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Making Sense of Credentials: A State Roadmap and Action Guide for Transparency

November 2020



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STATE HIGHER EDUCATION EXECUTIVE OFFICERS ASSOCIATION

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Council of Chief State School Officers



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OF THE STATES



**NATIONAL
SKILLS COALITION**

Every worker. Every industry. A strong economy.

Seven state leadership organizations and five workforce, education and data advocacy/technical assistance experts have come together to build awareness, understanding, and demand for how policy can integrate credential transparency into education and workforce development state strategies.

Specifically, this partnership:

- Builds awareness among state policymakers around the importance of credential transparency to their own state workforce and education goals and strategies;
- Elevates a common language about credentials for use in state policy;
- Increases demand among policymakers for credential transparency; and
- Provides specific actions policymakers can consider using to support integrating credential transparency into their larger human capital development efforts.

Members of the State Policy Partnership include:

Council of Chief State School Officers
Education Commission of the States
National Conference of State Legislatures
National Governors Association
State Higher Education Executive Officers
Association
National Association of State Workforce
Agencies
Advance CTE

Credential Engine
Data Quality Campaign
Education Strategy Group
Education Quality Outcomes Standards Board
National Skills Coalition

For more information on the State Policy Partnership or Credential Transparency, please contact Scott Cheney, CEO of Credential Engine, at 202.257.0279 or scheney@credentialengine.org. For general inquiries please contact info@credentialengine.org.

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Introduction:

What is Credential Transparency and Why Does it Matter to State Policymakers?

What is a Credential?

Credential Engine uses the term “credential” broadly, including but not necessarily limited to diplomas, badges, certificates, apprenticeships, licenses, certifications, and degrees of all types and levels. These credentials all capture and convey unique sets of competencies (knowledge, skills, and abilities) to signal what a holder is able to do in the education and employment market.



State policymakers are searching for ways to help students and workers find the most efficient and cost-effective pathways to secure the right skills and credentials that lead to good jobs. Credentials are emerging as powerful actionable data that, when prioritized as part of a state's broader investment in its P-20W ecosystem, can help take friction out of our inefficient labor market.

But with nearly 1,000,000 unique credentials in the U.S., opportunity seekers too often do not know which credentials lead to desired outcomes, employers are unable to understand what skills workers actually bring to a job, and educators are rushing to keep up with changing requirements in the workplace.

It is still too difficult for a student to understand the courses and programs of study or training they need to take to be prepared for their target career. Similarly, hiring managers are struggling to find job applicants with the specific skills and knowledge they need. We all pay for this inefficient labor market; greater clarity and transparency around the demands of today's and tomorrow's jobs and the credentials required to attain them will level the playing field and increase equity in the marketplace.

Much like finding and purchasing a car, mapping a route to a store, or browsing for music—all of which are possible through the shared use of common, open data systems on the web—stakeholders are seeking clear alignment between education and work, and states play a vital role in uncovering those connections.

State policy leaders are in a unique position to prioritize credential transparency and embed this concept into the foundations of their education and workforce strategies, including broader investments in their P-20W data infrastructure. These leaders have recognized the critical importance of increasing credential attainment to meet economic and equity goals: nearly every state has or is considering a postsecondary educational attainment goal, which sets a threshold for the percentage of residents with some type of postsecondary credential. Not only do states have responsibility for education and training, but they have also led the transformation of the role of data in these sectors to be a tool of empowerment and improvement. Most importantly, state leaders have used their position to set robust goals for postsecondary attainment and preparing all of their residents for family supporting jobs. Through governance structures including cabinets and P-20W Councils, state policymakers can build a culture that encourages all parts of state government, employers, and education and training providers to work in a coordinated and aligned fashion to meet those goals.

The task at hand is to ensure that policy creates systems for these credentials to be easily accessible, understood, comparable, connected to other critical education and workforce data, and communicated so that they serve everyone. This document is a roadmap and an action guide for state policymakers to help take the inefficiencies out of the labor marketplace and provide more efficient and equitable access to actionable information through the prioritization of credential transparency. This guide is divided into three sections:

1) Actions State Policymakers Can Take to Increase Credential Transparency:

The interactive graphic on the next page provides an overview of the specific steps that state leaders can take to help integrate a common data infrastructure into their statewide education systems and to build a public, open marketplace for information about credentials so students, opportunity seekers, employers, and others can answer the questions: *Which credentials are in demand locally? What skills do they represent? Who is providing them? How and where do I earn one?* These strategies will help states meet the ultimate goal that everyone is prepared to participate in the economy and community.



Understand the Value:

Make the Case:

Align with Existing Education and Workforce Data Commitments:

Catalog and Publish Credentials Offered and Sought at Local, State, and Federal Scale:

Turn these Data into Actionable Information:

Build Enduring Commitment:

The Roadmap:

1. Learn how credential transparency can benefit students, workers, employers, educators, policymakers, and others
2. Communicate clear use cases to benefit students, workers, employers, educators, programs, and key policy goals
3. Commit to using a common language and identify what data about credentials and competencies are necessary to be transparent and publicly available
4. Ensure this work is integrated with, complements, and strengthens quality, attainment, equity, access, affordability, and P-20W data efforts to ensure continuity and impact
5. Inventory all credentials in your jurisdiction
6. Publish all credentials and their competencies to the Credential Registry and the Open Web in CTDL and CTDL-ASN
7. Link and align credential data with other essential data
8. Support the creation of user-end tools, services, and systems with robust navigation and guidance capabilities
9. Ensure sustainability of credential transparency through legislative, agency, and institution policies that continuously improve credential transparency for the benefits of its citizens and markets
10. Establish the necessary infrastructure for enduring data transparency



2) Credential Transparency's Critical Role in the Connected Learn-and-Work Ecosystem:

State policymakers, even before the COVID-19 crisis and economic downturn, were laser-focused on preparing their residents for jobs. Now, with millions looking to upskill and re-skill as jobs have disappeared, the need to have coordinated, effective, results-oriented education and workforce strategies and programs that lead to good jobs is vital to the health of states. There are increasing numbers of national efforts to support states led by foundations, advocacy organizations, and the federal government. State leaders need to understand how all of these efforts can be coordinated and connected so they are more powerful than operating in silos. This section highlights many of these national efforts to improve labor market information systems and how credential transparency is a complementary piece of the workforce development picture.

3) Specific Policymaker Actions:

The third and final section provides a role-based approach to the roadmap by outlining specific actions that governors, legislators, chiefs, and SHEEOs can take to prioritize credential transparency in their state.



Section 1:

The Roadmap to Credential Transparency

How does the Credential Transparency Description Language (CTDL) help create credential transparency?

Colleges, job training programs, and employers offer all kinds of credentials—from degrees to certifications to badges—for learning and gaining skills. But with almost 1,000,000 different credentials it is hard to easily find reliable and actionable information on the value of various credentials, where to get them, what each competency and skill means, cost, and employment opportunities associated with each opportunity. Credential transparency requires bringing together this varied information from colleges, companies, government agencies and others to describe the knowledge and skills they confer and expect in clear, detailed, and consistent language—the Credential Transparency Description Language (CTDL).

CTDL is an open-source language that serves as the “Lingua Franca” or Rosetta Stone that makes it possible for all credentials to be catalogued, organized, and comparable. The CTDL and CTDL-ASN (competency language) combined include over 500 terms that can be used to clearly describe credentials and competencies.



Understand the Value

Leadership is critical to creating a vision for a labor market information system that works. State policymakers need to raise expectations that everyone—opportunity seekers, employers, education and training providers, and policy and program leaders—deserves to have timely, accurate, user-friendly information to guide their decisions about preparation for careers. Policy leaders who want to transform their labor market information systems can learn more about the foundational role that a common language and marketplace for credentials plays in creating greater transparency.

1. Learn how credential transparency can benefit students, workers, employers, educators, policymakers, and others.

The first step to making any change is recognizing current challenges and understanding solutions. A growing number of states are committed to using the [Credential Transparency Data Language \(CTDL\)](#) and adding their credentials to the public marketplace: the [Credential Registry](#). Policymakers can build their knowledge and encourage their staff to learn more from how states have approached this work to address equity and attainment goals, better aligning P-20W systems, addressing economic changes, and meet other priorities. States are demonstrating the critical role of leadership and the need to make the case about the value of this work to meeting the specific goals of the state.

State Exemplar:

- As the economic crisis stemming from COVID-19 hit, leaders in [New York](#) were looking for ways to make information about education and training opportunities more easily accessible to displaced workers. By learning about how other states have utilized Credential Engine's technologies to make credential information more transparent and available, New York developed strategies to implement the work in their own state.

POLICYMAKER ACTION: Work with state leaders to understand the challenges of delivering credentials of value and quality in your state and learn how credential transparency and linked open data can help address those needs.

Make the Case

The next step to making any change is building awareness, understanding, and demand for that change. By committing to and communicating the value of credential transparency, all stakeholders will see their role in the work.

2. Communicate clear use cases to benefit students, workers, employers, educators, programs, and key policy goals.

The first step towards credential transparency for states is understanding and sharing the ways that current, comprehensive, and comparable data about all credentials and competencies will help advance



states' priority goals and initiatives. Everyone should have access to real-time, complete, and trustworthy information, anytime, anywhere, that lets them make the best informed decision about which path to take. The millions of people who are now out of work due to the COVID-19 pandemic need the best possible information about which credentials and providers offer programs that have demonstrated success in being cost effective and connected to in-demand jobs that pay a livable wage.

State Exemplars:

- **New Jersey** is using such credential information to build decision making tools to help unemployed people navigate their way back through education and training and into the workplace. Having a tangible and explicit use case at the start helps underscore the value of the work and helps stakeholders understand the end goals.
- **Indiana** is building better early college, dual credit, pathway, and digital degree platforms across the state, and has communicated their use cases via communications materials, presentations, and internal state agency policies.

POLICYMAKER ACTION: Agencies overseeing K–12, workforce, higher education, licensing, apprenticeships and other credentials can identify and report on how credential transparency would improve services and value to stakeholders.

3. Commit to using a common language and identify what data about credentials and competencies are necessary to be transparent and publicly available.

There are nearly one million credentials in the U.S. alone, and yet, because they are all described differently, it is almost impossible to make comparisons and connections among these credentials; which limits the value of these credentials to individuals trying to make decisions. The Credential Transparency Description Language (CTDL) is an open-source language that serves as the “Lingua Franca” or Rosetta Stone that makes it possible for all credentials to be catalogued, organized, and comparable. Without a commitment to have all credentials in a state be described in the same language, transparency around skills and knowledge represented by credentials is impossible.

The CTDL includes over 500 terms that can be used to describe credentials and competencies. But not every term is necessary for every goal or relevant to every credential. Each state, institution, and partner should determine what exactly they need to know about credentials and competencies, and identify those data fields that meet these needs. These could include cost, earnings and employment outcomes, quality assurance indicators, competencies taught or assessed, and links to occupation and job skills. States should also examine what data is available and/or already being collected through other data initiatives—such as state longitudinal data efforts—and ensure that they are all being described using the CTDL.

State Exemplars:

- Led by the **Colorado** Workforce Development Council and the Colorado Department of Higher Education, the state agencies and institutions are working together to develop a “canonical” source of all

credentials offered, including identifying and counting quality non-degree credentials through the National Skills Coalition (NSC). They are using the CTDL to describe these offerings and making the data open and accessible in the Credential Registry and through their My Colorado Journey tool. They are also leveraging a collaborative, innovative data trust to facilitate data sharing and governance between partners.

- The **New England** Board of Higher Education developed a minimum data policy—using CTDL terms—that required institutions participating in their High Value Credentials for New England initiative to publish data including costs, duration, and location. In the second phase of work, they are requiring information about competencies, as well.
- In **Minnesota**, representatives from the Minnesota State College and University System, the Department of Employment and Economic Development, and the Office of Higher Education audited their credential related data collection processes and systems to identify what data is collected, where and how it is maintained, how their data map to the CTDL, and their best methods for publishing to the Credential Registry. The Eligible Training Provider List, published on the DEED website as the “Career and Education Explorer,” had the majority of information available. Additional fields are being added to support expanded data collection and mapping to the CTDL. The Minnesota team will publish all ETPL listed WIOA-approved credentials to the Registry and will focus additional efforts on expanding these listings within the ETPL with public and private institutions offering postsecondary credentials in Minnesota, including nationally registered apprenticeships.

POLICYMAKER ACTION: Incent state agencies, training and education providers, employers, and others to make information on all credentials in the state accessible through linked open data using a common language, and ask all agencies focusing on supporting the development of human capital to identify all data elements needed to support state goals.

Align with Existing Education and Workforce Data Commitments

States have been laser focused on preparing their residents for jobs. There has been a rise of programs, priorities, and policies aimed at increasing knowledge and skills to prepare people for the changing economy. In addition, there are increasing numbers of national efforts to support states led by foundations, advocacy organizations, and the federal government. State leaders need to understand how all of these efforts—both national and homegrown—can be coordinated and connected so they are more powerful than operating in silos. A common language and shared space for cataloging credentials is a foundational element that allows these efforts to talk with each other and have greater impact on results. (See [Section 3](#) for more information on how credential transparency complements and supports other national efforts to build an effective labor market information system that serves people.)

4. Ensure this work is integrated with, complements, and strengthens quality, attainment, equity, access, affordability, and P-20W data efforts to ensure continuity and impact

Data about credentials and competencies matter throughout the learner lifespan. A state’s data ecosystem from early childhood through the workforce should be one that provides students, opportunity seekers,



and policymakers with access to the information they need to make decisions—including about the quality, competencies, pathways, transfer value, outcomes and linkages to jobs and skills. This requires a strong data infrastructure using common languages that facilitate connections and collaboration across agencies. Aligning credential transparency with existing education and workforce data commitments will help reduce redundancies and costs in data collection and reporting, and will improve interoperability and efficiencies across systems. Using data from the Registry to populate tools and resources used by decision makers reduces redundancy in data collection and eliminates inconsistencies across analyses and public reporting.

State Exemplars:

- **Alabama** has been working under the leadership of Governor Ivey and the Commission on Higher Education (ACHE) to use the CTDL and CTDL-ASN to set up the hardware and software infrastructure for collecting and organizing credential program data in the state. Leaders in Alabama recognized that building this foundational infrastructure using these common languages would streamline data sharing among state agencies by breaking down existing data silos. ACHE is using the infrastructure to create a statewide credential registry that will also connect to the P-20W longitudinal data system, known as the ATLAS on Career Pathways. In addition, they are using the data in the Registry to help determine and signal non-degree credentials of value using the framework developed by National Skills Coalition with the goal of improving equity and attainment in the state, highlighting how these efforts can be streamlined and connected through a common data source.
- As California works to develop and implement its statewide longitudinal data system, UNITE-LA is collaborating with Credential Engine to ensure credentials in the **Los Angeles** area are described in a common language in the Credential Registry. The project is meant to serve as a regional pilot for eventual statewide adoption. Incorporating credential data into the Statewide Longitudinal Data System will be key to supporting students' understanding of credential options connected to career pathways of interest—and will provide richer information about credentials connected to education and career outcomes for research and policy uses.
- In **Kansas**, the Board of Regents is improving information about quality indicators by publishing additional data to the Registry, including financial assistance opportunities. Agency leaders are also collaborating with Credential Engine's CTDL working group toward the goal of showing credit for prior learning from military occupations to programs at schools in the state. Using the CTDL for this purpose will make the information more readily available and connected to more detailed information about those credentials.
- **Maryland SB 317** (2017) directs the State Board of Education, the Maryland Higher Education Commission, and the Governor's Workforce Development Board to develop statewide attainment goals for industry-recognized credentials.
- **Louisiana SB 102** (2017) includes credential attainment as part of the funding model for workforce training and education programs.

Leaders in Louisiana integrated credential transparency into actionable strategies and tactics for increasing graduates by focusing on Hidden Opportunities (awarding credentials without requiring application for graduation, transfer students who leave having completed but not awarded, reverse transfer) and Program Expansions (shortening training to 8-weeks, aligning with business and industry, coordinating between credit and non-credit departments) leading to record graduating class

from 19,810 in 2014 to 33,428 in 2020 encompassing a significant growth in short-term credentials and certificates to 15,083. This included a 7% graduation rate increase for minority students. Analysis conducted by Old Dominion University of 9,452 individuals who earned short-term credentials with LCTCS indicated immediate labor market returns of \$6,715.81 (+19%).

The State created the Career and Technical Certificate (CTC) clearly linked to industry-based certifications which graduated 4,038 individuals across the 150 CTCs offered in 2019-2020.

Integrating credential transparency within ongoing initiatives helped Louisiana secure millions of dollars in funding for training programs in healthcare, transportation/logistics, information technology, manufacturing, and construction across the state. The State developed three new methods for earning the high school equivalency diploma in Louisiana. These opportunities have led to degrees, short-term certificates, and industry-based credentials aligned to workforce needs.

POLICYMAKER ACTION: Incorporate common and comprehensive data around credentials into the data systems of early childhood, K–12, postsecondary, and workforce, and ensure that this information can be securely linked and shared, when appropriate, to meet education and workforce goals. Ensure that quality indicators are accessible to the public by publishing them in CTDL.

Catalog and Publish Credentials and Competencies

In order to make use of a common language and consistent, comprehensive linked open data about credentials and competencies, states must first understand what credentials are offered in their state, what data is currently available and in what formats, and work to map and publish that data to the Registry.

5. Inventory all credentials in your jurisdiction.

Our education and data systems were built for compliance reporting rather than to serve people's information needs. Thanks to state leadership, the data that has historically sat in data warehouses is beginning to be turned into actionable information that can help policymakers, practitioners, and opportunity seekers make more informed decisions about pathways to success. The Credential Transparency Description Language and the Credential Registry provide a shared language and trusted space to be able to catalog all credentials in an open, accessible platform that allows comparability and analysis to inform decision making.

States have multiple, often siloed and duplicative ways that they inventory and collect information about credentials of all types. Higher Education agencies track postsecondary degrees and credit-bearing certificates, Workforce Boards track WIOA eligible training programs that include certificates and apprenticeships, Licensing Agencies inventory state licenses, and more. While these processes cover many credentials offered in a state, few states have a full view of every credential offered—for example, badges and credentials offered through employers and bootcamps are traditionally left out of current state processes. In order to reach the goal of full transparency, states must understand the current landscape of credentials and credential data.



State Exemplars:

- In **Michigan**, a new position was created at the Department of Labor and Economic Opportunity (LEO) to inventory all credential information currently collected in the state and to identify gaps. They found that while LEO had information about all degrees at public institutions, WIOA-approved programs, apprenticeships, licenses, and secondary credentials, they did not have information about credentials offered at private or for-profit institutions, badges, or credentials that are not eligible for state or federal funding. Developing this credential inventory is helping Michigan reach Governor Whitmer's goal for the state to have 60% of working-age adults with a skill certificate or college degree by the year 2030.
- **Kentucky HB 419** (2020) requires the Council on Postsecondary Education to annually compile data on in-demand jobs within the state and for each public postsecondary instruction, and each campus of the Community and Technical College System, to compile data relating to student successes and costs, and requires the Council to develop a delivery method to ensure access to information by prospective students.
- In **Tennessee** and **North Carolina**, leaders have established data sharing agreements directly with providers of industry-recognized credentials, which enables both states to better track and report information on credential attainment. Tennessee is the model for this approach and has established agreements with 15 certification agencies for the 42 promoted industry certifications that comprise the state's priority list. Not only does it help them build a more accurate understanding of who is earning credentials and which credentials are being earned, but it provides a wealth of data upon which to conduct further research to inform policy and practice.

POLICYMAKER ACTION: Create a census of all credentials available to state residents so credential data can be identified, cataloged, and reported by type, provider, type of provider, and other additional information that is important to the state by using linked open data and a common schema.

6. Publish all credentials and their competencies to the Credential Registry and the Open Web in CTDL and CTDL-ASN.

A common language and repository for all credentials and their competencies will break down data silos, streamline data collection and reporting, support a multitude of state goals, and ensure an apples to apples comparison across credential types. Utilizing the CTDL and CTDL-ASN enables this not just within state boundaries but also across state lines. Ultimately, publishing details about all credentials as linked open data will guarantee that everyone has current and complete information. Being able to have all credentials in one space and described in the same language empowers users to search, analyze and compare credentials to best meet their needs.

State Exemplars:

- The **Indiana** Commission for Higher Education has worked with credential providers across the state to publish over 3,000 credentials to the Registry, including all offered by their public institutions.



The Ivy Tech Community College System has also published all associate degree competencies, and the state is working to add competencies for all credentials.

- The **Washington** Workforce Training & Education Coordinating Board has collected and made public information about over 6,000 credentials offered in the state through its nationally recognized career and education platform, [CareerBridge.wa.gov](https://careerbridge.wa.gov). The next step is publishing that data to the Registry using an API to map to the CTDL, ensuring that it is in linked open data format and machine searchable. By publishing in this new format, education and training providers can readily add competency data to their credential descriptions, and highlighting skills and competencies which are currently not shown.

POLICYMAKER ACTION: Require that information about all credentials (including but not limited to diplomas, badges, certificates, certifications, apprenticeships, licenses, and degrees of all levels and types) and competencies (knowledge, skills and abilities) delivered, issued, funded, authorized, overseen, or governed by the state be made publicly accessible through the use of linked open data formats that support full transparency and interoperability; such as through the use of Credential Transparency Description Language specifications.

Turn these Data into Actionable Information

Data by itself does not change anything. Data can be transformed into actionable information when it is connected and linked with other important data (e.g., the state's P-20W data system), analyzed, and publicly reported. The Credential Registry and CTDL together make it possible for data on every credential to be analyzed, compared, and reported in an efficient and user-friendly manner.

7. Link and align credential data with other essential data.

The value of linked open data about credentials and competencies has been made clear through previous steps in this roadmap. Connecting these data to other data sets will expand the use and value of the work. For example, ensuring that job postings, public transit, financial assistance, and other related data utilize open schema and linked data will allow real time information about actual job openings and their skill needs that can be linked to both available credentials and to digital learner records.

State Exemplars:

- At **Indiana's** Ivy Tech Community College System, students' digital diplomas include data from the Registry, which is linked via the unique identifier for each degree.
- ProPath **Illinois** is an innovative statewide Workforce Data Quality Initiative (WDQI) technology transparency tool that can be utilized by both education and workforce partners throughout the state to integrate and enhance existing educational and workforce training provider and program data. It leverages the technology of the Illinois workNet tools and platform in conjunction with the Credential Registry, the New York University Administrative Database Research Facility, and the Illinois Longitudinal Database System to create an easily accessible and robust directory of state training pathway alternatives.



POLICYMAKER ACTION: Utilize linked open data and unique identifiers of credentials to ensure data from the Registry can easily be linked to other essential data.

8. Support the creation of end-user tools, services, and systems with robust navigation and guidance capabilities.

Delivering rich, timely, accurate, and reliable information about credentials and the competencies they represent into the hands of students, opportunity seekers, employers and others is the vital “last mile” that makes it possible for people to use these data for their own decisions. This is one of the most important goals of credential transparency. Tools, services, and resources must be created that meet the needs of all the different users and beneficiaries. And existing services offered by vendors in states, such as career navigation and guidance, should be required to utilize these data.

State Exemplars:

- The **New Jersey** Department of Labor and Workforce Development is leading state efforts to build a “smart disclosure” tool that will help jobseekers obtain their desired employment and earnings outcomes; employers find better qualified employees; and regulators make data-driven decisions that weed out fraudulent and low-quality training providers. The tool will use the Registry as its backbone to help its users better understand education and training opportunities.
- The **Indiana** Commission for Higher Education is ensuring that these data are included in the state’s career and guidance counseling tools used in the secondary, postsecondary, and workforce systems by including language in their RFP that will require the winning contract to utilize the rich data available in the Registry.

POLICYMAKER ACTION: State agencies should use Registry data in user-facing tools and portals to promote more comparable information. Agencies can also develop language to be used in RFPs that require vendors to utilize the CTDL and the Registry where appropriate.

Build Enduring Commitment

Leadership is critical to building a vision for change. It is also critical for ensuring that quality implementation of new ideas creates sustainability for those approaches. State policymakers are vital to ensuring that credential transparency is a core element of their education and workforce development strategies for the long term.

9. Ensure sustainability of credential transparency through legislative, agency, and institution policies that continuously improve credential transparency for the benefits of its citizens and markets.

The value of open data about credentials and competencies will only grow, especially as the marketplace of providers, offerings, and platforms continues to change and as the jobs and skills needed by employers continue to evolve—and policy can ensure that the work is consistent and lasting. The commitment to transparency must be embedded in policy and practice across P-20W systems to ensure sustainability, alignment, and impact.

State Exemplars:

- **Connecticut** Governor Ned Lamont signed an executive order to establish a Governor’s Workforce council to strengthen and connect workforce and education systems and includes a call to “bring transparency to credentials” in the state.
- **Indiana’s** Strategic Workforce Plan underscores the state’s commitment to credential transparency by including policy language that requires the use of the CTDL and Registry to streamline efforts and ensure data connectivity across the state.

POLICYMAKER ACTION: Consider and implement policies noted throughout this document, including legislation that provides for enduring credential and competency transparency. Ensure that clear lines of authority for data transparency are in place.

10. Establish the necessary infrastructure for enduring data transparency.

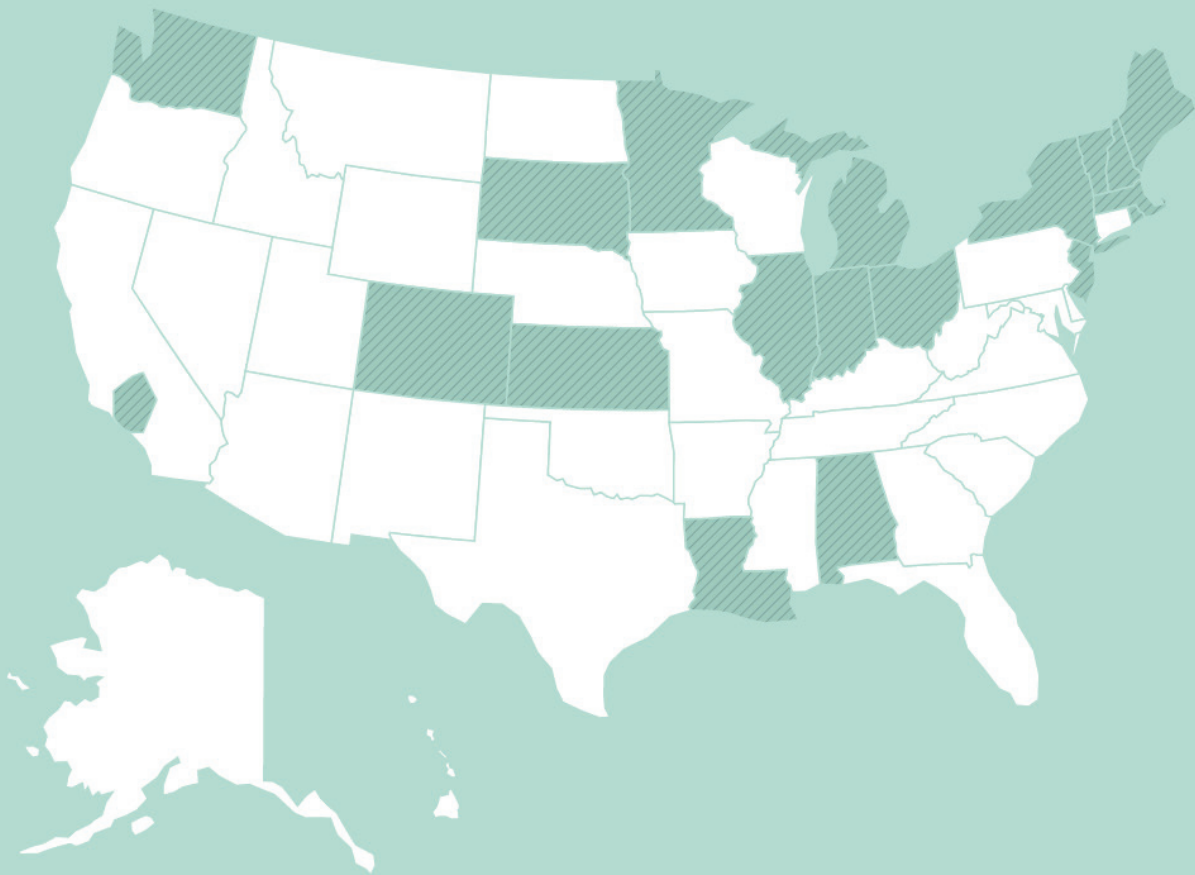
Policies are important, but quality implementation is essential across systems and the state. There must be the necessary investments in cross-agency collaboration and governance; staff capacity and professional development; business process innovation; maintenance and upgrading of technology, and standardizing and updating vendor MOUs to make credential transparency standard, regular, and expected practice. Transparency should be a stated goal of all data management systems and vendors, and institutions, systems, and agencies should develop and implement data maintenance processes that prioritize this. Professional development should include training and certification in data transparency practices and practitioners should be trained in the best practice uses of linked open data to improve their operations and performance.

State Exemplars:

- **Washington** and **New Jersey** both include language in their Eligible Training Provider List processes that require training providers to give them permission to publish their data to the Registry—or expressly opt out of this process. This helps to streamline the publishing process and ensure regular data updates.
- The **Kansas** Board of Regents collects data from each of its institutions at least annually, and the Registry is automatically updated via API. They also have established regular processes to evaluate additional data they can collect and publish to the Registry.



POLICYMAKER ACTION: Include funding for credential transparency-related activities in budgets for state agencies and programs.



This work is already underway across the country. Credential Engine’s [State Partnership](#) webpage features an interactive map showcasing how 19 states and regions have approached the work. The [State Toolkit](#) also contains useful resources that can help you implement this Roadmap.

Section 2:

Credential Transparency's Critical Role in the Connected Learn-and-Work Ecosystem

How Do We Create a More Connected Learn-and-Work Ecosystem?

Lumina Foundation identified seven necessary goals to build a stronger and more connected Learn-and-Work Ecosystem:

1. Build credential transparency infrastructure.
 2. Accelerate ecosystem developments through alignment and alliances.
 3. Create and implement technology, data, and standards to drive and connect systems.
 4. Understand credentials of value.
 5. Advance employer and workforce signaling for credential transparency.
 6. Advance navigation tools, verifications, and quality assurance.
 7. Expand messaging related to credential transparency.
-



The ever-shifting learn-and-work landscape has made selecting an education and training program a more high-stakes choice for students and workers than ever before. With hundreds of thousands of credentials available in the U.S., and little easily-accessible data available about the majority of them, the credential marketplace is confusing and chaotic. While many initiatives are working hard to bring order and understanding to this key piece of the nation's economy, coordination among efforts has been challenging to track. To improve coordination and collaboration, the *Stakeholders and Key Initiatives for a Connected Learn-and-Work Ecosystem* covers 36 efforts supported by a total of over 30 funders that consider key questions about the credential marketplace. Technology, data, and standards—including transparent and linked open data about credentials—knits all of these efforts together.

We are pleased to share this working-draft mapping document which we will update each year. Our goal is to bring greater transparency to initiatives already at play and spur conversations about what efforts are missing and actions we can take to accelerate the work.

1 Credential Transparency

- Credential Engine
- Credential Registry
- Open-platform schemas and languages

2 Alignment and Alliances

- State/regional projects
- Military (Dept of Defense, Navy)
- Public/private ROI
- Credentials of value
- Aligning bachelor's degrees and industry-recognized certifications
- T-Profile builder

3 Drive and Connect Systems

- Credential Engine: Credential Registry Learn and Build Summit Series (apps)
- T3 Innovation Network (10 pilot projects)
- Workcred: Data-sharing among organizations awarding non-degree credentials
- Non-Degree Credential Research Network
- Understanding the landscape of industry certifications

4 Understanding Credentials of Value

- State identification of credentials of value
- Public-private education/credentialing data infrastructure
- Credential Registry use in Eligible Training Provider List and other eligibility determinations
- Incremental higher education credentialing system framework
- SocialTech's unumdl.com

5 Employers/Workforce

- Jobs Data Exchange
- Talent Pipeline Management Initiative
- Competency/skills/competency calibrator
- Hiring for competencies/skills
- Workforce Partnership Initiative

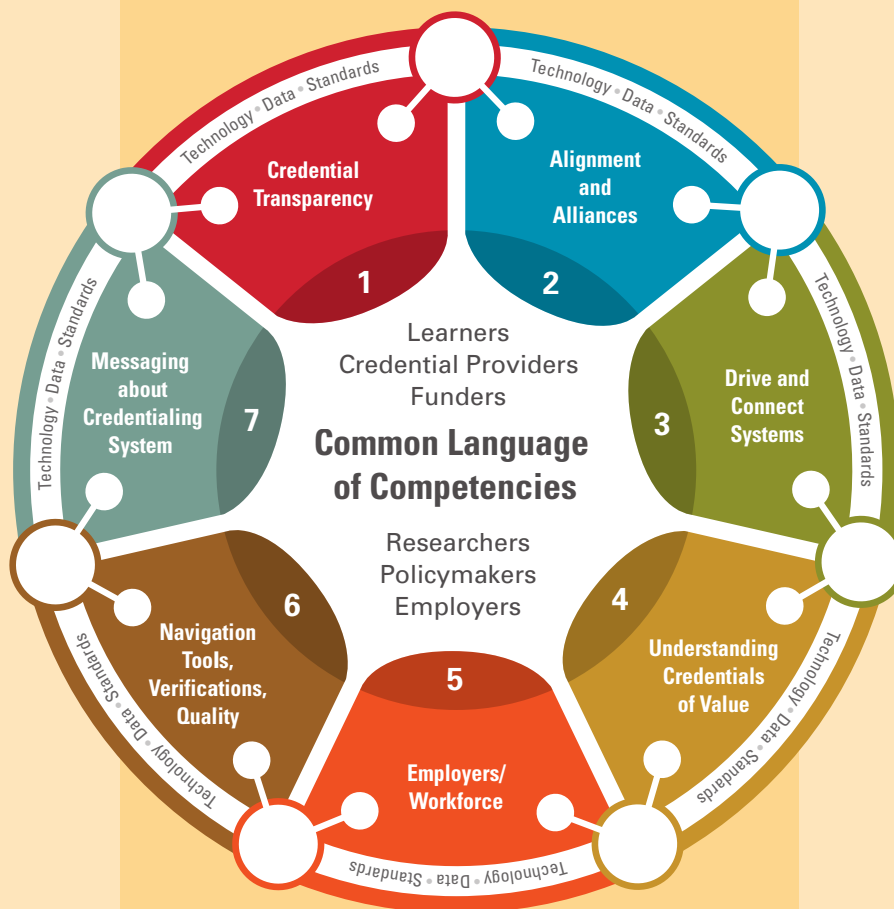
6 Navigation Tools, Verification Quality

- Digital learner records
- The Quality Assurance Commons
- Google Education and Pathways Search

7 Messaging about Credentialing System

- Gallup surveys
- Media messaging
- Research: number of credentials

Stakeholders and Key Initiatives for a Connected Learn-and-Work Ecosystem



Section 3:

Specific Policymaker Actions

How Can State Leaders Help Advance Credential Transparency?

All leaders within the state play an important role in increasing credential transparency. The Roadmap offers the needed action steps, but it is state leadership who can ultimately make it a reality. Regardless of role, the road towards credential transparency is paved with collaboration. Every individual holds expertise, resources, and perspectives that must be leveraged to address any potential challenges and meet the opportunities available in your state.



Leadership matters. This truism is especially applicable when states are trying to act quickly in response to a crisis, and when there are many efforts, agendas, and players in the mix. Below are the leadership roles that governors, legislators, agency leaders, business and employers, and education and training providers can play to leverage the power of credential transparency to support their broader workforce development strategies and reach their goals. All of these leaders are critical to making this roadmap a reality in your state.

Governors:

- Create a strategic vision for aligning education and workforce systems that include labor market information grounded in credential transparency and part of a broader P-20W data ecosystem.
- Issue Executive Orders mandating the commitment to credential transparency through the use of linked open data, the CTDL, and the Credential Registry.
- Highlight the value and importance of credential transparency in State of the States and other important strategy-setting speeches.
- Appoint leadership to create and follow clear objectives in the development and implementation of a credential transparency initiative.
- Build upon and utilize governance bodies, such as the P-20 Council, that are focused on learner lifespan issues to ground their work in credential transparency (adopt the CTDL, integrate credentials into P-20W dashboards, and post all credentials on the Registry).
- Hold agencies accountable for coordinating together to integrate CTDL into all education and workforce programs.

Legislators:

- Allocate funding to support statewide adoption of the CTDL and populating of the Registry.
- Mandate the use of CTDL to describe any credential granted in the state.
- Allocate funds to provide ongoing support for the state's P-20W data system.
- Set or require a state goal or target for credential attainment.
- Define high-value credentials using rigorous skill, demand, and wage thresholds.
- Incentivize credential programs.
- Develop protocols to provide academic credit for credentials.

Agency Leadership:

- Use the CTDL to describe every credential (whether granted by a K-12, postsecondary accredited institution or a non-accredited training provider) to promote transparency, analysis, and comparability.
- Ensure that every credential is publicly cataloged on the Credential Registry.



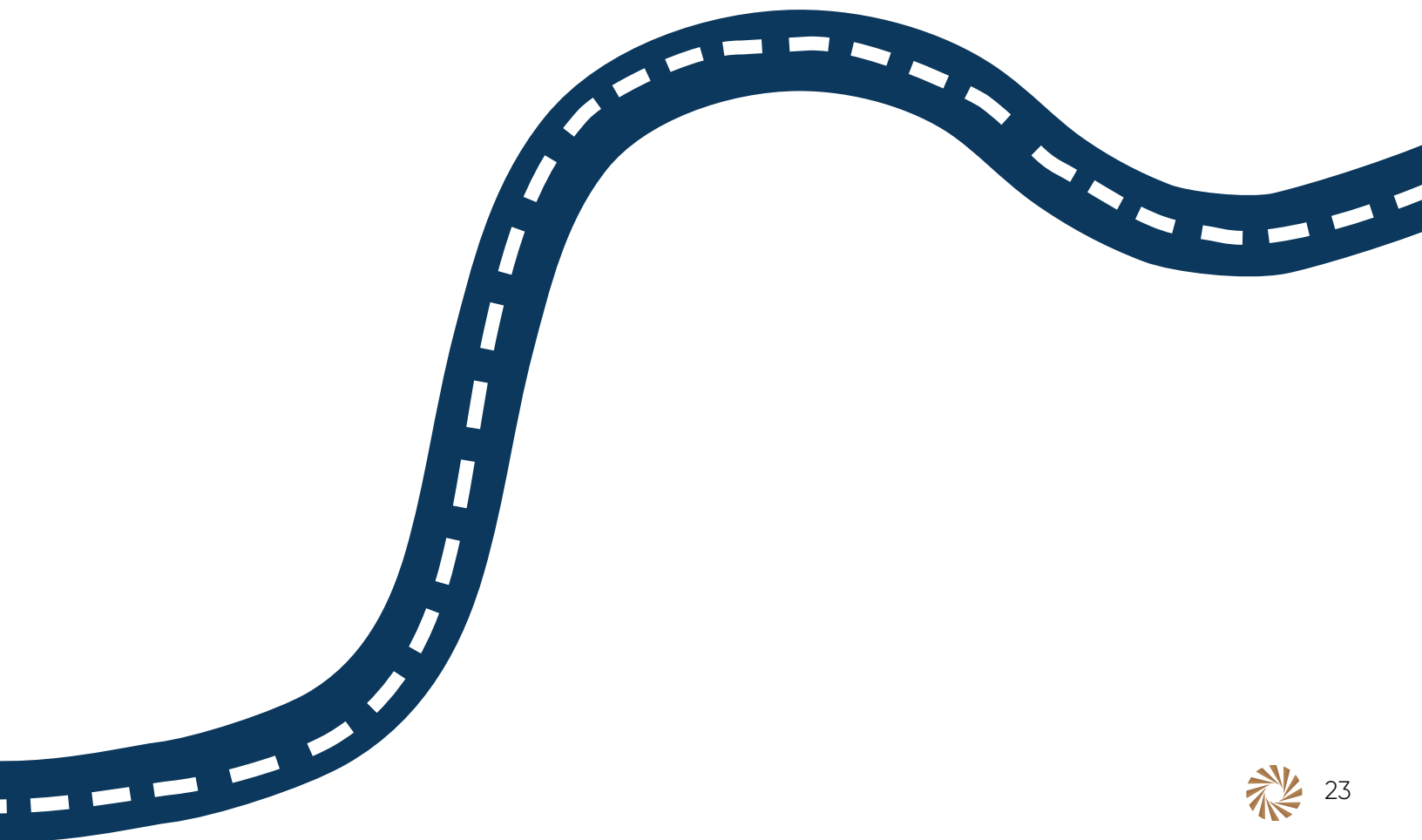
- Require information about credentials be part of program approval and program review processes.
- Create tools, resources, and communication measures to ensure opportunity seekers, education/training providers and employers are able to access and use the information about credentials, including indicators of their quality, found on the Registry.

Business and Employers:

- Commit to using the CTDL when describing the skills, knowledge, and competencies necessary for jobs.
- Signal which credentials are required or recommended for employment on the Credential Registry.
- Work together with state programs to develop and communicate use cases important to the business community.
- Utilize Registry data in talent acquisition software and/or hiring workflows.

Education and Training Providers:

- Commit to using the CTDL when describing the credentials and competencies (knowledge, skills, and abilities) you offer.
- Publish all credentials you grant into the Credential Registry.



Conclusion

With better workforce and education data and new technology that allows data to be aggregated, analyzed, and made actionable, it is possible to have full transparency around the skills needed for success in the job market and the credentials that signal competence and readiness for those jobs. Creating transparency around credentials is a transformative opportunity to take friction out of the labor market, empower decision makers across education, workforce and economic development systems with timely, tailored information, and to improve impacts of education and workforce development and training.

State policy leaders are in a unique position to prioritize credential transparency and embed this concept into the foundations of their education and workforce strategies. This roadmap provides potential ways to make this happen, and there are increasing numbers of tools, case studies, and resources on the Credential Engine website (www.credentialengine.org). Credential Engine and the rest of the state policy organizations in this partnership stand ready to support state policymakers to empower people with better information to prepare for their future.





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Credential Engine is a non-profit whose mission is to create credential transparency, reveal the credential marketplace, increase credential literacy, and empower everyone to make more informed decisions about credentials and their value.