



# Economic Activity Signals

Remotely monitor the world's activity to make better decisions in a time of economic disruption

**Contact us:**  
[hello@dl.gov.com](mailto:hello@dl.gov.com)

**“Actions taken now to mitigate impacts on supply chains from coronavirus can also build resilience against future shocks.**

— McKinsey & Co, Apr 2020

**“Americans continue to expect to reduce spending, especially on discretionary purchases.**

— McKinsey & Co, Apr 2020

## Overview

Changing global conditions are affecting supply and demand flows worldwide, causing freezes and disruptions at borders and ports and challenges to the way products are produced and delivered. Stop guessing about the timing and impact of economic disruption and use our activity signals to make data-driven decisions about supply and demand across your sourcing and distribution networks.

Descartes Labs leverages our background and experience from Los Alamos National Laboratory to help our clients answer fundamental questions:

- When should I restart hiring and ramp production to balance supply with demand?
- Which components of my supply chain should I try to bypass or replace with alternatives?
- What's my visibility into tier 2 or 3 suppliers?  
What are my competitors doing?
- Where are the impacts on the food supply?  
How can I monitor specific locations?

The Descartes Labs Platform monitors signals to help estimate the recovery of demand, production and movement of goods, and the operational state of businesses and facilities on a global, automated, and easy to access scale.

These signals help companies assess the timing of recovery and the unpredictable return to economic normal as the COVID-19 pandemic persists.

They are designed for data science and business users that need timely data and analysis to answer key questions during periods of increased volatility and uncertainty.



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## The Economic Activity Signals include:

### Maritime Activity

*Track when maritime transportation returns to normal.*

As a proxy for the maritime supply chain, this activity tracker provides a daily data feed and optional email alert for nearly 1000 global ports and waterways with continuously updated attributes capturing port area activity.

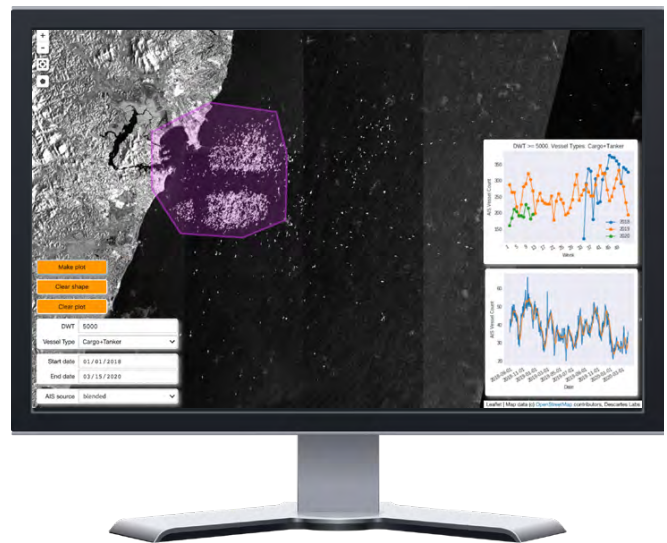
FEATURES

Maritime activity tracking of port area vessel counts derived from 65 million+ global AIS data points per day sourced, cleaned, and aggregated across two raw AIS data providers.

Selection of 250 areas of interest within the overall set of global ports and waterways.

Categorical filtering and attribute counts of navigation status, type, class, and vessel size.

Possible customization options may include historical data indexing, more frequent data delivery, additional filters such as vessel departures, arrivals, previous port locations, and whether cargo is onboard (additional fees may apply).



*Stationary cargo and tanker counts for DWT greater than 5,000 in Port of Tubarao, Brazil*



*A time-series of z-scores for facility activity anomaly detection using geolocation data.*

### Commercial Activity

*Track recovery of production activity.*

As a proxy for industrial and commercial operations, this activity tracker provides a daily data feed and optional email alert containing cellular device counts across facilities and customer-defined areas of interest relevant to commercial operations including, manufacturing, retail, restaurants, transportation hubs, businesses, and more.

FEATURES

An indication of the activity level attributed to cell phones for up to 250 custom areas of interests, facility boundaries, or groups of facilities.

Data is reported and delivered as either zero devices, fewer than five, or any number greater than six (e.g., 11, 21, 45...)

Possible customization options may include historical data indexing, more frequent data delivery, and area of interest groupings and categorizations (additional fees may apply).



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## Mobility Activity

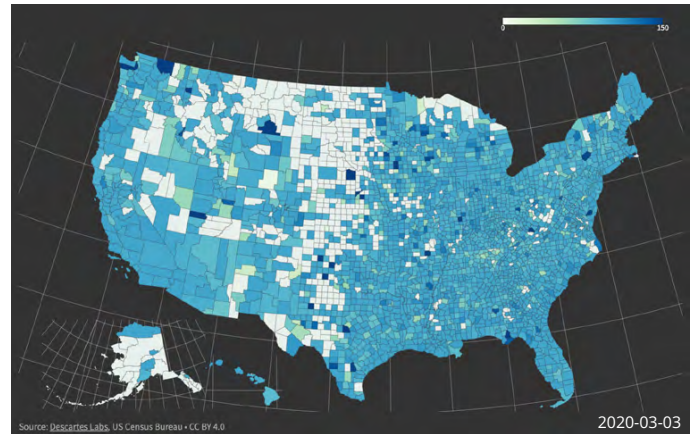
*Track when consumers begin to venture out.*

As a proxy for consumer demand, this tracker includes a daily mobility index for US states, counties, municipalities, and select international countries to help understand aggregated patterns of movement.

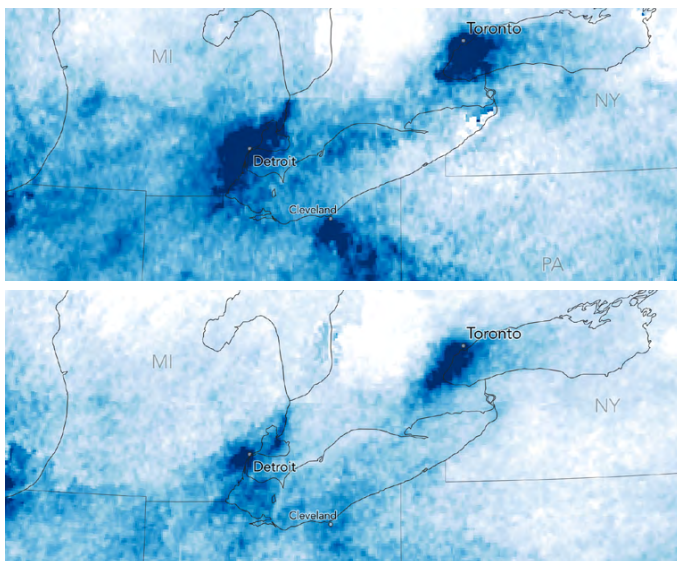
FEATURES

Mobility index: Measure the maximum distance traveled per device, and report the 25th, 50th, and 75th percentile distance traveled values, as well as an index that evaluates those values against a typical baseline period for the region.

Available for US states, counties, and municipalities, as well as some international locations.



Visualization of US county-level mobility activity. Darker colors represent more mobility and lighter colors represent less.



Concentrations of nitrogen dioxide in the atmosphere above the U.S. Great Lakes Region in 2019 (top) and 2020 (bottom). Darker colors represent higher concentrations.

## Regional Pollution Activity

*Track changes in regional emissions and pollutants.*

As a proxy for activity, this tracker provides a bi-weekly data feed capturing change in atmospheric pollutants and aerosols over a standard set of customer-selected political boundaries.

FEATURES

For each political boundary, we provide pollutant concentration as a percentage change between current activity and that from the previous bi-weekly estimate, the previous month, and over longer historical patterns for nitrogen dioxide, sulfur dioxide, methane, and aerosols.

The data is generated from the European Space Agency's Sentinel-5P satellite, filtered by quality, and temporally integrated to enhance detection and average out wind and weather effects on plumes.

Possible customization options may include customer-specific temporal comparisons and aggregation levels (additional fees may apply).

[Get in touch](#) with us today to learn more about how our economic recovery signals can help monitor activity at locations critical to your business. We provide the data you need to make timely and informed decisions on a global, automated, and easy to access scale.

