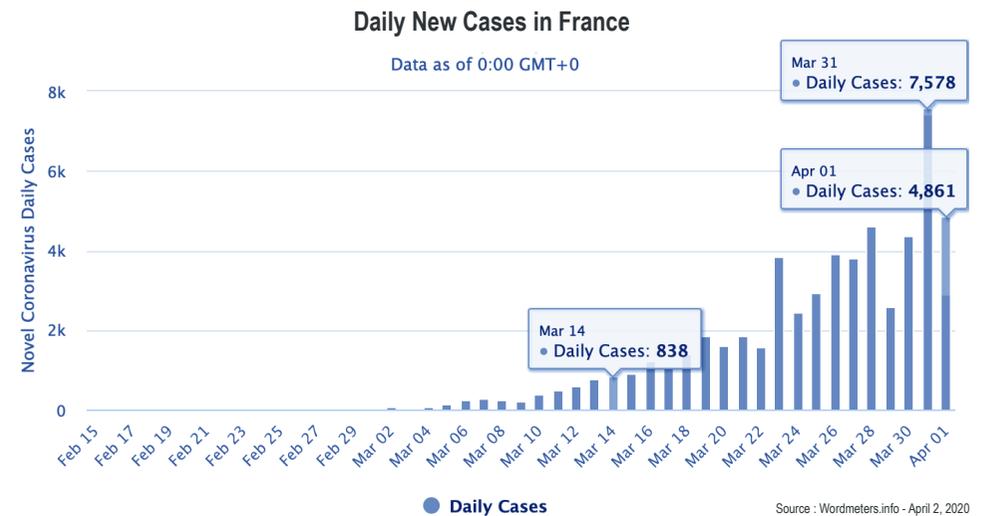
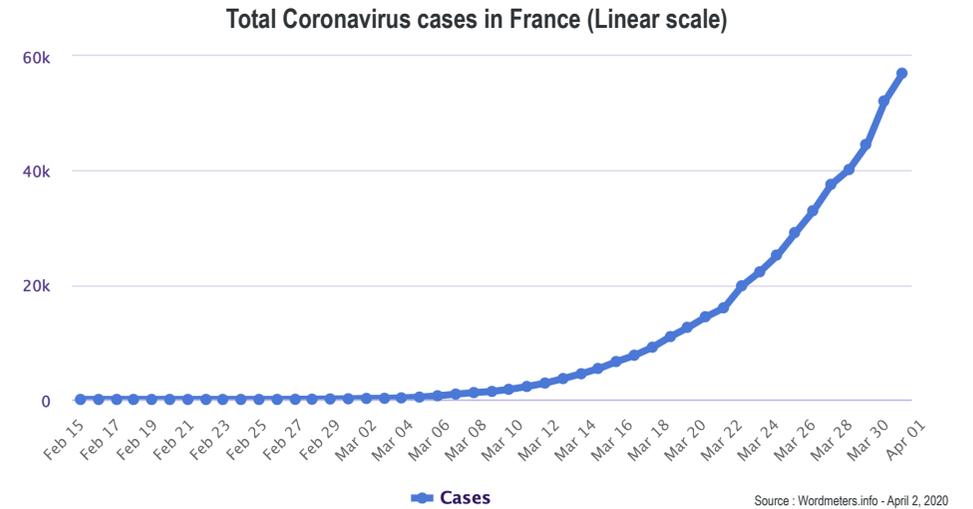
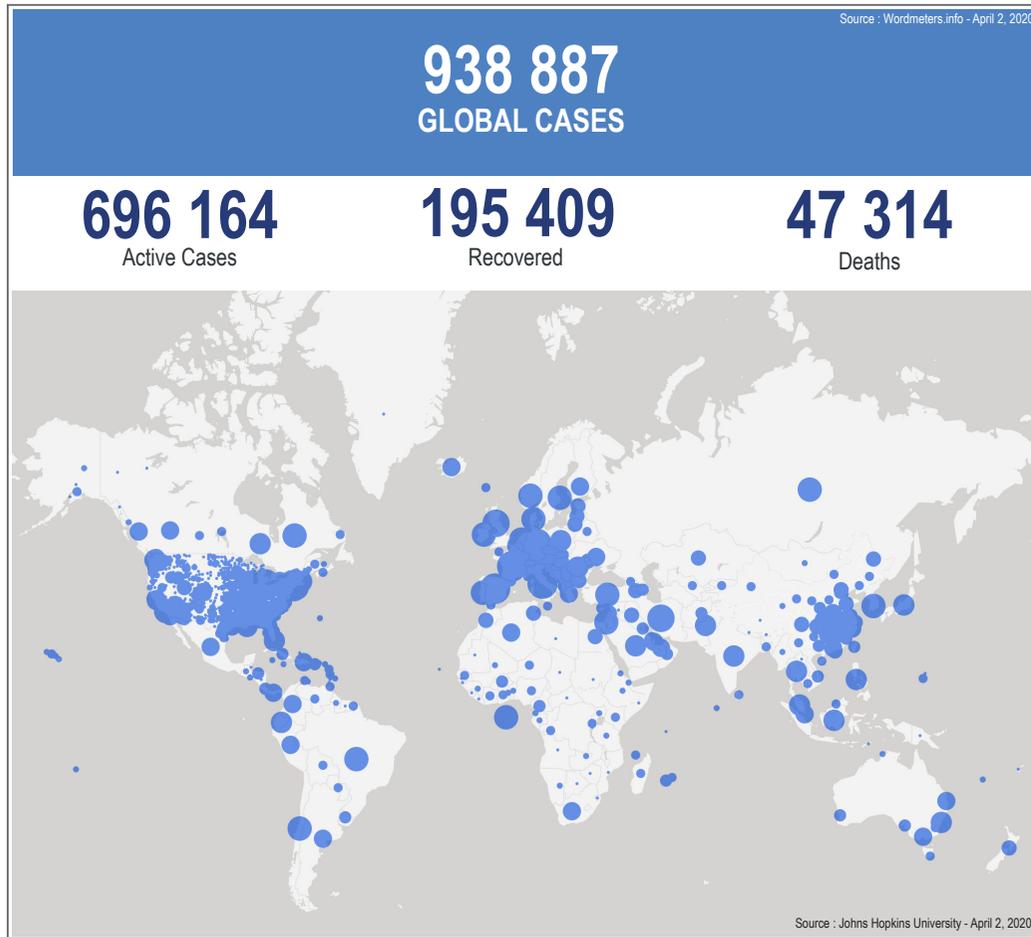


Global Overview of the impact of Coronavirus

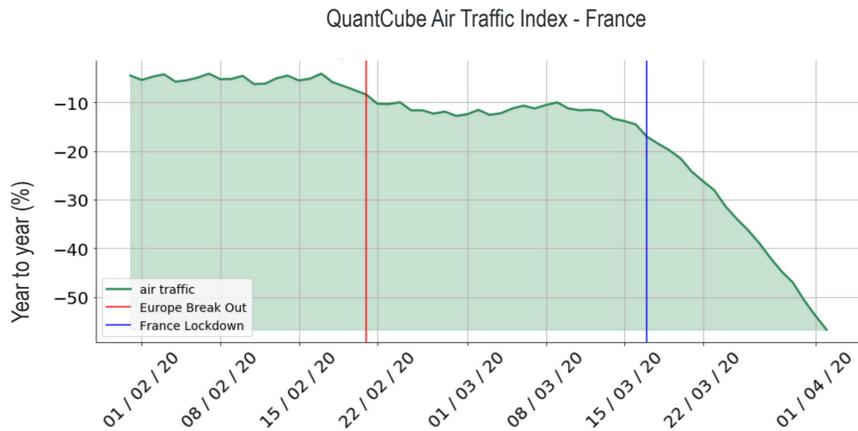


AIR TRAFFIC

QuantCube Technology tracks all the air traffic worldwide. Due to increasing travel restrictions, we observe a significant drop of air traffic in France. More globally, the Covid-19 crisis is massively impacting airline companies. Indeed, the travel demand has extremely dropped and large part of the fleet is currently grounded. This Wednesday, the Orly Airport in Paris, closed until further notice after hosting just 10 flights on Tuesday compared to its usual daily traffic of 600 flights.



Paris Aéroport announcing on Twitter, the shutdown of Orly airport, France's biggest airport for domestic flights



ROAD CONGESTION

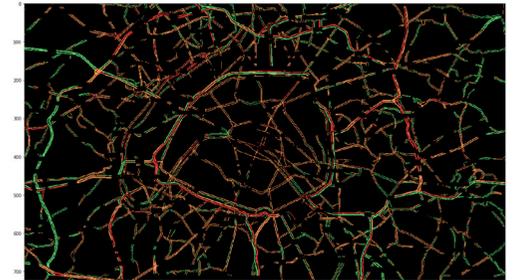
To limit the virus transmission, more and more countries are locking down, shutting down many businesses and encouraging employees to work remotely when it is possible. Other governmental measures allowed partial unemployment... These new habits have real impact on the road congestion that especially contributes massively to greenhouse emissions. In normal traffic, we observe two daily spikes in traffic congestion during rush hours: from home to work and from work back home.

Paris, illustrating the observance of social distancing and the consequence of shops, restaurants and offices shuttering. We also observe on our Consumption Index that the lock down has repercussions on the confidence of the consumer.

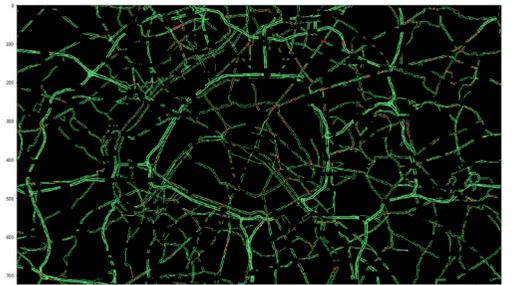
This road Congestion Index will be used by our team to monitor the "return to normal" when the lockdown will be lifted. The reversal of this congestion index will be very useful to estimate the inflection point related to the impact of Covid-19 on the economy.

Since the lock down announced by the President Emmanuel Macron on Monday 16/3/2020, we observe a drop of 89% in our QuantCube Congestion Index in

QuantCube Congestion index Paris (France)
= 82.56
Usual Traffic on Mondays



QuantCube Congestion index Paris (France)
= 8.77
30/03/2020



INDUSTRY

QuantCube Technology tracks different levels of pollution, especially emissions from nitrogen dioxide, ozone, sulphur dioxide, methane, carbon monoxide and aerosols provided by Tropomi, a spectrometer instrument from the satellite

Sentinel 5P. Tropomi maps the global atmosphere every day with a resolution of 7 km x 3.5 km. The analysis of these data allows us to follow human activities by comparing the total average of produced

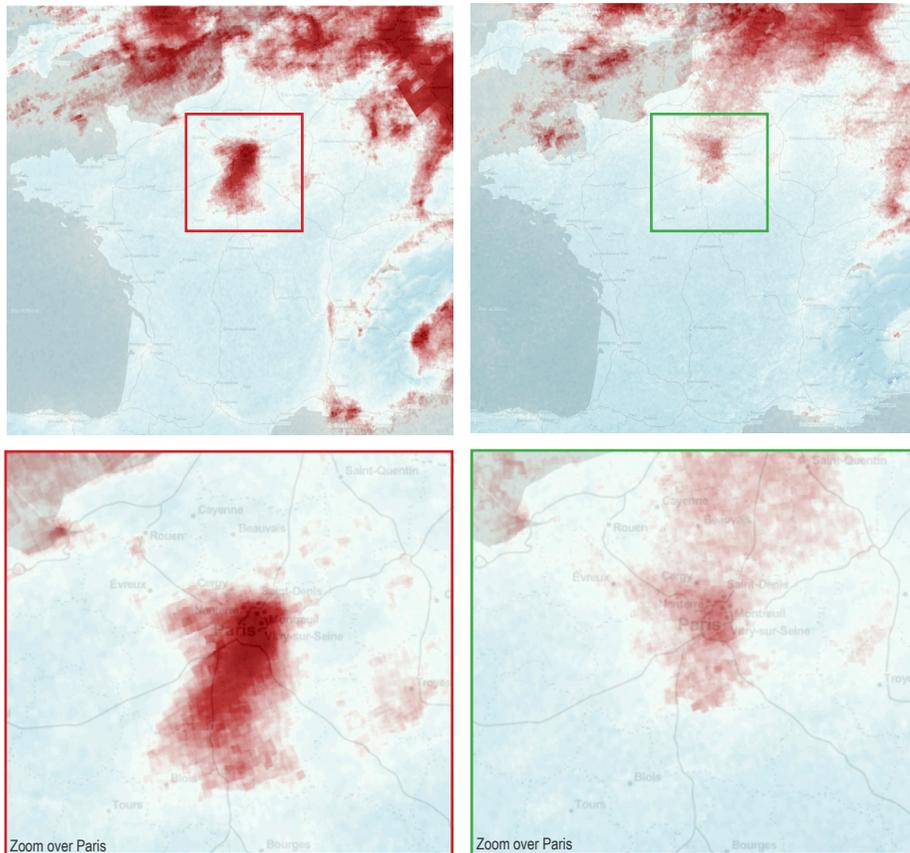
NO2 over given periods in time. In France, NO2 is primarily emitted from the traffic (cars, ships, planes), a combustion of fossil fuels in industrial processes and from heating. The largest emitter of NO2 in France is Paris area.

In this case, two periods are presented: from 17/3/2019 to 30/3/2019 ; and from 17/3/2020 to 30/3/2020 for France with a zoom on the Paris area.

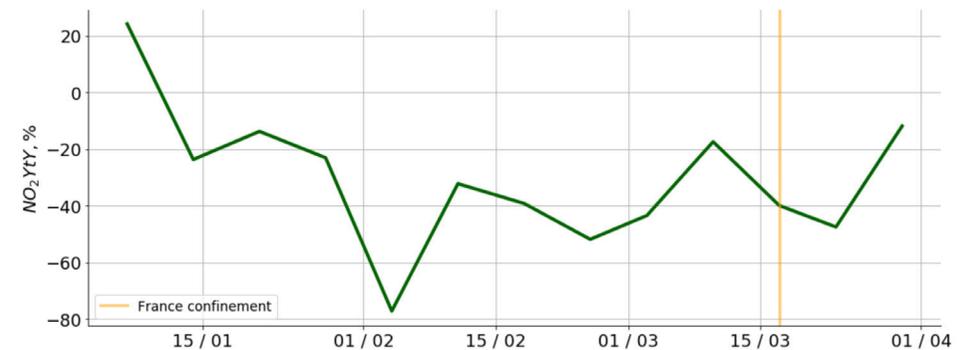
QuantCube Industrial activity index - France

France '17/3/2019' - '30/3/2019'

France '17/3/2020' - '30/3/2020'



QuantCube Industrial Activity Index - Parisian Region



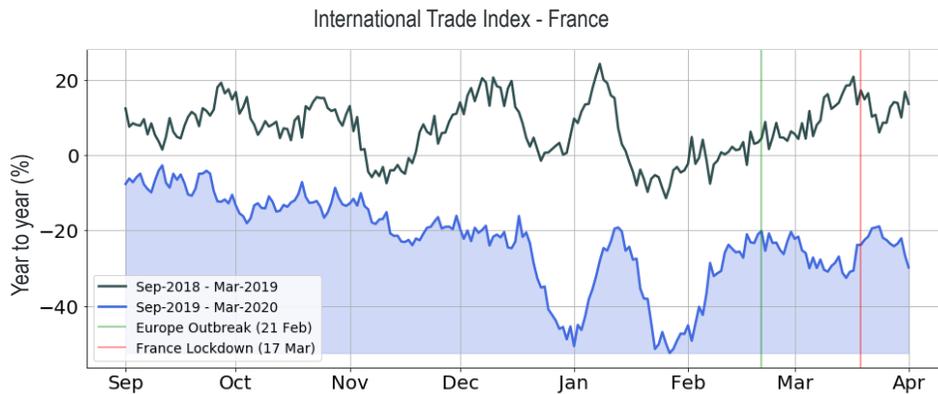
QuantCube directly compares the growth rate of pollution between those two periods. We observe that the level of emissions in France has been reduced on average by 25% since the end of January 2020 (compare to the 2019) and 50% around Ile-De-France (Parisian region) which is also caused by

the reduction of the shipments and transportation over the country since the spread of the Covid-19 in the world. Even the drop of the ambient temperature did not increase the level of the emissions due to the significant drop of the traffic and production activity.

INTERNATIONAL TRADE

Despite the lockdown, HAROPA (Le Havre, Rouen and Paris) and Marseille-Fos French hubs are still maintaining their activity in order to secure the imports and exports of goods including medical supplies thus enabling the supply to France and Europe. With the normal activity being held, major vigilance measures are deployed to ensure the safety of employees present at the port.

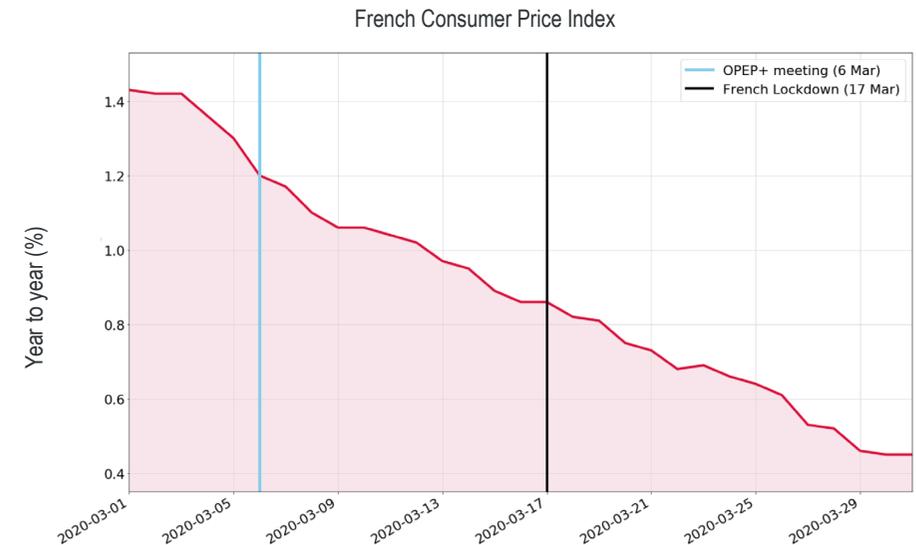
To avoid the high risk of COVID-19 contamination at ports, passenger ships are prohibited during this period. At the beginning of April 2020, maritime traffic in France is down more than 25% compared to the previous year. Even before the Covid-19 impact, there were also some strikes in France that have impacted significantly maritime traffic.



INFLATION

The Quantcube French Consumer Price Index has sharply decreased since the beginning of March 2020. It went from 1,45% on 1/3/2020 to 0,47 % on 31/3/2020, (the first official inflation estimation - measured in the last days of the month - is equal to 0.6 %). This is mainly due to the decrease in demand and the drop in oil prices explained by the over-supply of fuel

and oil products. The absence of agreement between the Organisation of the Petroleum Exporting Countries (OPEC+) on one hand, and on the other hand Russia and Saudi Arabia on decreasing oil production on March 6, caused a continuous drop of the price of crude oil per barrel.



CONSUMPTION

QuantCube Technology index tracks consumption on a daily basis. After the breakout of Covid-19 in Europe, overall French consumption has decreased, temporarily increasing in the consumption of basic goods. First signals appeared just after the Italian lockdown through the sharp slowdown of leisure demand.

Slightly before the anticipated president's first speech about coronavirus, fear has increased with rumors about a possible lockdown and caused an exceptional reaction of over-stocking foods and basic commodities. Few days after the lockdown, the rush on basic food consumption has disappeared.

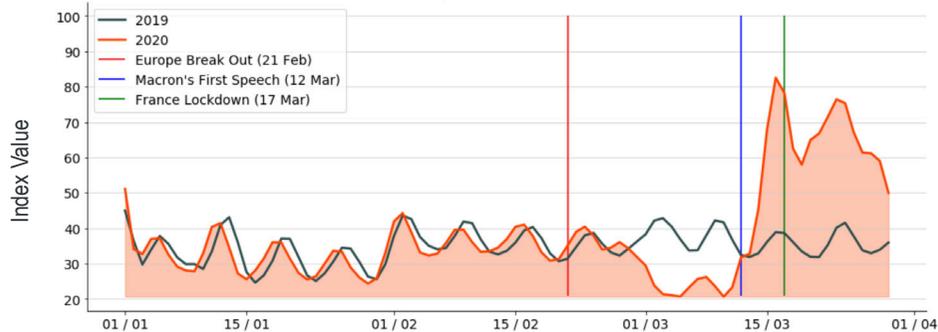
JOB OPENINGS

QuantCube Job Openings Index tracks changes in real-time the job market, anticipating official numbers with high correlation. By taking into account the information related to each new job (position, company sector, and type of contract), it enables to have a granular view on the job market sector, and even by sub-sector. Such data are significantly in advance

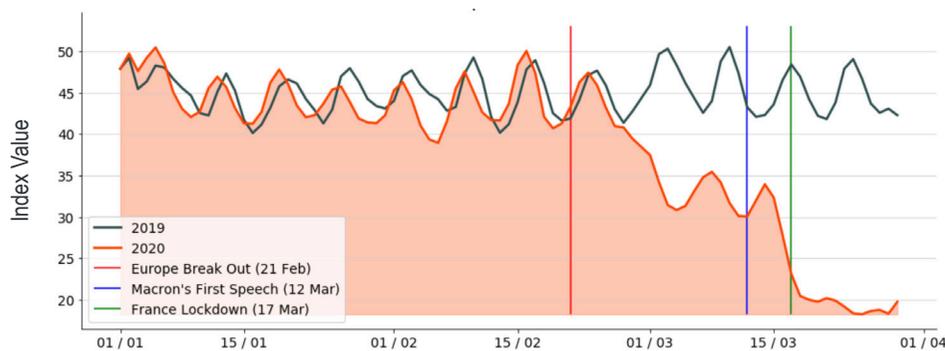
compared to official numbers.

For example, three days before the official confinement measures implemented by the French Government due to the COVID-19, QuantCube Job Openings Index has already occurred a YtY drop of 32% by the end of 1Q2020.

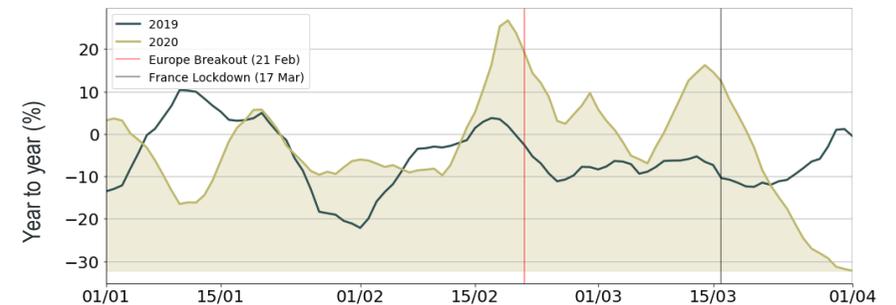
QuantCube Consumption Index: Food Retailers - France



QuantCube Consumption Index: Leisure - France



QuantCube Job Openings Index - France



Company Background

Founded in 2013, QuantCube Technology is a fintech startup specialized in **Alternative Data Analytics for Economic Intelligence**. QuantCube Technology aims to provide to financial institutions actionable global macro smart data through its economic intelligence platform. Our focus is especially on real-time predictive analytics, commonly called Macroeconomic Nowcast.

QuantCube has built up one of the largest datalake in the financial industry. Relying on the most advanced AI techniques and high performing computing machines, we are able to **estimate in real time major macroeconomic variables** such as economic growth, employment market, inflation, international trade or consumer expenses with very high correlation with official numbers.

Our team has proven expertise on AI analytics such as multilingual Natural Language Processing to analyze different economic and financial texts, Deep Learning for Satellite data analytics or machine learning techniques on structured data such as maritime traffic, meteorological data, and other numerous data sources.

QuantCube is also involved in **advanced scientific publications with governmental agencies, academic institutions and major leading corporates** in different sectors of the economy.

QuantCube Technology is backed by two major institutional investors : **Moody's Investor Services** and **Five Capital** -a joint venture between CDC International (Caisse des Dépôts) and Kingdom Holdings.

Disclaimer

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