) Equity considerations for LERs
  - (3) Single skill endorsement credential
  - (4) Resume profile specification
  - (5) Experience You



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# Translation

- AI is a cross-network issue that needs to be addressed by the ecosystem to fully unlock the potential of skills and competencies as data;
- A both/and approach to data standards and AI
- On August 4, 2022, the T3 Innovation Network convened a meeting where we explored the role of AI in supporting skills translation and analysis
- Identified priority applications like Experience You, an effort to use AI to bring your past forward and make LERs an innovation available to everyone



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# Experience You

- A new LER project to be chartered by the T3 Innovation Network
- The current LER landscape is predominantly focused on newly issued records by education institutions, which means achieving scale and mainstream use will take time
- Leverages AI to bring your past forward allowing anyone to produce a standards-based, self-verified LER based on prior education and employment experiences
- Expands the LER ecosystem to include incumbent workers, the unemployed, and others, helping make LERs more ubiquitous
- The project will kickoff this year and a demonstration is planned for next year



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# JobSIDE – Skills Data for Jobs

- A collection of tools and applications that produce, share, and use data on employer-validated skills profiles for in-demand jobs
- Combines T3 Network innovations to the U.S. Chamber of Commerce Foundation's Talent Pipeline Management (TPM) initiative
- Generated through the TPM's Strategy 3 workflow or through a standalone application
- Enables the use of competencies and skills in job postings and in mapping employer-validated competencies and skills to curriculum, credentials, assessment, and records
- Provides provenance data to frameworks and profile owners based on actual employer validation and use



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# JEDx – Employment Records at Scale



- A public-private approach for organizing, collecting and using standards-based data on jobs and employment to (1) improve government reporting (e.g., UI wage records); (2) support workforce analytics; and (3) make possible verifiable employment records for workers
- Launched a seven-state partnership to (1) set data priorities for the technology; and (2) build a system architecture to support the organization, collection, and sharing of jobs and employment data (e.g., APIs)



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# T3 Projects to Watch For

- **Use Cases**

- Master use case for skills-based hiring and advancement

- **LERs**

- Single-assertion endorsement credentials
  - Resume profile specification
  - Experience You

- **Tools**

- DESM tool improvements and standards mapping

- OCFC improvements and launch

- Coordination with JobSIDE

- Coordination with JEDx



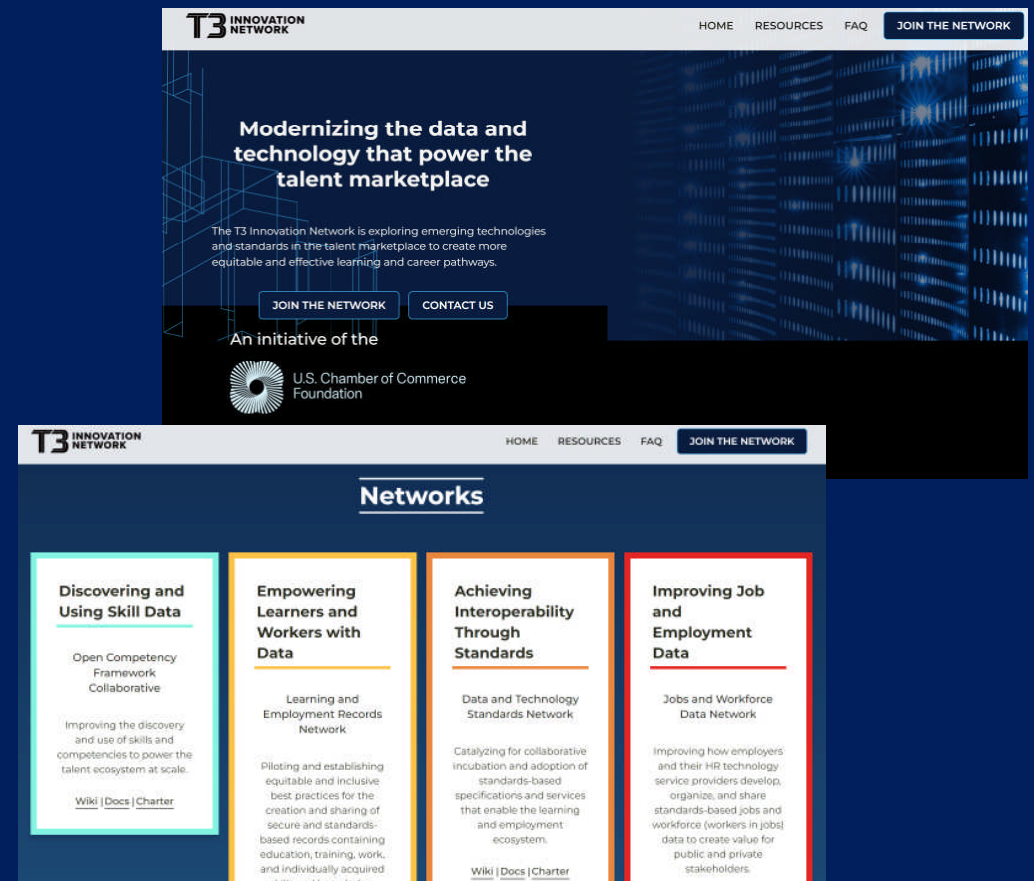
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# My Ask of You

- Join the T3 Innovation Network at [T3NetworkHub.org](https://T3NetworkHub.org)
- There you can join T3, the networks, and workgroups without sign-in
- Change your group membership anytime to update your subscriptions
- Find links to each group's collaboration sites and materials on the homepage
- Browse tags to navigate a new repository of over 50 T3 Network and community reports and resources



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# Contact Information

Make no plans small and be bold, your future competitiveness depends on it



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