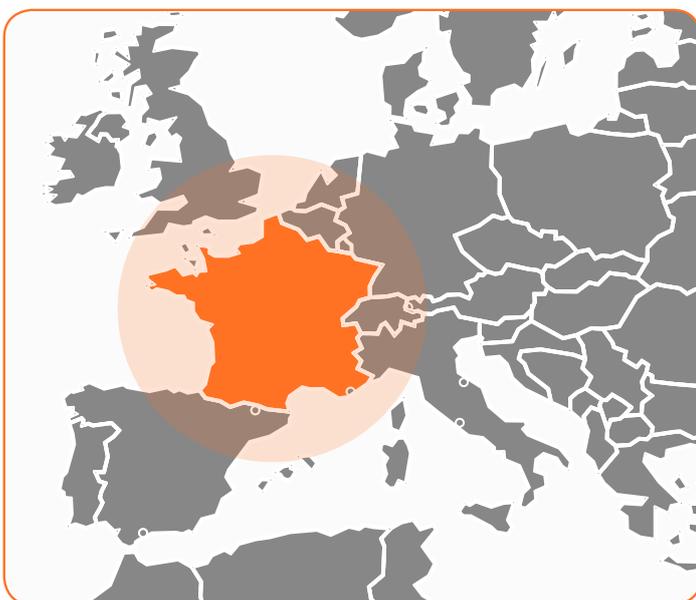


GLOBAL OIL INDUSTRY ACTIVITY MONITORING

What it's all about

Energy companies and commodity traders can all benefit from having more precise and timely information on movements within the crude oil market. Knowing more about the current locations of oil inventories as well as where they are moving, gives any trader a better overall understanding of the market, allowing them to buy and sell at optimum times. Crude oil is typically stored in tanks in which the roofs float on top of the oil content inside the vessel, meaning the roofs

rise or fall as crude oil is pumped in or out of the tank. Sentinel-1's InSAR capabilities allow for the monitoring of the heights of these roofs worldwide. This data can then be processed to build a global picture of crude oil inventories. Market participants can then use this information to make better informed business decisions. This encourages market competition and ultimately drives prices lower for end users.



What we found

- The service provider, Kayrros, has leveraged Copernicus Sentinel-1 data to measure the heights of crude oil storage tank roofs globally. They have developed algorithms that can produce continuous and accurate estimates of where oil inventories are currently situated and how they are changing. The free and open data available from Copernicus has been instrumental in making business models like Kayrros' commercially viable.
- TOTAL's Market Analysis team use global crude oil inventory tracking services to make better informed decisions, not only when it comes to their trading, but for their planned production volumes, as well as the short to medium term strategy of the company as a whole.
- The accurate monitoring of oil inventories ultimately increases market competition. This contributes to consumers and society having greater access to fairer priced



The Satellite Data

Copernicus Sentinel-1 provides free-of-charge frequent, all-weather, day-and-night C-band radar images.



The Service Provider

Kayrros is an advanced data analytics company that helps global energy market participants make better investment decisions. They track crude oil inventories globally and provide customers with continual information on their volumes and movements.



The Primary User

TOTAL is an energy company which produces and markets fuels, natural gas and low-carbon electricity. They use oil inventory tracking to better understand the markets in which they operate, allowing them to make more informed business decisions.



End User Beneficiary

Oil inventory tracking ultimately increases market competition. Competitive markets drive prices lower for end users while simultaneously reducing the chances of monopolies forming and exploiting customers.

About the project

Through a series of case studies, EARSC aims to gather quantitative evidence that the usage of Copernicus Sentinel data provides an effective and convenient support to various market applications. These studies are undertaken in the frame of the project "Showcasing the benefits brought by the usage of Sentinels data to society, environment and

economy: a bottom-up assessment based on traceable impacts along selected value chains", under an assignment from the European Space Agency (ESA) funded by the European Union as part of the Copernicus Programme.

