



Tennessee Industry Credential Analysis

December 2024

Credentials of Value

What is a credential?

*A **credential** is a verification of a learner's qualification or competence issued by a third party/postsecondary institution and can take the form of a postsecondary non-degree certificate or associate degree, an industry certification, a government issued license, or other formal conferral.*¹

¹ Adapted from ExcelinEd and Burning Glass Technologies, [Credentials Matter Report 1: A National Landscape of High School Student Credential Attainment Compared to Workforce Demand](#), May 2019.

Why do credentials matter?

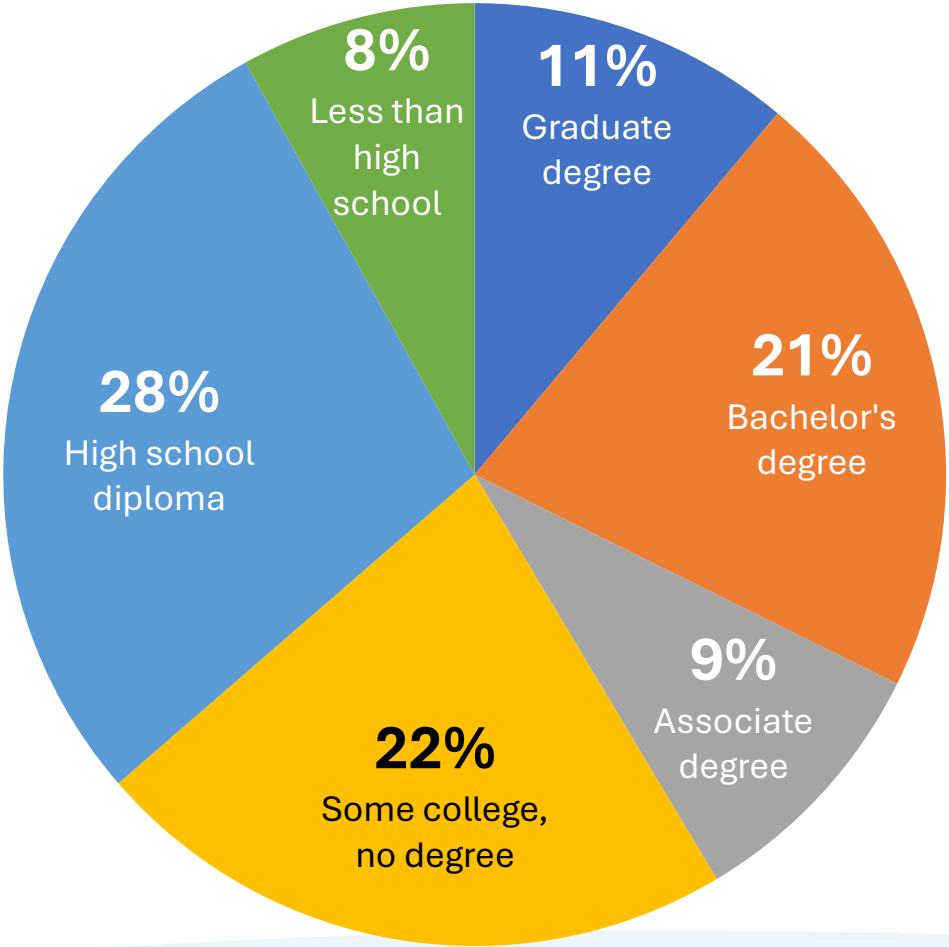
People of all ages—including high school and college graduates—are finding themselves unprepared for the reality of today's evolving job market.

High-quality pathways begin in K-12 and span postsecondary to the workplace—creating direct connections between learner experiences and the world of work. They provide learners with opportunities to:

- Master core and critical academic knowledge
- Gain industry sector-specific technical skills – as well as all-important employability skills
- **Earn industry and postsecondary credentials** starting in high school
- Apply their learning through a continuum of work-based learning experiences

Why do credentials matter in Tennessee?

By 2031, 63% of all jobs in Tennessee (2,120,000 jobs) — and 72% of all jobs nationally — will require some postsecondary training beyond high school.



After Everything: Projections of Jobs, Education, and Training Requirements through 2031. State Report. Georgetown Center on Education and the Workforce, Nov. 2023.

5 Components of Credentials of Value Policy



State definition and identification (with employers) of high-skill, high-demand, higher-wage (H³) occupations



Comprehensive list of both postsecondary and industry credentials aligned to identified H³ occupations



Tiering of the list to differentiate the value of credentials



Strong incentives (and supports) to encourage attainment of credentials of value



Data and reporting on the ROI of credentials for learners and state/regional economies

Tennessee's Industry Credential Policy Context

Tennessee has very few formal industry credential policies. Most priorities and decisions are established at the state agency/system or institution level.

K-12: Tennessee Department of Education (TDOE) annually updates a tiered list of promoted industry credentials and collects student-level attainment data.

- Industry credentials are incentivized through state and federal accountability indicators, TISA Outcomes Bonus funding, the uniform grading system, and high school graduation recognition.

Postsecondary: Each Tennessee College of Applied Technology (TCAT) and Community College (CC) identifies their promoted credentials and decides which data to collect.

- Some Tennessee Board of Regents (TBR) system-wide articulation agreements include credits/hours for industry credentials.

Analysis of TN Industry Credentials



Project Overview

Tennessee has prioritized industry credentials as a strategy to ensure students are prepared for success in college and career.

Yet, there is little public information about which industry credentials students are earning—and whether those credentials are valued by employers for hiring, career advancement, and wage advantages.

ExcelinEd partnered with **Lightcast** on this research project to find out.

Key Research Questions

To understand how well industry credentials are serving both students and employers, ExcelinEd and Lightcast explored the following questions:

1. How do Tennessee's *promoted industry credentials* align with employer demand?
2. How do the *industry credentials earned* by Tennessee students align with employer demand?
3. Which of Tennessee's promoted and earned industry credentials are requested by employers for higher-wage, in-demand jobs (statewide and regionally)?

Methodology

Additional methodology information can be found in the [full report](#) and [Appendix](#).

Part 1: Aggregating credential supply	Part 2: Measuring employer demand	Part 3: Assessing alignment
<p><i>Collected industry credential lists and student attainment data from K-12 and postsecondary (TCATs and community colleges):</i></p> <p>Promoted Industry Credentials: Credentials on the state’s promoted list or offered to students (2021-22, 2022-23, 2023-24- the three years were combined in the analysis)</p> <p>Industry Credentials Earned: Total number of credentials earned by K-12, TCAT and community college students (2021-22 school year)</p> <p>Credential Type: License, Certification, General Career Readiness</p>	<p><i>Explored Lightcast data for employer signals about each credential.</i></p> <p>Job Postings: Average annual number of postings requesting each credential that:</p> <ul style="list-style-type: none">• Requires less than a bachelor’s degree• Is based in Tennessee (May 2021-May 2023) <p>Advertised Salary: Average advertised salary for job postings requesting each credential</p> <p>Wage Threshold: 120% of area median income (AMI), statewide and regionally</p>	<p><i>Analyzed credential supply and demand statewide and regionally.</i></p> <p>Supply: Credentials on the state’s promoted list or earned by students</p> <p>Demand: Credentials requested in employer job postings</p> <p>Credential Alignment Categories:</p> <ol style="list-style-type: none">1. Aligned2. Undersupplied3. Oversupplied4. Not Demanded5. General Career Readiness

Industry Credential Data Collection

Main Finding: K-12 has strong data collection, but postsecondary does not have a statewide process.

- **K-12: TDOE has a tiered promoted industry credentials list**, collects student attainment data, and recently instituted a regular review of the credentials already on the promoted list.

*Since *ExcelinEd* conducted the research, the TDOE has continued its work to strengthen credentials in the state and released an update list.

- **Postsecondary: There is no statewide process or criteria to identify and promote industry credentials — or to collect attainment data.*** TCATs and community colleges approach credentials differently – including how they define, identify, promote, and collect credential data.

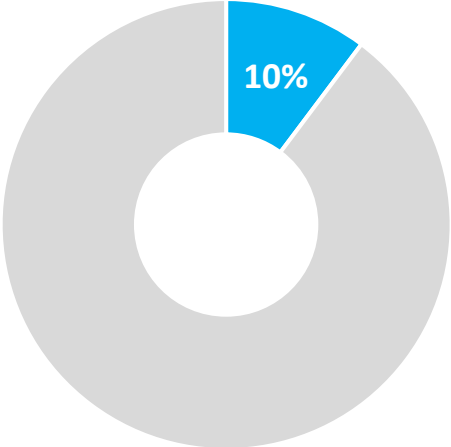
**ExcelinEd* had to request data from each individual postsecondary institution.

Promoted Industry Credential Lists (K-12 and Postsecondary)

Main Finding: There are hundreds of promoted industry credentials, but most are not requested by employers.

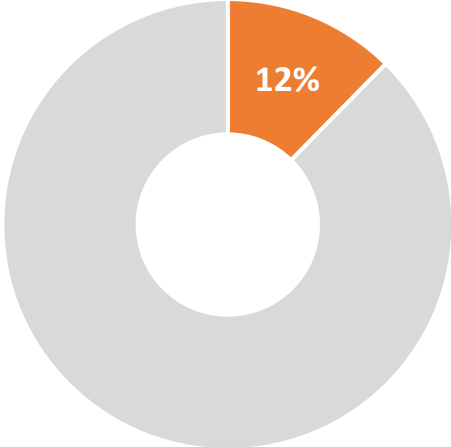
K-12 and Postsecondary

10% of the 683 promoted credentials register demand*



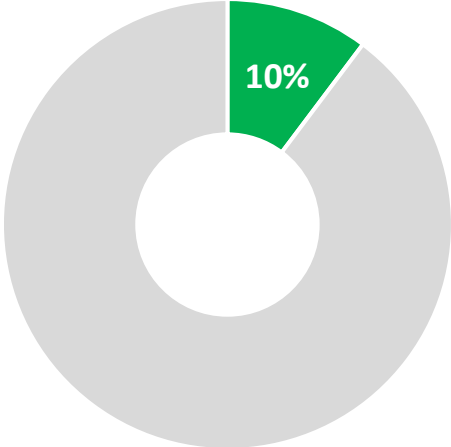
K-12

12% of the 186 promoted credentials register demand*



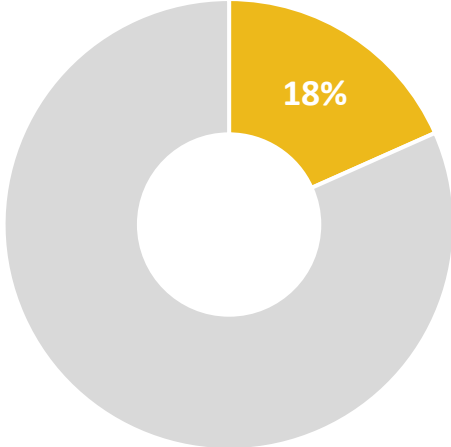
TCAT

10% of the 419 promoted credentials register demand*



Community College

18% of the 289 promoted credentials register demand*



Promoted Industry Credentials are the “list” of credentials that are available or offered to students.

Source: TDOE promoted industry credential list (K-12) and TCAT/community college data requests (postsecondary).

*at least 100 average annual postings (May 2021-May 2023) that request less than a Bachelor’s degree

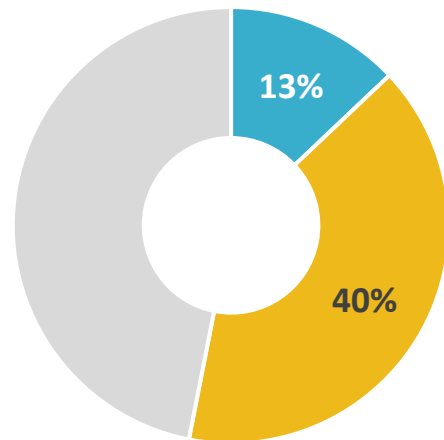
Industry Credentials Earned (K-12 and Postsecondary)

Main Finding: Over half of the credentials earned register demand*, but most of them are of the general career readiness type.

General Career Readiness credentials (e.g., OSHA-10) may appear in a posting but will not get someone a job.

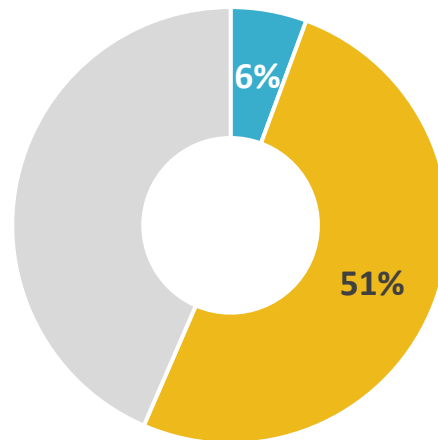
K-12 & Postsecondary

53% of 57,661 credentials earned register demand



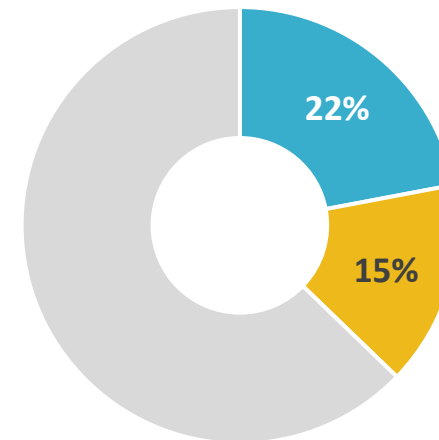
K-12

56% of 38,017 credentials earned register demand



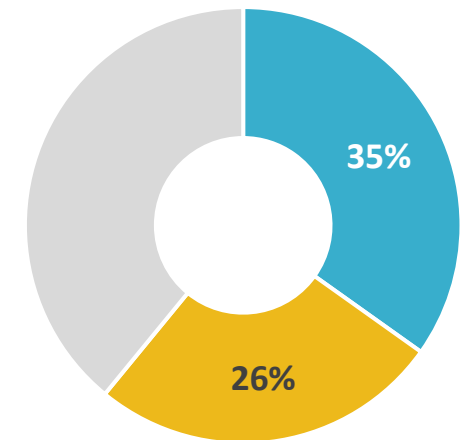
TCAT

37% of 11,950 credentials earned register demand



Community College

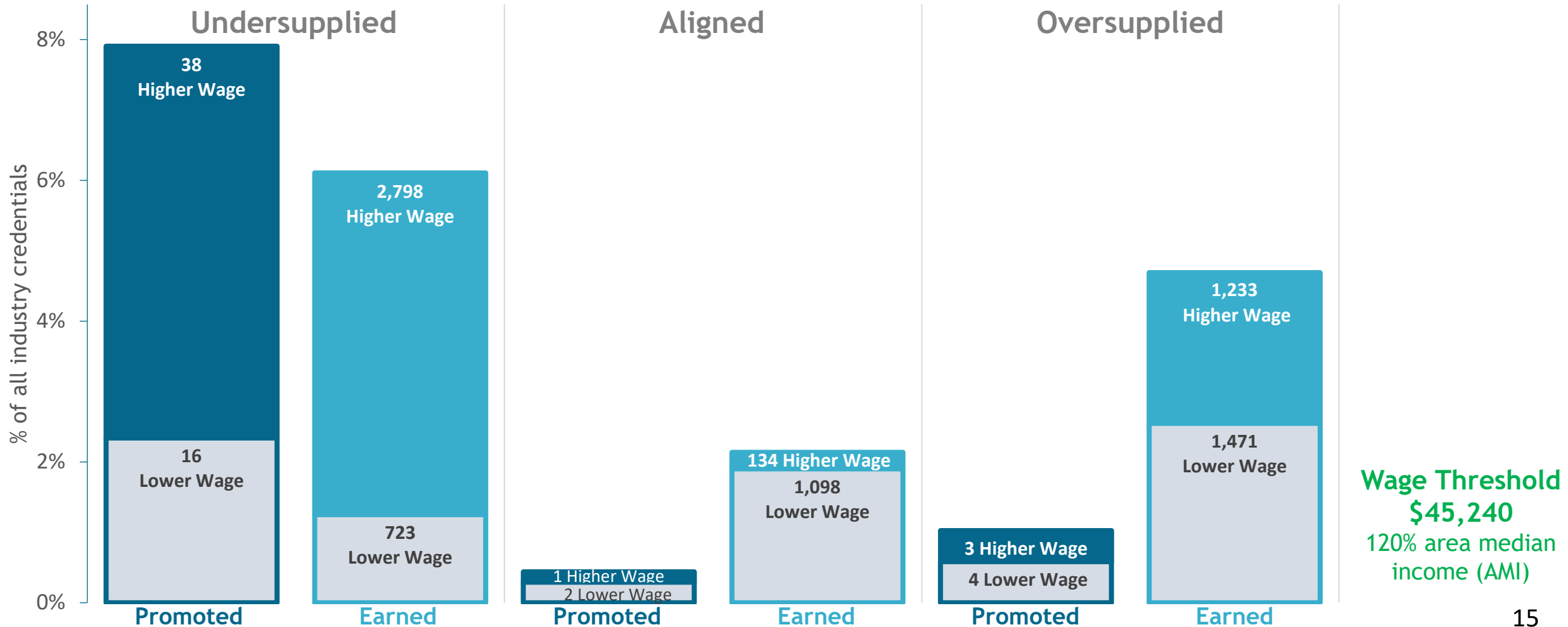
61% of 7,694 credentials earned register demand



*at least 100 average annual postings (May 2021-May 2023) that request less than a Bachelor's degree

Wages for In-Demand Industry Credentials (K-12 & Postsec.)

Main Finding: Many industry credentials linked to jobs with higher wages are very undersupplied (i.e., too few students earn them).



Top Credentials Earned and Demanded (K-12 and Postsec.)

Main Finding: The most earned credentials are not requested by employers.

Main Finding: Only two of the top five credentials demanded are linked to higher wage jobs.

Top 5 Credentials Earned	Earned	Demand	Wages	Alignment
OSHA 10 General Industry	21,582	**	**	GCR
MOS PowerPoint Associate	2,299	**	**	GCR
MOS Word Associate	2,209	**	**	GCR
OSHA 10 Construction	2,156	**	**	GCR
NC3 Snap-On Starrett - PMI	1,575	0	***	Not demanded

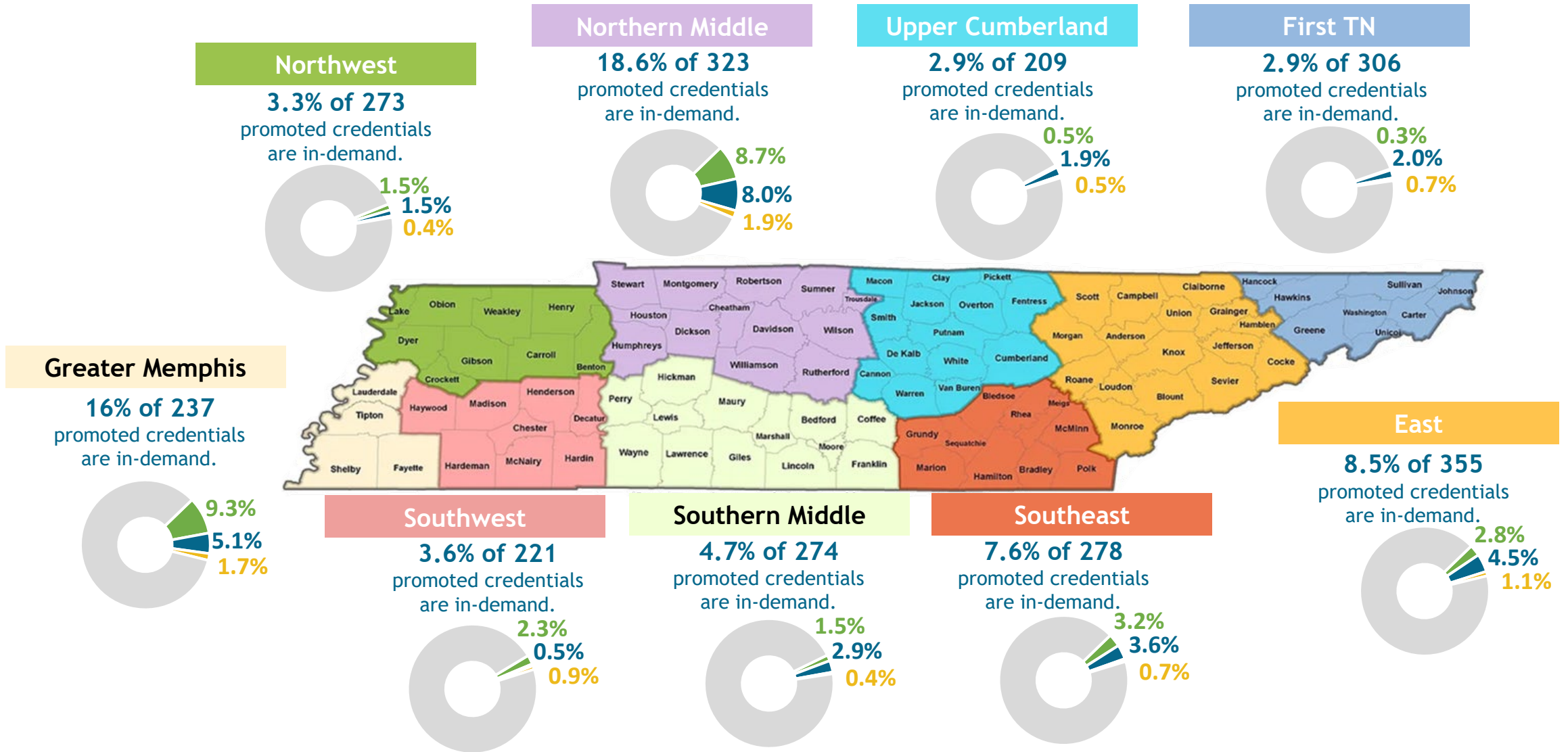
Top 5 Credentials Demanded	Earned	Demand	Wages	Alignment
Commercial Drivers License	291	9,243	\$60,242	Undersupplied
Licensed Practical Nurse (LPN)	953	3,907	\$55,414	Undersupplied
Certified Pharmacy Technician	137	3,590	\$40,085	Undersupplied
Forklift Certification	42	3,425	\$39,301	Undersupplied
Certified Patient Care Tech	111	2,266	\$37,638	Undersupplied

Bold indicates credential meets wage threshold. **Orange** indicates credential does not meet wage threshold.

GCR stands for “General Career Readiness”. Demand for GCR is not included in the alignment analysis.

Regional Demand for Promoted Industry Credentials (K-12 & Postsec.)

Main Finding: Major gaps in demand exist at the regional level too.



■ In-Demand and Higher-Wage | ■ In-Demand but Lower-Wage | ■ General Career Readiness | ■ Not Demanded

Numbers may not add to 100% due to rounding.

Recommendations

5 Components of Credentials of Value Policy - TN

Needs Attention



State definition and identification of high-skill, high-demand, higher-wage (H3) occupations
The Department of Labor's list identifies in-demand occupations with a low wage threshold. Skills are not included. K-12 and postsecondary are not required to align with the list.

Major Opportunity



Comprehensive list of postsecondary and industry credentials aligned to identified H3 occupations
No formal policy on the books.

Needs Attention



Tiering of the list to differentiate the value of credentials
The K-12 industry credential list is currently tiered, but this is not a formal policy requirement.

Strong Foundation



Incentives and supports to encourage attainment
K-12 (TISA) and community college (OBF) funding formulas reward attainment of postsecondary and industry credentials. TN Promise, TN Reconnect & Wilder-Naifeh funds reduce/eliminate student costs.

Major Opportunity



Data and reporting on the ROI of credentials for learners and state/regional economies
No formal policy on the books.

Recommendations

There are three categories of recommendations:

- 1. Infrastructure to Strengthen Pathways:** While credentials are one essential element of high-quality pathways for learners, foundational changes at the state level can improve pathways and learner outcomes and support credentials of value.
- 2. Credentials of Value:** At the same time, strategic changes to the credentials of value process can be made to align credentials with demand/wage thresholds and support credential attainment.
- 3. Employer Signaling:** Employers can also play a strong role in sharing what credentials truly provide value to the individuals who earn them.

Recommendations

Infrastructure to Strengthen Pathways

1. **Conduct a return-on-investment analysis** of K-12 and postsecondary workforce programs to assess learner outcomes and inform future programming.
2. **Formalize a pathways governance structure** responsible for developing a shared vision for high quality pathways and credentials of value across agencies.
3. **Align policies, accountability, and funding** to the list of tiered credentials of value. Prioritize the largest incentives for higher-value postsecondary and industry credentials.
4. **Establish a statewide definition and methodology to identify and verify H3 occupations.** Require all agencies to adopt this definition, methodology, and H3 occupation list throughout their policies, priorities, and reporting.

Recommendations

Credentials of Value

- 1. Collect student-level data on all postsecondary and industry credentials.** Include this information in the [TNDATA dashboards](#) so that all stakeholders understand the long-term outcomes associated with each credential.
- 2. Create a single tiered list of K-12 and postsecondary industry valued credentials.**
 - Codify a cross-agency, cross-sector (i.e., employers) framework and ongoing process to identify and evaluate postsecondary and industry credentials.
 - Clearly communicate the value of credentials using tiers that are consistent across agencies and systems. Identify pathways with stackable credentials that are guaranteed through statewide articulation agreements.

Recommendations

Employer Signaling

The credential universe is large: are employers asking for what they value?

Employers play an important role in signaling the value that each credential offers in terms of employment, wage and advancement decisions. However, they do not always communicate which credential(s) and/or credentialing entities they trust and value.

The State can embolden employers to take two steps to improve signaling:

- 1. Engage with employers, urging them to include the credentialing organization and full name of the credential in job postings.**
- 2. Encourage employers to more clearly specify whether credentials are required or preferred.**

Thank You!

For Reference: Key Methodology Decisions

More methodology information can be found in the [full report](#) and the [Appendix](#).

Part 1: Aggregating credential supply	Part 2: Measuring employer demand	Part 3: Assessing alignment
<p><i>Collecting and cleaning industry credential lists and data received from K-12 (TDOE) and postsecondary institutions (TCATs and Community Colleges).</i></p> <p>Promoted Credentials: the number of unique credentials that are available or offered to students.</p> <p>Credentials Earned: the total number of credentials earned by K-12, TCAT and community college students in the 2021-22 school year.</p> <p><i>Each credential is classified into one of three Credential Types:</i></p> <ul style="list-style-type: none">• License: mandated by law, must be renewed• Certification: validates a specific set of abilities, but not a legal requirement.• General Career Readiness: foundational knowledge/skills used across most industries (math, literacy, safety, first aid, etc.)	<p><i>Searching Lightcast data for employer signals about each credential. Queries are scoped according to credential type.</i></p> <p>Job Postings: The average annual number of job postings requesting each credential that:</p> <ul style="list-style-type: none">• Requires less than a bachelor’s degree• Is based in Tennessee (May 2021-May 2023) <p>Advertised Salary: The average advertised salary for the job postings requesting each credential (n>5).</p> <p><i>Salary information for each credential is compared to overall wages in the state and in each region.</i></p> <p>Wage Threshold: 120% area median income (AMI), statewide and regionally</p>	<p><i>Comparing supply and demand by assigning each credential to one of five mutually exclusive Alignment Categories:</i></p> <p>Alignment Categories:</p> <ul style="list-style-type: none">• Aligned: between oversupplied and undersupplied and 100+ job postings statewide (25+ regionally)• Undersupplied: at least 2x more job postings than credentials earned and 100+ job postings statewide (25+ regionally)• Oversupplied: 25+ more credentials earned than job postings and 100+ job postings statewide (25+ regionally)• Not Demanded: <100 job postings statewide (<25 job postings regionally)• General Career Readiness: Because these reflect foundational skills that are not occupation-specific, demand and alignment are not reported.

For Reference: Top Credentials Earned and Demanded

(K-12 and Postsecondary)

Top 15 Credentials Earned	Earned	Demand	Wages	Alignment	Top 15 Credentials Demanded	Earned	Demand	Wages	Alignment
OSHA 10 General Industry	21,582	**	**	GCR	Commercial Drivers License	291	9,243	\$60,242	Undersupplied
MOS PowerPoint Associate	2,299	**	**	GCR	Licensed Practical Nurse (LPN)	953	3,907	\$55,414	Undersupplied
MOS Word Associate	2,209	**	**	GCR	Certified Pharmacy Technician	137	3,590	\$40,085	Undersupplied
OSHA 10 Construction	2,156	**	**	GCR	Forklift Certification	42	3,425	\$39,301	Undersupplied
NC3 Snap-On Starrett - PMI	1,575	0	***	Not demanded	ASE - Certification	0	3,357	\$53,007	Undersupplied
Certified Nursing Assistant	1,001	1,786	\$37,871	Aligned	Certified Patient Care Technician	111	2,266	\$37,638	Undersupplied
Licensed Practical Nurse (LPN)	953	3,907	\$55,414	Undersupplied	Certified Nursing Assistant	1,001	1,786	\$37,871	Aligned
NIMS - Machining Level I: Measurement	864	0	***	Not demanded	ServSafe	30	1,745	\$40,865	Undersupplied
NC3 Snap-On - Multimeter	823	0	***	Not demanded	Child Development Associate (CDA)	79	1,669	\$29,742	Undersupplied
NCCER Core	819	1	***	Not demanded	Pediatric Advanced Life Support	123	1,490	\$68,236	Undersupplied
NC3 Dremel - 3D Printing	759	0	***	Not demanded	ASE - Electrical/Electronic Systems	17	1,473	\$48,552	Undersupplied
MOS Excel Associate	616	**	**	GCR	Registered Nurse (RN)	587	1,215	\$73,266	Undersupplied
Registered Nurse (RN)	587	1,215	\$73,266	Undersupplied	CompTIA A+	144	1,215	\$48,126	Undersupplied
Certified Clinical Medical Assistant	584	362	\$38,224	Oversupplied	EPA Certification	11	853	\$52,116	Undersupplied
WorkKeys/NCRC	541	**	**	GCR	ASE - Brakes	19	677	\$56,381	Undersupplied

Bold indicates credential meets wage threshold. **Orange** indicates credential does not meet wage threshold. GCR stands for “General Career Readiness”.