TRANSPORTATION SHORT COURSE

NINETY SEVENTH ANNUAL

From Globalization to Regionalization: Analysis of Texas Cross-Border Goods Movement

Daniel Covarrubias, Ph.D.

INDEX

01 International Trade

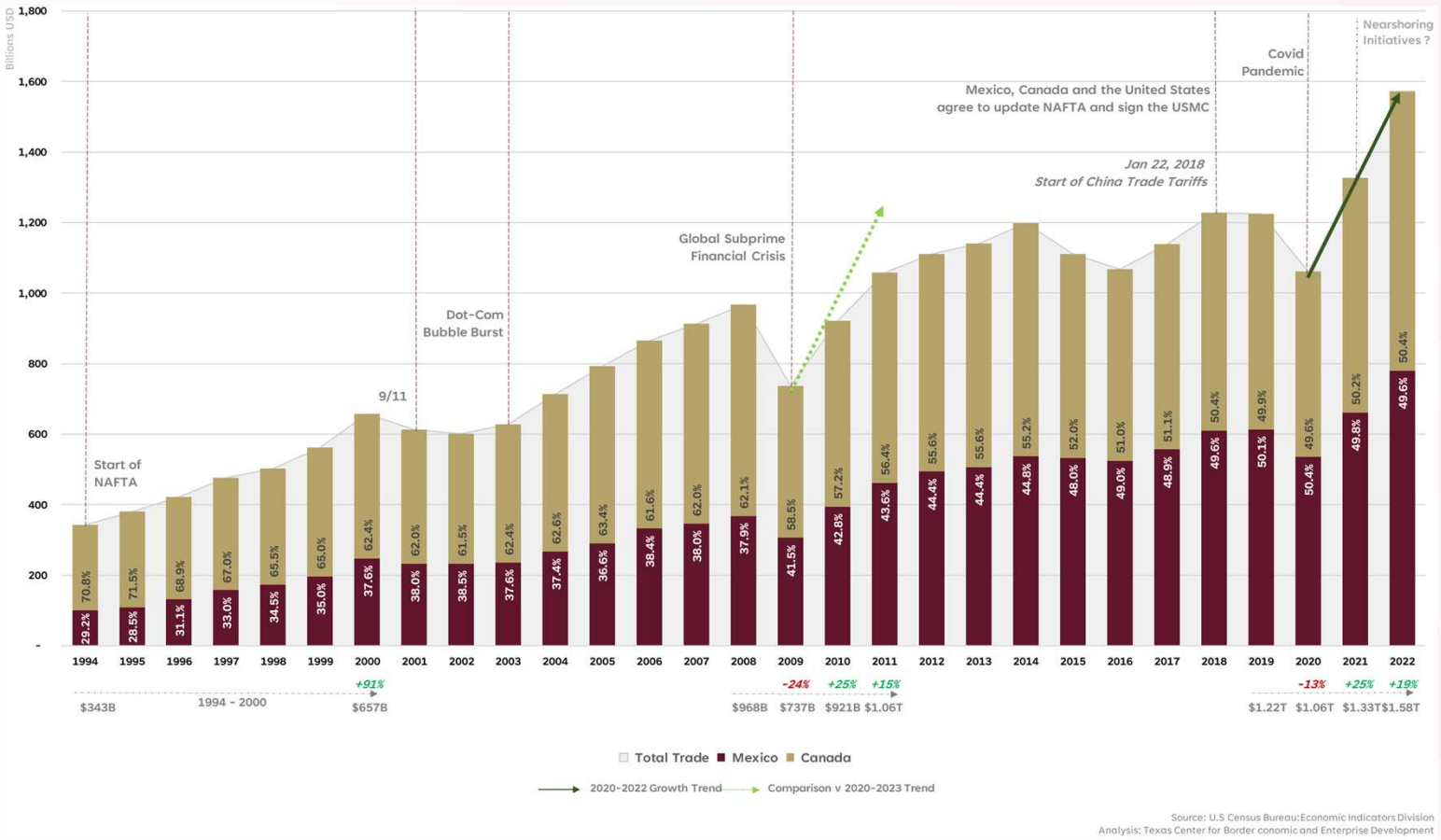
02 Nearshoring

03 Smart Borders

US TRADE

MEX / CAN

NAFTA / USMC TRADE



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

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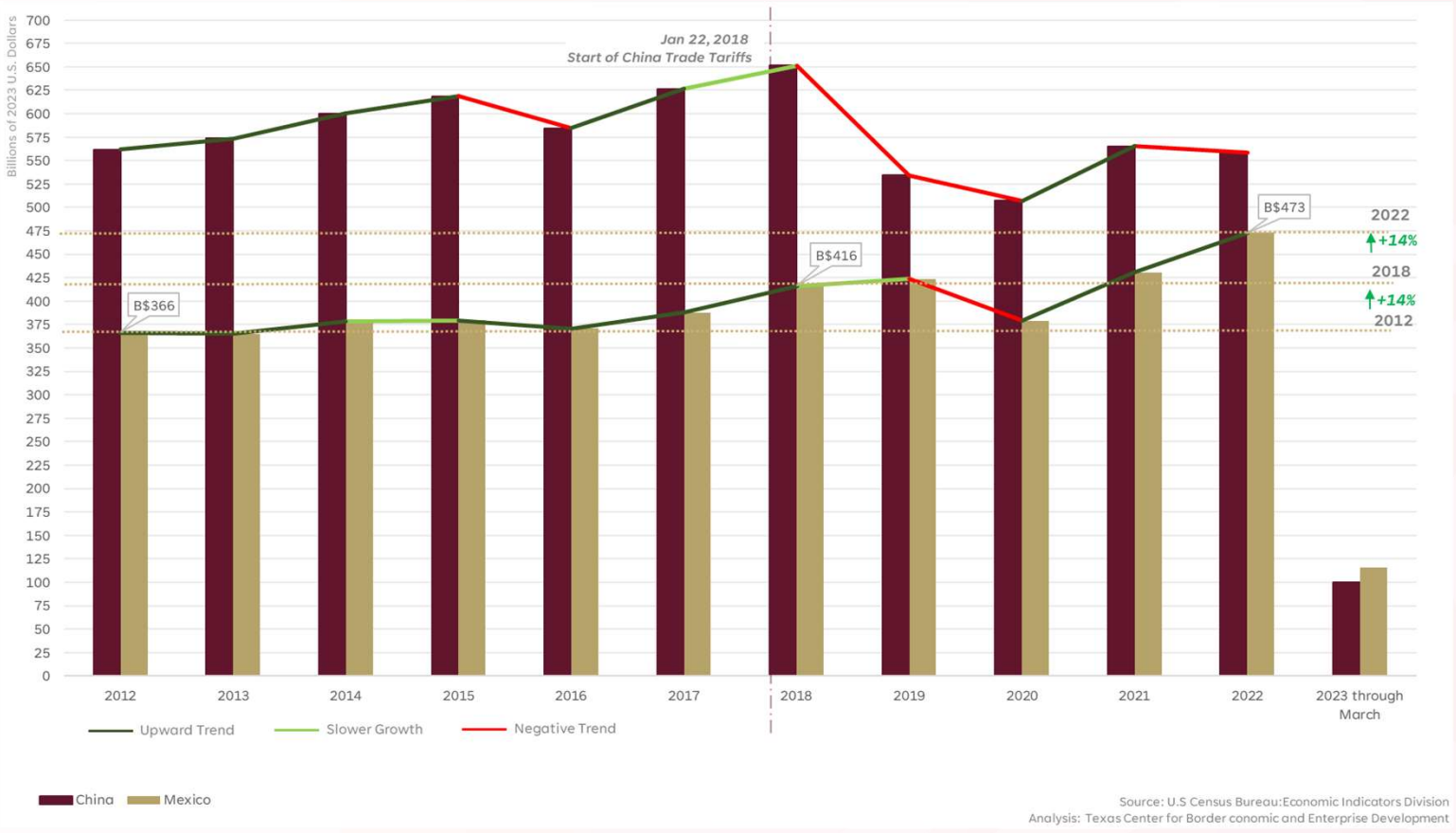
U.S. IMPORTS

U.S. TOTAL IMPORTS VALUE

MEXICO VS CHINA 2012-2023 (ADJUSTED FOR INFLATION)



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

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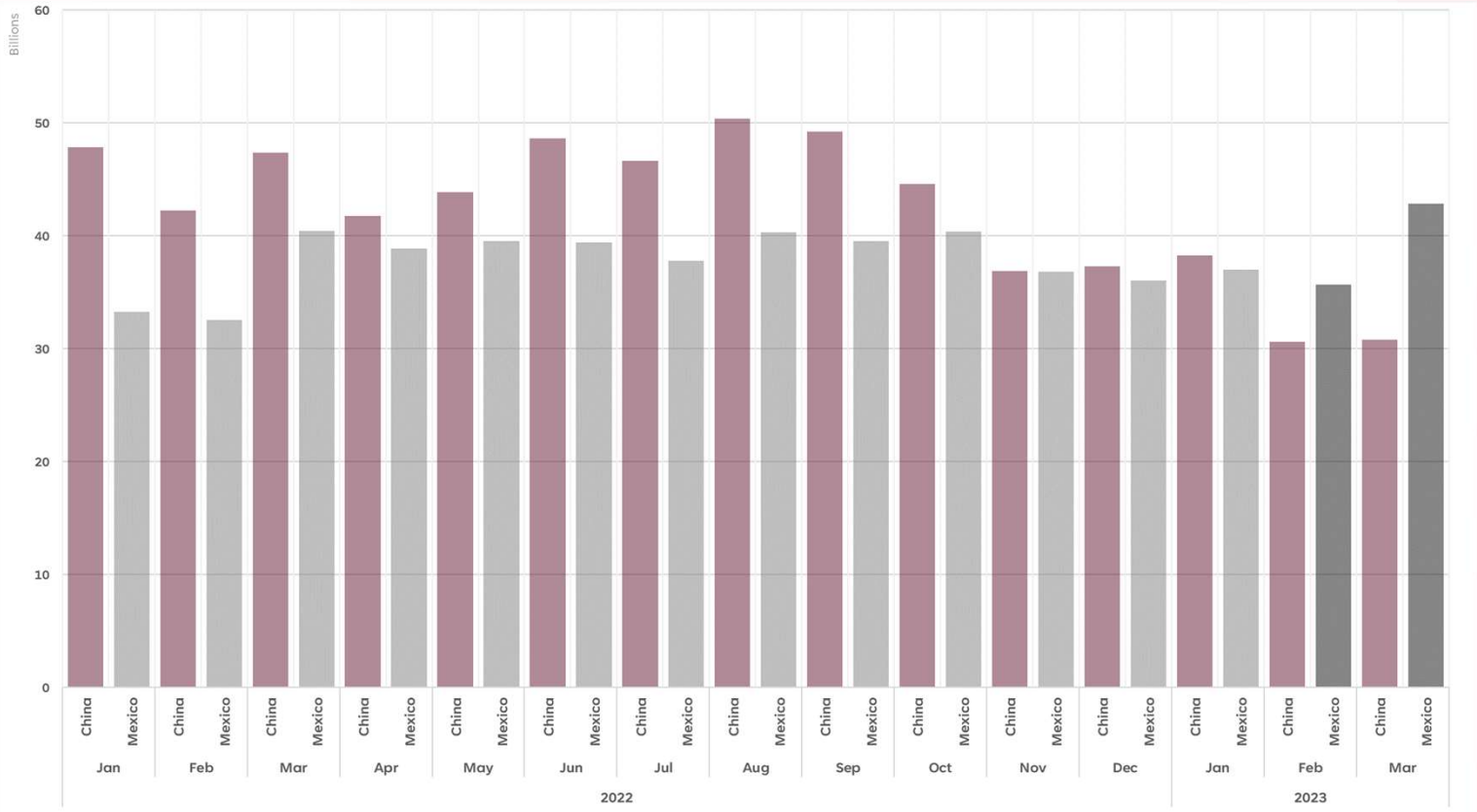
U.S. IMPORTS

MONTHLY TOTAL U.S. IMPORTS

MEXICO VS CHINA JANUARY 2022 - MARCH 2023



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

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U.S. PORTS

2022 TOP 5 U.S. PORTS OF ENTRY
BY TOTAL TRADE VALUE

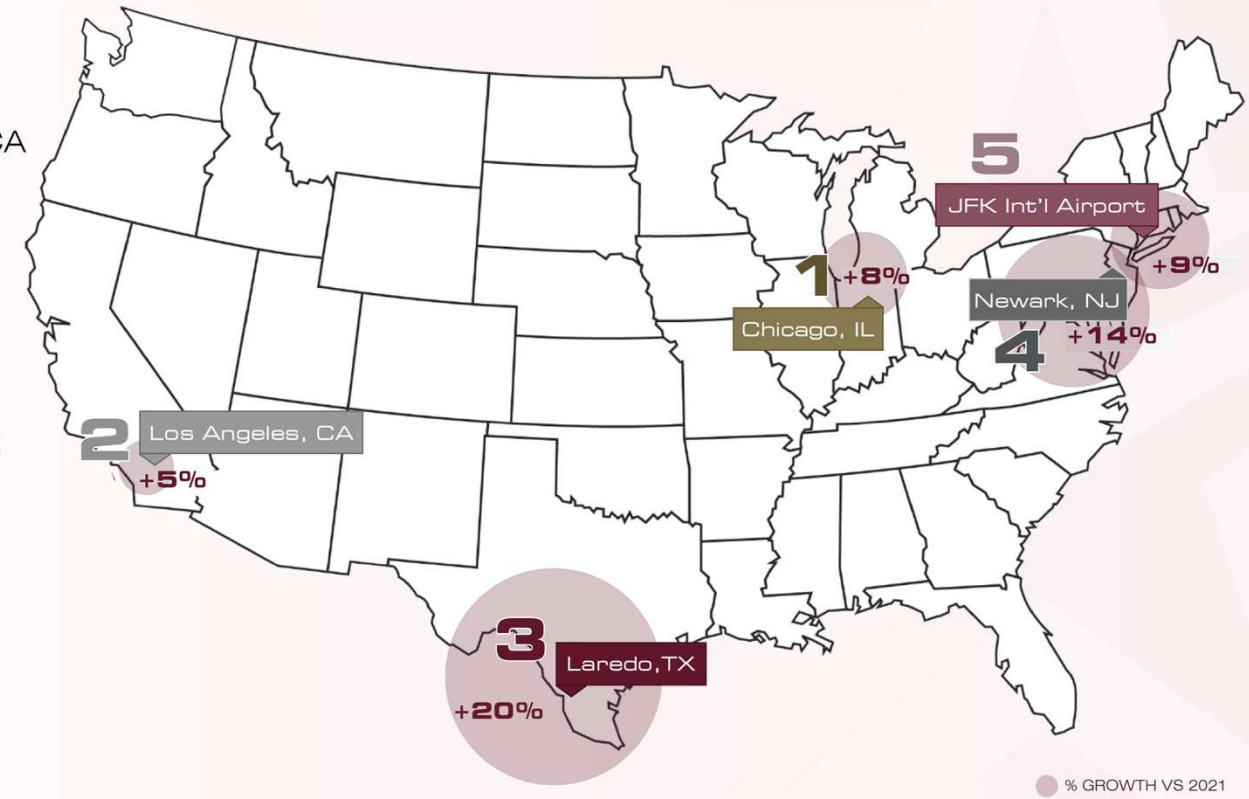
1 $330 billion Chicago, IL

2 $312 billion Los Angeles, CA

3 $299 billion Laredo, TX

4 $259 billion Newark, NJ

5 $258 billion JFK Int'l Airport



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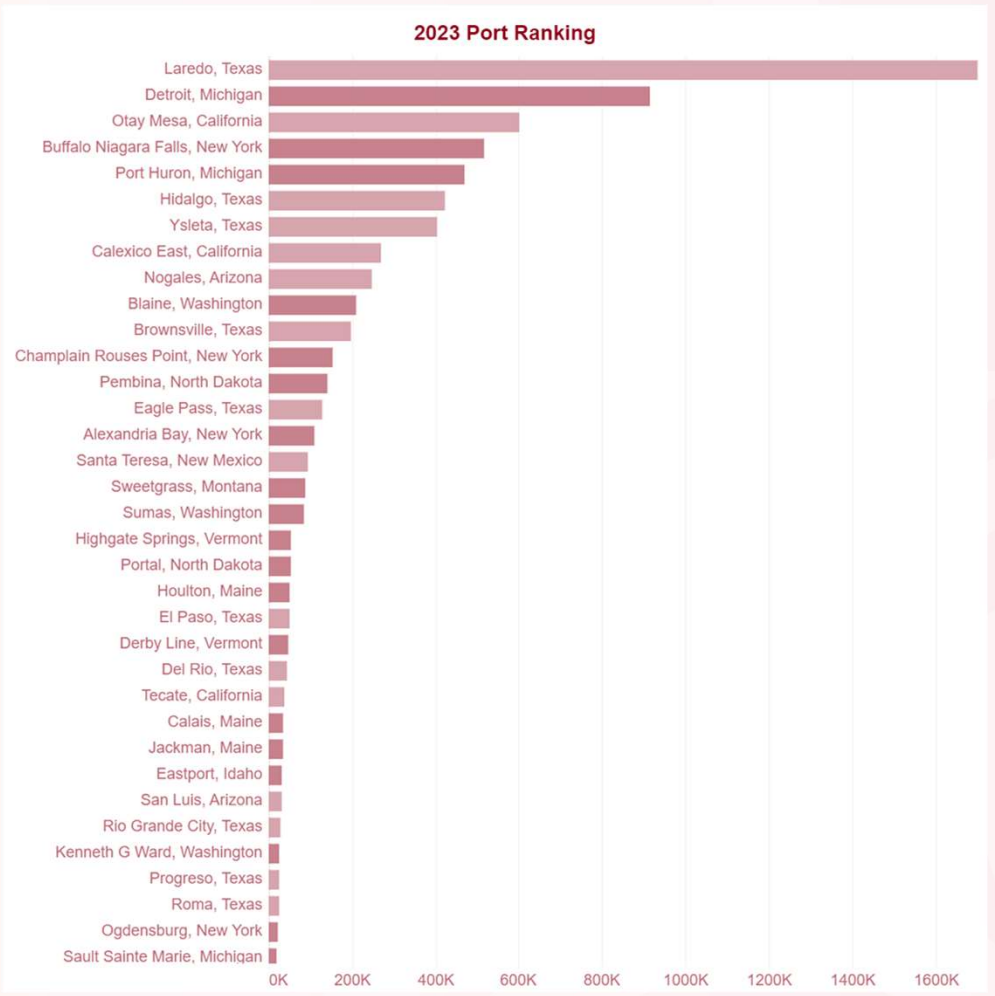
Source: U.S. Census Bureau: Economic Indicators Division.
Analysis by: Texas Center for Border Economic and Enterprise Development

IN-BOUND (USA)
2023

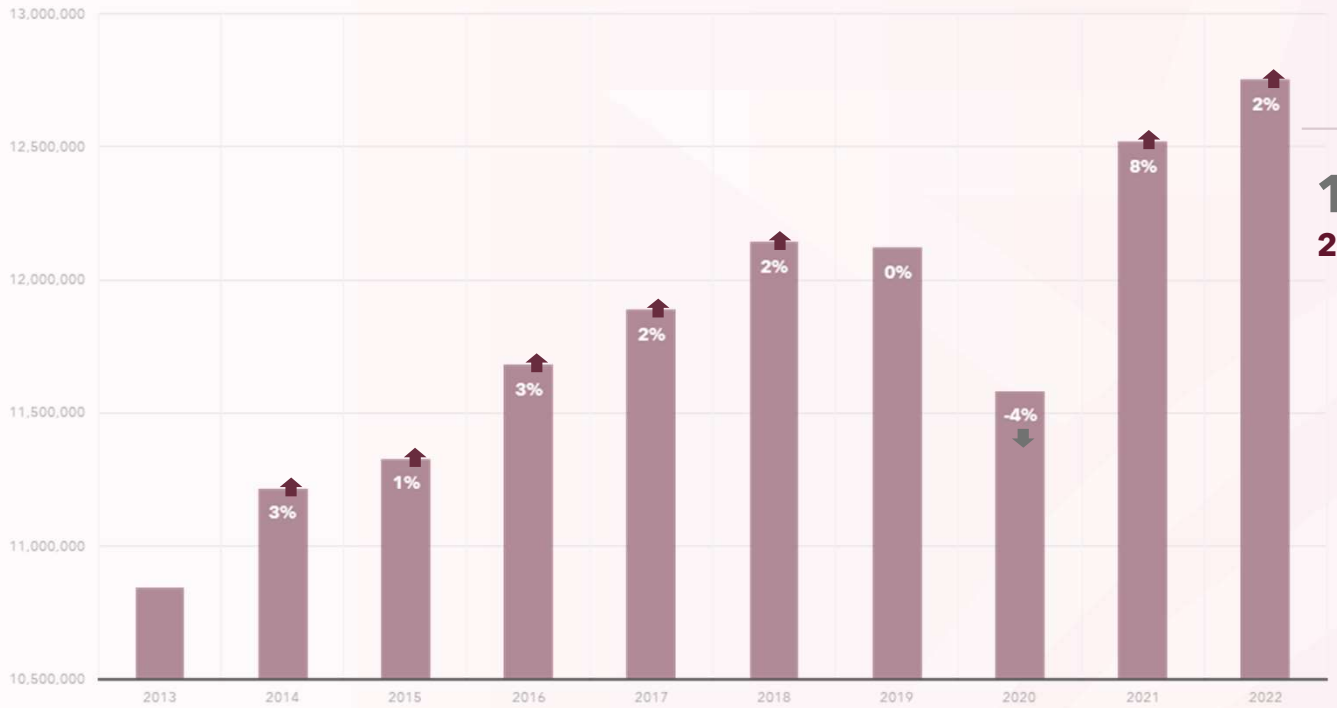
TRUCK CROSSINGS



Source: Bureau of Transportation Statistics

IN-BOUND (USA) 2013 - 2022

TRUCK CROSSINGS



18%
2013-2022

2%
average
yearly growth

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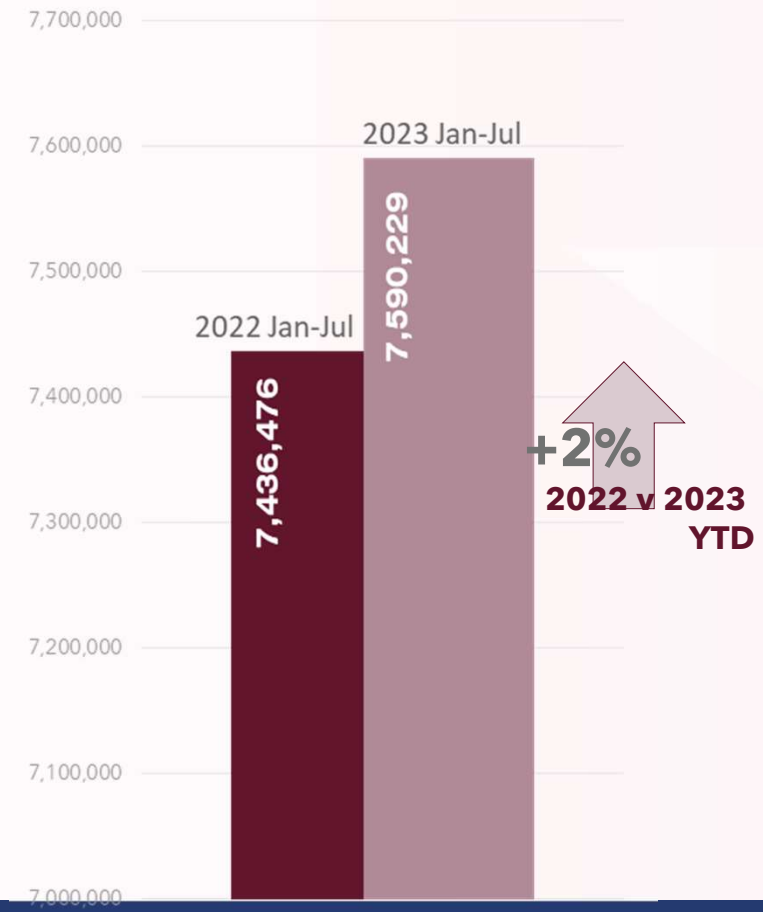
Source: Bureau of Transportation Statistics

IN-BOUND (USA) 2022 - 2023



TRUCK CROSSINGS

40,740
2022 Daily Avg
(Mon-Sat)

41,086
2022 Jan-Jul Daily Avg
(Mon-Sat)

41,935
2023 Jan-Jul Daily Avg
(Mon-Sat)

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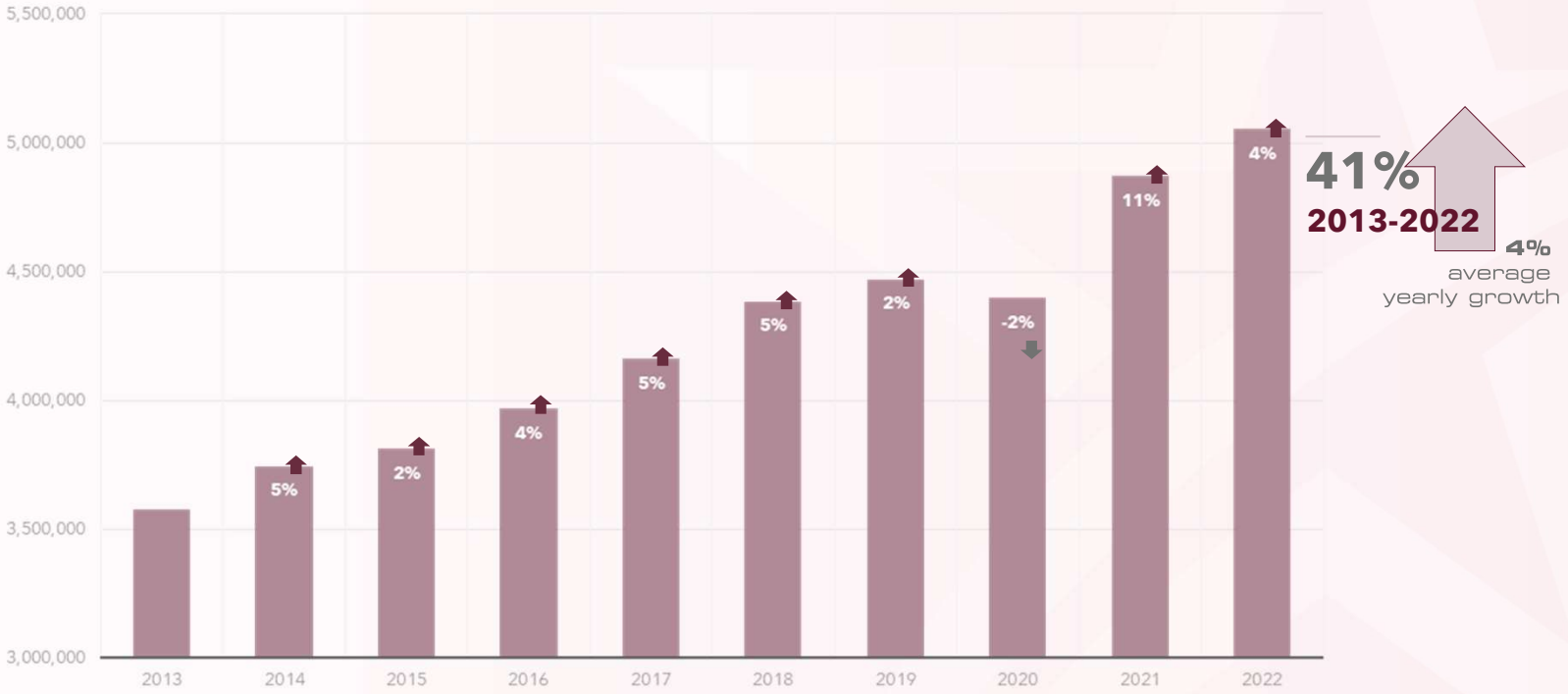
Source: Bureau of Transportation Statistics

IN-BOUND (TX) 2013 - 2022

TRUCK CROSSINGS



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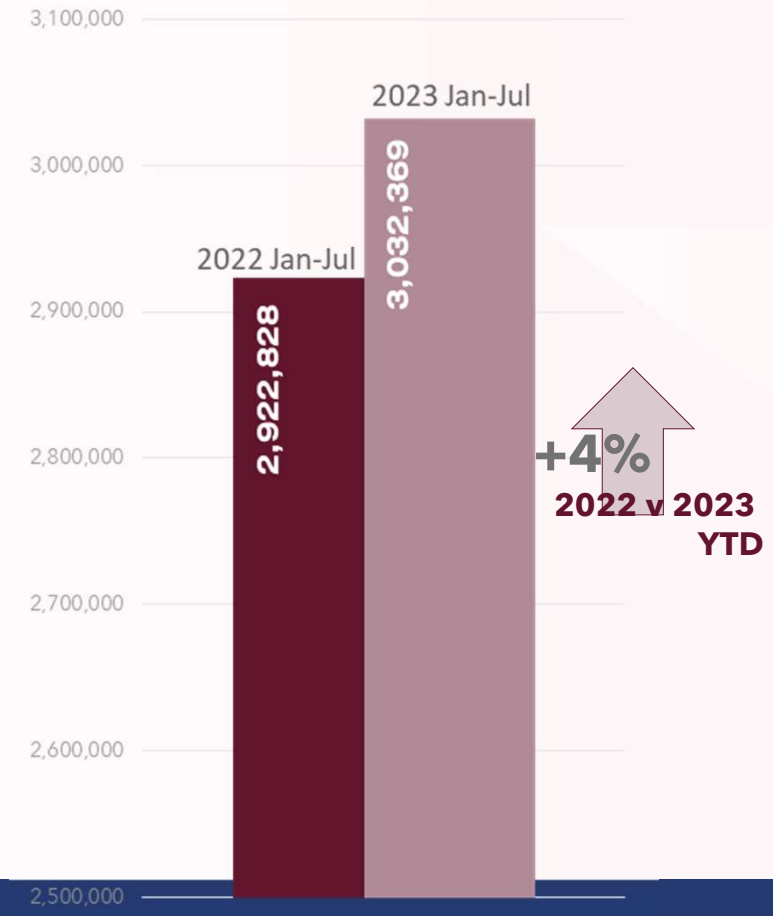
Source: Bureau of Transportation Statistics

IN-BOUND (TX) 2022 - 2023



TRUCK CROSSINGS

16,144
2022 Daily Avg
(Mon-Sat)

16,148
2022 Jan-Jul Daily Avg
(Mon-Sat)

16,753
2023 Jan-Jul Daily Avg
(Mon-Sat)

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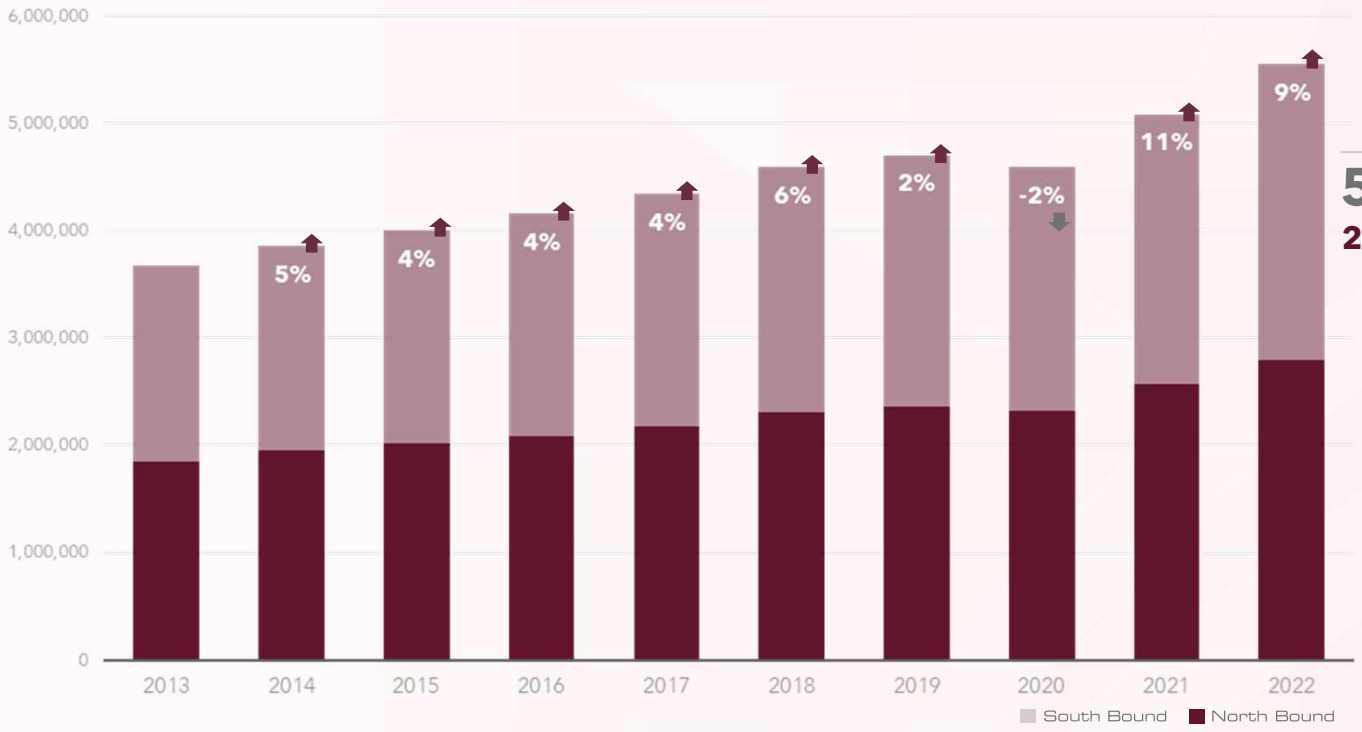
Source: Bureau of Transportation Statistics

LAREDO
2013 -2022
NORTH-SOUTH BOUND

TRUCK CROSSINGS



51%
2013-2022

5%
average
yearly growth

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

LAREDO
2022 -2023
NORTH-SOUTH BOUND

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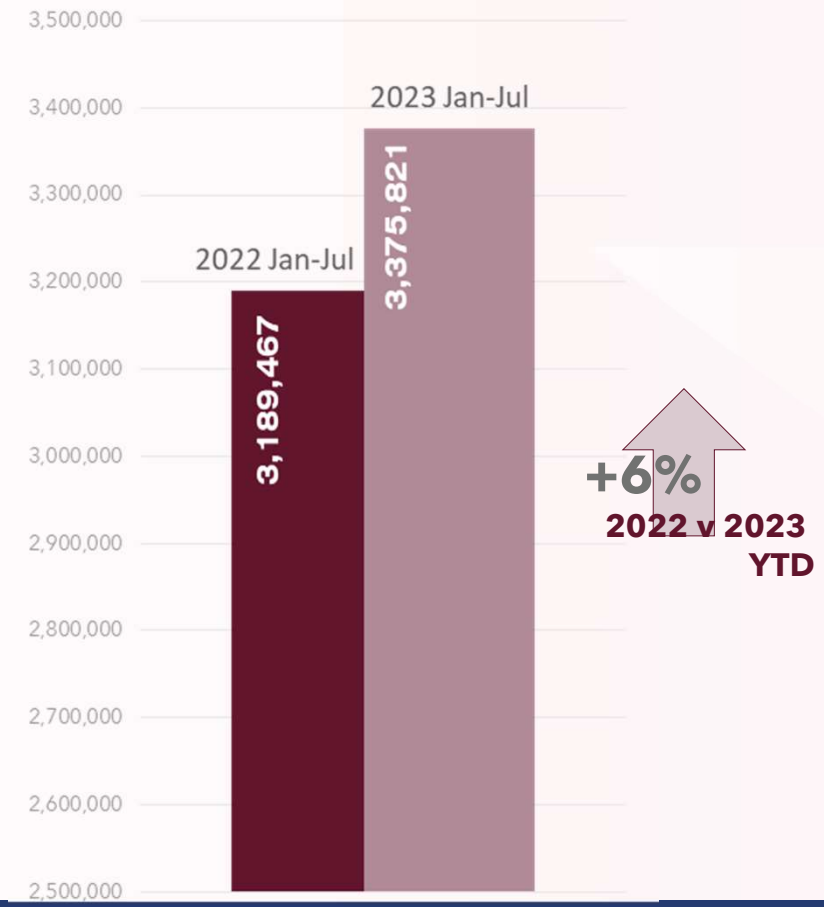

TRUCK CROSSINGS

17,721
2022 Daily Avg
(Mon-Sat)

17,621
2022 Jan-Jul Daily Avg
(Mon-Sat)

18,651
2023 Jan-Jul Daily Avg
(Mon-Sat)

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

LAREDO
2022-2023
NORTH-SOUTH BOUND

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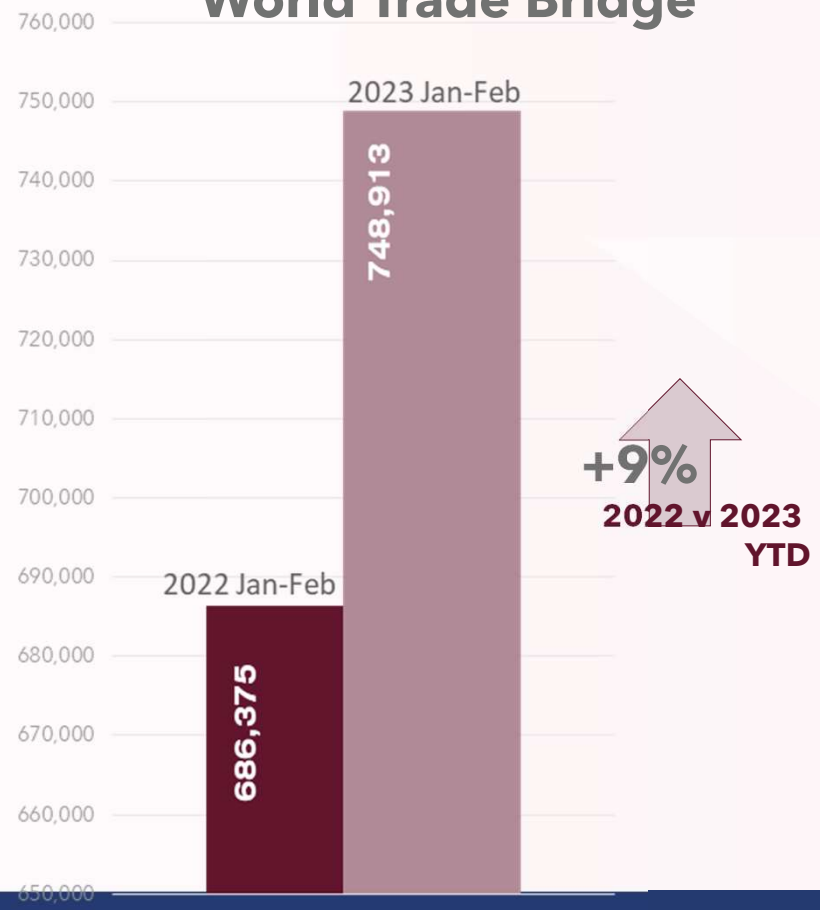
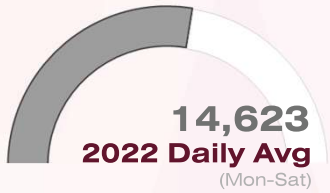
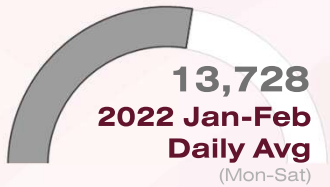
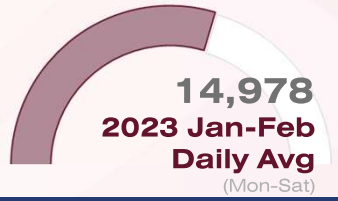
World Trade Bridge



TRUCK CROSSINGS







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

LAREDO
2022-2023
NORTH-SOUTH BOUND

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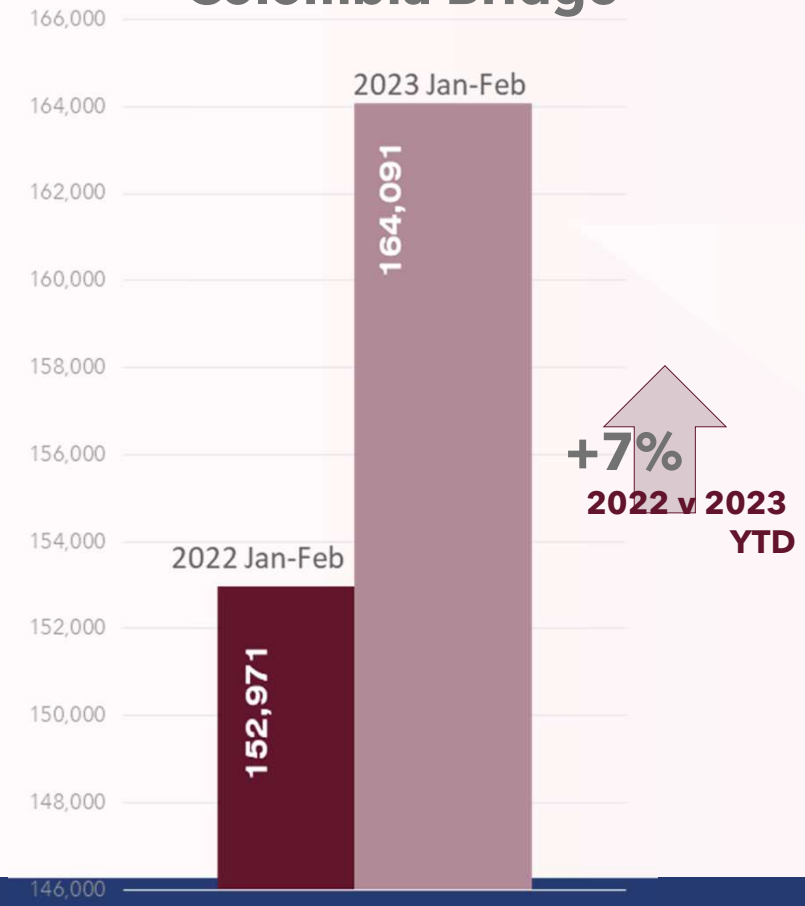
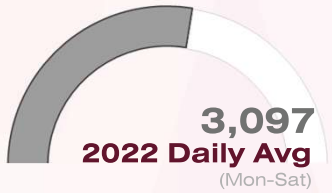
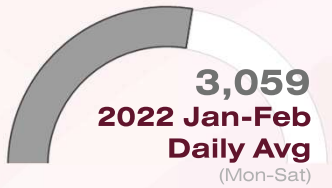
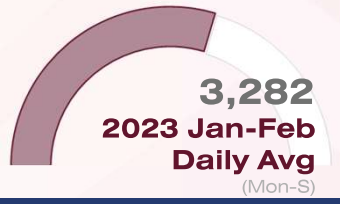
Colombia Bridge



TRUCK CROSSINGS







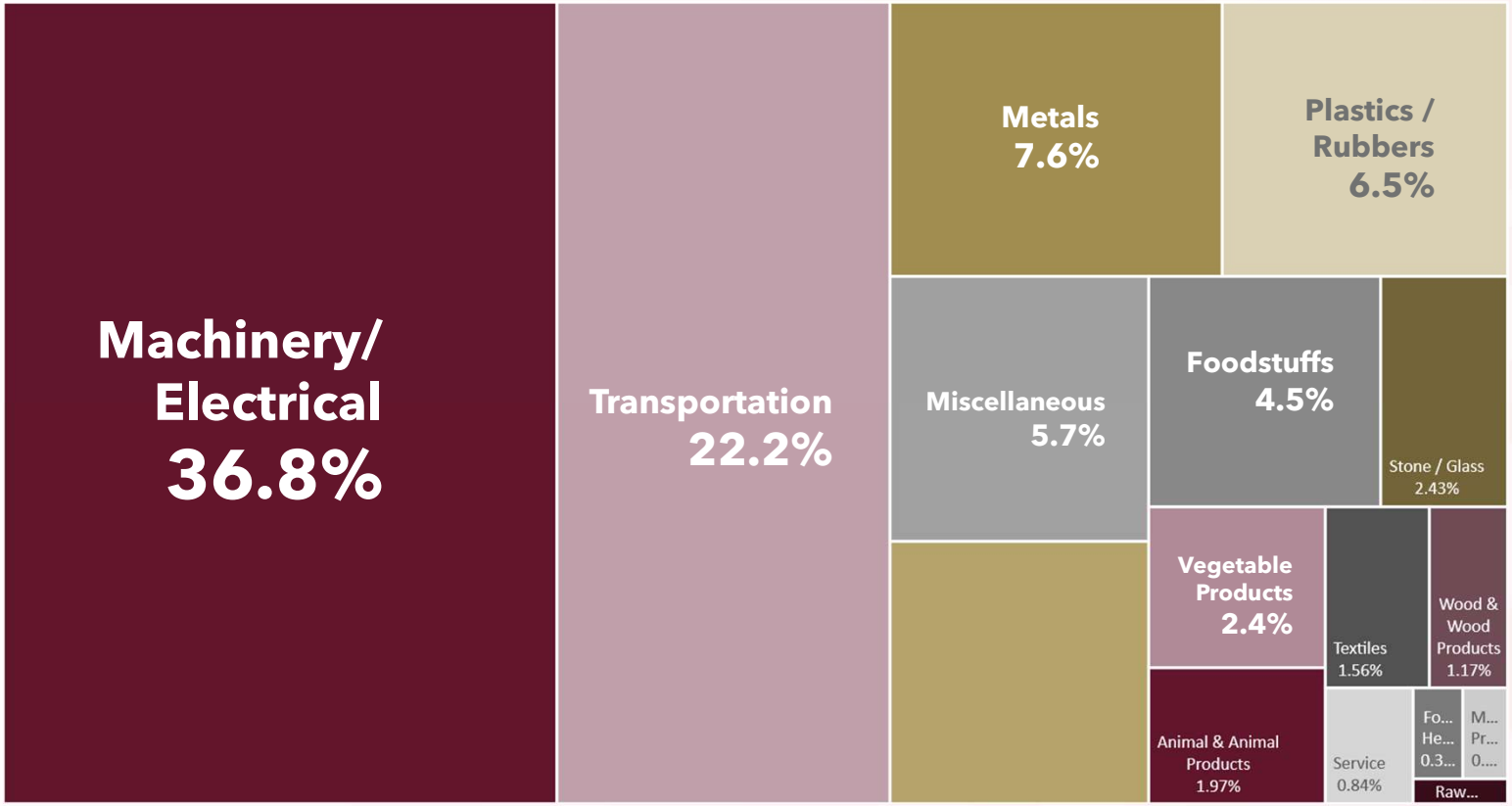
Source: Bureau of Transportation Statistics, City of Laredo Bridge Department, ICCE Nuevo Lare

LAREDO POE

2023 JAN-JUL

TRUCK

TOTAL TRADE SHARE BY COMMODITY GROUP



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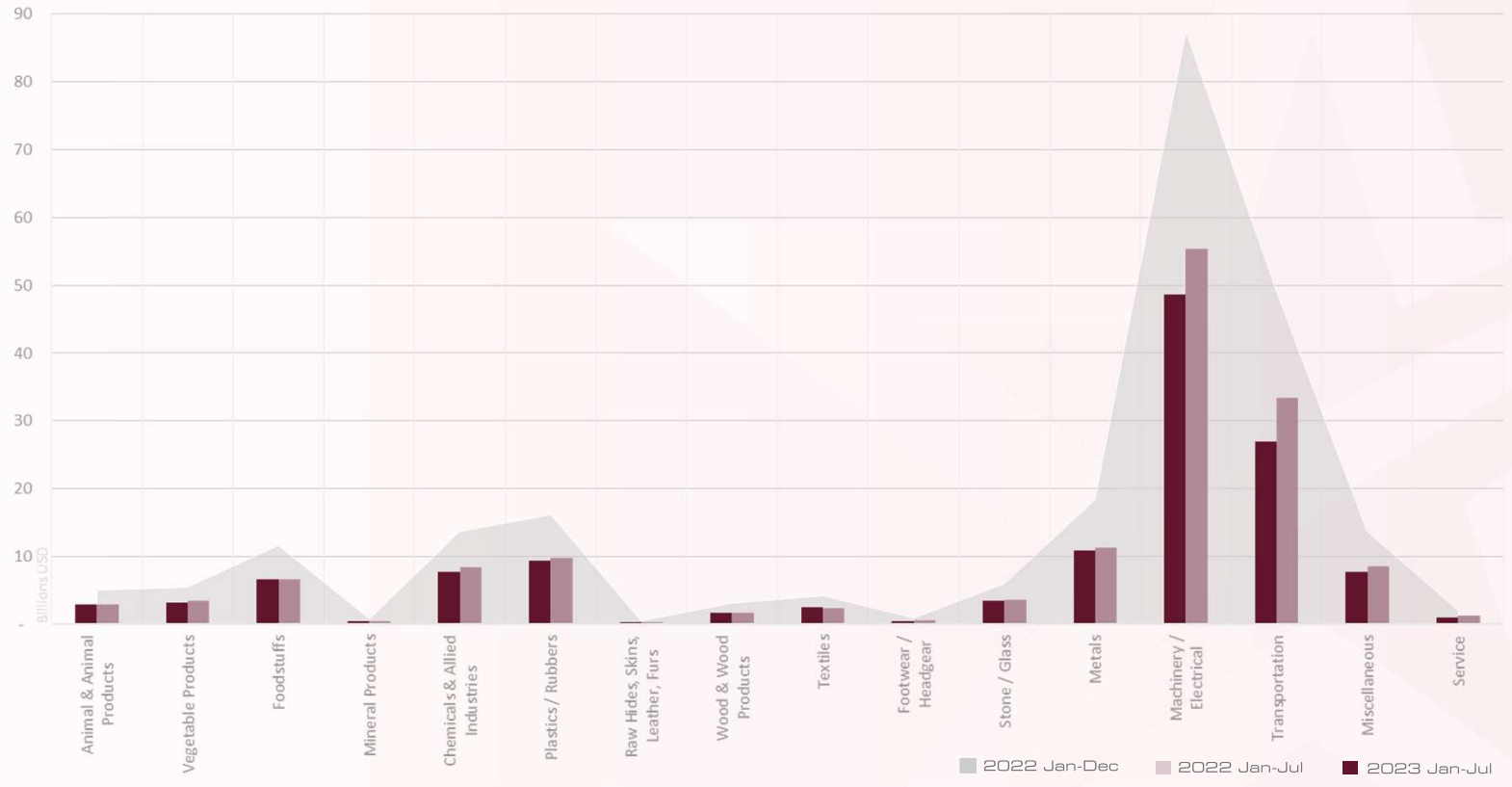
Source: Bureau of Transportation Statistics

LAREDO POE

TRUCK

TOTAL TRADE VALUE



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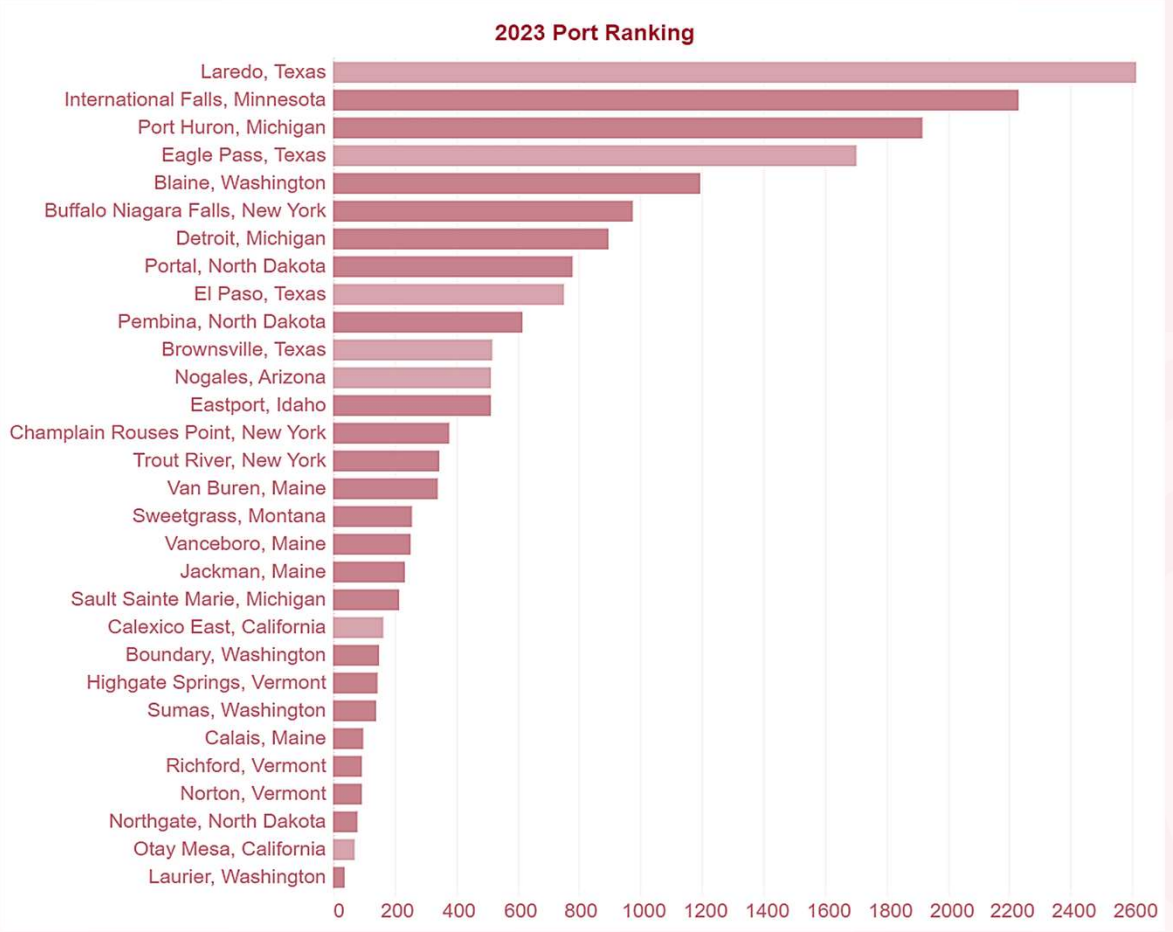
Source: Bureau of Transportation Statistics

IN-BOUND (USA)
2023

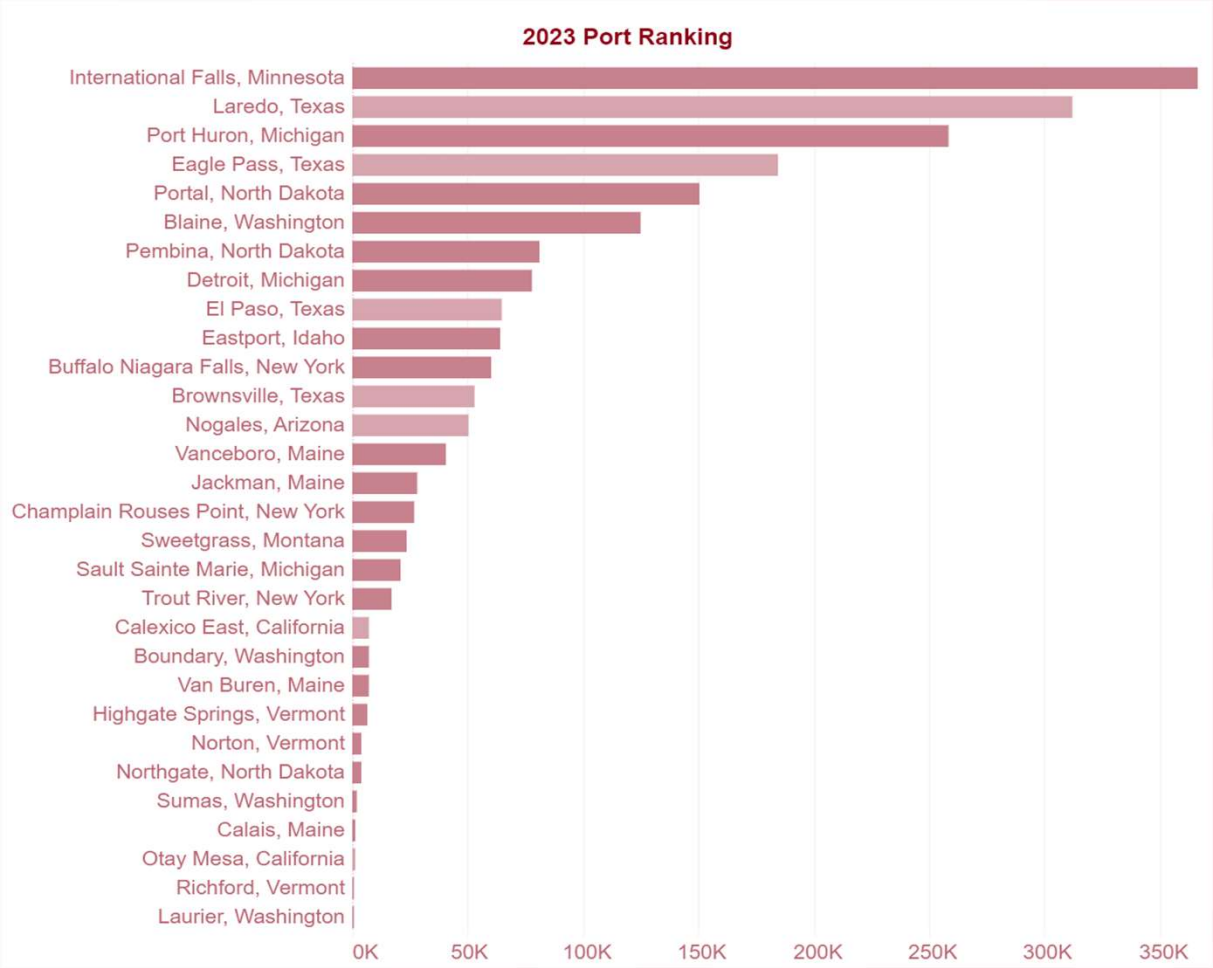
RAIL CROSSINGS: TRAINS



Source: Bureau of Transportation Statistics

IN-BOUND (USA)
2023

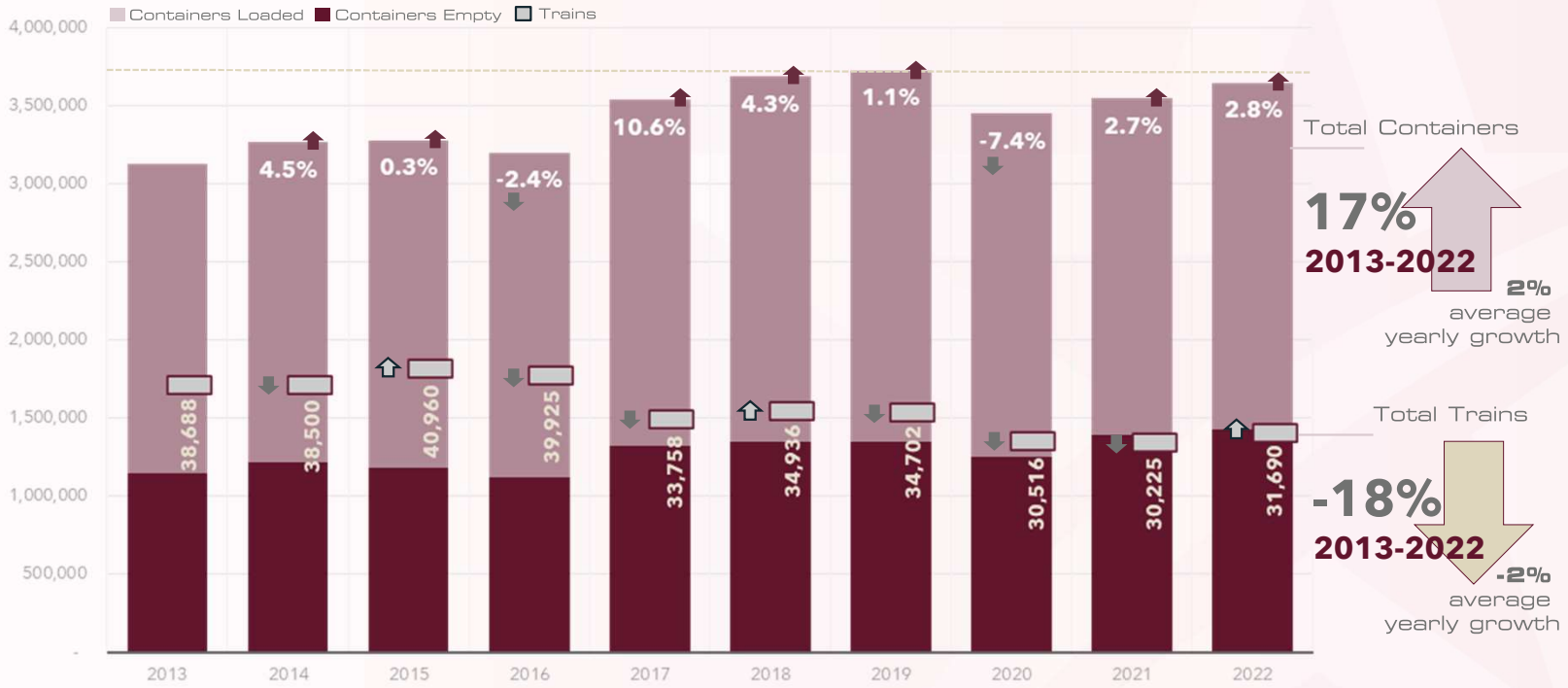
RAIL CROSSINGS: CONTAINERS



Source: Bureau of Transportation Statistics

IN-BOUND (USA) 2013 - 2022 ALL BPOE

RAIL CROSSINGS



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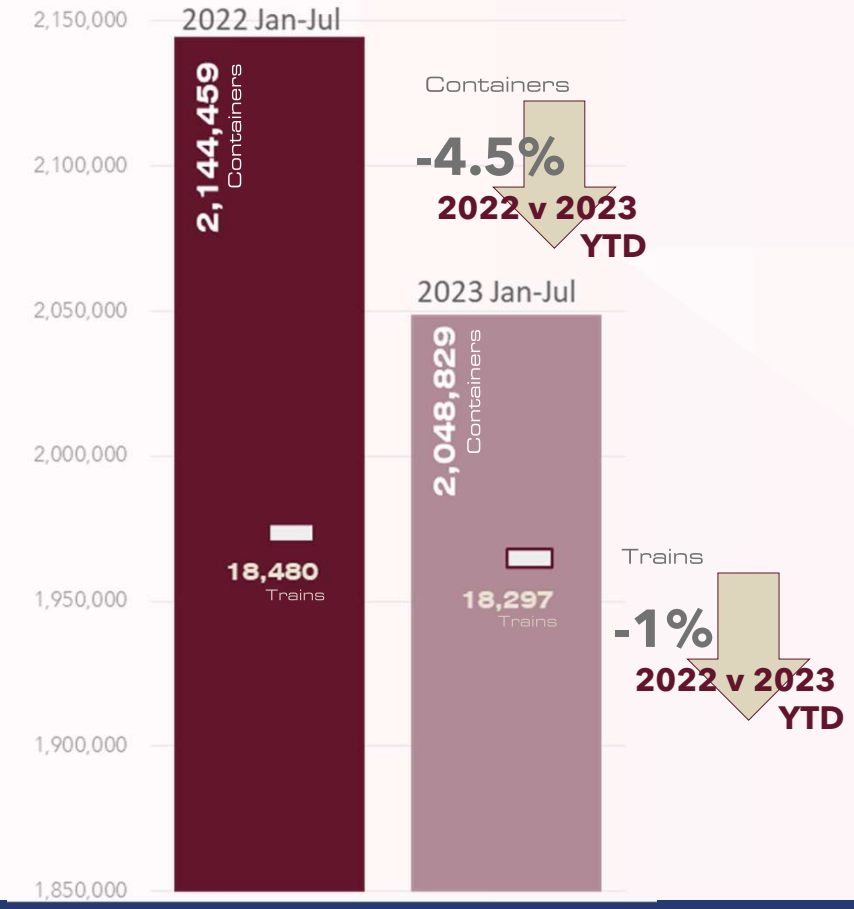
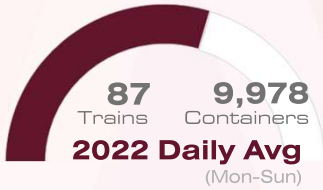
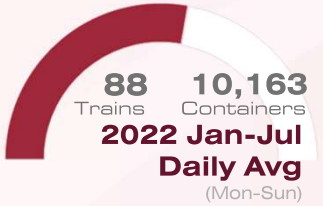
Source: Bureau of Transportation Statistics

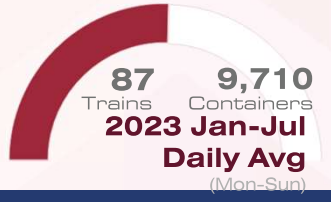
IN-BOUND (USA) 2022 - 2023 ALL BPOE



RAIL CROSSINGS







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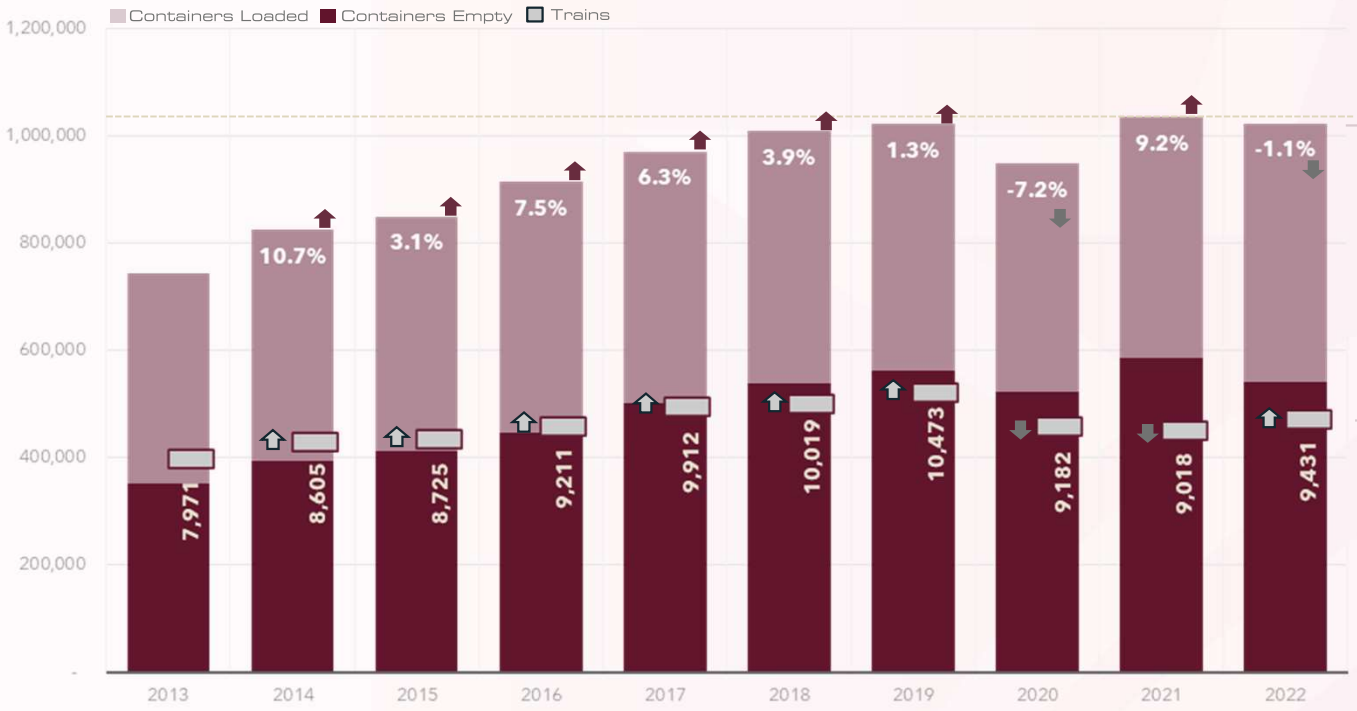
Source: Bureau of Transportation Statistics

IN-BOUND (TX) 2013 - 2022 TX BPOE

RAIL CROSSINGS



Total Containers

+37%

2013-2022

3.7% average yearly growth

Total Trains

+18%

2013-2022

2% average yearly growth

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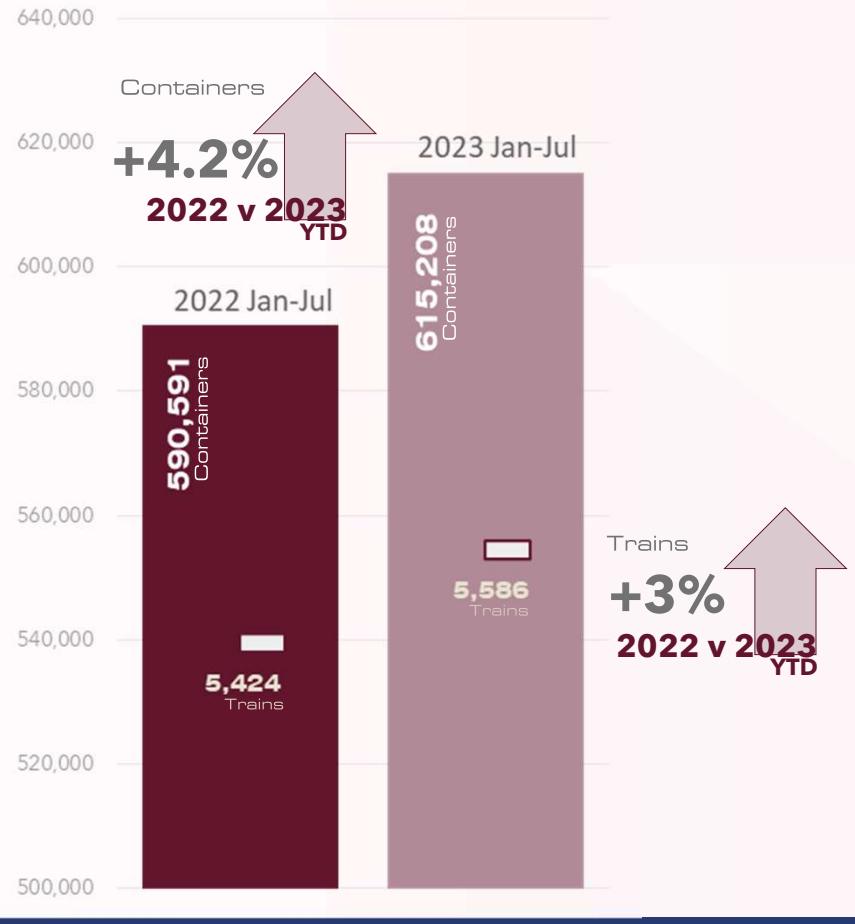
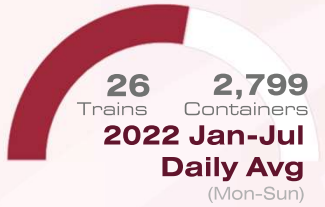
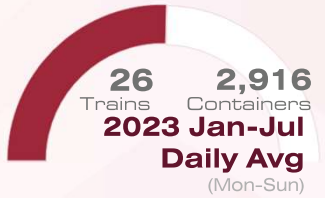
Source: Bureau of Transportation Statistics

IN-BOUND (TX) 2022 - 2023 TX BPOE



RAIL CROSSINGS

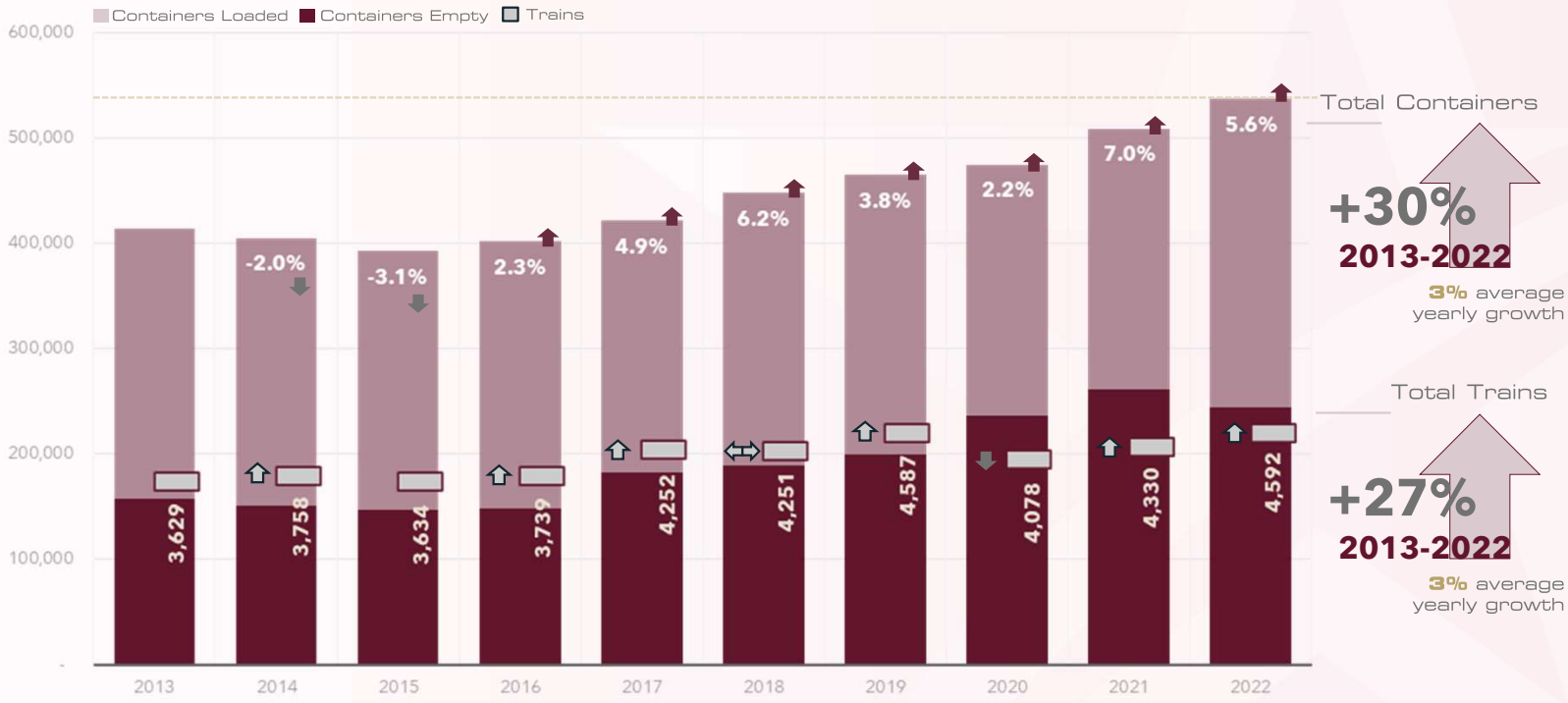




Source: Bureau of Transportation Statistics

IN-BOUND (TX) 2012 - 2023 LAREDO POE

RAIL CROSSINGS



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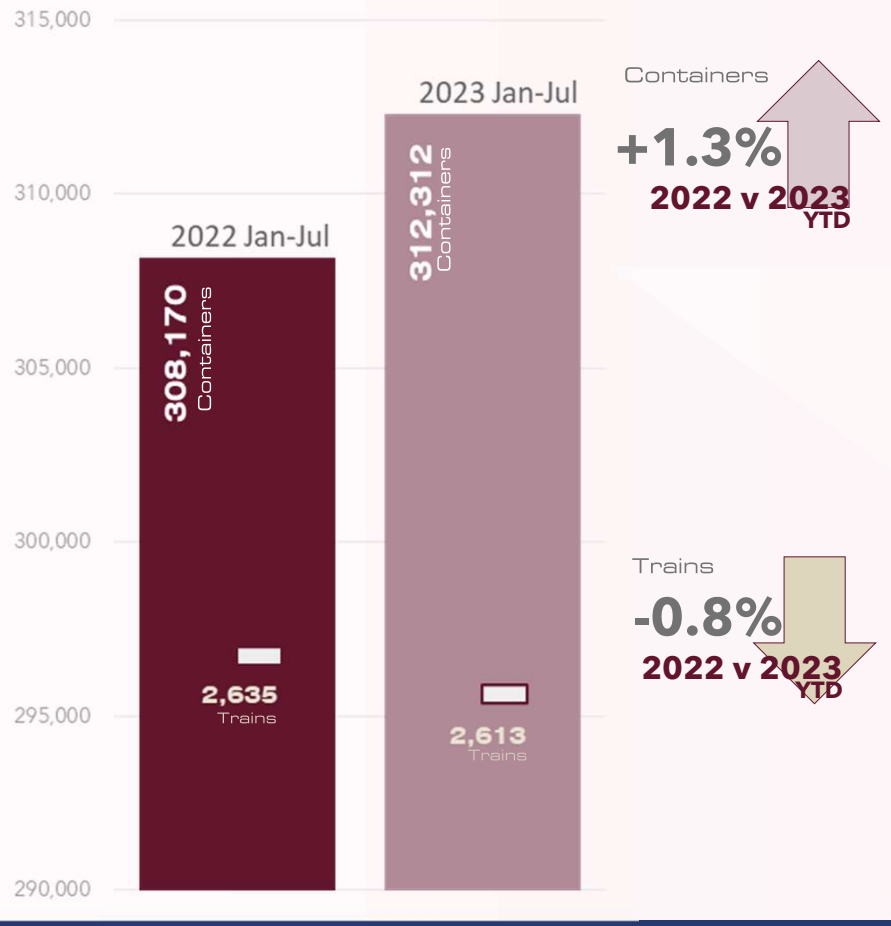
Source: Bureau of Transportation Statistics

IN-BOUND (TX) 2022 - 2023 LAREDO POE



Containers
+1.3%
2022 v 2023 YTD

Trains
-0.8%
2022 v 2023 YTD

RAIL CROSSINGS

13 Trains 1,471 Containers
2022 Daily Avg
(Mon-Sun)

12 Trains 1,461 Containers
2022 Jan-Jul Daily Avg
(Mon-Sun)

12 Trains 1,480 Containers
2023 Jan-Jul Daily Avg
(Mon-Sun)

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Source: Bureau of Transportation Statistics

LAREDO POE

2023 JAN-JUL

RAIL

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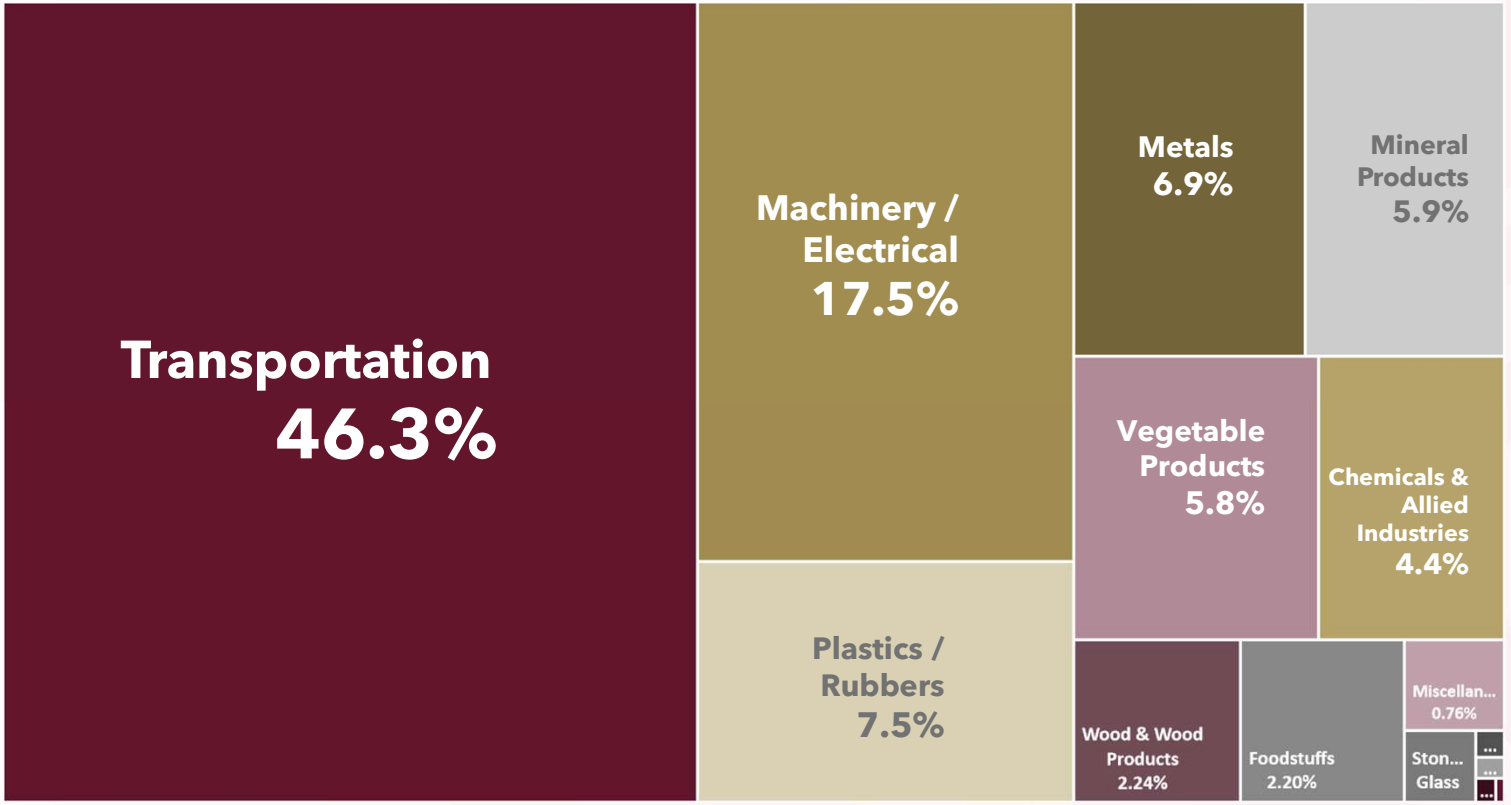
TOTAL TRADE SHARE BY COMMODITY GROUP

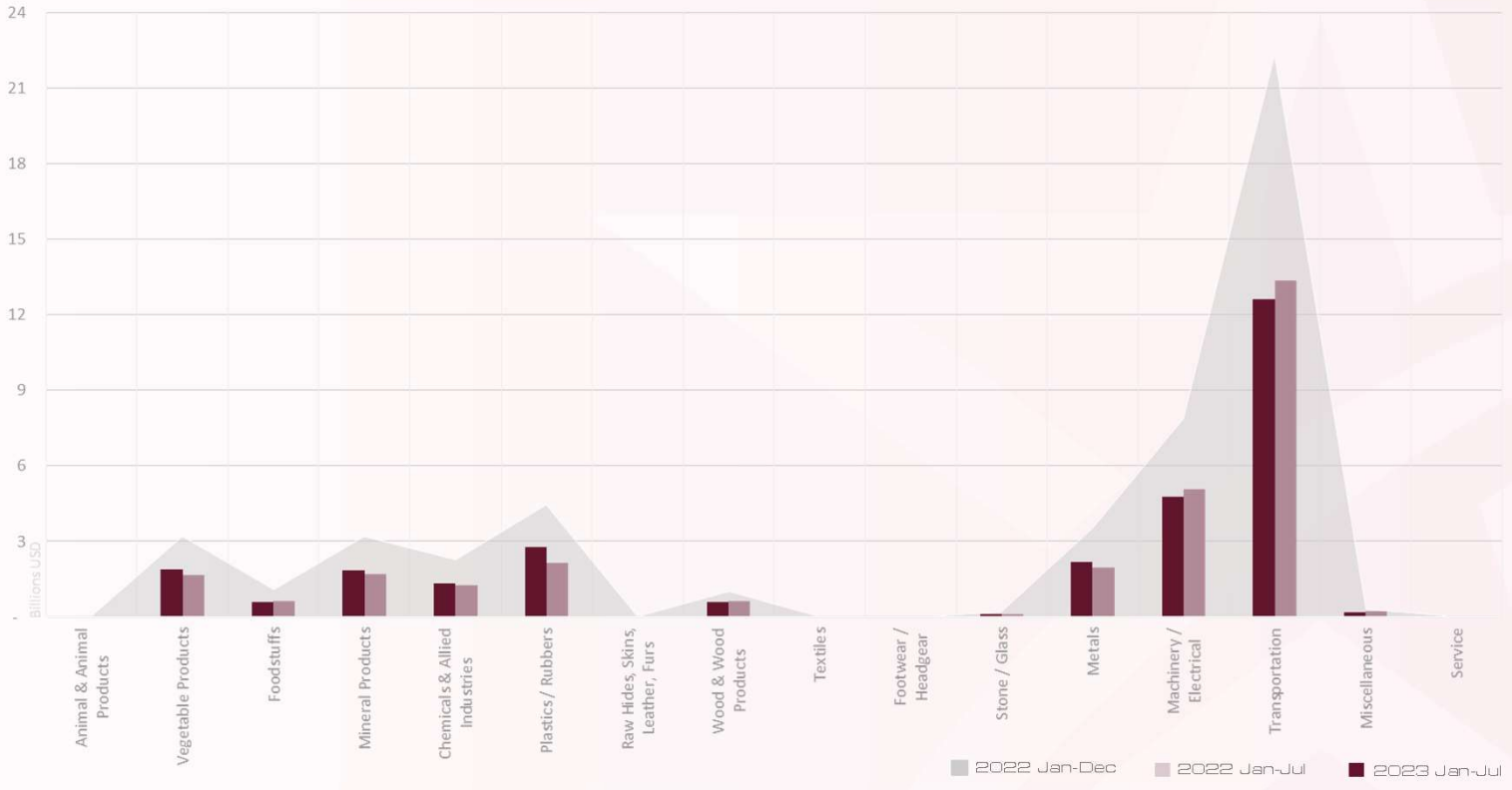


Source: Bureau of Transportation Statistics

LAREDO POE

RAIL

TOTAL TRADE VALUE



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Source: Bureau of Transportation Statistics

Nearshoring: A Boom for U.S. – Mexico Cross-Border Trade?

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Nearshoring Growth by State

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Source: CBRE Research 2022

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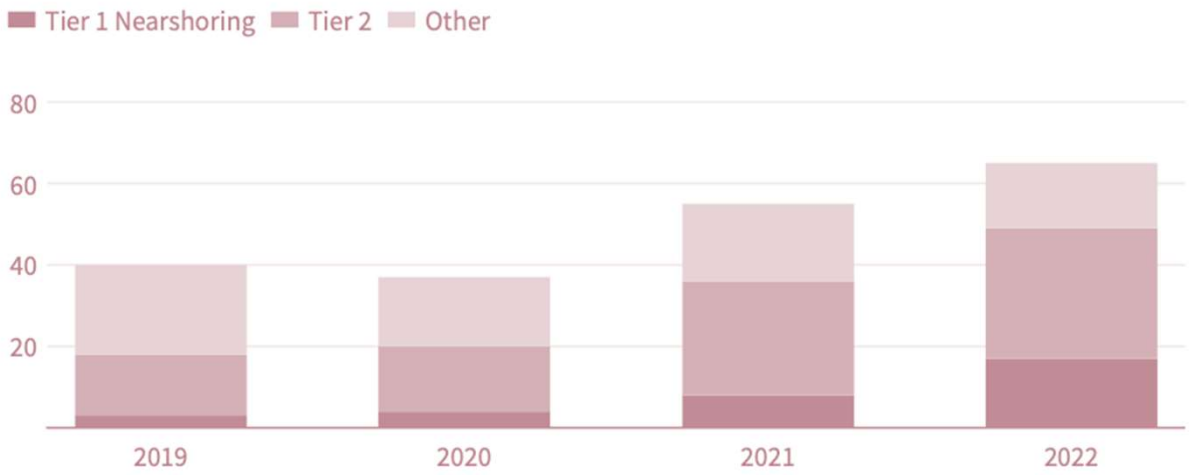
NEARSHORING-RELATED AND TOTAL GROSS ABSORPTION, MEXICO

MSF



- Annual nearshoring absorption (direct manufacturing capacity expansions to supply the US, installed in leased logistics space) grew from **3 MSF in 2019 to 16 MSF in 2022, increasing from 8% to 26% of gross absorption** in the country.

- Tier 2 nearshoring absorption (domestic providers and third-party logistics providers specializing in manufacturing warehousing) **grew from 15 MSF in 2019 to 29 MSF in 2022, or nearly half of the gross absorption.**

Source: Prologis Research, CBRE

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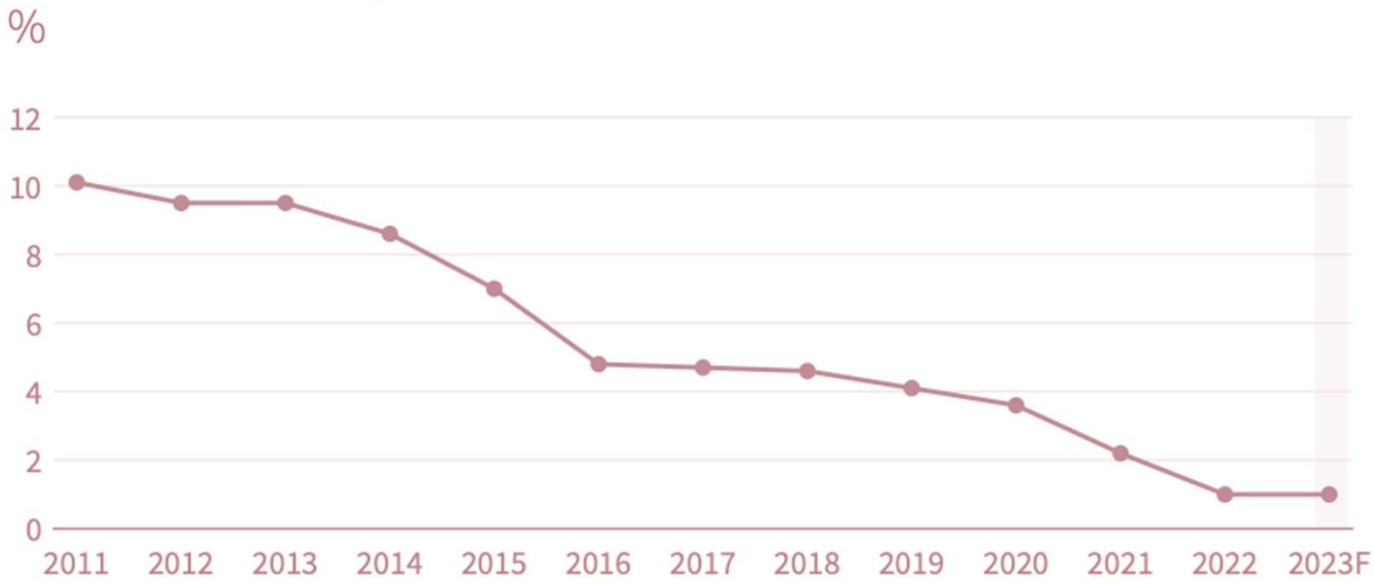
VACANCY RATE, MEXICO 6 MAIN MARKETS



- Very low space **availability (1.1% as of Q1 2023 vs. 6% expansion average for 2013-2019)** pushes demand into the future.
- **60%** of the space currently under construction is pre-leased, compared to **36%** in 2019.
- CDMX, Monterrey, Ciudad Juárez, Guadalajara, Reynosa y Tijuana

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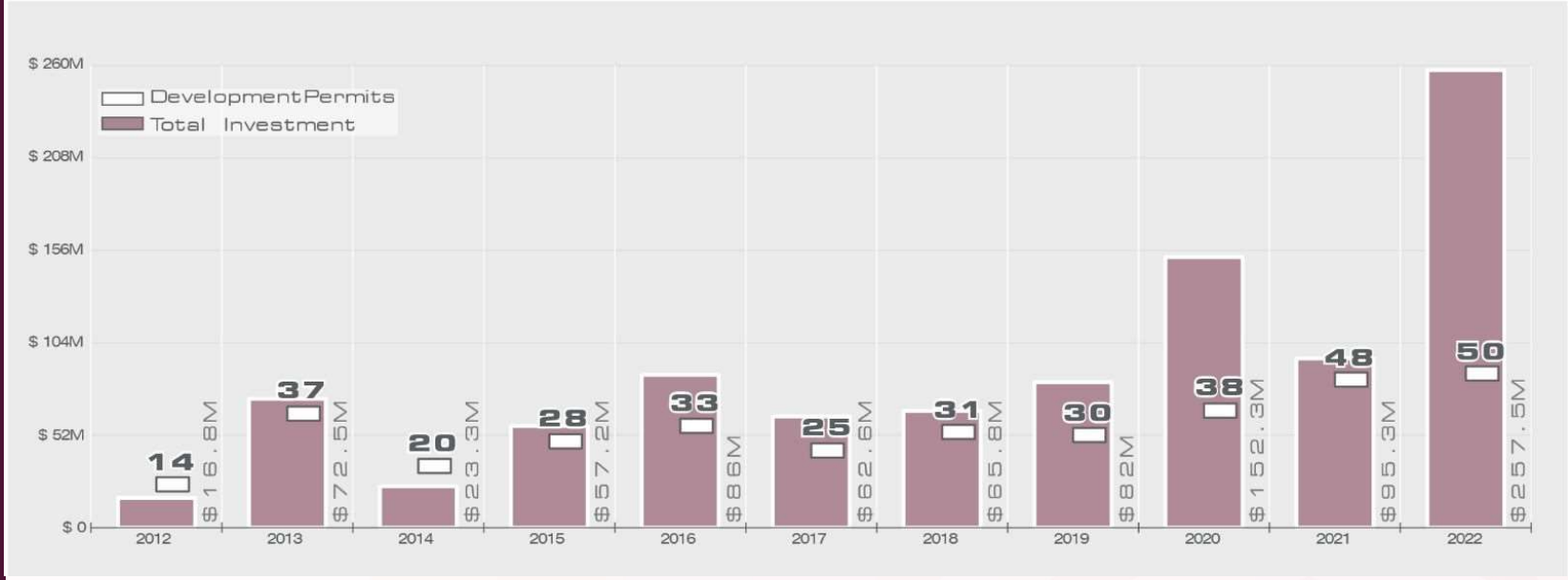
Source: Prologis Research, CBRE

LOGISTICS

FACILITIES

LAREDO POE WAREHOUSE & INDUSTRIAL PARK DEVELOPMENT



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TOTAL NEARSHORING

OPPORTUNITIES BY COUNTRY

ADDITIONAL EXPORTS OF GOODS

(M: US$ MILLIONS, B: US$ BILLIONS)

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Source: Inter-American Development Bank

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Nearshoring: potential opportunities for increased exports, by country

Trade in goods only - US$ millions

COUNTRY	Quick Wins – United States	Intra-LAC Quick Wins	Medium-Term Opportunities	Total
Argentina	890.7	1518.0	1497.8	3906.5
Bahamas	33.2	23.8	119.9	177.0
Belize	5.9	6.3	31.7	43.9
Bolivia	50.5	60.8	14.1	125.3
Brazil	4153.0	3144.3	546.8	7844.1
Barbados	9.7	42.8	8.1	60.6
Chile	665.8	516.0	641.1	1822.9
Colombia	1498.5	886.9	188.4	2573.8
Costa Rica	918.1	539.3	87.4	1544.8
Dominican Republic	1362.9	150.2	67.6	1580.7
Ecuador	482.0	285.8	72.8	840.7
Guatemala	436.4	293.8	55.5	785.7
Guyana	23.7	370.1	6.2	400.0
Honduras	745.1	418.7	79.0	1242.8
Haiti	237.2	11.4	4.4	253.1
Jamaica	84.9	25.8	27.8	138.5
Mexico	29679.4	2628.2	2970.6	35278.2
Nicaragua	473.3	78.2	17.0	568.5
Panama	81.3	549.2	171.5	802.0
Peru	792.0	498.0	128.4	1418.5
Paraguay	43.9	181.1	26.3	251.3
El Salvador	686.4	343.6	19.9	1049.9
Suriname	25.0	18.7	14.8	58.5
Trinidad and Tobago	87.9	304.5	84.3	476.7
Uruguay	69.3	369.5	89.4	528.2
Venezuela	218.4	48.7	53.8	320.9
Latin America and Caribbean (LAC)	**43754.4**	**13313.7**	**7024.9**	**64093.0**

Source: Inter-American Development Bank

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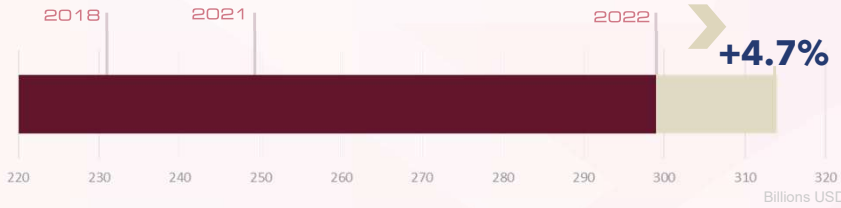
LAREDO TRUCK CROSSINGS

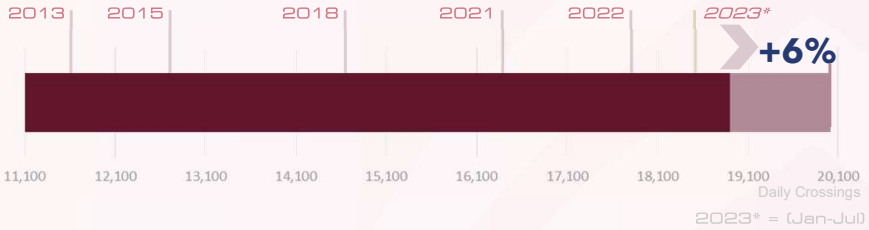
NEARSHORING IMPACT

+$35B
Expected US-Mexico Trade Increase

+$14B
Expected through Laredo POE



950-1,120
Estimated Additional Daily Truck Crossings



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Source: IADB

Why Mexico in this Nearshoring Context?

- **Location:** Proximity to the US, which favors companies that serve North American consumers.

- **Free Trade Agreements:** Mexico is the only developing country that has free trade agreements with the US, Canada, the European Union and Japan. In total, Mexico has 13 Free Trade Agreements signed with 46 countries

- **Regulations and Trade Wars:** Recent regulatory decisions and trade wars are favoring alignment among North American supply chains.

Smart Borders: The key to more resilient cross-border trade

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 & Challenges

Benefits

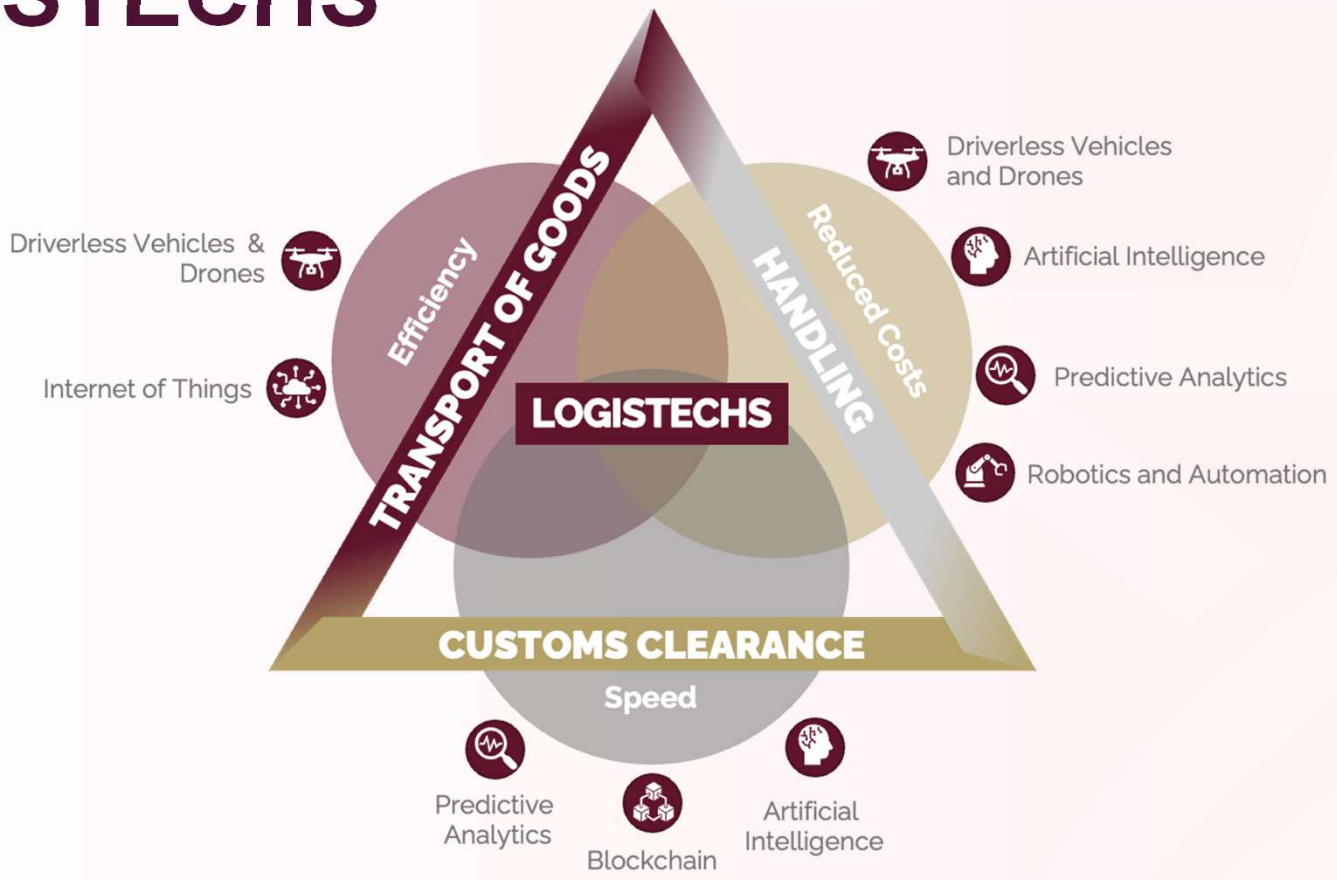
1. Increase the efficiency of border crossings by reducing wait times and processing times.
2. Can improve security by effectively identifying and targeting high-risk individuals and goods.
3. Reduce costs by decreasing the need for manual processing and increasing automation.
4. improve data collection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

Challenges

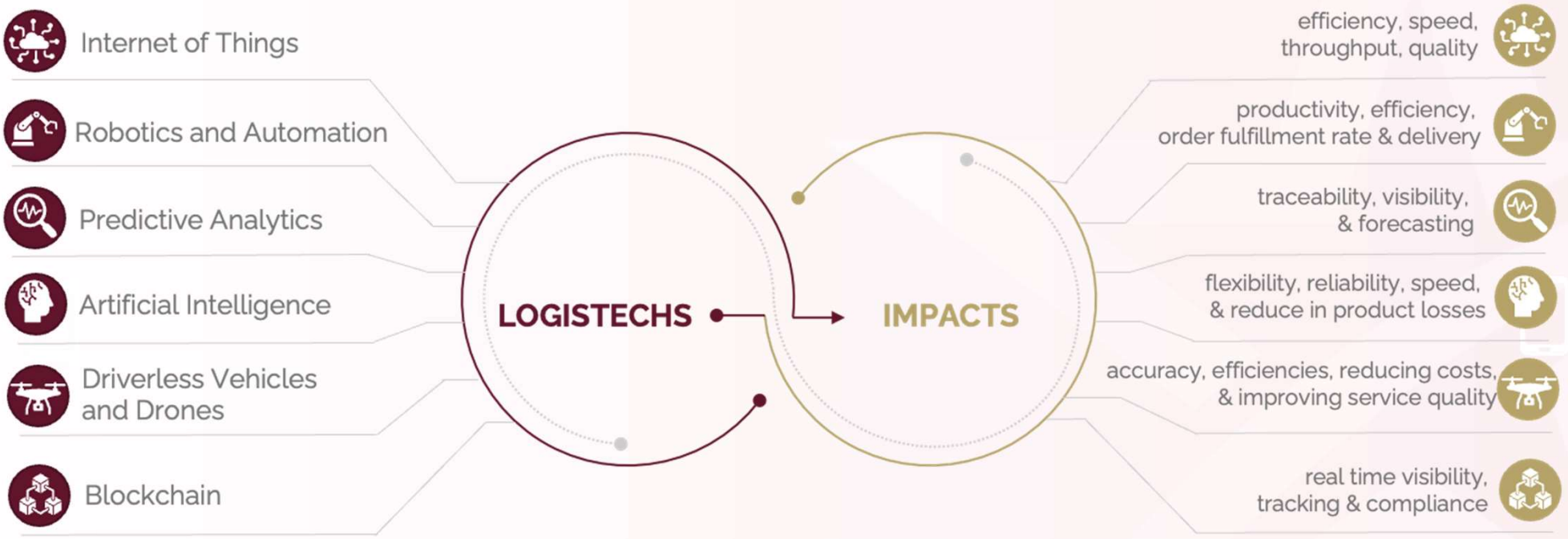
1. Implementing smart border initiatives requires significant investment in technology and infrastructure.
2. using technology and data raises concerns about privacy and data protection. Smart borders require collecting and analyzing significant amounts of personal data, raising privacy and data protection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

lo · gis · techs
represent the impact that exponential technologies have on logistics and can be classified as the technologies that support the transport of goods, those that improve their handling, and the ones that expedite their customs clearance.

LOGISTECHS


TRANSPORT OF GOODS
HANDLING
CUSTOMS CLEARANCE
Efficiency
Reduced Costs
Speed
LOGISTECHS
Driverless Vehicles & Drones
Internet of Things
Driverless Vehicles and Drones
Artificial Intelligence
Predictive Analytics
Robotics and Automation
Predictive Analytics
Blockchain
Artificial Intelligence

LOGISTECHS


Internet of Things
Robotics and Automation
Predictive Analytics
Artificial Intelligence
Driverless Vehicles and Drones
Blockchain
LOGISTECHS
IMPACTS
efficiency, speed, throughput, quality
productivity, efficiency, order fulfillment rate & delivery
traceability, visibility, & forecasting
flexibility, reliability, speed, & reduce in product losses
accuracy, efficiencies, reducing costs, & improving service quality
real time visibility, tracking & compliance

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