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# Border Dashboard Project



UC San Diego

**RADY SCHOOL OF MANAGEMENT**

SBC Meeting  
8 July 2021

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**Smart Border Coalition Project - Lab to Market Team**



Adriana  
Olivares

Contracts Manager  
*Qualcomm*



Angela  
Garais

Librarian  
*MCAS Miramar*



Kaitlin  
Pugliese, Ph.D.

Scientist  
*Illumina*



Katheryn  
Li

Senior Consultant  
*Booz Allen Hamilton*



Kimani  
Nakamura

Configuration Controller  
*General Atomics*



Quinn  
McGourty-Holland

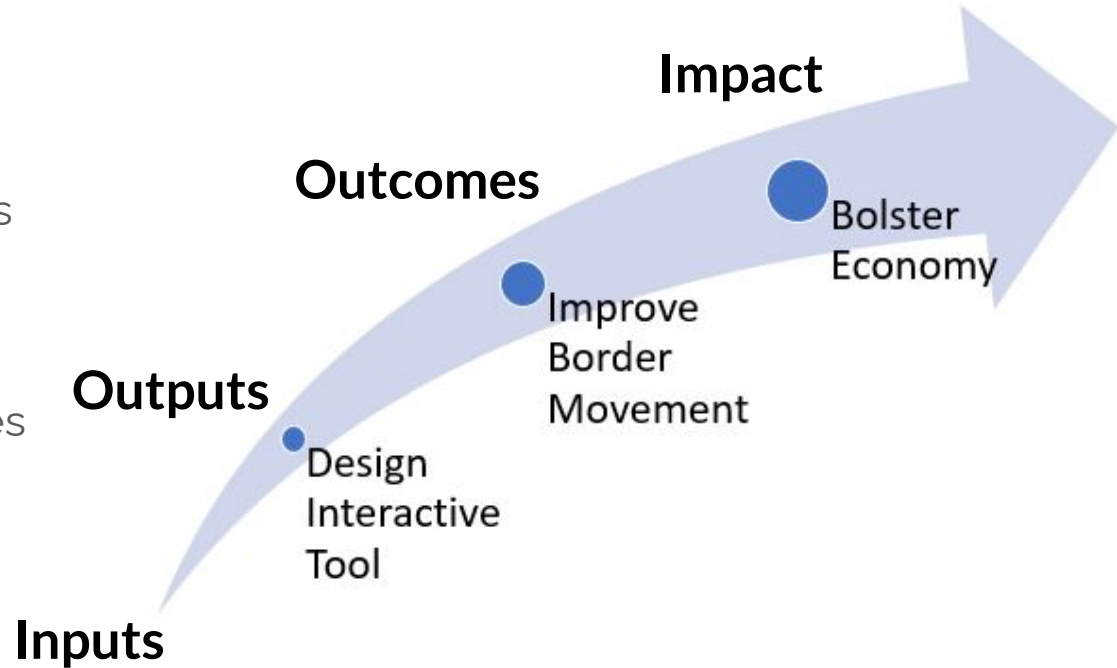
Analyst  
*Petco*

# Acknowledgments

Leadership	Gustavo de la Fuente, Executive Director Smart Border Coalition Hank Morton, Founder and CEO, Baja Bound Insurance
Advisors	Amy Nguyen-Chyung, PhD, MBA-MPA, UCSD L2M Professor Karsten Hansen, UCSD Professor of Marketing
Subject Matter Experts	Hyoduk Shin, UCSD Professor of Innovation Information Technology & Operations Monique Casellas, UCSD Director of Development
Rady Data Analytics Club <i>Visualizations and Sentiment Analysis</i>	Haritha Parupudi, Project Lead Sanya Khera, President
Website Developer <i>Architecture Diagram</i>	Prasaanth Balakrishnan, MBA Seth Morton, HS Sophomore
Mentors	Saul De Los Santos, Founder and CEO, AXIS - Strategic Intelligence Center Brian McArthur and Andrew Ovrom, MBA Student Leads, SDMAC MEIR

# A new offering has to help visualize the border and support decision making

- Collecting information across multiple sources
- Manually updating results
- Focusing on specific variables based on areas of interest



# Requirements must be shaped by key needs



# Interviews

AXIS Centro de Inteligencia Estrategica  
Baja California Railroad  
New City Medical Plaza  
Testa Marketing Marketing Research  
Former Maquiladora Employee  
Gustavo M. Rios Attorney at Law  
Sarakki Associates, Inc.  
Mexican Consulate in San Diego  
U.S. Embassy & Consulates in Mexico  
U.S. Congress  
U.S. Customs and Border Protection  
U.S. Department of Commerce | International Trade  
Administration  
U.S. General Services Administration  
U.S. House of Representatives  
Office of Mayor Todd Gloria  
Otay Mesa Chamber of Commerce

San Diego County Sheriff's Department  
San Diego Regional Chamber of Commerce |  
International Business Affairs  
San Diego State University  
San Ysidro Chamber of Commerce  
SANDAG | Borders  
University of California, San Diego | Center for  
U.S.-Mexican Studies  
University of San Diego | Political Science and  
International Relations  
Western Washington University  
Tijuana Innovadora  
US-Mexico Foundation  
US-Mexico Foundation  
Border Fusion Group LLC  
International Community Foundation  
South County Economic Development Council  
U.S.-Mexico Border Philanthropy Partnership

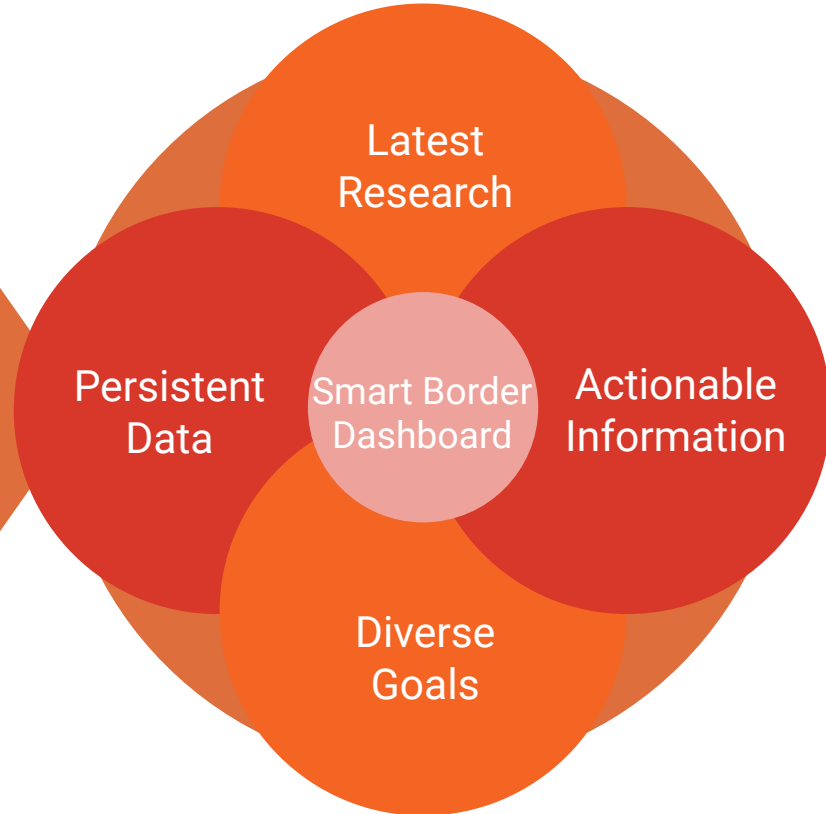
# Must provide value through easy assessment of current information

## KEY NEEDS

TO AGGREGATE LATEST INFORMATION FROM SCATTERED SOURCES

TO IDENTIFY TRENDS AND EXPLORE INTERACTIVE INSIGHTS

TO MAKE INFORMED DECISIONS BASED ON RELEVANT INPUTS





# EXPLORE THE VALUE OF THE SAN DIEGO-TIJUANA BORDER REGION

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2508 Historic Decatur Rd. Suite #130 San Diego, CA 92106  
(619) 814-1386  
[info@smartbordercoalition.com](mailto:info@smartbordercoalition.com)



# A regional snapshot in the form of a dashboard will highlight this value for stakeholders

## Crossings of People

In March, 2021

Compared to March, 2020

**834,862**



7.74%

PEDESTRIANS

**2,549,738**



10.84%

PASSENGERS \*

**1,659,790**



11.1%

VEHICLES \*\*

Source data: Bureau of Transportation Statistics.

- \* Total passengers in personal vehicles, buses, and trains
- \*\* Total Vehicles includes personal vehicles, buses, and trains

## Crossings of Goods

In March, 2021

Compared to March, 2020

**88,188**



18.2%

TRUCKS \*

**\$4,266**



18.2%

TOTAL TRADE VALUE (IN MILLIONS) \*\*

In Jan-Mar, 2021

Compared to Jan-Mar, 2020

**\$11,382**



4.5%

TOTAL TRADE VALUE (IN MILLIONS) \*\*\*

Source data: Bureau of Transportation Statistics.

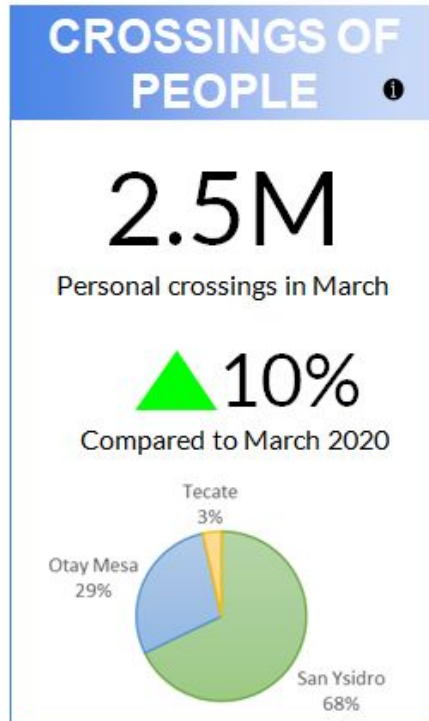
- \* Total northbound crossings of trucks
- \*\* Total imports and exports for trucks
- \*\*\* Total cumulative imports and exports for trucks

## Sentiment Analysis



Top-Mentioned topics in the news

# The solution elements will be organized into a frequently updated dashboard

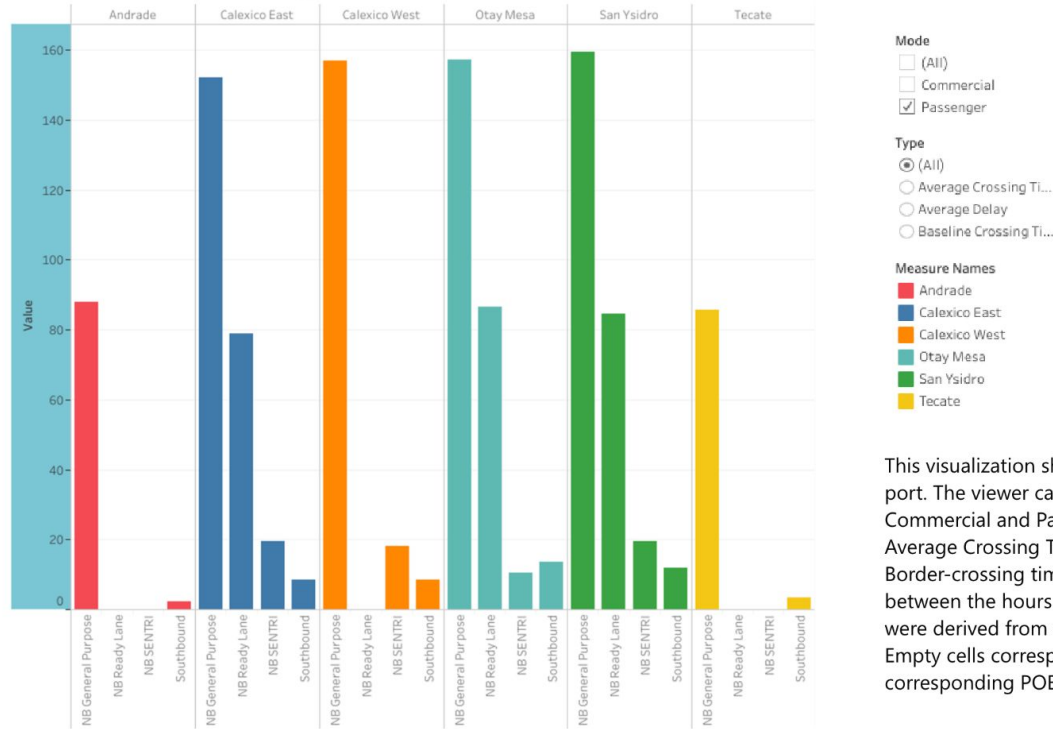


Cumulative total exports and imports through Otay Mesa POE

# Border Crossing Indicators

BY PORT

BY LANE

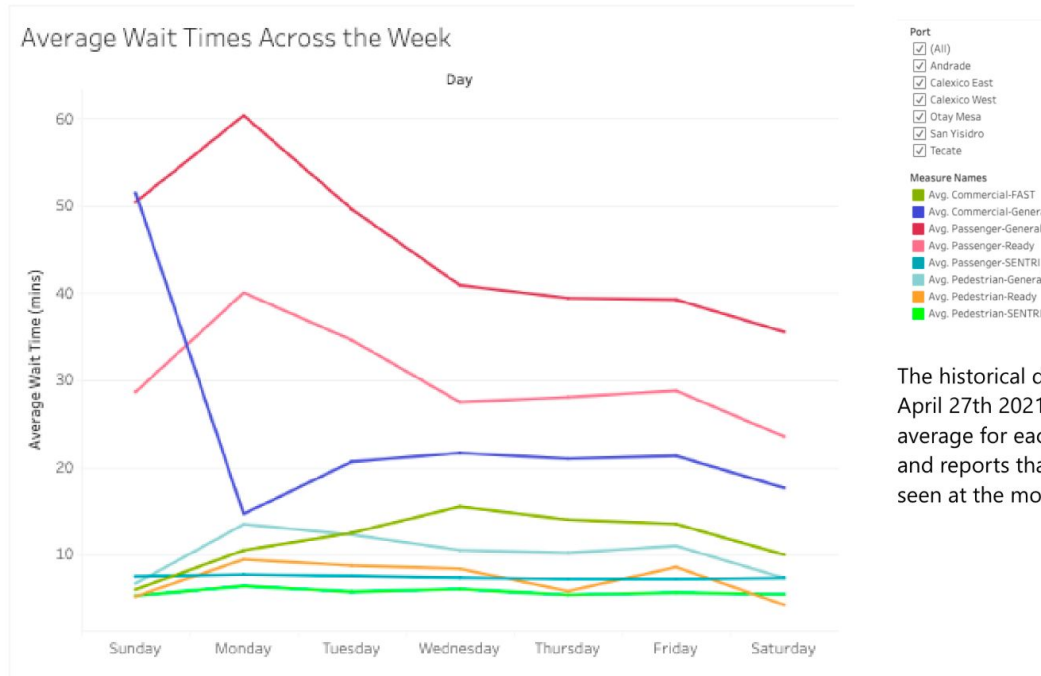


- Mode**
- (All)
  - Commercial
  - Passenger
- Type**
- (All)
  - Average Crossing Ti...
  - Average Delay
  - Baseline Crossing Ti...
- Measure Names**
- Andrade
  - Calexico East
  - Calexico West
  - Otay Mesa
  - San Ysidro
  - Tecate

This visualization shows the border crossing times separated by port. The viewer can utilize the Mode filter to differentiate between Commercial and Passenger and the Type filter to hone in on Average Crossing Time, Average Delay, or Baseline Crossing Time. Border-crossing times were collected on the days listed below, between the hours of 7 am and 7 pm. "Baseline" and delay times were derived from a statistical analysis of border-crossing times. Empty cells correspond to lane types not available at the corresponding POE.

Source: Vol. 1 SANDAG Report [https://public.tableau.com/profile/haritha7887#!/vizhome/vol1\\_crossing/BorderCrossingTimesbyLane](https://public.tableau.com/profile/haritha7887#!/vizhome/vol1_crossing/BorderCrossingTimesbyLane)

## Average Wait Times Across the Week (2020)



The historical data is an aggregate from April 26th, 2020 – April 27th 2021 from the BTS.gov website. It takes an average for each day of the week across the past 52 weeks and reports that number, with no further granularity/filter seen at the monthly level.

Source: BTS.gov, [https://public.tableau.com/profile/haritha7887#!/vizhome/ave\\_wait\\_times/AverageWaitTimesAcrossTheWeek](https://public.tableau.com/profile/haritha7887#!/vizhome/ave_wait_times/AverageWaitTimesAcrossTheWeek)

# Data Sources

## [Border Crossing Times](#)

Vol. 1 of the SANDAG report.

## [Average Wait Times: Annually Across the Week](#)

BTS.gov website.

## [Border Crossings \(Comparisons & Trends\)](#)

BTS.gov website

## [Border Crossings: Monthly & Annual Trends](#)

DOT.gov website

## [Economic Impact of Border Crossing Delays](#)

Vol. 2 of the SANDAG report for 2016.

## [Economic Impact of Border Crossing Delays & Proposed Enhancements](#)

Vol. 2 SANDAG report from 2016

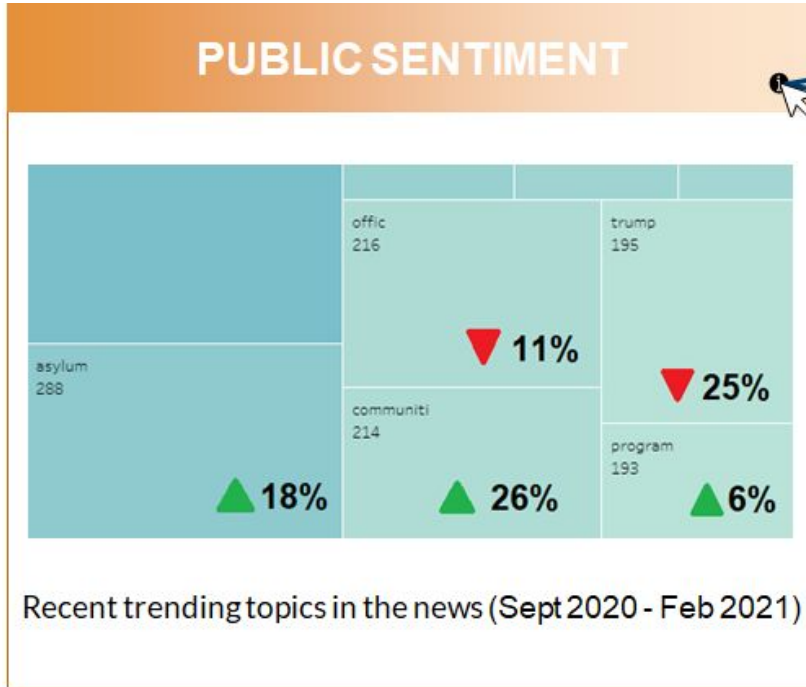
## [Mexico Imports & Exports](#)

Census.gov website

## [Border Trade: By Value & Weight](#)

DOT.gov website

# Sentiment Analysis - A unique view for SBC



Word frequency analysis from border-related articles featured in the San Diego Union Tribune

Current dashboard visualization (with illustrative indicators)

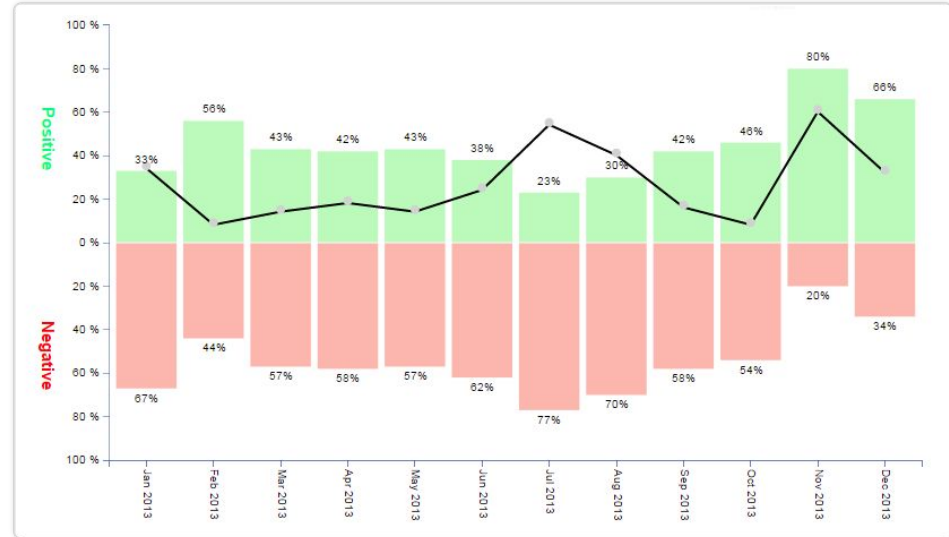
# Trend analysis provides greater detail and insight to inform decisions

- Calculate **Positive**/**Negative** sentiment
- Monthly trend analysis

- End Product:

**A tracking tool that periodically scrubs information sources for popular terms/phrases, assigns a sentiment score, and updates the display**

Monthly Sentiment Trend Diagram



Illustrative Visualization

# Operational plan will drive longevity

## Website Architecture

Complete navigational features

Diagram data framework

Identify dynamic and persistent data

Perform user testing

## Technical Requirements

Optimize API performance

Data connection upkeep

Choose a domain name

Manage and manage metrics

## Product Roadmap

Explore recommended topics

Analyze website traffic

Data transparency

Content strategy





Thank You