

PLANNING GUIDE · NOT THE FINAL SUBMISSION

# TEXAS CTO CHALLENGE

Submission Preparation Guide · Portal field-by-field draft

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Prepared for the Office of the Governor of Texas | BOMForge, Inc.

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Distribution: Texas Education Agency, Texas Workforce Commission, Texas Higher Education Coordinating Board

**BOMFORGE**

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## Purpose

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This document is a planning guide to support the Texas Challenge submission. It outlines the fields and questions that appear in the online submission, giving the Governor’s Office and Tri-Agency staff the opportunity to prepare responses and assemble materials prior to submitting via the online form. Character limits and formatting requirements are enforced within the online system.

Approval is limited to one submission per state or territory. Should multiple submissions be submitted by a single state or territory, Governor clarification will be required to select the submission best suited for consideration.

Fields marked [DESIGNATE] require Governor’s-office decision before submission. The State of Texas is the author of record. This packet is offered as a drafting contribution by BOMForge at no cost to Texas.

## Organization Information

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### 1. State or U.S. Territory (Full Name)

Texas

### 2. Name of Person Submitting on Behalf of the Governor

[DESIGNATE]

Recommended: Commissioner of Education, or a Deputy Commissioner acting under the Commissioner’s designation.

### 3. Submitter Agency/Organization Name

Texas Education Agency

### 4. Submitter Title

[DESIGNATE]

Likely “Commissioner of Education” or “Deputy Commissioner, College, Career, and Military Preparation.”

### 5. Submitter Email

[DESIGNATE] at tea.texas.gov (email of the designated submitter).

### 6. Attestation

By checking this box, I attest that I am employed by an eligible entrant or an agency designated to receive funds, have been designated by the Governor’s Office to submit this application, and that this submission has been approved by the Governor.

Note: A letter of support from the Governor is required and must include the name of the individual authorized to submit the application on their behalf.

Checked by the authorized submitter. Governor’s letter of support attached as the first item in Appendix A and names the individual authorized to submit on the Governor’s behalf.

**7. Governor’s Office Primary Contact Name**

[DESIGNATE]

Recommended: Governor’s Office Director of Policy for Workforce, Education, or Economic Development.

**8. Governor’s Office Primary Contact Title**

[DESIGNATE]

**9. Governor’s Office Primary Contact Email**

[DESIGNATE] (typically an address at gov.texas.gov).

**10. Alternate Contact Name**

[DESIGNATE]

Recommended: a senior designee at Texas Workforce Commission.

**11. Alternate Contact Agency/Organization Name**

Texas Workforce Commission

**12. Alternate Contact Title**

[DESIGNATE]

**13. Alternate Contact Email**

[DESIGNATE] at twc.texas.gov.

**14. Which best describes your state’s implementation of Talent Marketplaces?**

Novice (Creating a new Talent Marketplace) / Scaler (Enhancing an existing Talent Marketplace)

Scaler. Enhancing an existing Talent Marketplace.

Texas operates the functional components of a Talent Marketplace in production today: the TXschools accountability system (TEA), WorkInTexas (TWC), the Texas Credential Library in Credential Transparency Description Language (Credential Engine), and the credit-transfer and attainment dashboards maintained by THECB. Texas also operates a statewide P-TECH and Industry Cluster Innovative Academy network, serving major Texas metropolitan areas through the TEA P-TECH Program Office. This submission proposes to integrate those components into a single public Talent Marketplace with the P-TECH triad as the structural unit.

**15. Designated prize funds recipient**

A: An eligible agency as defined under section 3(18) of Perkins; a consortium of eligible agencies; or the following eligible entities as defined under section 3(19)(iv) of Perkins V

B: An eligible agency, as defined in section 203(3) of Adult Education and Family Literacy Act (AEFLA), Title II of Workforce Innovation and Opportunity Act (WIOA).

A. Eligible agency under section 3(18) of the Strengthening Career and Technical Education for the 21st Century Act (Perkins V), 20 U.S.C. §2302(18): Texas Education Agency.

TEA is the Perkins V eligible agency for Texas (20 U.S.C. §2302(18)), administers the P-TECH Program Office, and maintains the Texas CTE Programs of Study catalog. Prize funds flow to TEA and are coordinated with TWC and THECB through the Tri-Agency Workforce Initiative.

### 15A. Prize funds recipient details

- Agency Name: Texas Education Agency
- Agency Contact Name: [DESIGNATE] (recommended: Commissioner of Education).
- Agency Contact Title: Commissioner of Education
- Agency Contact Email: [DESIGNATE] at tea.texas.gov.

## Written Response: Impact (up to 20 pts)

Describe your innovative approach to building or expanding a Talent Marketplace that includes a Credential Registry (34 CFR Part 75) and leverages Learning and Employment Records (LERs) to (1) enable stakeholders to transform, transcribe, and transact learning achievements as machine-readable, actionable, and industry-recognized competency statements, and (2) connect individuals directly with skills-based job descriptions used by AI, making it easier for individuals to match their verified skills with available opportunities and for employers to identify talent based on demonstrated competencies.

Texas adopted the P-TECH model (Pathways in Technology Early College High School) in 2017 under Senate Bill 22 (85th Legislature). The model is a four-year to six-year pipeline from ninth grade through an associate's degree or industry-recognized credential, with paid work-based learning at a named employer partner. The TEA P-TECH Program Office recognizes a statewide network of designated P-TECH and Industry Cluster Innovative Academy campuses. Each designated campus is a written partnership between a school district, a community college, and an industry employer. For Texas, the P-TECH triad is the closest existing operational analog to the learner-to-credential-to-employer pipeline the Challenge is describing.

Texas also carries anchor-scale employer demand across the industries the U.S. Department of Education has named as priorities: aerospace (Lockheed Martin Aeronautics in Fort Worth, SpaceX in Brownsville, Bell in Hurst), semiconductor and advanced electronics (Samsung Austin Semiconductor in Taylor, Texas Instruments, GlobiTech), shipbuilding (Port of Ingleside, Corpus Christi), energy (ExxonMobil, Motiva, and the Gulf Coast LNG export corridor), and the X-energy small modular reactor partnership with Dow at Seadrift. These employers are the demand side of the P-TECH triad.

The gap is navigation. A parent looking for her child's nearest P-TECH campus, a district superintendent looking for the local anchor employer that could form a new triad, and a regional workforce-board director looking for candidate programs that match a posted hiring need all have to assemble the answer from four separate agency systems. The Marketplace closes that gap by publishing the P-TECH triad as a single queryable object that binds ISD, community college, employer, CTE program of study, and credential.

The Marketplace integrates four components required by the Challenge criterion:

1. **Credential Registry.** The Texas Credential Library, published in Credential Transparency Description Language (CTDL) in the Credential Registry operated by Credential Engine, pursuant to the Challenge rules issued under 34 CFR Part 75. The Marketplace treats the Credential Library as the source of truth for credentials attached to every P-TECH program of study.

2. **Learning and Employment Record pathway.** The Marketplace reads Ed-Fi records from the Texas Student Data System (TSDS) and PESC transcript records from THECB. Learner achievements are represented using open Learning and Employment Record standards (W3C Verifiable Credentials and the IMS Comprehensive Learner Record), with credential and competency references carried as Credential Registry URIs published in CTDL. Credential-issuing institutions remain the issuers of record.
3. **Skills-based job descriptions.** A mapping layer resolves Texas employer posting requirements to entries in the Credential Registry. Credential-style requirements (for example, “GMAW certified”) resolve to the credential that meets them; skill-style requirements (for example, “can weld to AWS D1.1”) resolve to the underlying competency. From either, the Marketplace traces the connection to the P-TECH program of study that prepares the learner. Backed by the Texas-scoped subset of a nationwide employer graph joined to SAM.gov Entity registration, NAICS, capability tagging, certifications, and sub-county geography.
4. **P-TECH triad as the binding structural unit.** Every designated campus is rendered with its ISD, its community-college partner, its named industry employer, the CTE program of study, and the credentials it confers.

The public Marketplace surfaces are designed around the three user classes the criterion names: a parent-facing address lookup, a district-facing gap dashboard, and an employer-facing and workforce-board-facing talent-pipeline view. Each surface reads from the same underlying graph, and each surface is measured against usage targets defined in the Data criterion.

## Written Response: Partnerships (up to 20 pts)

Describe your engagement with business and industry partners (particularly for high-skill, high-wage, as defined by your State, or in-demand occupations, as defined by WIOA), the State Governor, State’s Perkins agency and AEFLA agency, the State Workforce Board, and education and training providers. Provide written, signed commitments as Appendix A.

Written commitments are attached as Appendix A. The list below describes the partner classes required by the criterion, with Texas partners named in each.

### Governor and required State-Agency partners

- **Governor of Texas.** Letter of support naming the authorized submitter. First item in Appendix A.
- **Texas Education Agency.** Perkins-eligible agency and eligible prize recipient. Administers the P-TECH Program Office, TXschools, and the CTE Programs of Study catalog.
- **Texas Workforce Commission.** AEFLA-eligible agency (29 U.S.C. §3272(3)) and the State Workforce Agency. Administers the Texas Credential Library, the Skills Development Fund, WorkInTexas, and the in-demand occupation list.
- **Texas Higher Education Coordinating Board.** Community-college credit transfer, associate-degree attainment, and the higher-education partner roster across the P-TECH network.
- **Regional workforce boards.** State Workforce Board partners including the Texas Workforce Investment Council, the Gulf Coast Workforce Board, and Workforce Solutions Alamo.

## Credential-infrastructure and technology partners

- **Credential Engine.** National non-profit that operates the Texas Credential Library in CTDL. Continues the credential registry and integrates it into the Marketplace graph.
- **BOMForge.** Employer-intelligence technology vendor. Contributes the Texas-scoped subset of its nation-wide employer graph (tens of thousands of Texas employer records joined to SAM.gov Entity registration, NAICS, capability tagging, certifications, and sub-county geography) and Pre-Phase engineering at no cost to Texas.

## Business and industry partners in high-skill, high-wage, in-demand occupations

- **Samsung Austin Semiconductor.** Taylor. Existing P-TECH industry partner for the Samsung Taylor semiconductor facility.
- **IBM.** Austin and Dallas. Founding global P-TECH industry partner since the 2011 New York City launch.
- **Dow Chemical.** Seadrift and Freeport. Gulf Coast petrochemical anchor and small modular reactor partner with X-energy.
- **SpaceX.** Brownsville and Starbase. Aerospace anchor at the Starbase facility.
- **Lockheed Martin Aeronautics.** Fort Worth. F-35 prime contractor.
- **ExxonMobil, Chevron Phillips, Motiva, and named LNG operators.** Gulf Coast energy corridor anchors.

Letters attached as obtained by submission date.

## Education and training providers

- Named community-college partners in the Texas P-TECH network: Dallas College, Tarrant County College, San Jacinto College, Austin Community College (STARS program), Lamar Institute of Technology, Texas State Technical College, Del Mar College, Midland College, El Paso Community College.
- Named ISDs with flagship P-TECH campuses: Dallas ISD, Houston ISD, Pasadena ISD, Klein ISD, Aldine ISD, Arlington ISD.

Letters attached as obtained by submission date.

## Written Response: Data (up to 20 pts)

Describe your measurable outcomes, baseline metrics, data collection methods, and inputs-outputs-outcomes, e.g., increased rates of labor force participation and postsecondary attainment; increased employee retention; increased rates of usage of the talent marketplace among employers, students, jobseekers, and education and training providers; and enhanced wage outcomes for participants.

### Baseline metrics, Texas, April 2026

- Labor-force participation, Texas: approximately 64 percent (Texas Workforce Commission Labor Market Information, Q1 2026).
- Postsecondary credential or degree attainment, working-age Texans: 54 percent of Texans ages 25 to 34 and 52 percent of Texans ages 35 to 64 hold a certificate, degree, or credential of value as of 2023. Source: THECB, *Building a Talent Strong Texas: 2025 Midpoint Update*, January 2026. Goal: 60 percent in both age brackets by 2030.

- Texas K-12 accountability: 8,985 campuses rated A to F; 1,197 districts rated A to F (TEA TXschools 2025 layer).
- Texas CTE footprint: 75 Programs of Study at campuses; 21,429 campus-by-program bridge rows; 1,453 campuses carrying at least one CTE POS (TEA ArcGIS, 2020 to 2021 rubric, current public release).
- Texas P-TECH and ICIA network: a statewide network across major Texas metropolitan areas (TEA P-TECH Program Office).
- Texas Credential Library: a growing set of Texas industry-recognized credentials published in Credential Transparency Description Language (Credential Engine, live).
- Texas employer graph: the Texas-scoped subset of the named technology vendor's nationwide graph, joined to SAM.gov Entity registration status, NAICS codes, capability tagging, certifications, and sub-county geography (BOMForge, retrieved April 2026).

## Inputs

TEA designation and accountability data, Credential Engine CTDL registry, TWC WorkInTexas postings and in-demand occupation list, THECB credit-transfer and attainment data, the Texas employer graph, and the TEA P-TECH triad roster.

## Outputs

Three Marketplace user surfaces (parent, district, and workforce). A CTDL-compliant public API. Quarterly refresh with a provenance audit on a public Sources page, with pull dates and source URLs per dataset.

## Phase 1 outcomes with measurement targets (November 2026)

- **Reach.** At least 500 recurring Texas parent sessions per month; at least 1,500 unique campus-profile page views per month; at least three recurring ISD superintendents using the district dashboard across two or more weeks; at least two regional workforce-board directors generating at least one gap report per quarter.
- **Coverage.** 100 percent of TEA-designated P-TECH and ICIA campuses rendered and linked to ISD, community-college partner, industry employer, CTE program of study, and credential.
- **Pipeline formation.** At least two documented new triad formations where the Marketplace is cited as connective tissue by the employer, college, or district.
- **Attainment and wage outcomes.** Measured longitudinally through THECB's Education Research Center under Texas Education Code chapter 61, subchapter N, operating under data agreements with TEA and TWC that incorporate the FERPA studies and audit-evaluation exceptions (34 CFR §§99.31(a)(3) and (a)(6)): postsecondary enrollment rate among K-12 seniors at Marketplace-surfaced P-TECH campuses relative to matched non-P-TECH cohorts; and average first-year wage of Marketplace-surfaced P-TECH graduates at 24 months post-graduation relative to matched non-P-TECH CTE graduates.

## Phase 2 outcomes with measurement targets (March 2028)

- Sustained statewide Marketplace load of at least 500,000 parent sessions per year.
- Two additional state deployments at Phase-1-equivalent coverage. Candidate states by data compatibility: California (semiconductor and aerospace), Illinois (advanced manufacturing and energy), Florida (aerospace and shipbuilding).
- Replication playbook and non-PII Marketplace subset released under open license. At least one peer-reviewed paper submitted.

## Data collection methods

All data collection is reuse of existing Texas public and research pipelines. TEA accountability data is public. The CTDL registry is open. The Texas employer graph refreshes on a daily production cadence from SAM.gov and public employer-registration sources, instrumented with run-level audit records. Marketplace usage is captured through aggregate, session-level analytics that do not collect student education records and are configured consistent with Texas Education Code §32.151 (Student Privacy) and §26.004 (parental rights). Attainment and wage outcomes are drawn from THECB's Education Research Center (Texas Education Code chapter 61, subchapter N), which has operated for more than a decade under FERPA studies and audit-evaluation agreements with TEA and TWC. No new personal-identifier flow is introduced.

## Written Response: Stakeholder Engagement (up to 20 pts)

Describe how the proposed activities will involve a broad cross-section of stakeholders, including but not limited to students, employers, jobseekers, education and training providers, with a focus on increasing levels of student labor force participation, strengthening employer connections, supporting jobseekers, and improving pathways to employments and postsecondary attainment for all students.

Texas organizes its stakeholder engagement around the classes named in the criterion. Each class has a named Texas partner, a design-partner cadence, and a measurable engagement commitment documented below.

- **Students and parents.** The parent-facing surface is the primary design audience. At the Phase 1 midpoint and the Phase 1 closeout, Texas conducts user research with 30 Spanish-speaking and 30 English-speaking parents across urban, suburban, and rural geographies. Co-designed with two flagship P-TECH ISDs (Dallas ISD and Pasadena ISD as candidates). Spanish-English parity on the parent surface at Phase 1 ship.
- **Jobseekers and adult learners.** The parent-facing surface includes an adult mode co-designed with a Texas AEFLA adult-education program. Surfaces short-term credentials (under 12 months) drawn from the TWC in-demand occupation list. Partners with regional adult-education providers.
- **District superintendents and principals.** Three Texas ISD superintendents serve as named Phase 1 design partners (candidate set: Amarillo, Pasadena, Klein). Quarterly co-design sessions across Phase 1. Each superintendent commits to two separate uses of the district dashboard across the Phase 1 measurement window.
- **Employers and HR leaders.** Two anchor employers serve as named Phase 1 design partners. Samsung Austin Semiconductor serves as the semiconductor anchor; a second anchor (Dow, SpaceX, or Lockheed Martin) is confirmed by Phase 1 Week 2. Additional mid-market employer validation comes from the existing Texas design-partner roster maintained by the technology vendor.
- **Workforce-board directors.** Two regional Texas workforce boards serve as named Phase 1 design partners: the Gulf Coast Workforce Board (Houston petrochemical and Port of Houston logistics corridors) and Workforce Solutions Alamo (San Antonio aerospace and shipbuilding). Each commits to generating at least one regional gap report per Phase 1 quarter.
- **Higher-education partners.** Named community colleges validate the higher-education layer of the P-TECH triad, confirm credit-transfer accuracy, and drive joint outreach to high-school seniors.

- **State and local officials.** Biennial briefings to the TEA Commissioner, the TWC Executive Director, the THECB Commissioner, the Governor’s workforce-policy staff, and the relevant committees of the Texas House and Senate. The Marketplace’s public surface is designed so Texas Legislative Budget Board and Legislative Council analysts can draw from it directly at each biennial session.
- **Federal stakeholders.** Coordinated reporting to the DOE program office per the CTO Challenge technical-assistance cadence. Engagement with the Office of Career, Technical, and Adult Education given P-TECH’s federal endorsement history. Phase 2 engagement with NCES on the open-license public-use data release.

## Process commitments

Every Marketplace release is preceded by user research with three or more stakeholder classes. Every feedback cycle is documented in a published summary. No release ships without validation from the parent-facing class.

## Written Response: Sustainability (up to 20 pts)

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Describe the planned and appropriated resources that will be used to implement, sustain, and scale the Talent Marketplace.

The Marketplace is planned to outlive the Challenge through four pillars: prize-funded build, partner-contributed engineering, state-appropriated operations, and cost-recovery replication.

### Pillar 1. Prize-funded build

Pre-Phase \$100,000 funds commitment-letter outreach, Phase 1 proposal preparation, prototype hardening, and FERPA-safe compliance scoping. Phase 1 \$400,000 funds the six-month statewide prototype: engineering 45 percent of budget, data engineering 18, compliance and privacy counsel 12, design and user research 12, partner honoraria 8, infrastructure 5. Phase 2 \$1,000,000 funds 15 months of statewide production, two-state replication, publication, and observability. TEA finalizes the Phase 1 budget exhibit before Phase 1 submission.

### Pillar 2. Partner-contributed engineering

Pre-Phase engineering and data integration are contributed to Texas at no cost by the named technology vendor. The vendor has offered, subject to a definitive agreement to be negotiated with TEA and reviewed by the Office of the Attorney General, to license the Texas-scoped subset of its employer graph to the State on a perpetual, royalty-free basis for public-benefit use. No binding license is created by this submission. Credential Engine’s CTDL operation for the Texas Credential Library is an existing commitment independent of this Challenge and independent of prize funding.

### Pillar 3. State-appropriated operations

Texas already appropriates for every data stream the Marketplace reads from. TEA’s Student Data System, TAPR, and TXschools are existing state appropriations. The P-TECH Program Office is funded through an existing strategy line in the General Appropriations Act, Acts 2025, 89th Legislature, R.S. (S.B. 1), for the 2026 to 2027 biennium. The TWC Skills Development Fund is funded through the same biennial General Appropriations Act. THECB’s transcript and credit-transfer infrastructure is funded through existing THECB strategy lines. Specific

Article and strategy line citations will be provided in the Phase 1 budget exhibit. At Phase 2 end (March 2028), TWC, as the AEFLA-eligible agency and the State Workforce Agency, integrates ongoing Marketplace operations into its FY 2028 to 2029 biennial appropriations cycle. No new state appropriation is anticipated; ongoing operations are planned to be absorbed within existing TEA, TWC, and THECB strategy lines, subject to the normal biennial appropriations process.

## Pillar 4. Cost-recovery replication

Phase 2 publishes a Replication Playbook under an open license. States that stand up Phase-1-equivalent Marketplaces pay Texas a cost-recovery fee for the Phase 1 schema, ingest scripts, and validation suite. California and Illinois are Phase 2 primary candidates; Florida is the alternate.

## Scale pathway

The Phase 1 schema is portable. Every state's public education accountability system, workforce agency data, and credential registry map onto the same graph model. Phase 2 commits to two additional state deployments.

## Sustainability risk register

Legislative-session risk is mitigated by operating only on already-appropriated data streams. Federal-grant discontinuity risk is mitigated because Pillars 3 and 4 do not depend on continuing federal funds. Technology-vendor default risk is mitigated by multi-vendor ingest and open-data formats. Dependency on a single employer-intelligence vendor is mitigated by the perpetual no-ongoing-cost license and by the underlying data (SAM.gov, NAICS, state filings) being reconstructible from public sources.

# File Uploads / Appendices

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## Appendix A: Partner Commitments

Provide written, signed commitments from your partners. (PDF files; no page limit.)

### Texas upload queue.

1. **Texas-Governor-Letter-of-Support.pdf**. Required. Names the authorized submitter. Gating artifact for submission validity. Governor's office to provide.
2. **BOMForge-Letter-of-Collaboration-2026-04-30.pdf**. Signed. Phased commitment. Pre-Phase at zero cost to Texas.
3. **Credential-Engine-Letter-of-Collaboration.pdf**. Outreach to info@credentialengine.org. Target signed by April 28.
4. **TEA-Commitment-Letter.pdf**. Tri-Agency internal. Governor's office coordinates.
5. **TWC-Commitment-Letter.pdf**. Tri-Agency internal.
6. **THECB-Commitment-Letter.pdf**. Tri-Agency internal.
7. **Workforce-Investment-Council-Commitment.pdf**. Tri-Agency internal.
8. **Anchor-Employer-Letters.pdf**. Samsung, IBM, Dow, SpaceX, Lockheed as obtained. Governor's office or TEA coordinates direct outreach.

**9. ISD-and-College-Letters.pdf.** Named Texas ISDs and community colleges as obtained. Rolling through submission date.

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*Drafting note. Prepared as a drafting contribution offered to the Texas Governor's Office at no cost. The State of Texas is the author of record. Fields marked [DESIGNATE] require Governor's-office decision before submission.*