Learning and Employment Records Powered by CTDL

Credential Engine™

www.credentialengine.org

Credential Transparency Illuminates Paths to a Better Future

Credential Engine

There are 1 million credentials offered in the U.S. With so many to choose from—and without widespread adoption of standards for comparing and evaluating them—people get lost and lose out on opportunity. Together, we and our partners are working to build a linked open data network that everyone can access for timely and trusted information about credentials.

CREDENTIALS
Credentials include diplomas, badges, certificates, licenses, apprenticeships, certifications, and degrees of all types and levels that represent key competencies signaling what a person knows or can do.
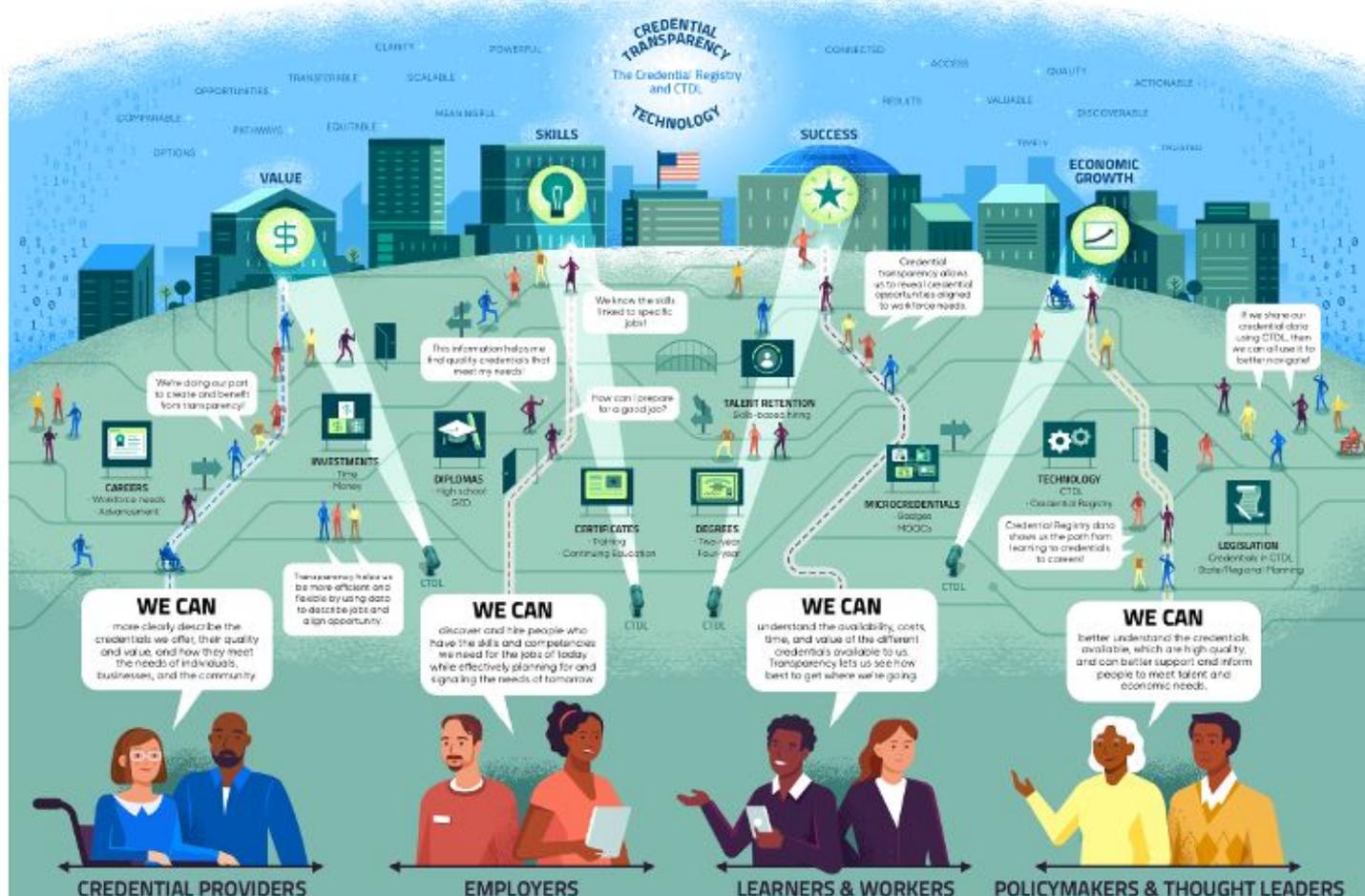
WHAT: TRANSPARENCY
Credential transparency makes essential information about credentials and competencies public, easily accessible, and actionable so that credentials can be better understood and pursued based on what it takes to earn them, what they represent, and the jobs they can lead to.

HOW: TECHNOLOGY
Credential transparency is made possible by technology. The **Credential Transparency Description Language (CTDL)** schema allows us to catalog, organize, and compare credentials and related information. Credential data from authoritative sources using CTDL is openly available in the **Credential Registry** for anyone, anytime, anywhere to search and compare credentials.
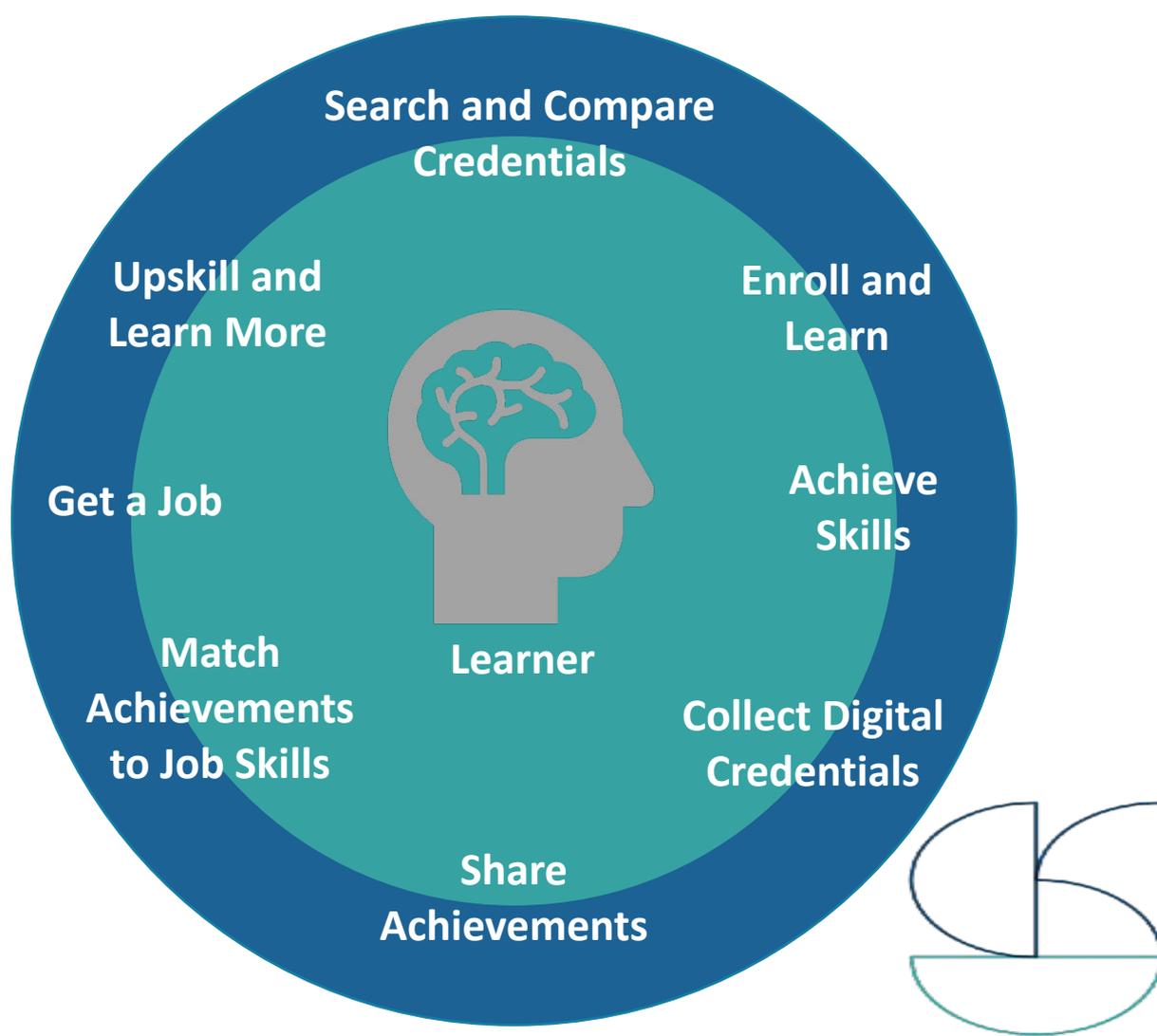
WHY: PATHWAYS
The easier it is to access and use comparable information about credentials, the easier it is for people to find the most effective paths to learn the right skills and find the best jobs. Credential transparency ensures equitable information about quality pathways to opportunities, makes those pathways discoverable, and empowers individuals along the way.
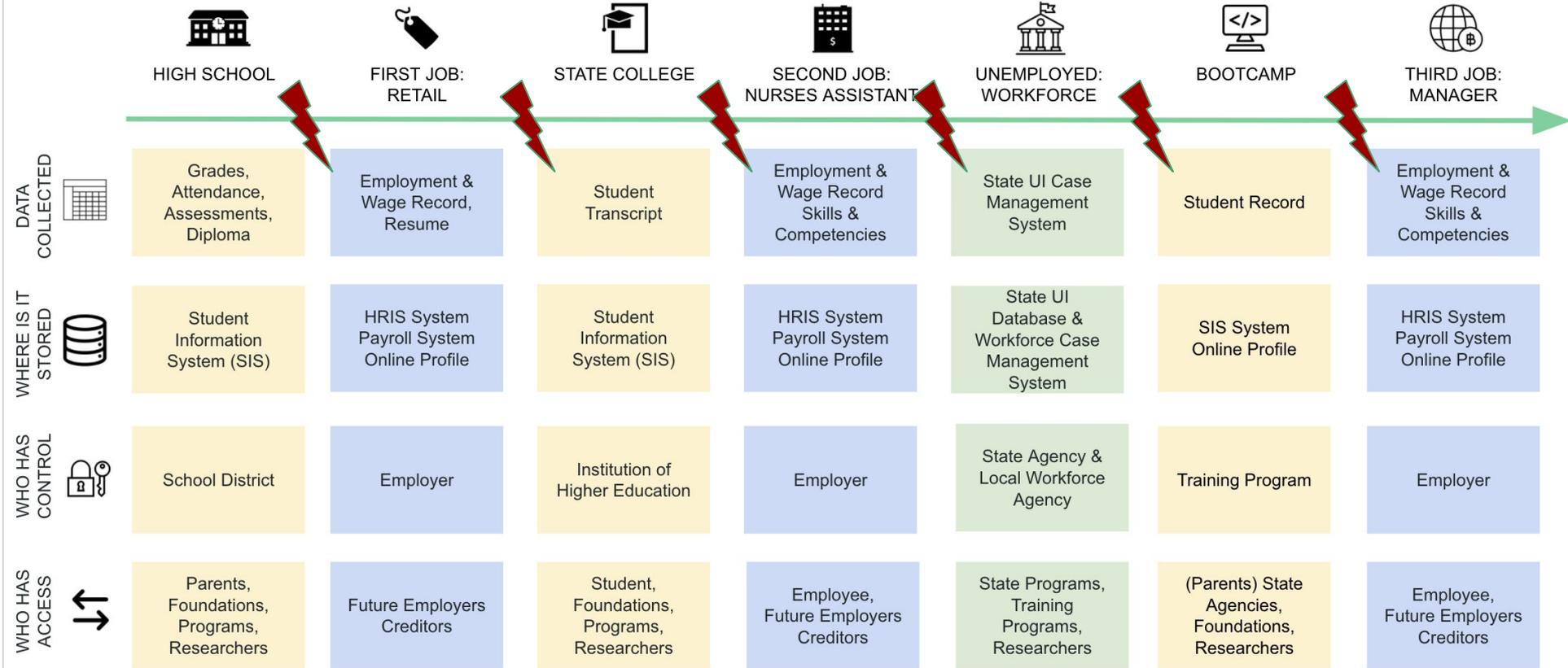
DESIGNED BY TREMENDOUSNESS
Learn more at www.tremendo.us

CREDENTIAL TRANSPARENCY
The Credential Registry and CTDL
TECHNOLOGY

CLARITY · POWERFUL · CONNECTED · ACCESS · QUALITY · ACTIONABLE · TRANSFERABLE · SCALABLE · RESULTS · VALUABLE · DISCOVERABLE · OPPORTUNITIES · MEANINGFUL · TIMELY · TRUSTED · COMPARABLE · PATHWAYS · EQUITABLE · OPTIONS

VALUE · SKILLS · SUCCESS · ECONOMIC GROWTH

We're doing our part to create and benefit from transparency!

This information helps me find quality credentials that meet my needs!

We know the skills linked to specific jobs!

How can I prepare for a good job?

Credential transparency allows us to reveal credential opportunities aligned to workforce needs.

If we share our credential data using CTDL, then we can all use it to better navigate!

CAREERS – Workforce needs, Advancement

INVESTMENTS – Time, Money

DIPLOMAS – High school, GED

TALENT RETENTION – Skills-based hiring

CERTIFICATES – Training, Continuing Education

DEGREES – Two-year, Four-year

MICROCREDENTIALS – Badges, MOOCs

TECHNOLOGY – CTDL, Credential Registry

LEGISLATION – Credentials in CTDL, State/Regional Planning

Transparency helps us be more efficient and flexible by using data to describe jobs and align opportunity.

Credential Registry data shows us the path from learning to credentials to careers!

WE CAN more clearly describe the credentials we offer, their quality and value, and how they meet the needs of individuals, businesses, and the community.

WE CAN discover and hire people who have the skills and competencies we need for the jobs of today, while effectively planning for and signaling the needs of tomorrow.

WE CAN understand the availability, costs, time, and value of the different credentials available to us. Transparency lets us see how best to get where we're going.

WE CAN better understand the credentials available, which are high quality, and can better support and inform people to meet talent and economic needs.

CREDENTIAL PROVIDERS · **EMPLOYERS** · **LEARNERS & WORKERS** · **POLICYMAKERS & THOUGHT LEADERS**

Learners are central to the ecosystem

Connecting credentials and skills across lifelong learning and career opportunities

Search and Compare Credentials
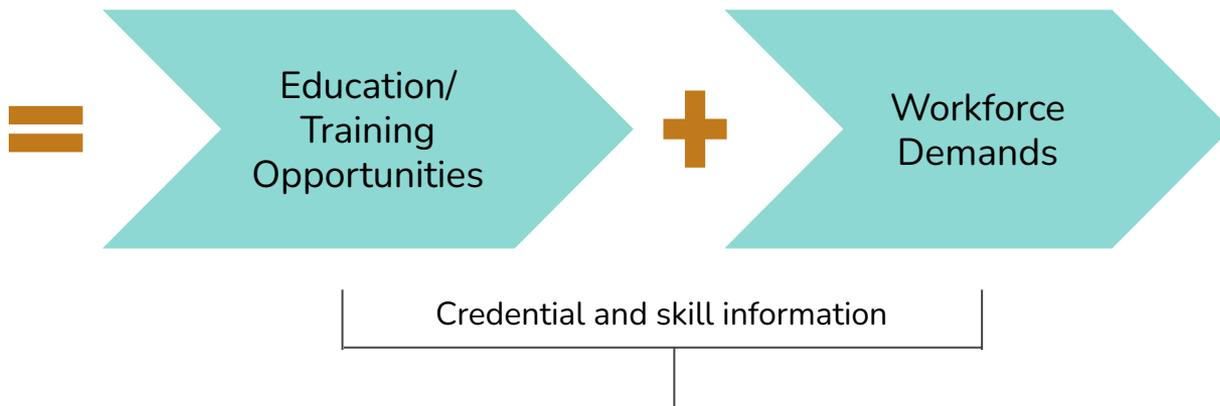
Upskill and Learn More

Enroll and Learn

Get a Job

Achieve Skills

Match Achievements to Job Skills

Learner

Collect Digital Credentials

Share Achievements

Disconnected learn and work records

	HIGH SCHOOL	FIRST JOB: RETAIL	STATE COLLEGE	SECOND JOB: NURSES ASSISTANT	UNEMPLOYED: WORKFORCE	BOOTCAMP	THIRD JOB: MANAGER
DATA COLLECTED	Grades, Attendance, Assessments, Diploma	Employment & Wage Record, Resume	Student Transcript	Employment & Wage Record Skills & Competencies	State UI Case Management System	Student Record	Employment & Wage Record Skills & Competencies
WHERE IS IT STORED	Student Information System (SIS)	HRIS System Payroll System Online Profile	Student Information System (SIS)	HRIS System Payroll System Online Profile	State UI Database & Workforce Case Management System	SIS System Online Profile	HRIS System Payroll System Online Profile
WHO HAS CONTROL	School District	Employer	Institution of Higher Education	Employer	State Agency & Local Workforce Agency	Training Program	Employer
WHO HAS ACCESS	Parents, Foundations, Programs, Researchers	Future Employers Creditors	Student, Foundations, Programs, Researchers	Employee, Future Employers Creditors	State Programs, Training Programs, Researchers	(Parents) State Agencies, Foundations, Researchers	Employee, Future Employers Creditors

U.S. Department of Education

OFFICE OF Educational Technology

Connected learn and work records

Credential and skill transparency = Education/ Training Opportunities + Workforce Demands

Credential and skill information

Powered by the Credential Transparency Description Language (CTDL) and uploaded to the Credential Registry

- Open
- Linked
- Trusted

- Accessible
- Useful
- Relevant

Learning and career pathway connections

Individuals' Needs

- Skill acquisition
- Training and education
- Records of learning and employment

Education/ Training Opportunities

- Training programs
- Military
- Colleges/Universities
- Apprenticeships
- On-the-job training

Workforce Demands

- Skill/job matching
- Workforce development
- Talent acquisition and management

What are Learning and Employment Records (LERs)?

"A Learning and Employment Record (LER) is a digital record of learning and work that can be grouped together with other individual LERs for use in describing their abilities when pursuing education and employment opportunities. An LER can document learning wherever it occurs, including at the workplace or through an education experience, credentialing, or military training. It can also include information about employment history and earnings." ([T3 LER hub](#))

- Digital records of learning from diverse sources
- Verifiable and secure
- Controlled and shareable by the individual
- Interoperable: transferable, meaningful, and machine-actionable across education and employment systems and processes

Global Open Standards

Standards support full transparency and interoperability of LERs:

- **W3C Verifiable Credentials and Wallets**
    - VCs for universal "envelope" data
    - VC wallets for collection and storage of LERs
- **Open Badges 3.0**
    - For organized content packaging of single records
- **Comprehensive Learner Records 2.0**
    - For organized content packaging of multiple records
- **Credential Transparency Description Language (CTDL)**
    - For meaningful linked open data so that LERs can be usefully understood and applied

How do LERs work as verifiable digital credentials owned and controlled by the individual?

Making it simple for people and organizations to exchange verifiable, trusted career credentials.

[Velocity Network Foundation](#)

**Claim** digitally signed records from your work or college to build a verified career portfolio.
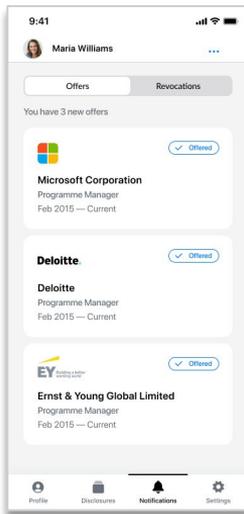
Stack proofs of your employment history, educational background, skills, and qualifications.
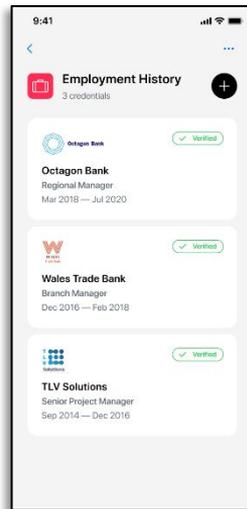
**Organize** all your career and education credentials. Store them privately.
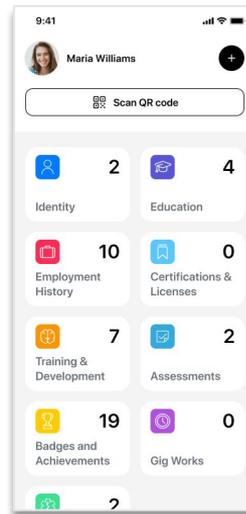
Control who you share your records with.

Issuing Parties (employers, educators issuing digital credentials)

Workforce (individuals)

Relying Parties (employers, educators receiving digital credentials)
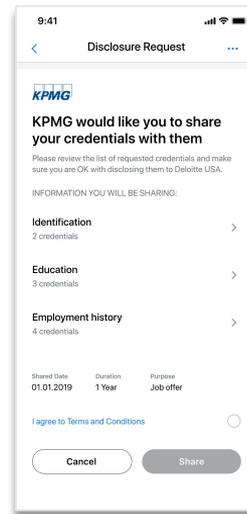
LERs use human- and machine-readable data in the Credential Transparency Description Language (CTDL)

Making it simple for people and systems to exchange meaningful information in career credentials.

Credentials can be aligned and linked to the Credential Registry, which hosts rich linked open data about credentials, including their skills and occupational alignments.
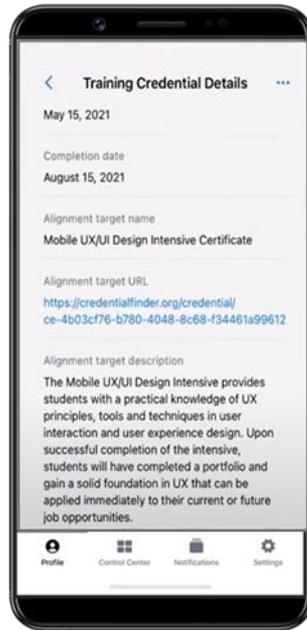
Inclusive Design Principles for Learning and Employment Records

1. Individuals can share evidence of their **skills** and **competencies**, in addition to work history.

2. Demonstrate **learning progress over time**, not just one point in time, such as degree completion.

3. Individuals can **control** how their information is presented and shared.

4. Address **safety and privacy concerns**, especially for historically and systematically marginalized individuals.

5. Prioritize lifelong **access** and ease of **use**.

Learning and Employment Records for Greater Equity

Cacicio, S., Tinsley, B., Miller, A., & Luke Luna C. (2022, April). Inclusive design principles for learning and employment records: Co-designing for equity. Digital Promise. https://doi.org/10.51388/20.500.12265/154

Digital Promise®

Power your LERs with CTDL

1. Define requirements for valuable information you can provide that makes your LERs valuable.
2. Organize your data about credentials, competencies, occupational alignments, etc. from one or more sources.
3. Design your LERs to use CTDL schemas, and for existing data, map it to CTDL schemas.
4. Include CTDL in the digital records that you issue to individuals.
5. Use CTIDs with Registry data to link to rich credential and competency information from within LERs.
6. Publish your credential and competency data as CTDL to the Registry and the Web.

See your LERs come to life in the ecosystems of linked open data across the web.

For More Information

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