Integrating Data Registries in an HR Marketplace
It’s become easy to find and compare online information for travel, products, sports teams, and much more.
Credential data hasn't kept up
Credentialing and employment information is not connected causing mixed signals in the talent marketplace including misalignment of training to competencies employers require or prefer.
Credential Engine’s Mission

We are a “public-good”, open-source non-profit working:

• To bring transparency to all credentials—their content, competencies, quality indicators, pathways, outcomes, etc.,
• To reveal the marketplace of credentials,
• To increase credential literacy,
• To help everyone make more informed decisions about credentials and their value.
• Competency Statements describe what a person knows and is able to do.

- Incorporates a range of design strategies to effectively integrate solutions into the user experience in ways that users with a range of backgrounds become excited.

- Establishes clear goals and expectations even when achievement processes may be complex.

- Installs and configures software, hardware, and networks for optimum functionality.
  - Monitors system performance and executes troubleshooting strategies.

- Knows and follows JSON schema design formatting rules.

- Sets up and uses client-side virtualization including knowing the purpose of virtual machines, resource requirements, emulator requirements, security requirements, network requirements, hypervisor.
Think About:

• How you learned the competency?
• How you would measure your proficiency?
• How you would communicate this competency to an employer?
• How an employer/educational provider could validate the competency?
• How an employer could use the competency statement?
750,000+
Competencies as Connective Tissue
Competency Exchange

- Use competencies to compare competency-based programs or courses
- Use competencies to align industry credentials to a course or program at your institution
- Use competencies to compare credit and non-credit programs at your institution
- Compare job competencies to program learning outcomes
- Use competencies to build credentials
- Use competencies to qualify, hire and assess talent
- Use competencies as a way to future-proof (individual and organization)
# Customer Service Profile

<table>
<thead>
<tr>
<th>Organizational Function</th>
<th>Related Work Functions</th>
<th>Cross-Cutting Competencies (Retail and Hospitality)</th>
<th>Framework Level</th>
<th>Validation</th>
<th>Within Work Context Entry Level</th>
<th>Mid-Level Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Service</td>
<td>Assess and meet customer needs</td>
<td>Understands and identifies internal and external customers.</td>
<td>K SS P S</td>
<td>Yes</td>
<td>Entry-Level</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is pleasant, courteous and professional when dealing with internal and external customers.</td>
<td></td>
<td>No</td>
<td>Entry-Level</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Greets and acknowledges customer promptly and offers assistance, speaking clearly and using proper grammar.</td>
<td></td>
<td>No</td>
<td>Entry-Level</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Attends to what the customer is saying, taking time to understand the points being made, ask questions, and does not interrupt at inappropriate times.</td>
<td></td>
<td>Yes</td>
<td>Entry-Level</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Clarifies customer needs and objectives and confirms by re-stating information.</td>
<td></td>
<td>No</td>
<td>Entry-Level</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Applies company policies and procedures appropriately to meet customer needs.</td>
<td></td>
<td>Yes</td>
<td>Entry-Level</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Employs the most efficient interview technique when gathering information from the customer.</td>
<td></td>
<td>No</td>
<td>Entry-Level/Mid-Level</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provides prompt, efficient, and personalized assistance to meet requests, requirements and address concerns.</td>
<td></td>
<td>Yes</td>
<td>Mid-Level</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identifies the social and cultural aspects of the customer in order to understand expectations for products and services.</td>
<td></td>
<td>Yes</td>
<td>Mid-Level</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tailors approach to meet the needs of customers with different demographic characteristics (e.g. age, cultural background, disability status) and personalities.</td>
<td></td>
<td>Yes</td>
<td>Mid-Level</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Establishes boundaries as appropriate for unreasonable customer demands.</td>
<td></td>
<td>Yes</td>
<td>Mid-Level</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anticipates future needs of the customer.</td>
<td></td>
<td>Yes</td>
<td>Mid-Level</td>
<td></td>
</tr>
</tbody>
</table>
Transparency Through Technology

Credential Transparency Description Language (CTDL) – Common language that describes key features of credentials, credentialing organizations, and quality assurance bodies.

Common descriptors will allow for better apples-to-apples comparison between credentials.

Publishing – After creating a user account, organizations use the API, Registry Publisher, bulk upload, or-in the future-harvest structured data to convert organization, credential and quality assurance information to the common language and publish to the registry.

Organizations will have a suite of options to add information to the registry.

Credential Engine Registry – houses information described by the common language and supports an open applications marketplace.

Developers will create specialized applications for different types of users, like employers, military veterans, and students.

Credential Finder Prototype Application – Basic search to view information in the registry.

The public will use Credential Finder to see all information in the registry.

Community – Receives technical assistance and other services to consume from and publish to the registry.

Credentialing organizations, developers, and other users will have access to resources like best practices, user guides, and staff support.
Example: Competency Frameworks
Encoded Competency Framework
Pathway as ‘Transit Map’—Defining ‘Station Stops’

In the context of Credential Engine:

• Pathway is...
  • A structured set of objectives and qualifying conditions defining points along a route to fulfillment of a job, occupation or career.

• Qualifying conditions include sets of prescribed, preferred or recommended artifacts:
  • Competencies (knowledge, skills, abilities)
  • Relevant awards
  • Recognitions (formal or peer)
  • Credentials earned
  • Relevant experience
  • etc.
Example: Pathway Abstract Model

- Assessment
  - Basic
  - Co-curricular
  - Competency
  - Course
  - Credential
  - Extracurricular
  - Job
  - Work Experience

- Agent
  - owns

- Pathway
  - hasRootComponent
  - hasChild
  - isRootComponentOf

- Pathway Component
  - hasChild
  - isChildOf
  - prerequisite
  - precedes

- Component Condition
  - hasCondition
  - targetComponent

- Rule Set
  - ruleSetUsed
  - hasRuleSet
Example: Quality Assurance

Supports QA actions
- Approves
- Accredits
- Recognizes
- Regulates

Supports QA claims
- Approved By
- Accredited By
- Recognized By
- Regulated By

Bi-directional Verification
## Credential Registry Data
### Publishing Options

<table>
<thead>
<tr>
<th>Manual Entry via the Publisher App</th>
<th>Bulk Upload via the Publisher App</th>
<th>Application Programming Interface (API)</th>
<th>Harvesting CTDL Structured Data from the Web</th>
</tr>
</thead>
</table>

- Enter small quantities of credentials and competency frameworks.
- Upload information using spreadsheets.
- Programmers publish structured data in real time.
- Future: Get and synchronize data from the Web.
Credential Transparency Partner Program

“By making data searchable and comparable through a common language, we will bring data transparency not only to credential providers, but also to the students, counselors, employers, and other users who need **clear data to make critical education and career decisions**.”

Scott Cheney
Executive Director of Credential Engine
Discover Credential & Competency Pathways

Olivia Updated Digital Record with Evidence of Learning and Employment Control When, Where, and Who to Share All or Part of Digital Record

Discover Job Skill Requirements and Employer Preference Matches

Retain and Advance in Employment with Work-based Learning

Search & Compare Credentials

Enroll & Learn

Upskill & Promotions

Apply for Jobs & Get Hired

Achieve Learning Outcomes

Match Achievements to Jobs

Collect Evidence of Learning

Share Achievements

Interoperability Data Standards

Access 4 Learning (A4L): SIF

Advanced Distributed Learning Initiative (ADL): Competency & Skills System (CaSS), Experience API (xAPI)

Credential Engine: Credential Transparency Description Language (CTDL), CTDL-Competency Framework, Credential Registry

Common Education Data Standards (CEDS): Elements and Data Model

Ed-Fi Alliance: Ed-Fi Data Standard

HR Open Standards: Assessments, Interviewing, Recruiting and Screening

IMS Global: Caliper, Competencies & Academic Standards Exchange (CASE)”, Learning Tools Interoperability (LTI), OneRoster, Open Badges, Question & Test Interoperability (QTI)

Postsecondary Electronic Standards Council (PESC): Standardization of Postsecondary Electronic Data Exchange (SPEEDE)

US Chamber of Commerce: Job Data Exchange (JDX)


Other domain-specific specifications such as competencies, maintenance task analysis, occupations…

See #EDU2030 proposal https://goo.gl/yvqH9D
## Credential Registry Data
### Consuming Options

<table>
<thead>
<tr>
<th>Search API</th>
<th>Customizable Widgets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application programmers can consume data from the Registry.</strong></td>
<td><strong>Organizations can create customized search widgets that</strong></td>
</tr>
<tr>
<td><strong>This requires knowledge of implementing APIs.</strong></td>
<td><strong>seamlessly embed in their websites. This does not</strong></td>
</tr>
<tr>
<td></td>
<td><strong>require an application programmer; it only requires the</strong></td>
</tr>
<tr>
<td></td>
<td><strong>webmaster to copy/paste code snippets provided by the</strong></td>
</tr>
<tr>
<td></td>
<td><strong>widget creator tool into their website.</strong></td>
</tr>
</tbody>
</table>
Register Now

Indiana App-athon:
Credential Data LaB

Indianapolis, IN
May 14 - 15, 2019
Thank you!

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