

**What would happen if customs
professionals disappeared
tomorrow?**

(Brokers, entry writers, HTS analysts, dispatchers.)



SMOOTH OPERATIONS

- \$3.1 M USD in cross-border trade every minute keeps moving
- Uninterrupted border flows and reliable ETAs
- Shared prosperity for Laredo & the region



TOTAL PARALYSIS

- Thousands of local jobs at risk (brokerage, carriers, warehouses)
- Broken supply chains and factory line stoppages
- Massive economic losses across North America

**The real question isn't whether
we'd survive without you...**

**It's whether we're ready for the
next era of cross-border trade.**

*More digital, more automated, and more
demanding of your skills.*



From Border Basics to Logistechs: Laredo's role in the next era of cross-border logistics

Daniel Covarrubias, Ph.D.

August 26, 2025

Laredo College Global Logistics Center
Laredo, Tx.



OVER THE NEXT 40 MINUTES, HERE'S OUR ROUTE



Why You Matter + Why Laredo

- \$3.1M/min keeps moving because of you
- Port Laredo by the numbers

Smart Borders: ACE 2.0 & PITA

- Interoperability & the “Digital Wall”
 - Data first, then speed



How a Shipment Actually Crosses

- Broker → Entry Writer → HTS → Dispatch → Compliance
- Where *your* job fits



Finish: A.I. & What's Going on Now

- A.I. in daily ops
- NA chapter
- Q&A



From the Big Picture to Our Border

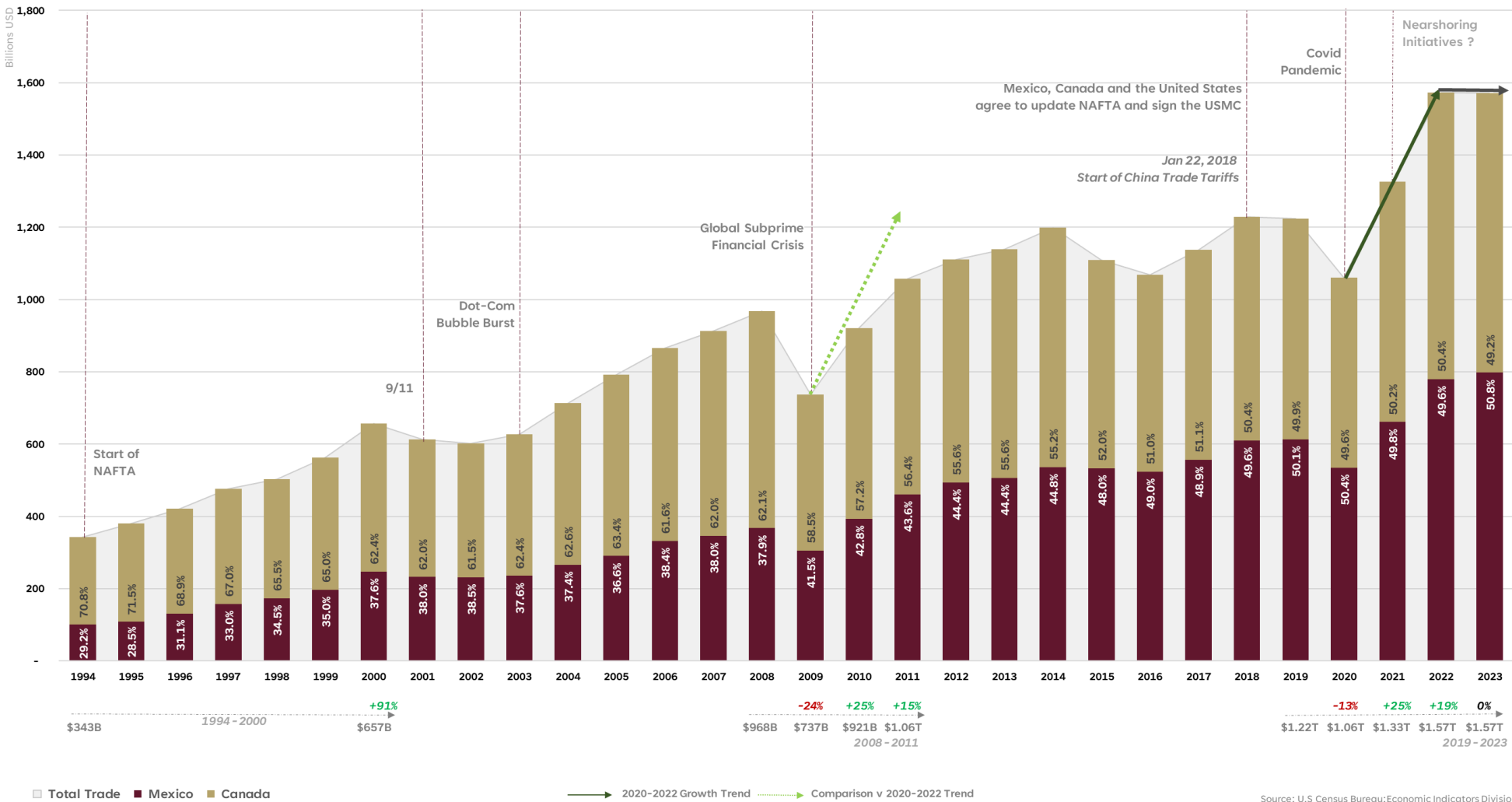
USMCA has tilted U.S. trade toward Mexico and Canada. Let's zoom out to the North American trend. And then zoom in to what it means here in Laredo.

US TRADE
MEX / CAN



TEXAS CENTER
FOR BORDER ECONOMIC & ENTERPRISE DEVELOPMENT
TEXAS A&M INTERNATIONAL UNIVERSITY

NAFTA / USMCA TRADE



Source: U.S Census Bureau: Economic Indicators Division
Analysis: Texas Center for Border Economic and Enterprise Development

USMCA at a Glance

An economy built over 30 years

30%
Global GDP



501
Million
Consumers

\$1.6 T
Total Trade



\$3.1 M
Trade per
minute

North America's Global Advantage

Comparative Economic Strength of Major Trading Blocs



USMCA

- 501 million consumers, representing 30% of global GDP.
- Highly integrated supply chains with strategic specialization across borders and proximity advantages



EUROPEAN UNION

- 450 million consumers, representing 13.4% of global GDP.
- A highly regulated single market with uniform standards and a shared currency for most members.



ASEAN – Association of Southeast Asian Nations

- 693 million consumers, representing 7.2% of global GDP.
- Rapidly growing economies focused on manufacturing with emerging integration policies.



RCEP - Regional Comprehensive Economic Partnership (incl. China)

- 15 countries, 2.3 billion consumers with a substantial economic potential
~30% del PIB mundial
- A large market with fragmented supply chains and varying levels of economic development



The background of the slide features a wooden maze with a small, dark-colored figure standing at the entrance. The maze is constructed from light-colored wood blocks, and the figure is positioned at the top center of the frame. The overall image has a warm, natural wood tone.

Why Laredo, Why Now

Record truck volumes, reliable daily averages, and two world-class bridges make Laredo the best classroom for learning logistics at scale.

Laredo Trade Outlook

Share of Total U.S. Trade (2023 Top 5 Ports of Entry)



Source: U.S. Census Bureau Economic Indicators
Division, U.S Bureau of Transportation Statistics

Laredo Trade Outlook

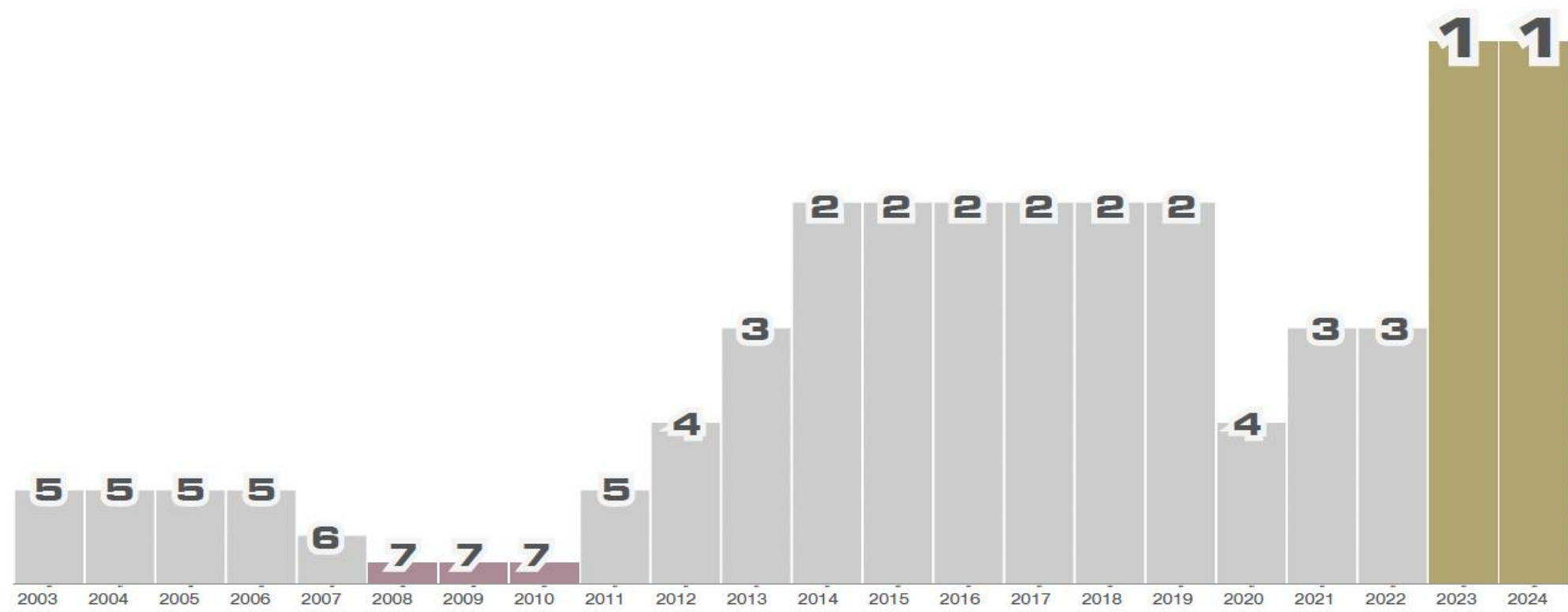
Top 5 Ports of Entry (2023 Total Import/Export Trade Value)



Source: U.S. Census Bureau Economic Indicators
Division, U.S. Bureau of Transportation Statistics

Laredo Trade Outlook

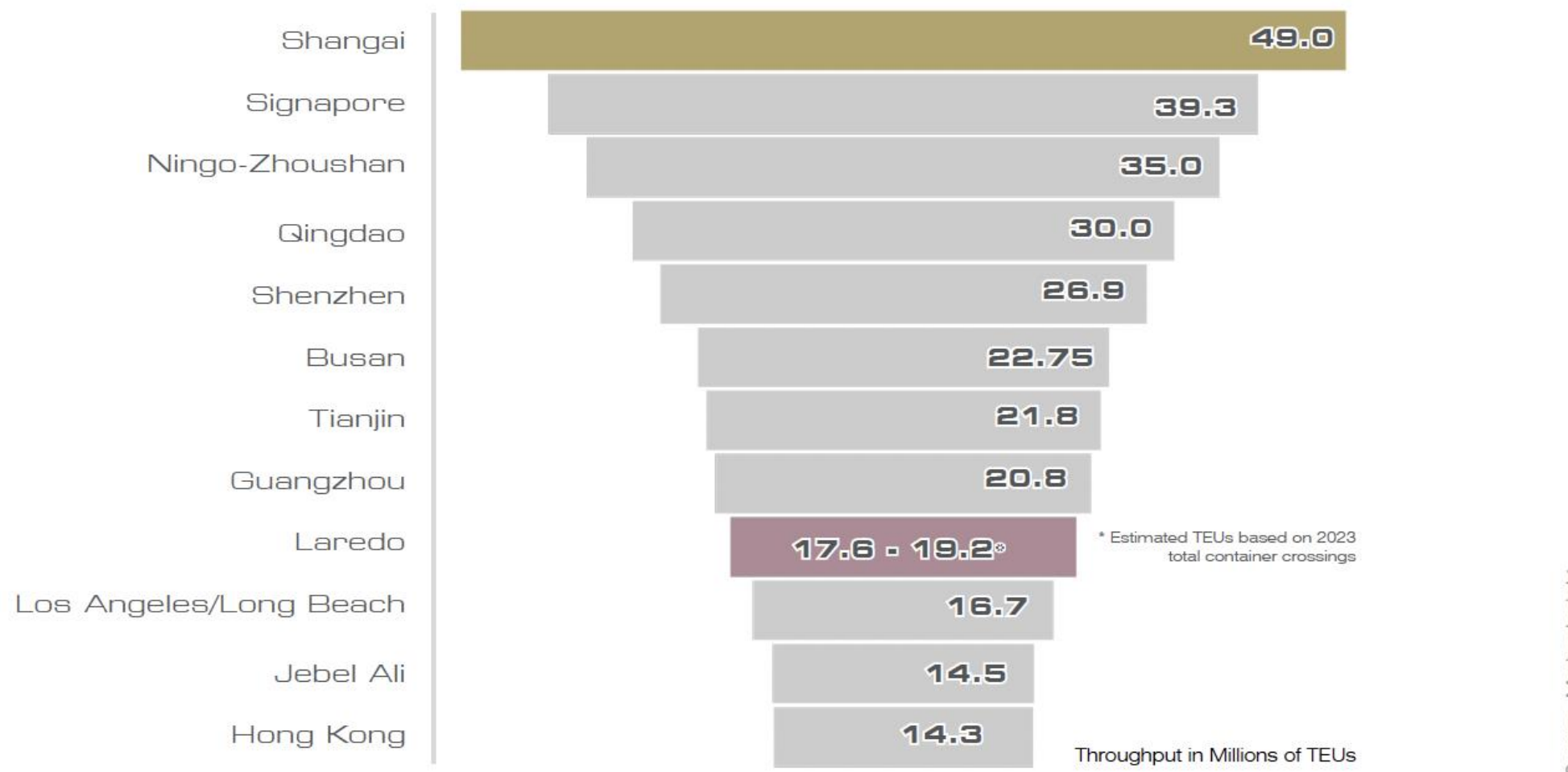
Port Laredo Yearly Ranking vs. Other U.S. POE



Source: U.S. Census Bureau Economic Indicators
Division, U.S Bureau of Transportation Statistics

Laredo Trade Outlook

2023 Port Laredo Placement Within the Largest Ports in the World Based on Throughput



Source: Marine Insight - <https://www.marineinsight.com/ports/top-10-busiest-ports-in-the-world/>
U.S. Bureau of Transportation Statistics, City of Laredo Bridge System, Port of Long Beach, Port of Los Angeles,

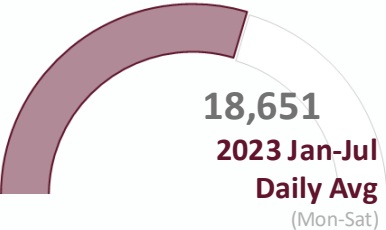
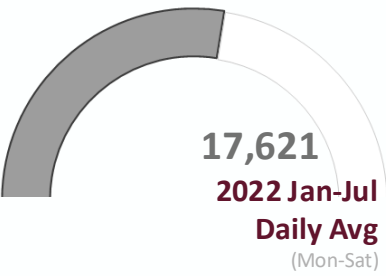
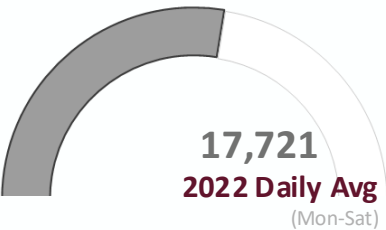
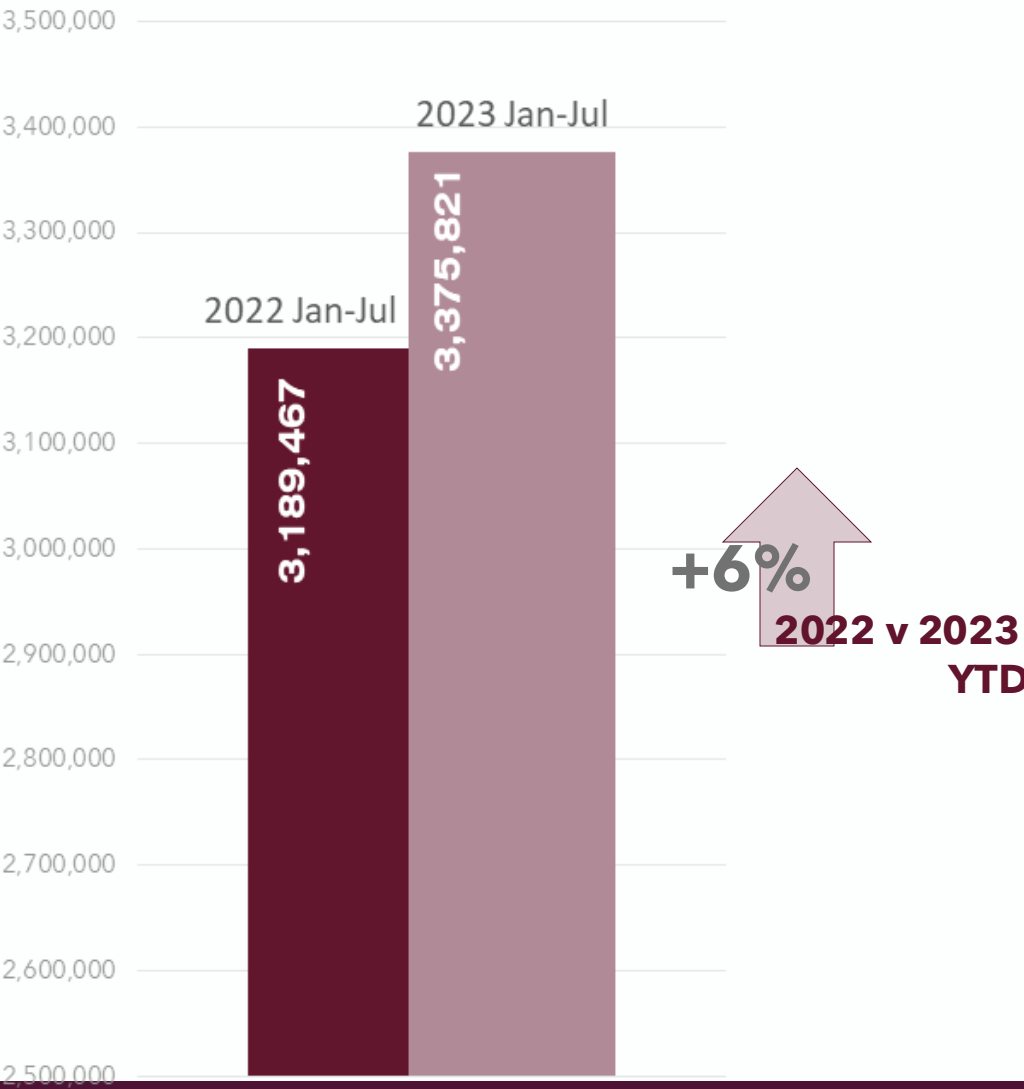
LAREDO

2022 -2023

NORTH-SOUTH
BOUND



TRUCK CROSSINGS



Source: Bureau of Transportation Statistics, City of Laredo Bridge Department

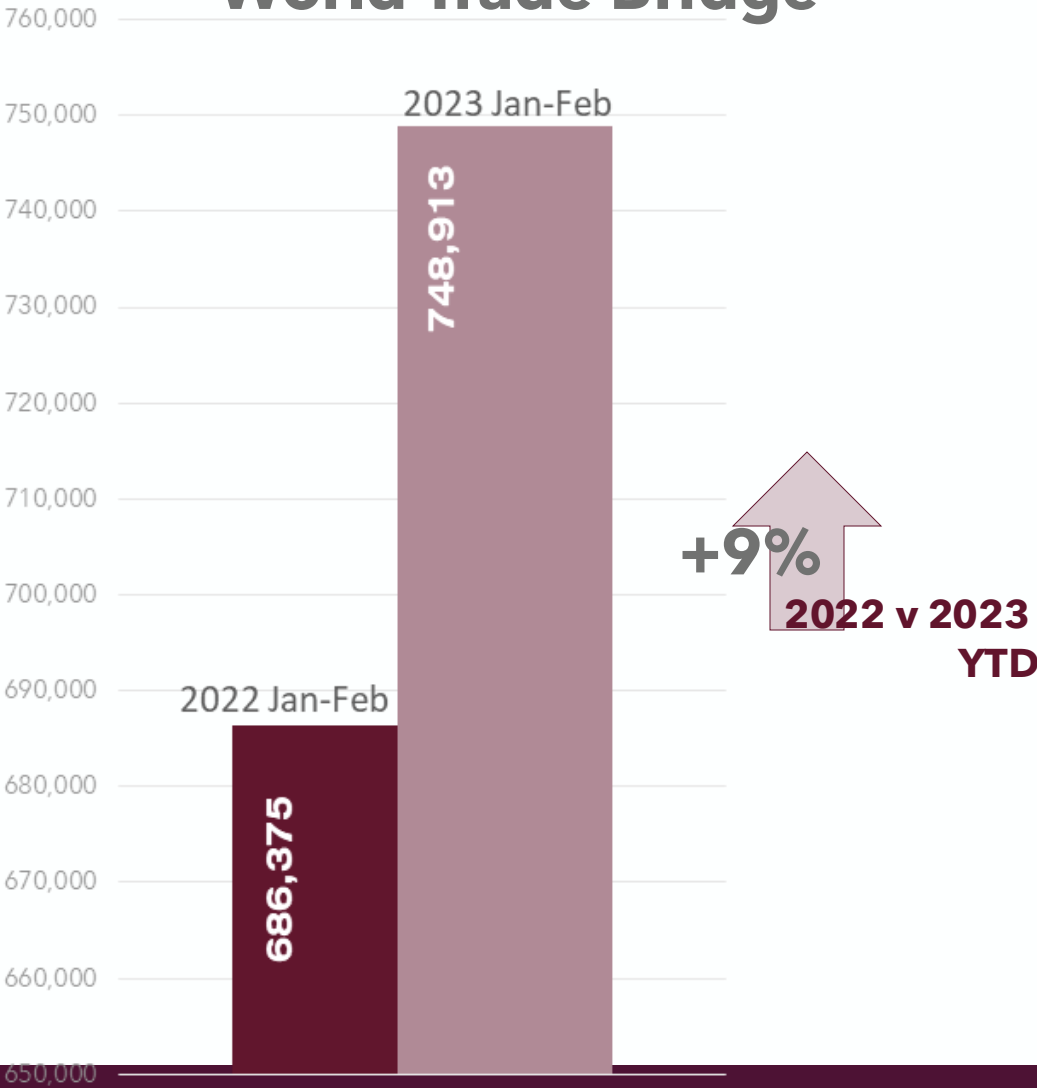
LAREDO

2022-2023

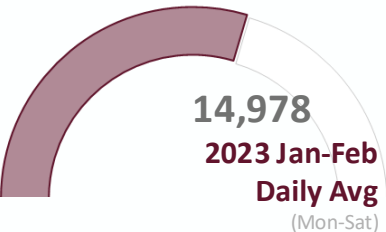
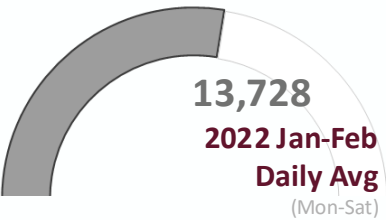
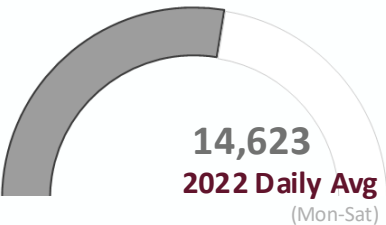
NORTH-SOUTH
BOUND



World Trade Bridge



TRUCK CROSSINGS



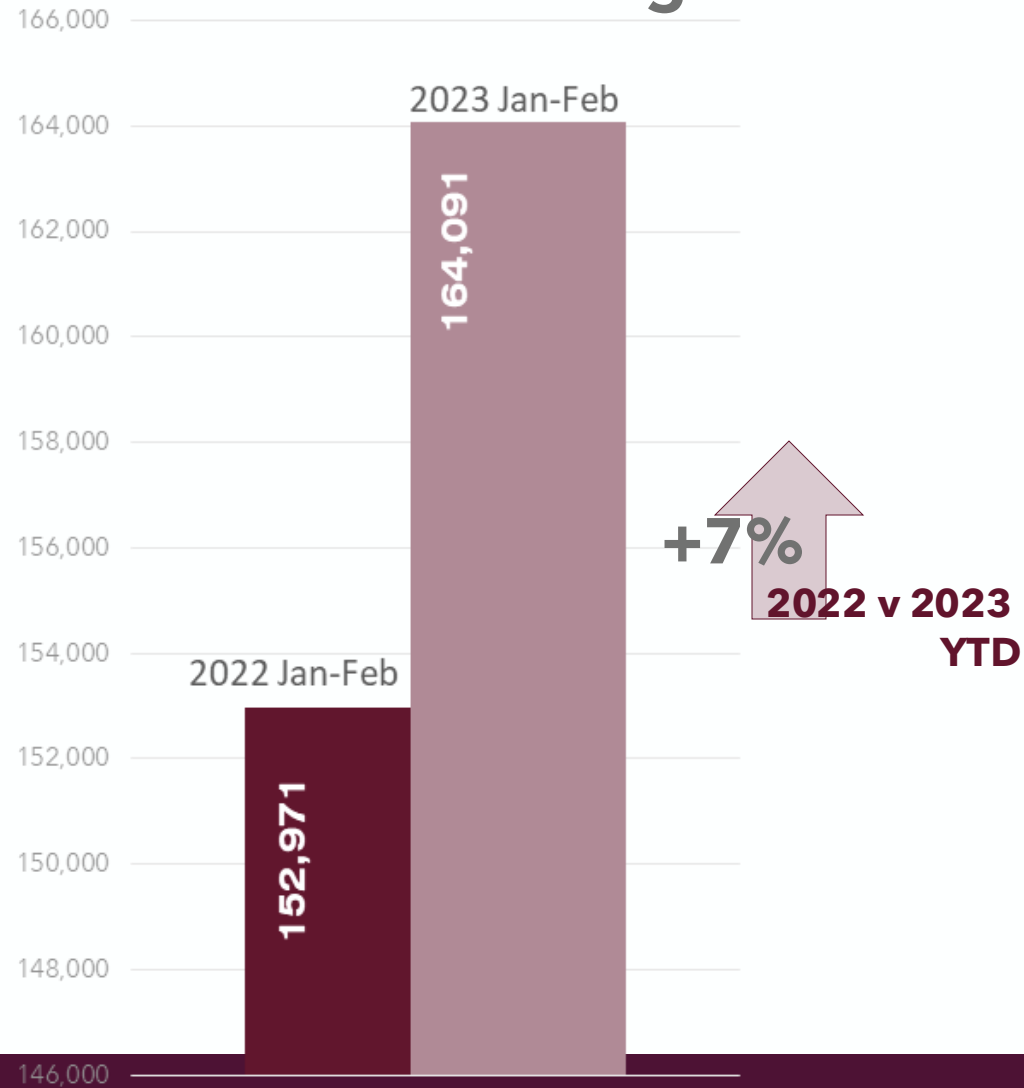
LAREDO

2022-2023

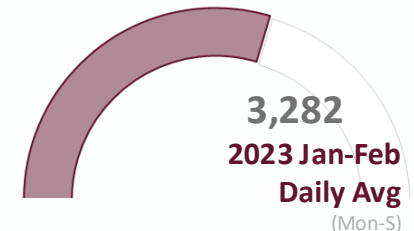
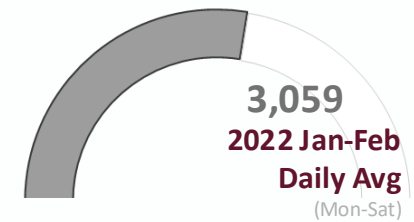
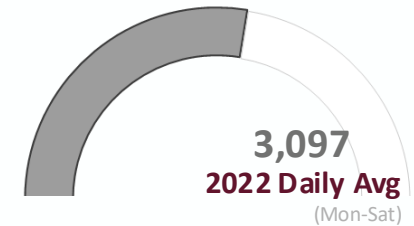
NORTH-SOUTH
BOUND



Colombia Bridge



TRUCK CROSSINGS



PORT LAREDO IN NUMBERS

**5+
MILLION**

ANNUAL
TRUCK
CROSSINGS

**2+
MILLION**

ANNUAL
BUS
PASSENGERS

**1+
MILLION**

ANNUAL
RAIL CAR
CROSSINGS

PORT LAREDO IN NUMBERS

**\$60
BILLION**

ANNUAL
AUTO PARTS
TRADE

**\$23
BILLION**

ANNUAL
NEW AUTO
TRADE

**\$14
BILLION**

ANNUAL
COMP./CELL PH.
TRADE

**\$4
BILLION**

ANNUAL
PRODUCE
TRADE

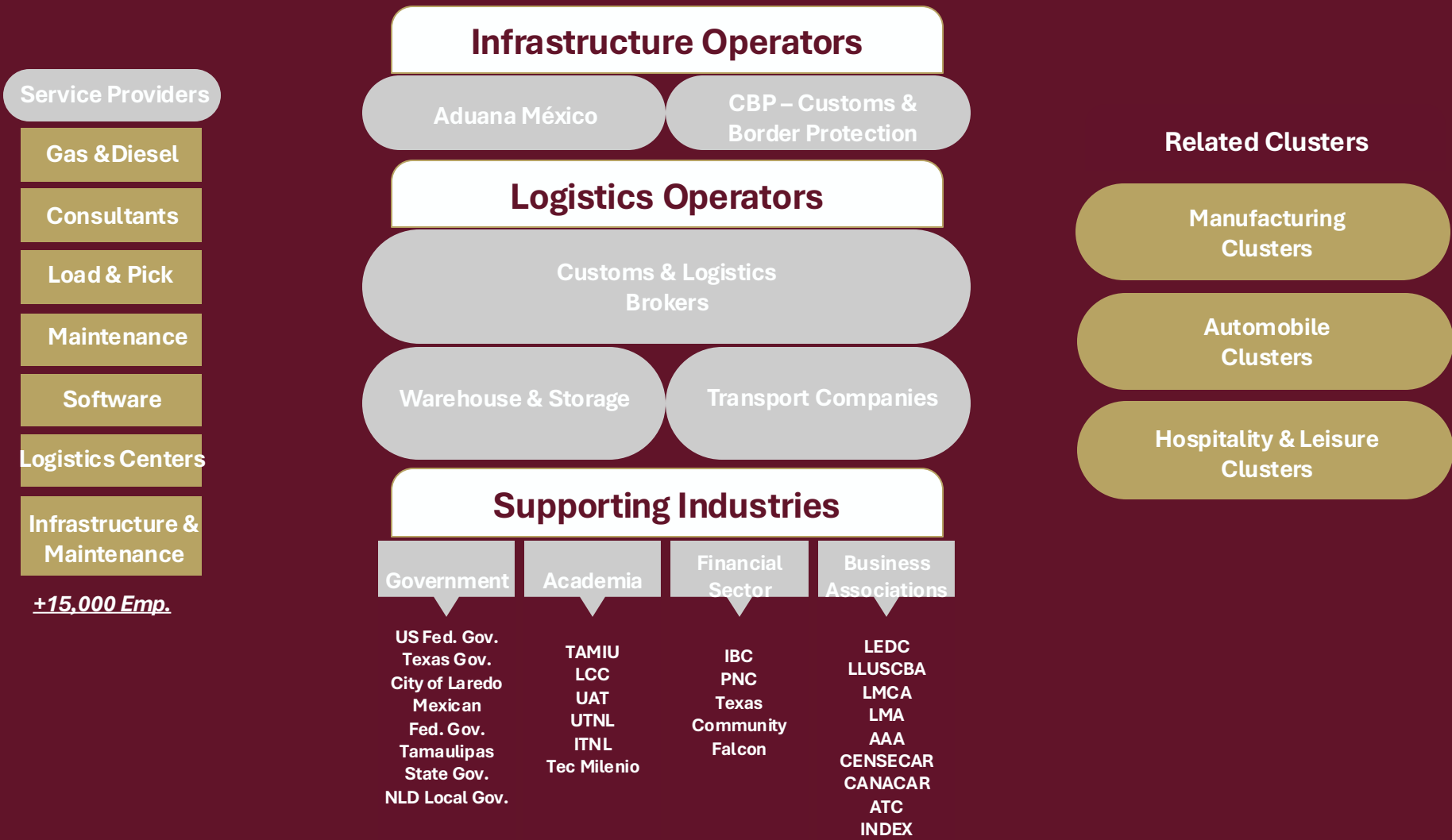


From Trendlines to the Workline

We've seen how trade is surging and why Laredo matters.

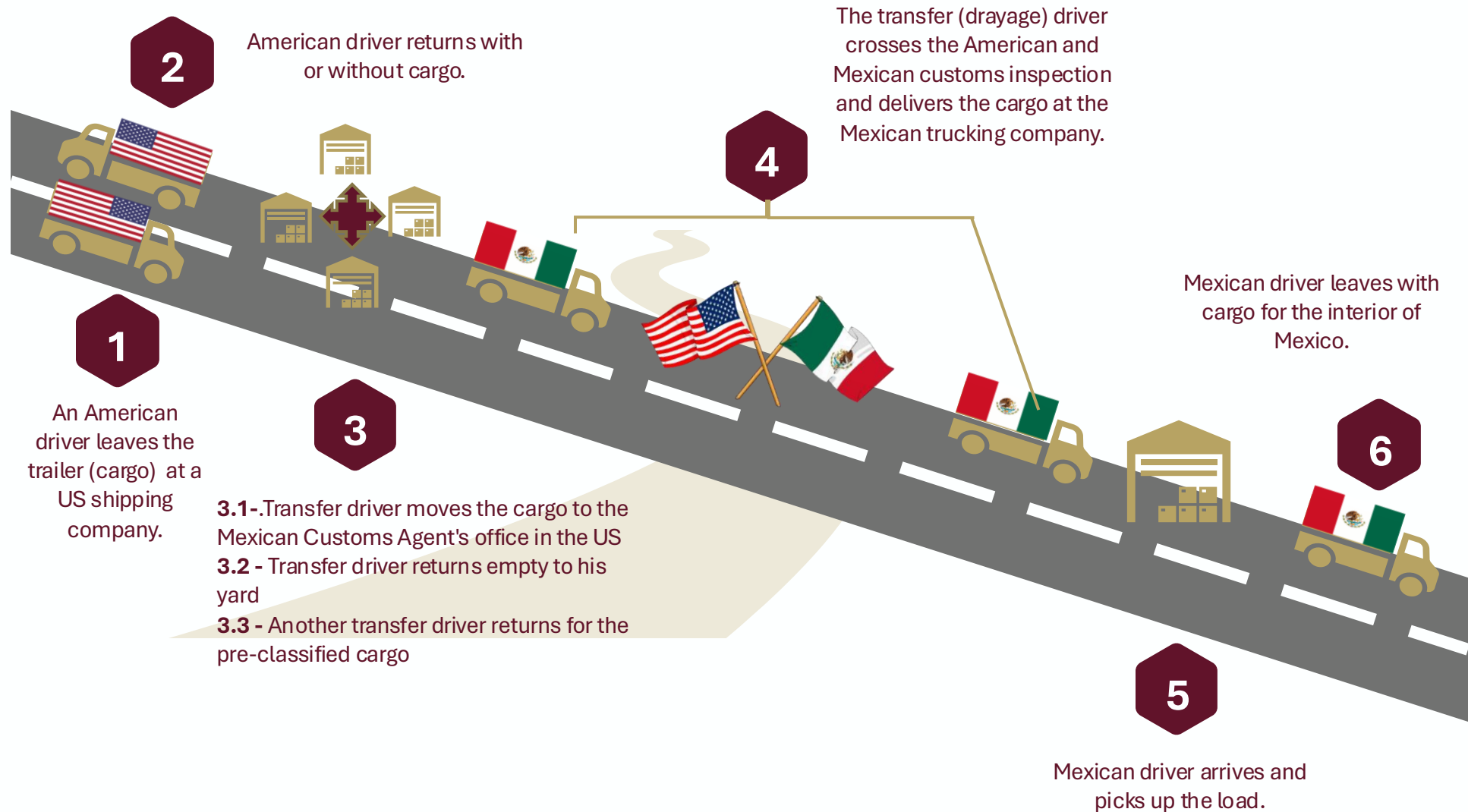
Now let's follow a single shipment across the border.
And locate the jobs you're training for along the way.

Port Laredo Logistics Cluster Map



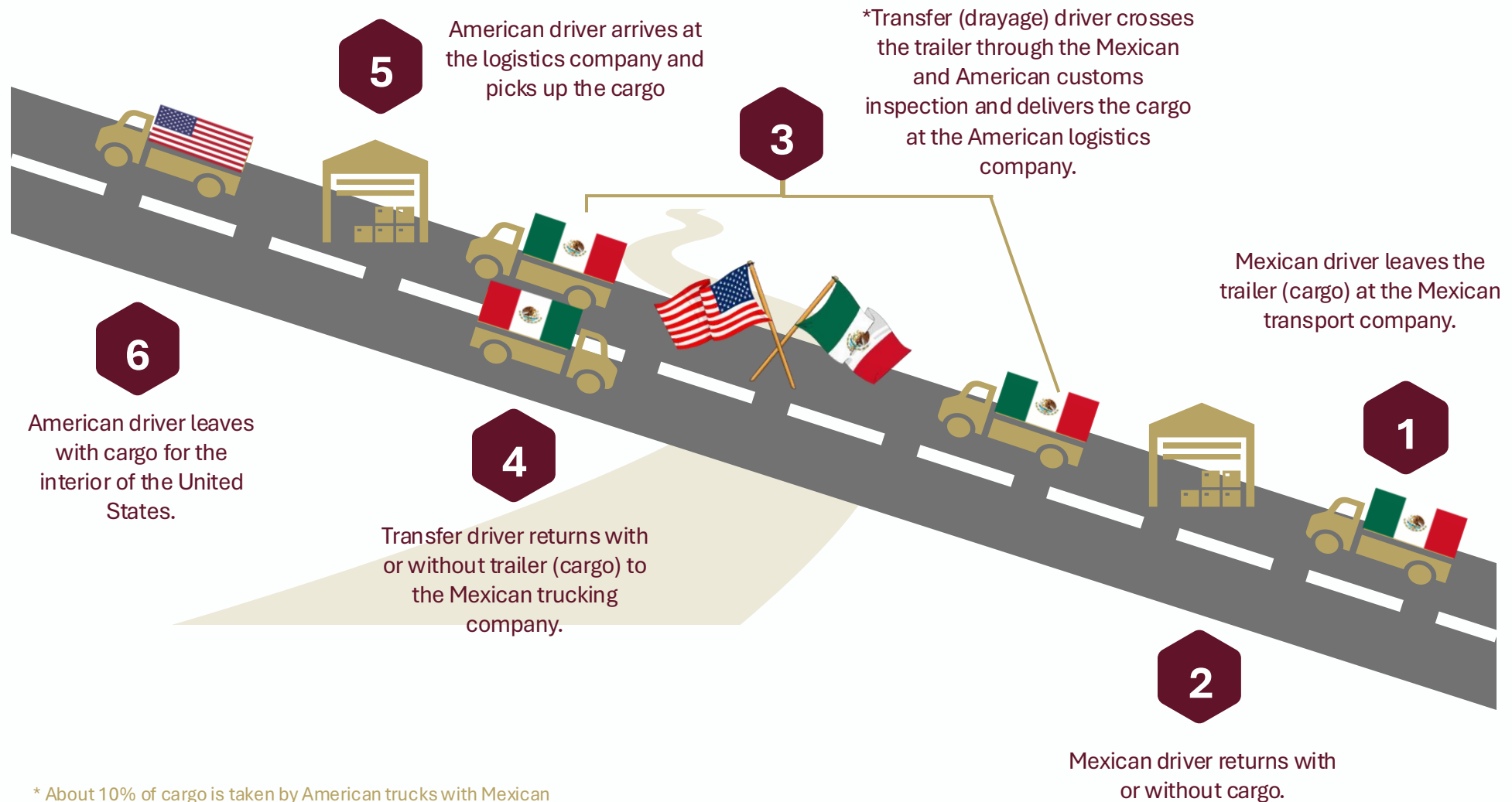
Port Laredo Operations

U.S. exports to Mexico



Mexico imports to the U.S.

Mexico imports to the U.S.



*Transfer (drayage) driver crosses the trailer through the Mexican and American customs inspection and delivers the cargo at the American logistics company.

Mexican driver leaves the trailer (cargo) at the Mexican transport company.

American driver leaves
with cargo for the
interior of the United
States.

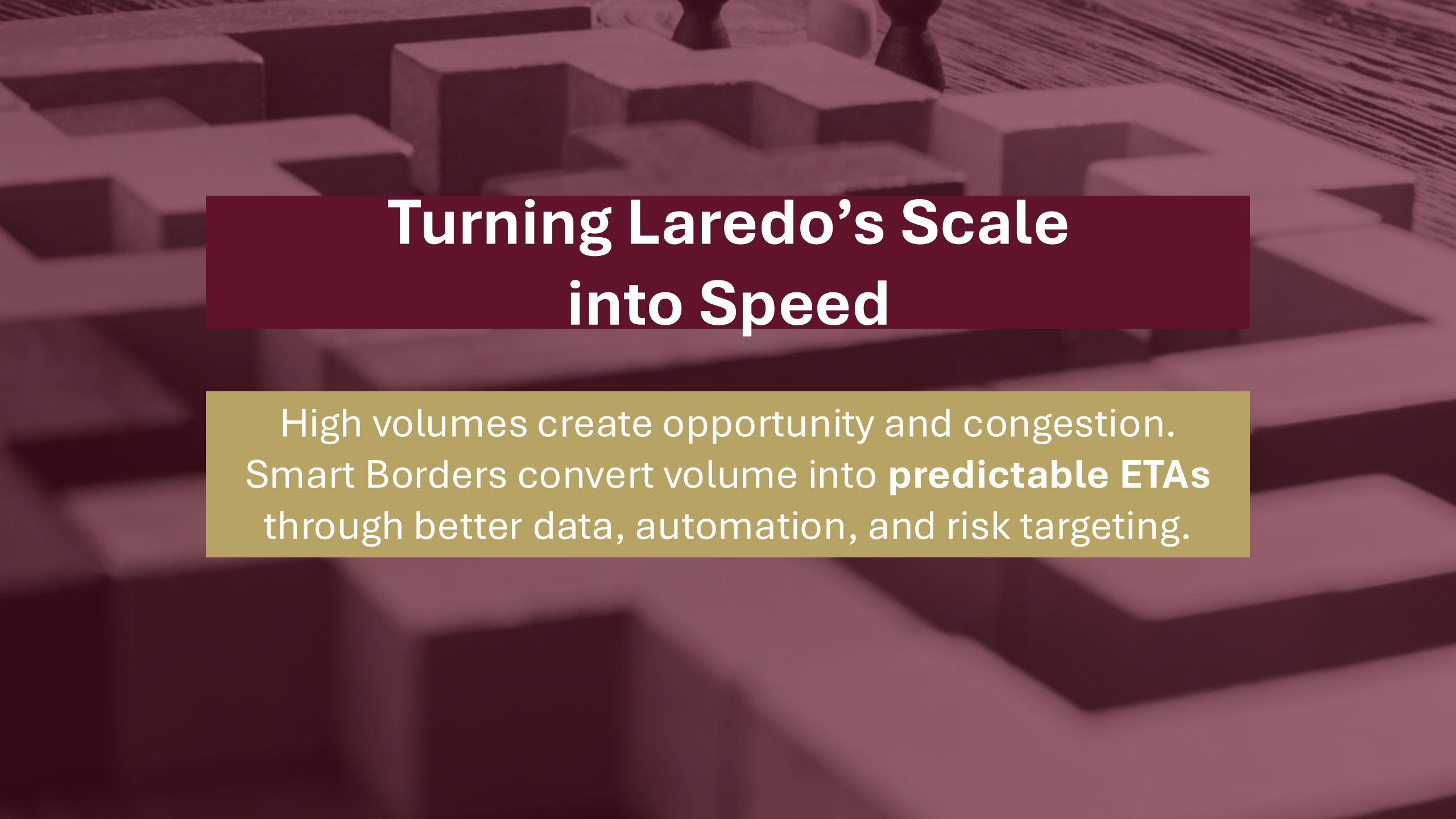
Transfer driver returns with or without trailer (cargo) to the Mexican trucking company.

Mexican driver returns with
or without cargo.

* About 10% of cargo is taken by American trucks with Mexican drivers on B1 Visas

Port Laredo's Geographical Advantage





Turning Laredo's Scale into Speed

High volumes create opportunity and congestion. Smart Borders convert volume into **predictable ETAs** through better data, automation, and risk targeting.



SMART BORDERS

- Smart borders refer to the use of technology and data to facilitate the movement of people and goods across borders while ensuring security.

- These initiatives include electronic customs systems, automated border control systems, and risk assessment tools (Svitek et al.:2019).

Smart Borders

BENEFITS

- Increase the efficiency of border crossings by reducing wait times and processing times.
- They can improve security by effectively identifying and targeting high-risk individuals and goods.
- Reduce costs by decreasing the need for manual processing and increasing automation.
- Improve data collection and analysis, allowing for better decision-making and risk assessment.

CHALLENGES

- Implementing smart border initiatives requires significant investment in technology and infrastructure.
- Using technology and data raises concerns about privacy and data protection. Smart borders require collecting and analyzing significant amounts of personal data, raising privacy and data protection concerns.
- Implementing smart borders requires international cooperation and coordination, which can take time and effort.

If the data flows, trade flows: interoperability + privacy-by-design → faster, safer crossings.

CBP 21st Century Customs Framework



Enhance
Facilitation
and
Security
through
21st century
processes



Define
Customs and
trade
Responsibilities
for emerging
and traditional



Ensure
seamless
data
sharing and
access



Employ
Intelligent
enforcement



Protect and
enhance
customs
infrastructure
through
secure funding

ACE 2.0 - Automated Commercial Environment

- It aims to be a new system based on a rethinking of how current and future technologies help CBP fulfill its mission more effectively.
- It will allow CBP to receive much better-quality data much earlier in the supply chain, often nearly in real-time, from traditional and non-traditional actors.
- This will greatly increase supply chain visibility as products arrive in the U.S., resulting in faster government responses with earlier determinations on cargo.

ANAM'S PITA PROJECT

- PITA (Proyecto de Integración Tecnológica Aduanera) launched in March 2016 . Key part of Mexico's "Aduana Digital" (Digital Customs) initiative
- It aims to automate, facilitate, and streamline the entry/exit of goods at customs ports. It enables paperless processing of trucks crossing the border using technology. RFID readers scan QR codes on drivers' Consolidated ID Badges.
- The monitoring center oversees the automated customs clearance process.



The Emerging "Digital Wall" at the U.S.-Mexico Border

Both Mexico and the U.S. are investing heavily in "smart border" technologies.

- US – CBP 21st Century Framework (ACE 2.0)
- Mexico – ANAM PITA

However, a lack of integration between the two countries' systems is creating a virtual barrier.

- Insufficient work on communication protocols and connection interfaces
- Resulting in a "Digital Wall" that hinders the seamless flow of goods and data

Potential consequences of this Digital Wall:

- Reduced efficiency gains from smart border tech investments.
- Missed opportunities for enhanced bilateral cooperation and information sharing
- Fragmented data ecosystems vulnerable to cyber threats

The background of the slide is a 3D maze made of light-colored blocks. A chess knight piece is visible in the upper center of the maze.

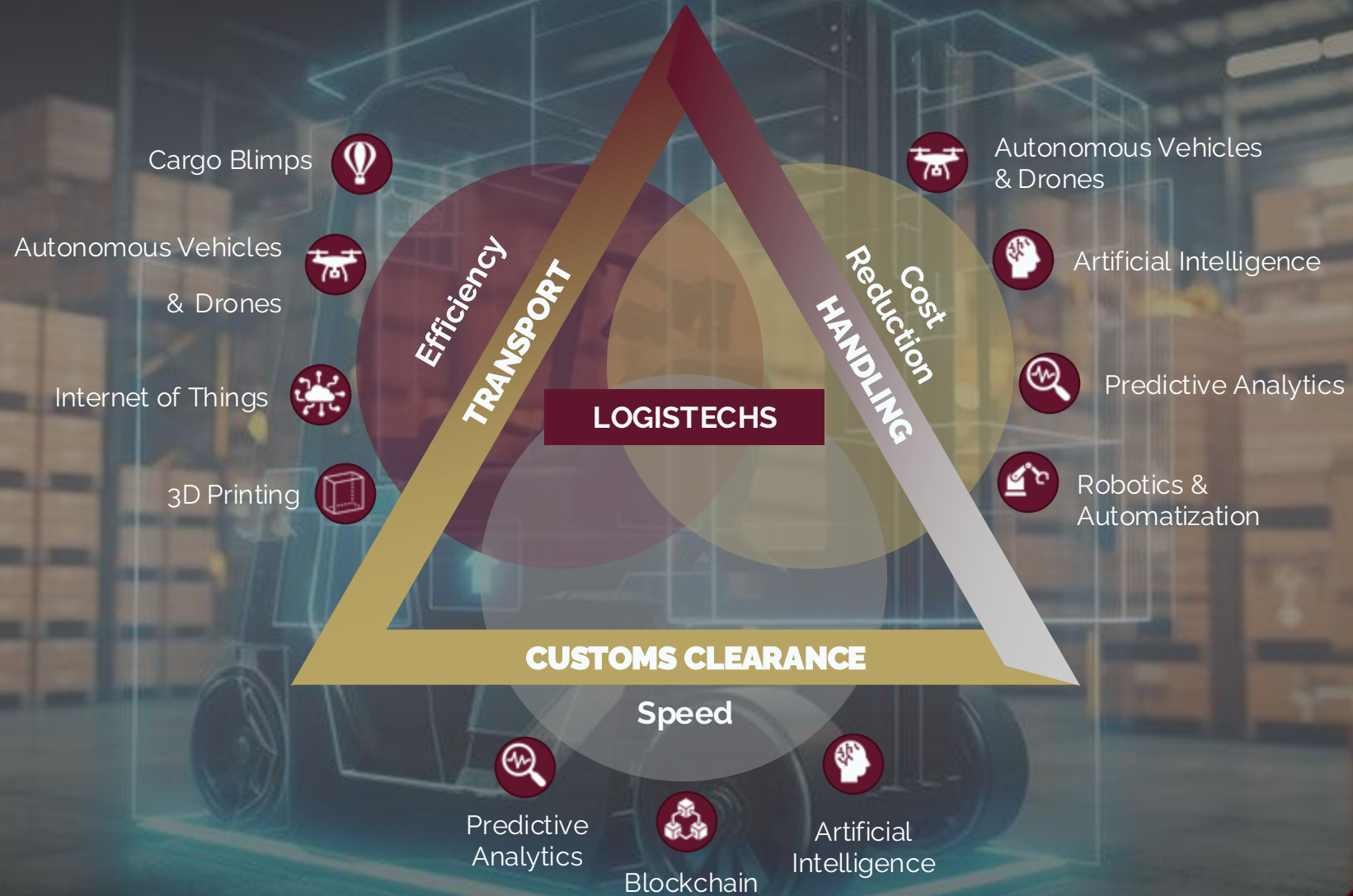
Stack to Skills

Policy → Platforms → **People + Logistechs.**
Let's look at the skill that multiplies every desk in this
room: **A.I.**

LO · GIS · TECHS

Represent the impact that exponential technologies have on logistics and can be classified as those that support the transportation of goods, those that improve their handling, and those that streamline their customs clearance.

LOGISTECHS



AI in Cross-Border Trade: 3 Changes That Matter

Forecasting & Decisions

- More accurate demand and **ETA** forecasts
- **Anomaly detection** & faster audit readiness
- **Who uses it:** Entry writers, HTS analysts, Compliance

Process Acceleration

- Document **extraction & validation** (less re-work/holds)
- “First-time-right” filings and cleaner data trails
- **Who uses it:** Entry writers, Compliance, Ops

Routing & Cost

- **Dynamic routing** & dwell prediction → better on-time rates
- Less driving time & fuel; fewer penalties
- **Who uses it:** Dispatch/Traffic, Ops

Clean data + AI → fewer holds, predictable ETAs, lower cost per mile.



AI-based Route Optimization System

- Dynamic route optimization
- No left turns
- Greater accuracy in delivery times
- Savings of **100 million miles** and **10 million gallons** of fuel per year
- Improved customer experience

ROUTE PLANNING & OPTIMIZATION

UPS ORION: The Driver Helper

UPS's ORION technology is revolutionizing package pickup and delivery operations. ORION combines package-level detail and customized online map data with expansive fleet telematics and advanced algorithms to provide UPS drivers with the most efficient delivery routes. A big task considering there are more ways to deliver a route than the age of the Earth in nanoseconds. No wonder ORION has been called "the world's largest operations research project!"

Meet ORION and check out the amazing results it delivers...



AI-based Predictive Maintenance System

- Uses machine-learning algorithms to analyze sensor data on trains and tracks
- Predicts possible equipment failures before they occur

Benefits:

- Reduced downtime
- Improved safety
- Optimized maintenance programs



We can analyse
8,000
variables for a single train

Including
2,000
in real time



More than
1,100
trains already have SIM
cards or IoT¹ sensors
installed by SNCF
Voyageurs



Our diagnostics are
95%
accurate in predicting
technical problems

We track
2,500
trains with remote
diagnostics network-wide



We've eliminated
50%
of technical problems with
predictive maintenance





From What AI Does → Who Uses It

We've seen how AI changes forecasting, processes, routing, costs, and decisions.

Now, who actually makes that change happen at the border desk?

AI CENTRIC WORKFORCE



AI Producers



AI Utilizers



AI-Aware

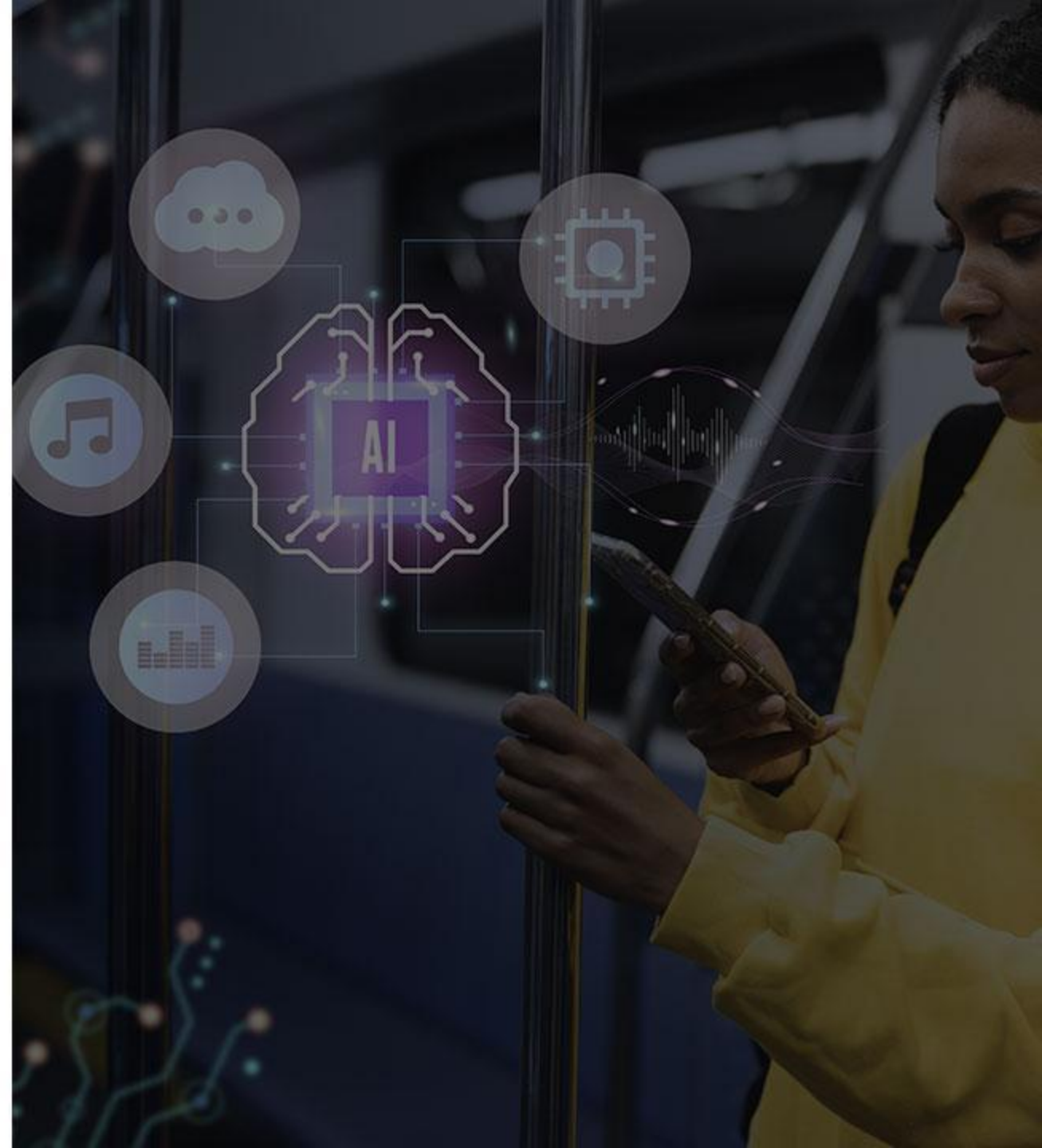


The A.I. Producers: Building Blocks of an A.I.-Driven Future

A.I. Producers will be primarily responsible for conceptualizing, designing, building, and seamlessly integrating A.I. applications into existing workflows and operations.

The A.I. Practitioners: Leveraging A.I. to Drive Efficiency

These professionals will be at the forefront of implementing A.I. into practical workflows. They will be the ones translating the theoretical potentials of A.I. into tangible efficiencies and strategic advantages.





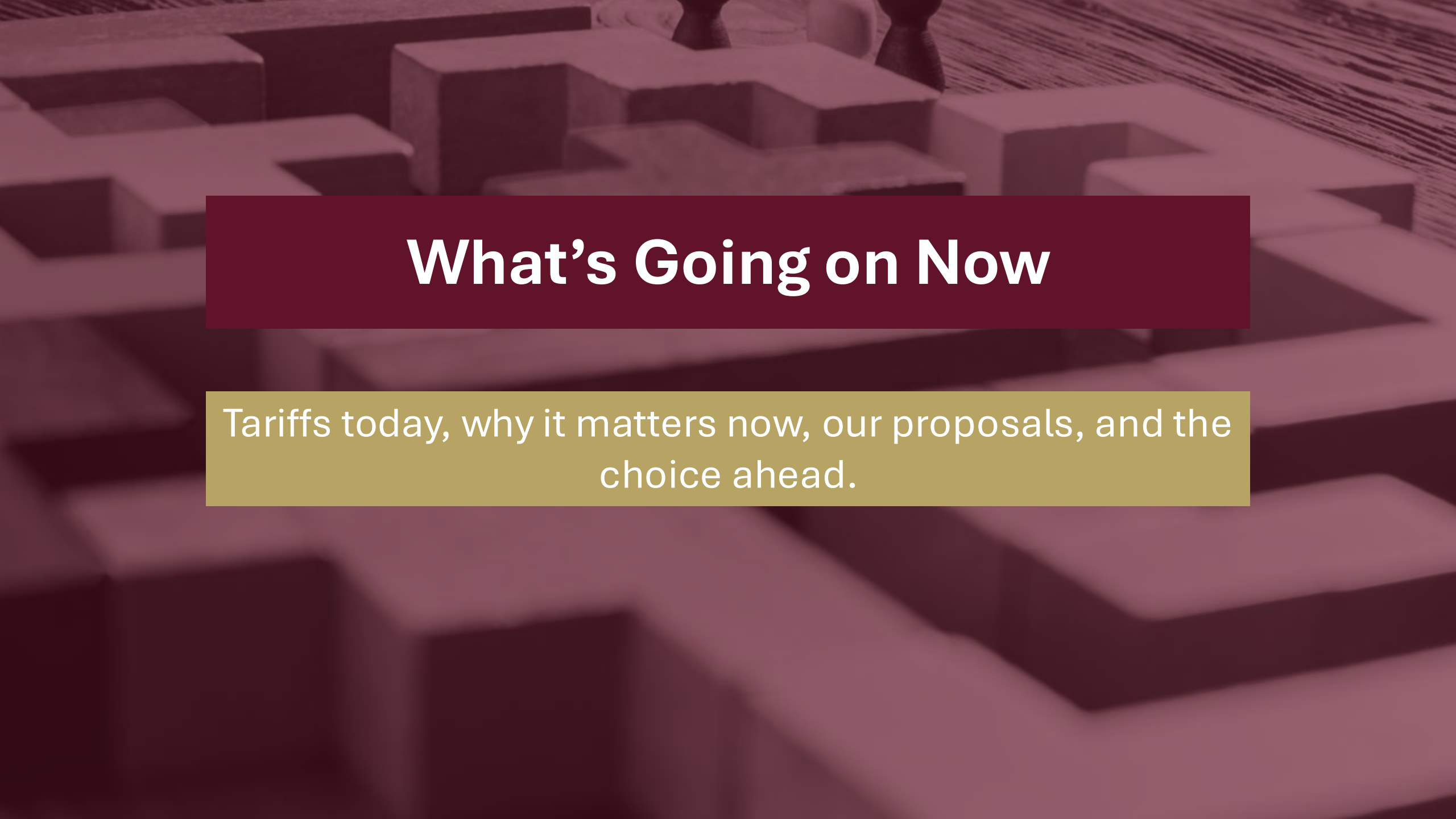
The A.I.- Aware Individuals: The Informed Spectators

A.I.-Aware Individuals are informed people who understand the importance and relevance of A.I. While not directly involved in the development or utilization of A.I., they need to be mindful of the existence and application of A.I. in the real world.

5

KEYS TO IMPLEMENT AI

- ① **Begin Small**
- ② **Choose the Right Partners**
- ③ **Invest in Data**
- ④ **Identify specific business issues**
- ⑤ **Prioritize data security and privacy**

The background of the slide features a 3D maze made of light-colored wooden blocks. A wooden chess piece, possibly a king or queen, is positioned at the entrance of the maze. The entire scene is overlaid with a semi-transparent dark red filter.

What's Going on Now

Tariffs today, why it matters now, our proposals, and the choice ahead.

Tariffs Snapshot — July 2025



Result: The most expensive international trade in 30 years

(IEEPA)
effective 5 abr 2025
new one 1 ago 2025

(IEEPA)
effective 5 abr 2025

- (12 mar)
- 25% Autos & autoparts (3/5 abr-may)

Exemption from
IEEPA / 232

Why Now?



RISKS IF WE DON'T ACT

- China dominates **57 of 64** critical technologies
- Tariffs fragment supply chains built over 30 years
- 4.3M jobs U.S. + 4.1M jobs in México exposed
- Each country duplicates investment = inefficiency

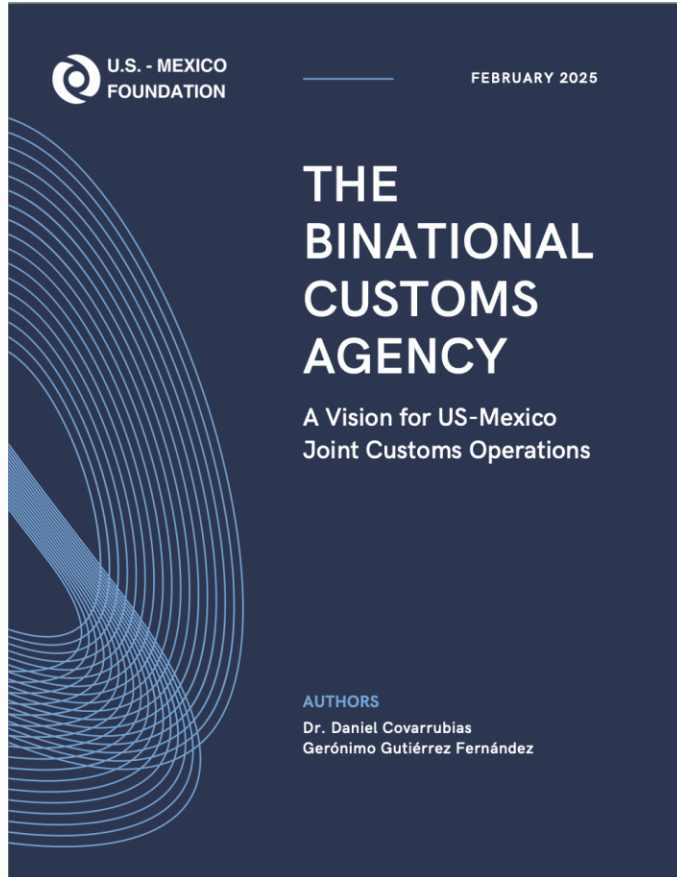


COORDINATION OPPORTUNITIES

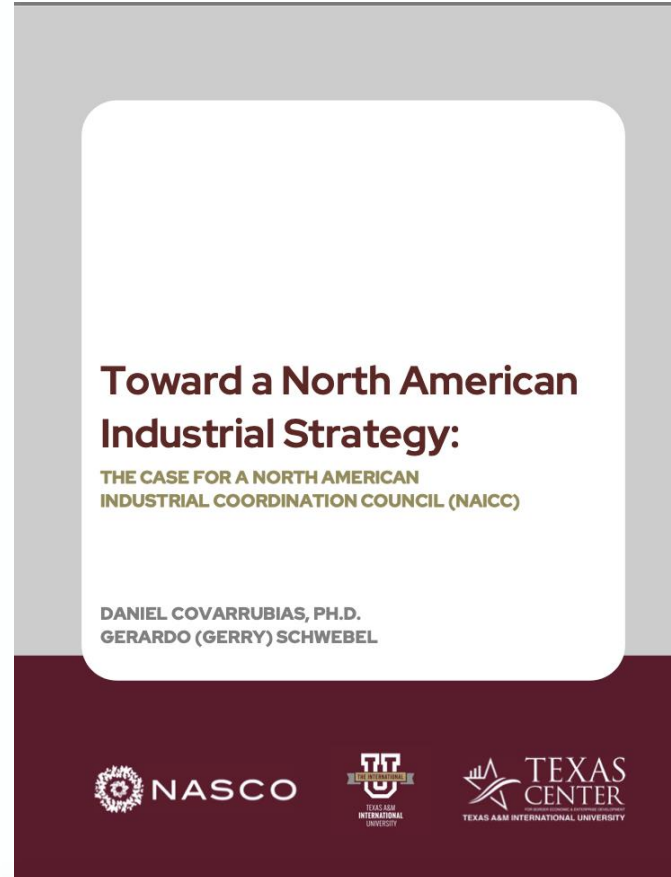
- Nearshoring: **\$150B** in new investment
- 2026 Window: USMCA Review (Revision)
- Semiconductors: **200%** demand increase
- Young Talent: México average age 29

The Deciding Moment: Compete between us or compete together

Blueprints for a Competitive North America



- **Joint risk management & data sharing** (ACE 2.0 ↔ PITA) with “single submission, shared view.”
- **One-stop, one decision:** coordinated inspections and trusted-trader lanes to cut dwell and variability.
- **Pilot priority corridors** with binational KPIs and MOUs as a path to a phased joint agency.



- **Create a permanent U.S.–Mexico–Canada coordination table** to align sector strategies and investments.
- **Publish joint roadmaps** for strategic sectors—supply-chain resilience, standards, R&D, and workforce.
- **Turn nearshoring into measurable results** via synchronized incentives, shared KPIs, and cross-border financing.

THE NORTH AMERICAN DIGITAL INFRASTRUCTURE COORDINATION INITIATIVE

A Continental Framework for Digital Integration and Technological Sovereignty

UPCOMING

- **Build continental “data rails”:** interoperable APIs, identity, cybersecurity, and data-governance standards.
- **Break the “digital wall”** with verifiable credentials and end-to-end visibility for shipments and compliance.
- **Public–private scaling model** to fund and deploy digital infrastructure starting on high-volume lanes.

Two Paths. One Choice. No Time to Waste.

América del Norte se encuentra en una encrucijada que definirá la prosperidad continental durante generaciones.

Route A: Fragmentation

- Ongoing tariff volatility
- Weakened supply chains
- Loss of competitive advantage
- Over one million jobs at risk
- China fills the gap

What's at Stake

- **\$1.6 trillion** in annual trade
- **+17 million** direct jobs
- **501 million** consumers
- **30%** of global GDP
- The future of manufacturing

Route B: Integration

- Shared security framework
- Multiplied prosperity
- Global competitiveness
- Leadership in innovation
- Continental resilience



Bottom line: We don't have to choose between security and prosperity. With the right framework, we can have both—and lead the world in showing how it's done.

Your Next Steps in Shaping the Future



Explore Further Education

Consider continuing your journey in logistics and trade—whether here or at TAMIU’s advanced programs.



Embrace AI and Innovation

Take advantage of this opportunity to earn a certificate or complete a short course in AI or digital tools. Even a little extra learning can set you apart.



Take a Small First Step

Think about one small project or internship you can dive into. Every step you take now shapes the future of trade.



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in @jdcova

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