



Navigating a COVID-19 World with Connected Vehicle Data Insights

wejo



With the COVID-19 pandemic, we are getting from point A to point B in different ways, and at different volumes, drastically impacting how we forecast what is next for us as a society. We have witnessed lockdowns across the United States. Roads and freeways saw a significant decrease in traffic. The way people use public spaces, visit retail, and congregate at points-of-interest will continue to see significant shifts.

Connected vehicle data (CVD), directly from the source of transport, has transformed how organizations can predict the future based on historical, event and real-time data. From departments of transportation, cities, real estate and traffic management, connected vehicle data is essential to cost effective and accurate analysis for planning and decision making.



Covid-19 and Connected Vehicle Data

How can you use CVD to better understand the impacts of COVID-19?

- Compare and correlate regional, state-level, and nationwide mobility trends before and during the pandemic.
- Understand how the pandemic has changed driving trends and behaviors.
- Learn how safety profiles have changed as a result of reduced vehicles utilizing the road network.
- Better understand and model the impacts on multi-modal transportation.
- Monitor visitation to specific points-of-interest before, during, and after the outbreak.



Connected Vehicle Data Value:

The opportunity for accurate insights, predictions and decision making within Connected Vehicle Data is massive. The global market is predicted to be worth over \$300 billion in less than a decade. While both public and private sector organizations need data, their traditional sources are poor quality, low volume, disparate and inconsistent.

How does Wejo get connected vehicle data? We partner with some of the world's largest automotive manufacturers to create meaningful analysis and insights that truly change the way we work, live and travel. With access to over 90 unique vehicle sensors, 95 percent of U.S. road coverage and 12 billion data points captured daily, Wejo connected vehicle data provides a high level of accuracy and penetration to understand the impact of changes in mobility and more.

Knowing data is coming directly from the car means:

- There's no need to classify transport mode
- There's no need to dynamically sample – 1 car is 1 car
- There's no need to take account of different phone model, OS, chipset
- There's no need to correct for any potential issues around signal strength and positioning precision

\$300B+

The global market is predicted to be worth over \$300 billion in less than a decade

95%

95 percent of U.S. road coverage

12 BILLION

12 billion data points capture daily

Connected Vehicle Data has been invaluable in various scenarios for a multitude of industries over the last year, including:



Transportation Planning

- Determining the impacts of traffic flow in and around key dates and events or when new lockdown restrictions are implemented, in near-real time
- Understanding travel patterns between regions to determine the most utilized commuter routes



Logistics & Fleet

- Gaining a better understanding of traversal times on routes to improve delivery ETAs and ensure efficient usage of fleets
- Utilizing near real-time data to perform route optimization



Retail & Entertainment

- Optimizing new store opening locations based on mobility patterns and lookalikes
- Building a better picture of high value catchment areas ensuring a strong ROI



Real Estate

- Comparing sites for new developments based upon real world journey volumes
- Understanding journey distribution by POI category to determine if real estate developments are likely to be impacted by the pandemic



Cities & DOTs

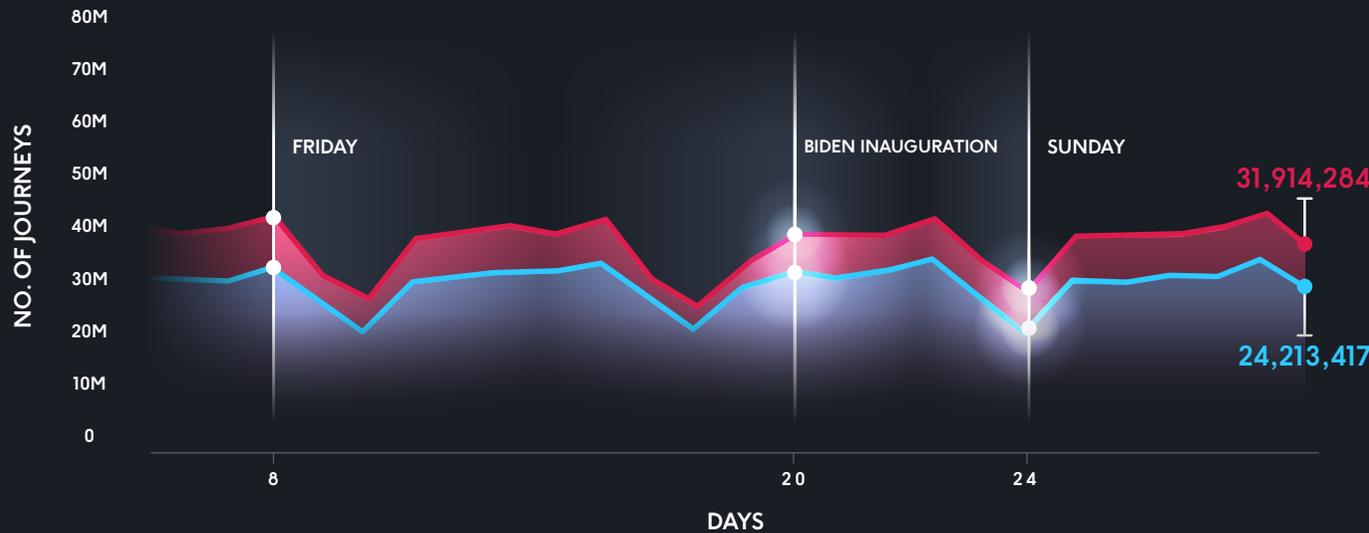
- Understanding the effectiveness of lockdown restrictions by determining journeys by category
- Identifying specific regions where lockdown restrictions aren't being observed to improve messaging in smaller municipalities, helping to reduce the spread of the virus
- Comparing and benchmarking traffic performance and congestion in your state or across multiple states
- Understanding the effectiveness of lockdown restrictions by determining traffic volumes and flows in states and cities

How could you use this type of data looking at real scenarios that impacted the mobility sphere over the last year?

Traffic flow comparison

Inauguration date (2021 vs 2020)

24.6%
▼



Total journeys taken

1,313,559,134 **1,053,960,356**

● 2020 ● 2021

How did President Biden's inauguration impact journey trends when compared with the same period in 2020?

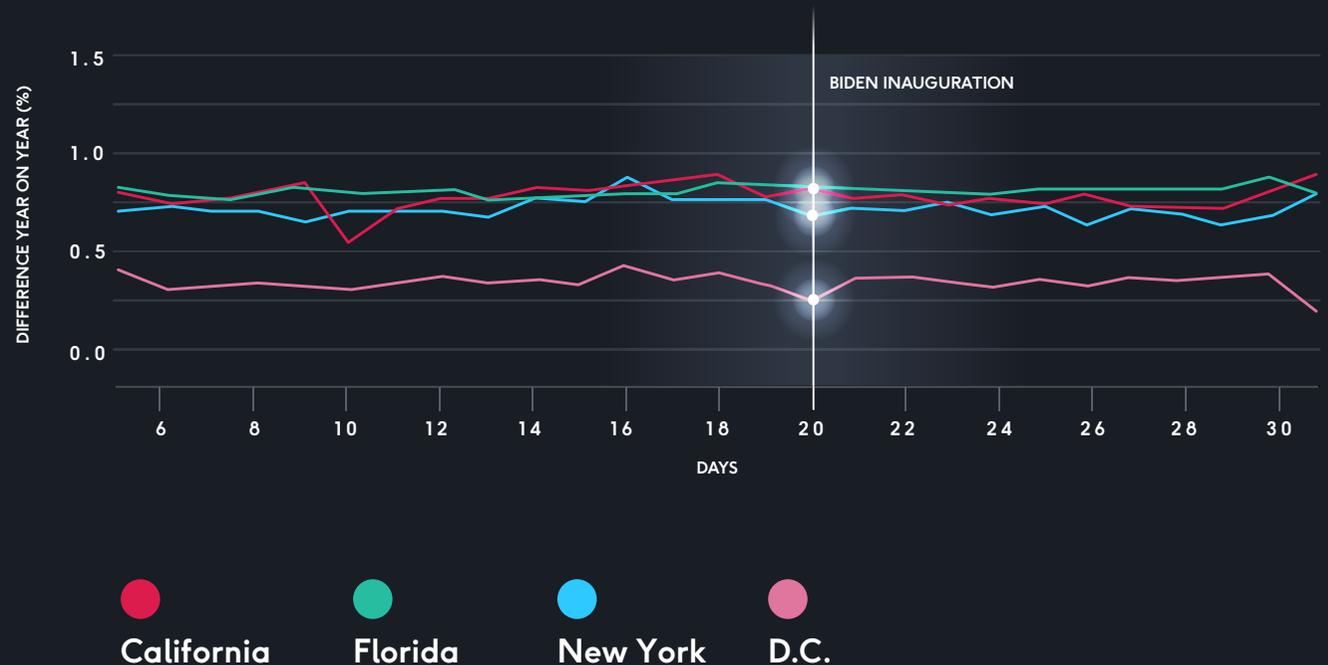
- The data can look at certain points in time. This data set is between **3rd January 2021 to 6th February 2021** (2 weeks pre and post inauguration)
- The data was compared against the same period in 2020 to understand possible variations and changes in the data
- Based on these results, we've learned that year-on-year, journey volumes are **down by more than 24%**
- **Fridays** continue to represent the busiest day of the week with the highest journey volumes
- **Sundays** continue to represent the quietest days of the week with the lowest journey volumes

Flow in major states

California, Florida, New York, D.C.

But how does this compare when you start focusing on specific states? You can see from the graph, that there was no specific impact in states such as California, Florida and New York. Unsurprisingly, D.C. saw the biggest drop in journey volumes on the day of the inauguration. The nation's Capitol which would normally see significant visitation from across all U.S. states was largely void of what is normally an Inauguration Day staple. Drove of Americans did not line the National Mall — instead flags, lights and thousands of security personnel did.

Using Wejo's vehicle movements product, you can produce in-depth analysis on journey trends. Vehicle movements is Wejo's high velocity and most granular data product, providing 1-3 second capture rates and less than 60 seconds latency. Many organizations can use this product to understand traffic flows and volumes in near real time or in historic batches.

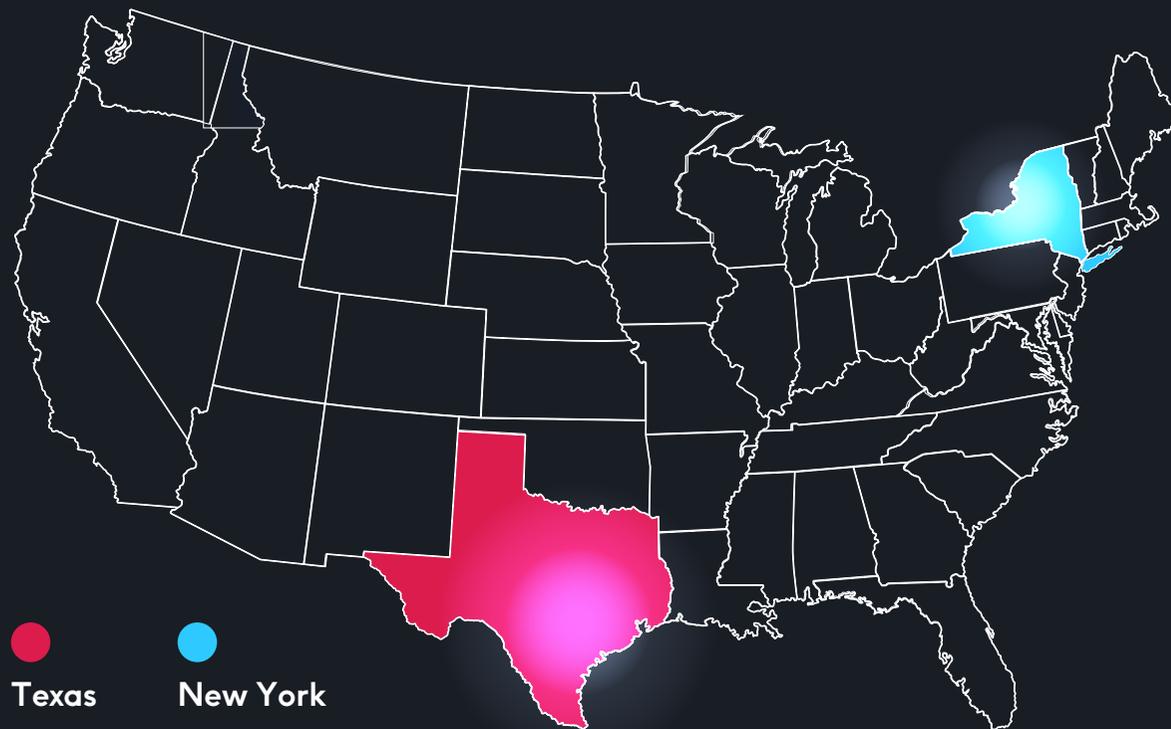




How can your organization use this type of data analysis today?

- Complete real-time traffic and congestion monitoring to empower accurate and swift decision-making
- Enhance origin-to-destination studies and driver journey trend analysis
- Understand traffic signal optimization and improved traffic flow monitoring
- Identify in-demand retail locations and improve urban planning developments

How did COVID-19 state by state mandates impact vehicle volume and traffic in the roads over a given period of time?



Lockdown and stay at home restrictions were implemented across multiple states in the lead up to the Holidays. But what was the impact when you start comparing specific states? For this analysis, we looked at data from 1st October until 9th February

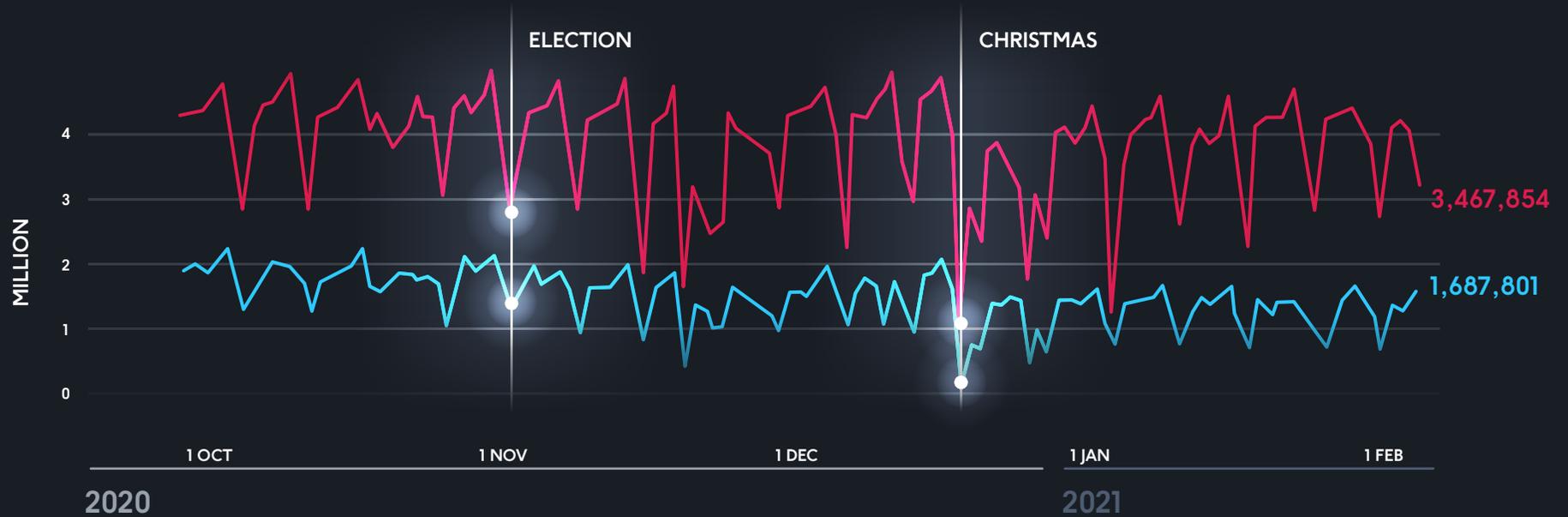
You can utilize Wejo's traffic intelligence product to produce in-depth analysis on traffic trends and volumes in different states. **Traffic Intelligence** is Wejo's latest product which provides aggregated data to understand congestion, safety hotspots and much more

Were people seeing family and friends before the festivities? Did people abide by stay-at-home orders during the holidays? Using this data, you can begin to explore in-depth when and where drivers were traveling.

State comparison

New York v Texas

● New York ● Texas



- We compared the traffic volumes in New York versus Texas to understand traffic volume in different seasons of the year.
- When considering NY vs. TX as a sample, it can be observed that before the election date NY was on average trending higher in terms of traffic volumes than TX.
- However, after election dates, NY traffic volumes dropped at a higher rate than in TX.
- As we look closer to the holiday period, we can see that both NY and TX observed higher journey volumes on 23/24th December, after which traffic volumes dropped considerably and continued to do so.

How can your organization use this type of data analysis today?

- Identify areas of congestion by analyzing traffic flows by road segment
- Optimize traffic-calming measures for roads susceptible to speeding by understanding average speed by road segment
- Analyze footfall trends by understanding traffic flows to retail centers
- Identify in-demand retail locations and improving urban planning developments



How have retail visits and trends transformed from the pandemic?

The pandemic has significantly impacted the retail industry. But what segments were most affected, and how have trends changed? You can use connected vehicle data to analyze various points of interest by retail category.

FOR EXAMPLE

- Overall we can see that journeys across all classifications have dropped significantly
- We can see that unsurprisingly, commutes are **down 63%** as work from home orders are still very much in place across most U.S. states
- Restaurants have seen less of a drop but still are tracking **33% below** the same period last year
- Grocery stores have also seen a significant reduction in visits with **21% fewer** grocery visits when compared to the same period in 2020

INSIGHT

Using Wejo's driving events data product, you can better understand mobility trends in retail locations. Driving events is Wejo's granular and contextually rich data product which many organizations use to understand origin to destination trends.



How can your organization use this type of data analysis today?

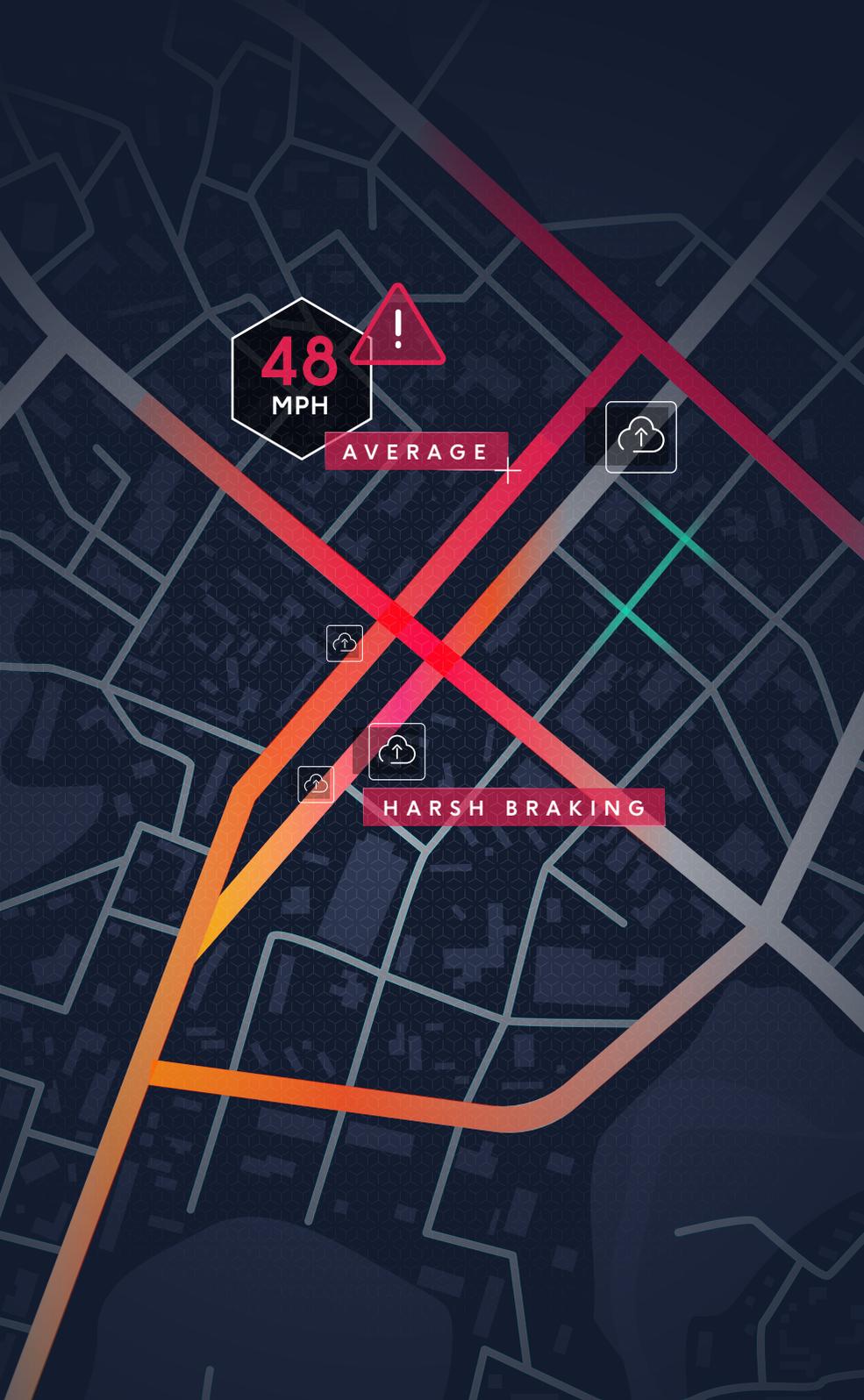
- Enhance origin-to-destination studies and driver journey trend analysis
- Identify roads susceptible to potentially dangerous driving behaviors including speeding and hard braking
- Understand point-to-point journey distribution across large geographies
- Understand and monitoring dwell time around POIs to determine length of stay and purpose of visit

Using Wejo Data to Inform Strategic Decisions

Analyzing historical data and mobility trends can be taxing but is required to make strategic decisions as we move forward in an unknown world. With Wejo connected vehicle data, which includes Vehicle Movements and Driving Events products discussed above, our data helps both public and private sector organizations truly understand the pandemic's granular impacts on nationwide mobility trends in a cost-effective way.

Throughout the pandemic, Wejo worked with decision makers and organizations in the United States to support insights around car movements during the lockdown, ultimately providing Connected Vehicle Data (CVD) to eight U.S. states. Wejo data has been invaluable in establishing priorities, identifying problems, and generating much-needed action.

The COVID-19 Bundle from Wejo, which includes [Vehicle Movements](#) and [Driving Events](#) products, can help both public and private sector organizations truly understand the pandemic's granular impacts on nationwide mobility trends from yesterday, today and tomorrow.



THE WEJO PRODUCTS THAT YOU CAN USE TO ANALYZE SIMILAR EVENTS AND FORECAST THE FUTURE ARE:

Driving events – Wejo’s granular and contextually rich data product which many organizations use to understand origin to destination trends, explore safety-related use cases, and complete site and dwell time analysis

Vehicle movements – Wejo’s high velocity and most granular data product, providing 3-second capture rates and less than 60 seconds latency, many organizations can use this product to understand traffic flows and volumes in near real time or in historic batches

Traffic Intelligence – Wejo’s latest product which provides aggregated data to understand congestion, safety hotspots and much more



EXCLUSIVE PROMOTION

How did COVID-19 impact mobility trends in 2020?

- Compare and correlate regional, state-level and nationwide mobility trends before and during the pandemic
- Understand how the pandemic has changed driving trends and behaviors
- Learn how road safety profiles have changed as a result of reduced vehicles utilizing the road network
- Understand and model the impacts on multi-modal transportation
- Monitor visitation to specific POIs before, during and after the outbreak of the pandemic

[Get in touch](#) to find out more



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Navigating a COVID-19 World with Connected Vehicle Data Insights

This is your opportunity to unlock the value in connected vehicle data to understand how the outbreak of the COVID-19 in March 2020 shaped and changed the way we live, work, and travel.

Contact us to learn more about partnering with Wejo.

Get in touch at
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