

## INEOS Oxide trusts Globalstar and Ovinto satellite IoT technology to ensure safe delivery of highly explosive chemicals

### Highlights:

- [INEOS Oxide](#) is equipping all its European tank containers and rail tank cars with [Ovinto Sat satellite IoT tracking and monitoring solution](#) to ensure safe transport of highly explosive petrochemicals, with approximately 700 tracking devices deployed to date
- Fully ATEX-certified Ovinto Sat harnesses the Internet of Things (IoT) and [Globalstar](#) satellite technology to ensure vital data transmissions are ubiquitous and uninterrupted
- Ovinto Sat is enabled by Globalstar's Low-Earth Orbit spacecraft and [STX3 chipset](#) to deliver reliability, reach and cost-effective satellite communications

**Dublin, Ireland – August 24, 2023** – [Globalstar Europe Satellite Services](#) Ltd., a wholly owned subsidiary of [Globalstar, Inc.](#) (NYSE American: GSAT) announced



today that leading global petrochemicals provider [INEOS Oxide](#) is deploying the [Ovinto Sat](#) tracking solution to monitor and safeguard rail and road transport of highly explosive gases across mainland Europe.

Following the staged introduction of the system over several years, INEOS Oxide has expanded the deployment and now installs Ovinto Sat sensors across its entire fleet of tank containers and rail cars, a total of approximately 700 devices to date.

Globalstar satellite communication at the heart of Ovinto Sat enables INEOS Oxide to know the exact location and status of every tank and rail car, continuously and in real time as they traverse the continent, even when beyond the reach of GSM mobile networks. This regular, reliable dataflow empowers INEOS Oxide and its supply chain partners to make speedy, well-informed business decisions about each delivery and be alerted to any changes in container/car environmental conditions that might affect the shipment.

“We are extremely pleased with the performance of Ovinto Sat,” says Business Safety, Health & Environmental (SHE) Manager at INEOS, Patrick De Block. “Ovinto Sat’s innovative and powerful tracking platform helps our business in so many ways, the most important of which is ensuring the safe conveyance of our products.”

“There are other solutions out there, but we know that ATEX-certified Ovinto Sat, with its reach and constancy enabled by Globalstar’s satellite technology, is the ideal solution for INEOS Oxide,” De Block added.

Two of the main products which INEOS Oxide transports are Ethylene Oxide and Propylene Oxide, primarily used to manufacture products for the following industries

and applications: Agrochemicals, Construction, Pharmaceuticals & Personal Care, Solvents and Inks, Surfactants and detergents. Both chemicals are highly explosive, flammable and carcinogenic to humans and animals.

### **Ensuring safety for all stakeholders and public**

When it comes to transporting such volatile materials safely, says De Block, “we need to know where our assets are, and what their internal temperature is. Ovinto Sat provides this and at the same time is helping us to optimise our systems.”



This solution reduces accident risk in transportation by monitoring the condition of the chemicals in each rail car and tank while providing valuable shipment information for the supply chain. The essential parameter for the safe transport of these hazardous products is temperature. After evaluating several alternatives in the marketplace, INEOS Oxide decided to deploy Ovinto’s PT1000 solution that monitors the surface temperature of the tank’s or rail car’s contents.

In the event of an emergency, Ovinto Sat can provide stakeholders and public authorities with a detailed understanding of the tank’s or rail car’s location and conditions.

Critically, thanks to satellite technology, all stakeholders can be confident that IoT transmissions from the tanks and cars are reliable, ubiquitous and uninterrupted. This ensures the very highest level of safety, benefitting and protecting supply chain partners, infrastructure authorities, and rail and road users.

### **Multiple operational benefits**

Ovinto Sat provides myriad operational benefits. This IoT-empowered solution gives INEOS Oxide instant updates about whether a rail tank car has been loaded or unloaded or is ready to be redeployed. This helps INEOS Oxide enhance return on investment and optimisation of assets.

The company uses the system to set up geofences around customer locations. INEOS Oxide can provide granular detail on car or tank temperature alongside delivery logistics as the shipment nears its destination.

“We are now able to harvest so much data, we can make informed predictions regarding temperature fluctuation, and any necessary requirement for refrigeration, as our shipments move across countries; this digital information is really valuable for both our operations and continuous assurance of safety,” De Block notes.

Ovinto Sat is built around Globalstar’s low power [STX3 chipset](#), the smallest satellite transmitter of its kind on the market. Since it’s battery powered, customers can monitor hazardous materials in unpowered environments such as rail cars and tanks.

Because of its very low power consumption, the Ovinto Sat battery can last up to eight years.

Frederick Ronse, Ovinto CEO, commented: “With our ongoing engineering enhancements, we will continue to help INEOS Oxide reduce risk, increase the safety of its cars and tanks, and enhance supply chain decision-making. Globalstar technology is our communications core due to its ubiquitous reach, reliability and power efficiency compared to GSM.”

“The need for reliable, resilient connectivity is particularly acute when transporting potentially hazardous materials. With no GSM signal over many areas of continental Europe, satellite is the only reliable way of communicating, and we are proud to collaborate with Ovinto to support INEOS,” commented Mark O’Connell, General Manager at Globalstar EMEA & APAC.

### **About INEOS**

INEOS is a global petrochemicals manufacturer, comprising 36 individual businesses. We operate 194 facilities in 29 countries throughout the world, employing over 26,000 people. INEOS makes the raw materials and energy used for everyday life. Its products make an indispensable contribution to society by providing the most sustainable options for a wide range of societal needs. For example, preservation of food and clean water; construction of wind turbines, solar panels and other renewable technologies; for construction of lighter and more fuel-efficient vehicles and aircraft; for medical devices and applications; for clothing and apparel; and for insulation and other industrial and home applications. In recent years INEOS has diversified with the launch of INEOS Automotive and INEOS Hygienics, acquisition of iconic British brand Belstaff and an ever-expanding sports portfolio. A blend of opportunism, belief that it can add value in pursuit of its core values and passion for adventure. <https://www.ineos.com>, <https://www.ineos.com/businesses/ineos-oxide>

### **About Ovinto**

Ovinto helps its customers to remotely monitor processes and goods and supplies them with critical data in a format customisable to users’ requirements. Ovinto developed a unique ATEX Ovinto Sat monitoring device enabling the monitoring of extremely hazardous materials in unpowered transport units. In 2011 Ovinto Sat achieved the highest possible ATEX standard certification for explosion safety. The solution is used for monitoring rail tank cars and tank containers carrying a wide variety of hazardous materials. Ovinto Sat can deliver business critical data on engine operating hours, fluid levels, temperature, pressure, shocks etc. Additional to Ovinto Sat hardware, Ovinto has also developed a reference Supply Chain Optimisation SaaS platform dedicated to rail and intermodal freight to support the IT infrastructure of its customers with complementary services, increasing efficiency and reducing costs. [www.ovinto.com](http://www.ovinto.com). See also <https://www.youtube.com/user/OvintoVideo>

### **About Globalstar, Inc.**

Globalstar empowers its customers to connect, transmit and communicate in smarter ways — easily, quickly, securely, and affordably — offering reliable satellite and terrestrial connectivity services as an international telecom infrastructure provider.

The company's LEO satellite constellation assures a secure data transmission for connecting and protecting assets, transmitting key operational data, and saving lives — from any location — for consumers, businesses, and government agencies across the globe. Globalstar's terrestrial spectrum, Band 53, offers carriers, cable companies, and system integrators a versatile, fully licensed channel with a growing ecosystem to improve their customers' wireless connectivity. In addition to SPOT GPS messengers, Globalstar offers next-generation IoT hardware and software products for efficiently tracking and monitoring assets, processing smart data at the edge, and managing analytics with cloud-based telematics solutions to drive safety, productivity, and profitability. [www.globalstar.com](http://www.globalstar.com)

**Note to media** attending [the 57th Annual Meeting of the European Petrochemical Association \(EPCA\) Vienna, 25-28 September, 2023](#): if you would like a 1:1 briefing with Ovinto, please just get in touch and we'll co-ordinate it.

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**And an earlier deployment:**

**Globalstar, Ovinto and Satellite IoT Support Clean Energy with Safe Worldwide Transport of Hazardous Gases**

**Highlights:**

- [Globalstar](#) and [Ovinto](#)'s satellite IoT enabled asset monitoring platform [Ovinto Sat](#) are helping a major exporter of potentially explosive gases to safely deliver its products worldwide
- Meeting the needs of fast-growing demand for Liquefied Natural Gas (LNG) and hydrogen, Ovinto and its customers are helping organisations and consumers become less reliant on traditional fossil fuels
- Globalstar's Low Earth Orbit (LEO) satellite system, and Ovinto Sat sensor devices built around Globalstar's tiny, low-power [STX3 chipset](#) deliver reliable ubiquitous coverage, minimal latency, energy efficiency and affordability

**Dublin, Ireland – March 23, 2023** – [Globalstar Europe Satellite Services](#) Ltd., a wholly owned subsidiary of [Globalstar, Inc.](#) (NYSE American: GSAT) today announced that a major international provider of hazardous gases is helping organisations and consumers to use cleaner energy.

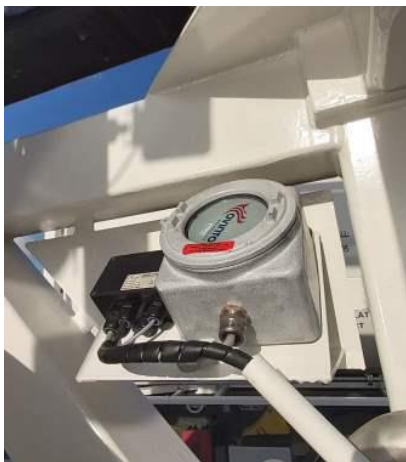
The gas exporter has deployed the [Ovinto Sat](#) smart asset monitoring system to ensure the safety of Liquefied Natural Gas (LNG) as it travels in cryogenic tank containers to customers around the globe. Ovinto Sat is enabled by the Globalstar worldwide satellite fleet and includes multifunction sensors built around Globalstar's [STX3 chipset](#), the smallest and lowest power consuming satellite IoT chipset on the market.

The exporter's containers are principally used for worldwide export of argon, nitrogen, oxygen, carbon dioxide and nitrous oxide. Customers represent a diverse range of organisations and sectors. These include energy and gas providers, industrial companies, leisure sector including hotels, medical businesses, beverage makers, among others.

### **Hydrogen and LNG demand rising in pursuit for clean energy**

LNG is a rapidly growing business area for the company, particularly in the US and Mexico. It is believed that the LNG market will see significant growth in the coming years as demand surges for sources of energy alternative to traditional fossil fuels.

Particularly to fuel vehicles, hydrogen demand is on the rise. "As the world turns to cleaner sources of energy, hydrogen is a big part of the solution to solve the global energy crisis," explains the Assets Manager at the gas exporting company.



Many of the initiatives aimed at promoting using hydrogen for vehicles are backed by governments as part of their commitments to reduce carbon emissions.

#### **Ovinto Sat Advantages**

The gas exporter owns 600 tank containers, each fitted with an Ovinto Sat sensor device, as is every new container purchased.

The company began to deploy Ovinto Sat four years ago. Earlier solutions the company tried were only able to provide positioning information. Only Ovinto Sat sensors could measure internal temperature and pressure. Ovinto

Sat's configurability was also a huge factor in the exporter's procurement decision. The company also found Ovinto Sat's operational dashboard to be highly functional and user friendly.

Alternative systems trialled were unable to provide uninterrupted tracking due to reliance on GSM technology. Others were too complex for speedy implementation, or their operational user interface was unintuitive. The robustness, low power consumption and long battery life of Ovinto Sat units were further valued features. "We were confident that Ovinto Sat units were rugged enough to withstand the long journeys on road, rail and sea that our containers take," the Assets Manager said.



### **Satellite IoT enables uninterrupted key data flow**

It's critical to be able to continually monitor the pressure inside these containers to ensure the safe travel and delivery of these highly dangerous liquefied gases. Tank containers get stacked during transport and storage. The sensor devices are affixed to the outside of the container, each safe inside its own rugged domed casing, to keep a continuous line of sight

with the satellites. The devices maintain uninterrupted visibility of the satellite network in Low Earth Orbit, so data on the environmental characteristics of the container flow uninterrupted as they traverse the globe.

“The Globalstar satellite system remains the best solution on the planet on account of its coverage, minimal latency, low power and, as a result, its affordability,” said Frederick Ronse, Managing Director of Ovinto.

### **Ovinto Sat - Highest ATEX certification and low power consumption**

Critically important for the conveyance of hazardous materials, Ovinto Sat complies with the highest possible ATEX standard certification for explosion prevention. At the heart of Ovinto Sat is Globalstar's low power STX3, the smallest and lowest power consuming chipset on the market. Because it's powered by long-life batteries, Ovinto Sat allows customers to monitor materials in unpowered environments including rail tank cars and containers.

“We are continually amazed by the myriad of ways in which Satellite IoT enabled solutions based on Globalstar are used to improve people's lives, businesses and the environment,” commented Mark O'Connell, General Manager for Globalstar EMEA & APAC. “And we're tremendously proud that, together with our valued partner Ovinto, we're enabling the safe delivery of cleaner energy solutions to ever more customers.”

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