



America's Welding Workforce Crisis

Operationalizing Deloitte's Workforce Modernization Principles via the M.O.S.T. Model

A Strategic Briefing for
Executive Leadership

Executive Summary



The Crisis

Welding workforce of 454,500 welders faces a 50% loss due to retirement at the exact moment the defense and infrastructure base needs them most.



The Failure

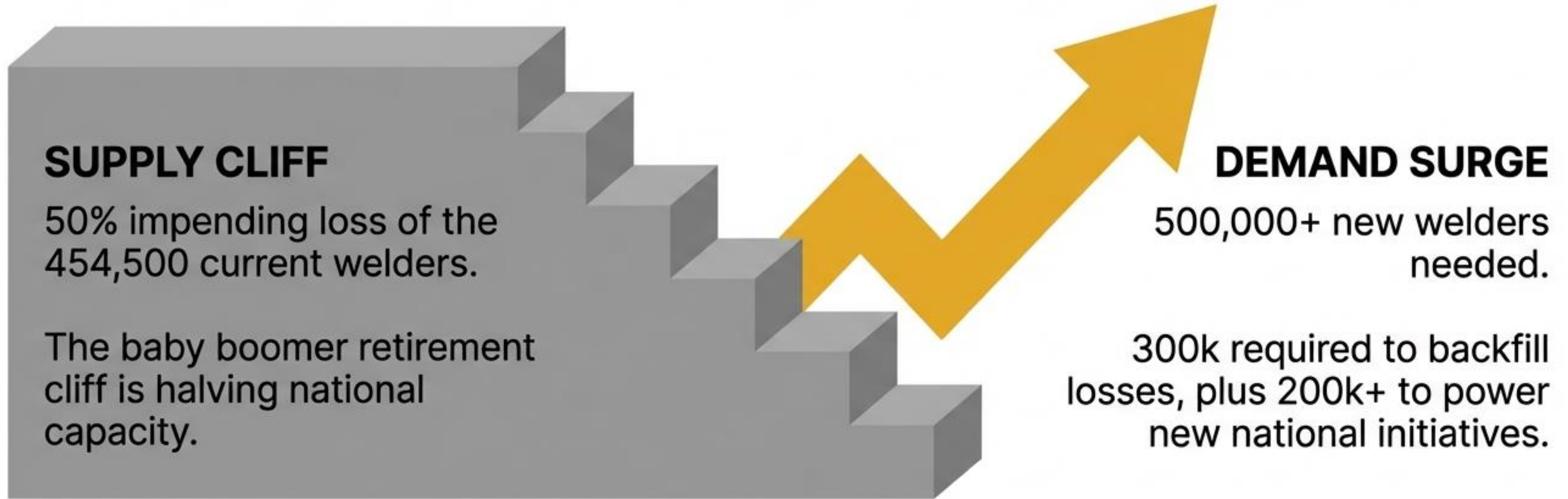
Traditional pipelines (18-month programs, community colleges) are structurally broken and broken and geographically trapped within a 10-mile radius.



The M.O.S.T. Solution

A revolutionary 6-week model that operationalizes Deloitte's principles to rapidly deploy transitioning soldiers—America's finest hidden workforce.

The Perfect Storm: Collapsing Supply Meets Surging Demand



Insight: National welding capacity is being halved precisely when it must double to meet immediate production needs.

The 'Big 4' Demand Accelerators

Shipbuilding

U.S.	VS	CHINA
<200 U.S. Flag Oceangoing Vessels	 Fleet	>7,000 Chinese Flag Oceangoing Vessels
<5 Orders (2023)	 Shipbuilding	>1,700 Orders (2023)
<153,000 U.S. Workers	 Shipbuilding Workforce	>600,000 Chinese Workers
<12,000 Merchant Mariners	 Mariners/ Seafarers	>1.7 Million Seafarers

\$450M spent on training since 2020 by major defense contractors.

National Infrastructure

\$480B funding for 60,000+ projects.



60,000+ construction projects moving forward



Projects to build more than **4,600** buses



175,000+ miles of roadway



1,100+ airports modernizing



10,200+ projects to build/modernize bridges



1,400+ communities funded for roadway safety



500+ transportation projects funded across 160 Tribal Nations



Nearly **170** rail projects



500+ port and waterway projects



Over **\$11 billion** in discretionary grant funding



Nearly **11,200** public transit projects

Doubling the Grid



57%

Grid expansion required by 2035; equivalent to adding 300 Hoover Dams.

Oil Field Resurgence



3X

Energy policy shifts demanding thousands of welders at triple existing salary levels, further cannibalizing the talent pool.

The 'Double Gap' Renders Traditional Pipelines Obsolete

The Skills Gap

1.9M

Manufacturing jobs will remain unfilled.

The Work Ethic Gap

80%+

Based on Deloitte & Manufacturing Institute data, over 80% of civilian candidates lack basic competencies—dedication, discipline, and work ethic.

Key Insight: You cannot fix a decades-long deficit in work ethic with a brief civilian training intervention. The candidate pool itself is fundamentally flawed.

The Geographic Trap: Why Higher Pay Isn't Working



Data Callout 1:

Community colleges have a median student draw of just 10 miles.

Data Callout 2: 61% of graduates remain permanently anchored within 50 miles of their campus.

Deloitte Insight: Manufacturers cannot fill roles even with higher pay because traditional civilian pipelines produce workers who refuse to relocate. National demands require a nationally deployable workforce.

The Hidden Ready Workforce



200,000

soldiers transition to civilian life annually
(64,000 in the Army alone).

80%

are under 25, offering
decades of career
longevity.

Key Insight: Military service acts as a rigorous pre-screening process. These soldiers already possess the exact soft skills, discipline, stress tolerance, and mobility that the civilian workforce critically lacks.

The M.O.S.T. Rapid Skills Model: 6 Weeks to Production Readiness

FAST TRACK WELDING JOB TRAINING WITH IMMEDIATE EMPLOYMENT AFTER COMPLETION



Phase 1:

VR Screening &
Video Interviews

Phase 2:

Guaranteed Employer
Commitment before
training begins.

Phase 3:

6-Week OSHA Live
Lab Training on/near
Military Bases.

Phase 4:

AWS National Welder
Certification &
Day-1 Employment.

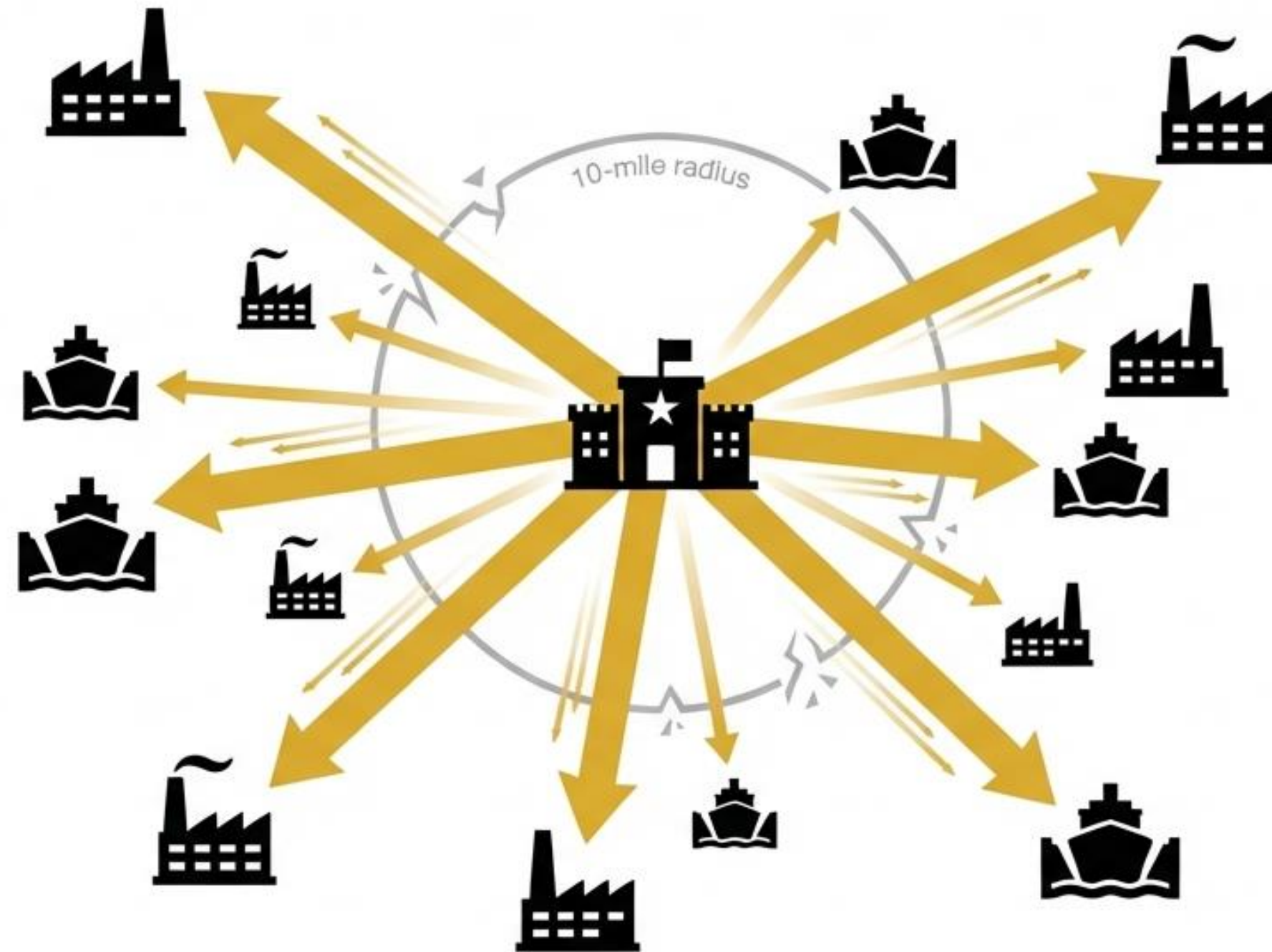
Phase 5:

30-Month E-Learning
Career Ladder.

Strategic Differentiator 1: Unconstrained National Deployment

Key Insight:

Transitioning soldiers are accustomed to PCSing (permanent changes of station). They have no fixed civilian address anchoring them to one town.



The M.O.S.T.

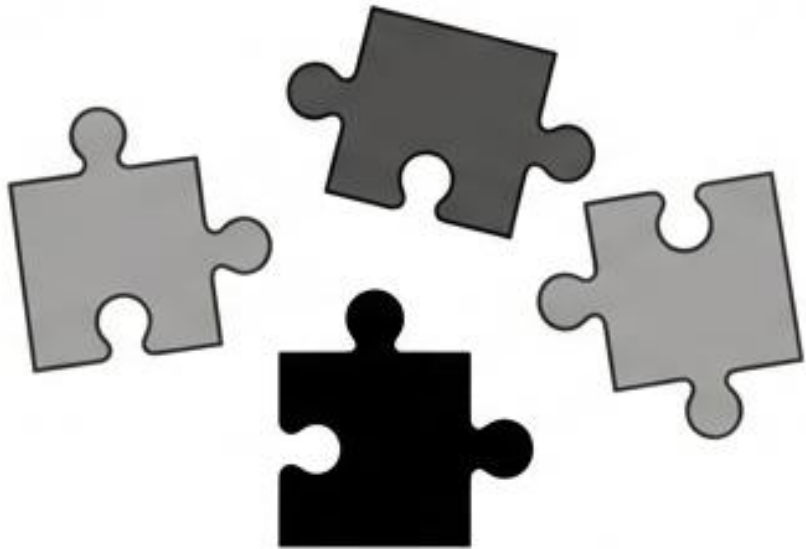
Advantage: The program recruits on-base and deploys graduates anywhere in the U.S. based precisely on where employers need them. It is the only model that operates with zero geographic constraints.

Strategic Differentiator 2: Employer-Customized Training



The Flaw: Traditional (General)

Traditional 18-month programs are too general, requiring companies to spend long lead times retraining hires to actual job needs.



The Advantage: M.O.S.T. (Customized)

M.O.S.T. precisely matches machines, rods, plate sizes, material components, and temperatures to the specific hiring company's actual floor conditions.



Result: Graduates are AWS-certified and 100% production-ready on day one.

Solving the Veteran Transition Crisis

The Enemy (Time & Uncertainty)

The highest risk of veteran suicide, depression, and UI dependence occurs in the first three months following separation when facing unemployment.



The Solution (Pre-Committed Employment)

M.O.S.T. secures the full-time job, salary, and benefits before training even begins. It eliminates financial anxiety and welfare risk, providing a **life-changing head start** into civilian life.

Economic Impact: Traditional Cost vs. The M.O.S.T. Efficiency

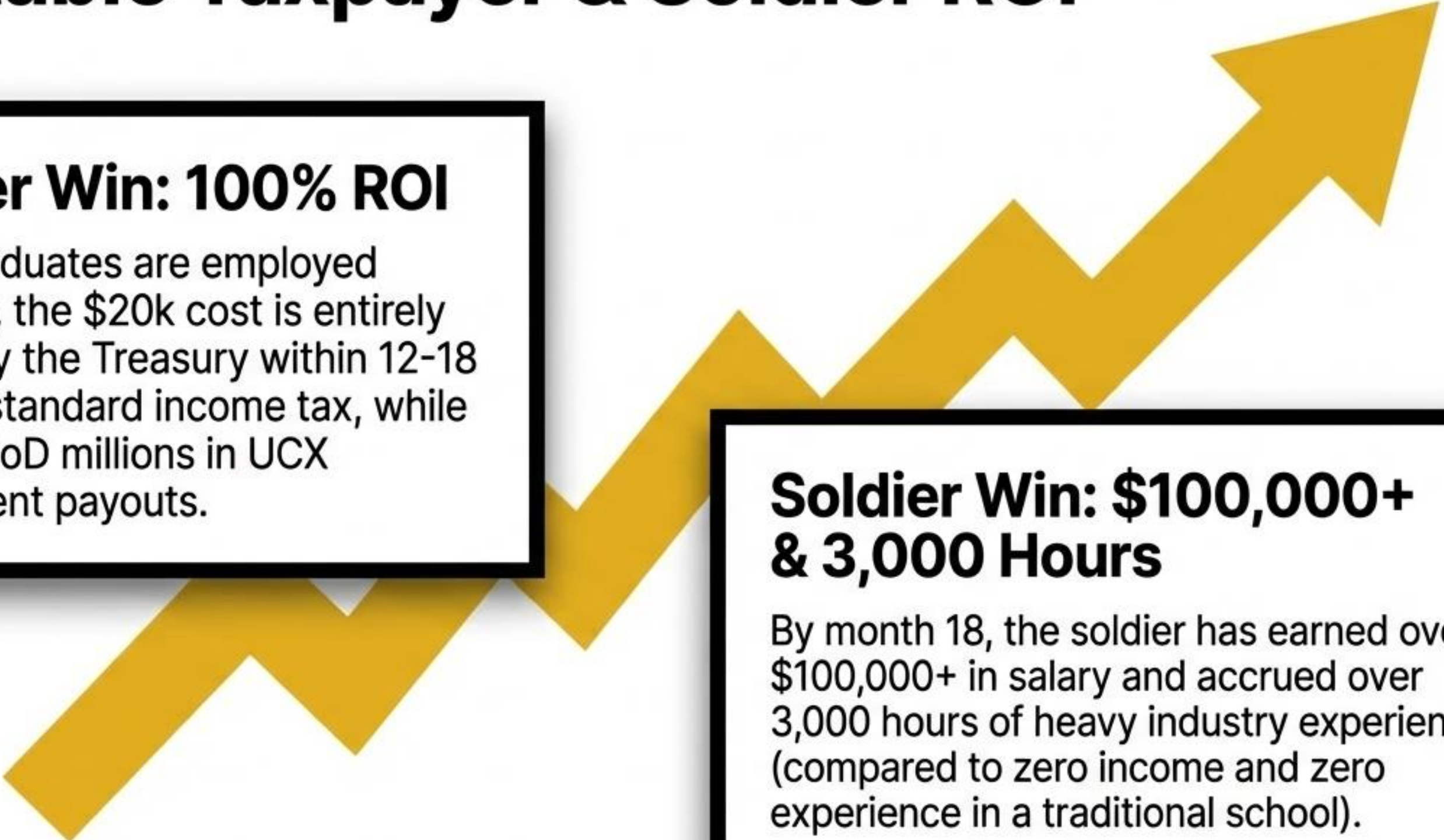


Traditional Burden: 18-month programs cost nearly \$100k per soldier when factoring in GI benefits, healthcare, SNAP, and unemployment—with zero guarantee of a job at the end.

**\$20,000
All-In Cost**

M.O.S.T. Efficiency: At ~\$20,000 per student or per soldier, M.O.S.T. costs roughly 20% of traditional programs, includes recruitment, training, specialized gear, and results in guaranteed employment.

Unbeatable Taxpayer & Soldier ROI



Taxpayer Win: 100% ROI

Because graduates are employed immediately, the \$20k cost is entirely recovered by the Treasury within 12-18 months via standard income tax, while saving the DoD millions in UCX unemployment payouts.

Soldier Win: \$100,000+ & 3,000 Hours

By month 18, the soldier has earned over \$100,000+ in salary and accrued over 3,000 hours of heavy industry experience (compared to zero income and zero experience in a traditional school).

Validated by Design: The Deloitte Alignment Matrix

Deloitte Workforce Principles	The M.O.S.T. Mechanism	
Outcome-Based Learning	6-week AWS Certification + guaranteed job.	✓
Multimodal VR	VR screening accelerating live OSHA lab training.	✓
Modular Credentials	AWS Cert + 30-Month e-learning ladder.	✓
Candidate Quality	Pre-screened military discipline solves the work ethic gap.	✓
Geographic Mobility	100% deployable national workforce vs. a 10-mile radius.	✓



The Future of the Defense Industrial Base

**M.O.S.T. is not just a training program.
It is a national workforce deployment
system for the defense industrial base.**

To meet the accelerating demands of American shipbuilding, infrastructure,
and the energy grid, we cannot rely on localized traditional pipelines.
We must scale the pipeline that deploys nationwide.