Technology services for a connected learn-and-work ecosystem: Results from the Midwest Credential Transparency Survey

Series 2 with Credential Engine
Moderator

• Jenny Parks
  MHEC
  Vice President
Presenters

• Jeanne Kitchens
  Credential Engine
  Chief Technology
  Services Officer

• Jeff Grann
  Credential Engine
  Principal Investigator
Presenters

• Jeni Spaulding
  MI Department of Labor &
  Departmental Specialist
  Employment & Training

• Ken Sauer
  IN Commission for Higher
  Education
  Sr. Associate Commissioner and
  Chief Academic Officer
Poll Question #1
Introduction to Credential Engine’s Technologies

June 2020

Jeanne Kitchens, Chief Technology Services Officer
jkitchens@credentialengine.org
https://credentialengine.org
https://credreg.net
Shared Understanding Across All Credentials

- **Who We Are**
  - Non-profit
  - Community built
  - Data Driven
  - *Mission oriented around credential transparency*

- **What We Do**
  - Provide common infrastructures
  - Leverage a common language
  - Build and mobilize partnerships
  - Develop and support open technology
• The market is large and expanding

• Over 738,000 credentials confirmed in the U.S. alone.

• As many or more competency models / frameworks

• Approximately $2t spent in the U.S. market annually

• Possibly 40,000+ separate providers / issuers of credentials, 7000 from IPEDS, 500+ licensing bodies, 1000+ certification bodies, 23,000+ apprenticeship programs, thousands of badge issuers
Credential Engine’s Open Technologies

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

Publishing
After creating a user account, organizations use the API, Credential Registry Publisher, or bulk upload to convert information to CTDL and publish to the Registry as Linked Open Data.

Credential Registry
The Registry collects and connects credential data described with CTDL and supports and an open applications marketplace.

Credential Finder
A basic Web app to view and explore the information stored in the Registry and provides an option to create customizable search widgets.

Community
A wide range of stakeholders provide and receive technical assistance and other services to both publish to the Registry and consume the data it houses.
Credential Engine Tech Stacks

Credential Engine maintains nationally scalable development, testing, staging and production cloud-hosted infrastructure for managing, publishing and consuming data.

1. **Account Management Stack**
   - 1.a. Organization Accounts
   - 1.b. Issue keys
   - 1.c. Third-party publishing permissions
   - 1.d. Publishing group and custom-branded partner page management

2. **Schema Management**
   - 2.a. CTDL
   - 2.b. CTDL ASN
   - 2.c. Quantitative Data
   - 2.d. Specialized Profiles

3. **Publishing Stack**
   - 3.a. Publishing APIs
   - 3.b. Bulk Uploads (CSV files)
   - 3.c. Manual Editors
   - 3.d. Ingesting from Web

4. **Registry Stack**
   - 4.a. Linked Data Store
   - 4.b. Minimum Data policy
   - 4.c. Currency Policy

5. **Graph Search Stack**
   - 5.a. Graph Search
   - 5.b. Customizable Search Widgets
   - 5.c. Credential Finder
Credential Transparency Description Language

- Modeled using the W3C’s Semantic Web principles, the CTDL family of specifications has been developed to support rich descriptions of credentials, their requirements, and other related data.

- Our Description Languages (schema) for all types of credentials supports search and discovery and comparability by using linked, open, interoperable, machine-actionable data.
Any credentialing organization, or state as a 3rd-party publisher (for credentialing organizations), can:

1. Set up a Credential Engine account.

2. Select from publishing tools:
   a. API for structured data in a database
   b. Bulk upload using spreadsheets
   c. Manual entry for small quantities of credentials

3. Use the selected tools to manage information and publish to the Registry:
   a. Use the API sandbox to test
   b. Preview information managed with bulk upload or manual entry before publishing

4. Publish to the Registry.

5. Use the formatted data in your own environment, embed on websites, and consume from the Registry.
Registry: Minimum Data and Currency Policies

https://credreg.net/registry/policy
Consuming Data From the Registry

https://credentialengine.org/build/

Applications and systems can consume data from the Registry:

1. Set up a Credential Engine account to access Registry keys.
2. Select from consuming options:
   a. Graph search
   b. Import and store
3. Use the online guides.
4. Consume data.
Credential Finder

https://credentialfinder.org
**Credential Finder**

https://credentialfinder.org

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<table>
<thead>
<tr>
<th>Health Assisting</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOCTI Certification + Badge heard</td>
</tr>
</tbody>
</table>

### Basic Info

**About this Credential**

The Health Assisting industry-based credential is included in NOCTI’s Job Ready assessment battery. Job Ready assessments measure technical skills at the occupational level and include items which gauge factual and theoretical knowledge. Job Ready assessments typically offer both a written and performance component and can be used at the secondary and post-secondary levels. Job Ready assessments can be delivered in an online or paper/pencil format. This assessment can be used at the secondary, post-secondary, and adult levels and is tied to the NOCTI Workforce Competency Credential. Individuals meeting a minimum benchmark also have the opportunity to earn college credit. More specific information about the standards and competencies measured can be found in the Assessment Blueprint at: [http://noci.org/blueprint.cfm](http://noci.org/blueprint.cfm).

### Estimated Time to Complete Required Assessments

**Health Assisting**

- **Estimated**: 3 hours
- **Written Assessment**: 160 Questions (may be administered in one, two, or three sessions)

### Credential Status Type

- Active

### Credential Type

- Certification

### Alternate Name(s)

- Test Code 4143

### Audience Levels

- Beginner Level
- Secondary School or Equivalent
- Postsecondary Level
- Associate Degree Level

### Location Info

**Available Online**

**Jurisdiction**

- **North America**
- This credential is available throughout North America.

### More Info

#### Competencies

- **41 Competencies**

#### Connections

1. Has 1 Common Condition

#### Quality Assurance

- **5 Quality Assurance**
- **Owner’s Quality Assurance**

#### Requirements and Recommendations

1. Requires 1 Assessment
1. Other Recommendations
1. 1 Renewal Requirement

#### Estimated Costs

1. 2 Costs
1. 1 Assessment Cost

#### Details

7 Processes
Credential Finder

https://credentialfinder.org
Credential Finder Customizable Widgets

https://credentialfinder.org/widget
Technical Information

https://credreg.net
Notes

● Public Service Non-Profit
  *We believe that full access to linked, open, transparent data is a public good.*  
  *We are not a “vendor”*

● No Fees to Publish Data.

● No Fees for Non-Commercial Use.

● Our language is an open, Creative Commons Licensed schema.

● Our role is NOT to define quality, but to provide appropriate ways to have quality described and determined by appropriate entities (i.e. accreditors, state agencies, etc.).

● We do not collect or track individuals or their data.
Poll Question #2
Convergence Accelerator Team – Connected Learn & Work Ecosystem

Phase 1: Data exchange evaluation criteria, Indiana roadmap, state-level toolkit

Phase 2: Connected data exchanges, new user applications, outcome measures

Data Expert Workshop:
October - define requirements

Use Case Workshops:
November & January - Indiana employers, ed providers, government, & experts

Jeff Grann (PI)
Credential Engine

Ken Sauer (Co-PI)
IN Commission for Higher Ed

Jenny Parks (SP)
MHEC

Emilie Rafal (SP)
Credential Engine

Jillian Scholten (SP)
IN Commission for Higher Ed

Holly Zanville (SP)
Lumina Foundation

IN COMMISSION for HIGHER EDUCATION

Midwestern Higher Education Compact

Lumina Foundation

Credential Engine

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Lumina Foundation
Midwest Credential Transparency Survey

4/27/20 - 5/6/20

Focal areas
1. State priorities
2. Stakeholders
3. Engagement strategies

Sample
• MHEC commissioners, alternates, and midwest CE partners
• n = 26 (58% state government, 30% credential providers, 12% non-profits)
• At least one response from each midwest states.
## Findings - State Priorities

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<thead>
<tr>
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<tbody>
<tr>
<td>Careers: Help displaced &amp; transitioning workers gain skills for better jobs</td>
<td>90%</td>
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<td>5%</td>
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<tr>
<td>Planning: Set credential attainment goals by state employment needs (occupational sectors, population sectors, credential types, etc.)</td>
<td>81%</td>
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<td>Quality: Identify high-value credentials (such as certificates, micro-credentials, badges, and degrees) for in-demand occupations</td>
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<td>29%</td>
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<tr>
<td>Return on Investment (ROI): Measure and track educational outcomes and effectiveness of credentials</td>
<td>43%</td>
<td>38%</td>
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<tr>
<td>Equity: Ensure equitable opportunities and outcomes for education and training</td>
<td>62%</td>
<td>19%</td>
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<tr>
<td>Performance: Meet statewide secondary &amp; postsecondary credential attainment goals</td>
<td>85%</td>
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<tr>
<td>Policy: Update state policies and practices supporting workforce, employers, and education providers</td>
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**Current**: Careers and Performance  
**Future**: ROI and Competencies
## Findings - Stakeholders

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<td>High school leadership</td>
<td>76%</td>
<td>14%</td>
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<td>College and university faculty</td>
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<td>Human resource professionals and hiring managers</td>
<td>43%</td>
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<td>14%</td>
<td>0%</td>
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<td>Employer executives</td>
<td>76%</td>
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<td>50%</td>
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<td>5%</td>
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<tr>
<td>State workforce and education agencies</td>
<td>95%</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
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<td>State legislators</td>
<td>76%</td>
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**Current:** State agencies and college leadership  
**Recruit:** HR, faculty & registrars
## Findings - Engagement strategies

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Highly effective</th>
<th>Effective</th>
<th>Not very effective</th>
<th>I don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large face-to-face meetings (50 or more participants)</td>
<td>5%</td>
<td>50%</td>
<td>35%</td>
<td>10%</td>
</tr>
<tr>
<td>Small, face-to-face meetings (less than 50 participants)</td>
<td>40%</td>
<td>50%</td>
<td>0%</td>
<td>10%</td>
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<tr>
<td>Large, virtual or telephonic meetings (20 or more participants)</td>
<td>0%</td>
<td>35%</td>
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<td>25%</td>
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<tr>
<td>Small, virtual or telephonic meetings (less than 20 participants)</td>
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<td>Webinars</td>
<td>11%</td>
<td>42%</td>
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<tr>
<td>Action teams focused on certain issues and tasks</td>
<td>63%</td>
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<td>5%</td>
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Use small web meetings & action teams to engage
MHEC Commissioners interested in Credential Transparency

95%
Poll Question #3
Credential Transparency in Michigan
Michigan Department of Labor and Economic Opportunity-Workforce Development
Business Cases

1. Expand Registered Apprenticeships in Michigan

2. Enhance Public Workforce Information System
   • Pure Michigan Talent Connect (PMTC)
   • Michigan Education & Career Pathfinder
   • Michigan Training Connect (MiTC)
   • One-Stop Management Information System (OSMIS)

3. Define Career Pathways in Michigan
Project Status – July 2018 Launch

Asset Mapping
• Credentials & Certifications
• Owners, Partners, & Stakeholders

Phased Approach
1. Assisting State departments to publish licenses and certifications issued to residents to work in Michigan.

• Incorporated Credential Registry deliverables into a WDQI grant in 2019 to include funding a temporary staff member dedicated to assisting with account creation, data gathering, and credential uploading
Project Status – July 2018 Launch

Technology

2. Creating API connection to upload credential information available to LEO through state databases including Proprietary Schools, secondary and postsecondary CTE programs, colleges and universities and the ETPL.
   • ~ 6,900 Learning Opportunities and Credentials in queue

3. Created API connection to download credential information from the Registry applicable to Michigan residents – including Michigan credentials - to create a database to use in state systems identified in Business case #2.
Opportunities for Michigan

• Connect training programs with certifications.

• Assist in credential evaluation across state education and workforce initiatives and federal guidelines.

• Unify terms across industry, education, and workforce arenas.

• Allow employers, jobseekers and programs to communicate credentials.
Jeni Spaulding
Talent Information Systems - Specialist
517-930-9111
spauldingj@michigan.gov

Michigan Department of Labor and Economic Opportunity - Employment and Training

Michigan.gov/LEO
Credential Engine

Indiana

Indiana Commission for Higher Education

May 28, 2020
DATA WE’VE PUBLISHED

- Public Sector:
  - ✔ All 2- and 4-year campuses
  - ✔ All certificate and degree programs at
    - ✔ All levels
- Two Private, Non-Profit Institutions
- 3,000+ Indiana Credentials
USE CASE #1: SECONDARY SCHOOLS (HIGH SCHOOLS, DUAL CREDIT PROGRAMS AND CAREER EXPLORATION)

- High School Early College Programs
  - Starting with 31 high schools endorsed by CHE and Center for Excellence in Leadership of Learning (CELL)
  - Connection to postsecondary credentials
- Working with existing and future career exploration software vendors to use data in the Credential Registry
USE CASE #2: ELIGIBLE TRAINING PROVIDER LIST (ETPL)

- Eligible Training Providers have met specific performance and occupational demand criteria, and undergo an annual application review process.
- Indiana’s system is called INTraining.
- Working to connect this system with Credential Engine Registry.
- On hold due to COVID-19.
INDIANA WIDGET: TRANSFERIN.NET/SEARCH
GOOGLE PATHWAYS APP

- Launched in Indiana in Dec 2019
- Three pilot sites
- In-demand information
- Alignment with credential descriptors
CONTACT INFORMATION

Ken Sauer, Ph.D.
Senior Associate Commissioner and Chief Academic Officer
Indiana Commission for Higher Education
101 W. Ohio Street, Suite 300
Indianapolis, Indiana 46204
317-232-1090
ksauer@che.in.gov

Jillian Scholten
Director of Academic Affairs and Talent Credentialing
Indiana Commission for Higher Education
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Indianapolis, IN 46204
317-232-1071
jscholten@che.in.gov
Questions

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Series 2:
Technology services for a connected learn-and-work ecosystem: Results from the Midwest Credential Transparency Survey

Thursday, June 4, at Noon CDT
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Contact

Jenny Parks
MHEC Vice President
(612) 677-2779
jennyp@mhec.org