

When spatial technology first came on the scene it was hard to imagine how the idea of a global mapping schema could play such a vital role in the routing and delivery of goods globally. For WiseTech Global, it is now an essential tool within the CargoWise platform.

We investigate the industry pain points then work to solve them. Spatial technology has helped us develop a more seamless global solution using the latest technological advances to address delivery and tracking concerns. This is why our CargoWise One platform is a leader in its field.

Space is the place

CargoWise One

Where are you? You can answer this question in several ways. You can use a street address, you can identify an area, or you can rely on local knowledge and landmarks. However, these methods have shortcomings in a data driven environment. In a world which is becoming more digitised and speeding up around us, it is more important than ever to know exactly where we are, and where we want to be.

Spatial (or geospatial) technology refers to software or hardware that assists with mapping of the earth through the study of position, area and size of locations. Otherwise known as applied geography, spatial science uses technologies such as global positioning systems (GPS), geographic information systems (GIS), remote sensing (RS), satellite imagery, and augmented reality. These technologies are used to visualise, manipulate, analyse, display, and record spatial data.



Spatial information is increasingly used across many industries including transport, defence, security, agriculture, mining, construction, healthcare, and retail. The spatial information industry had an estimated combined market worth of nearly US\$340 billion in 2018. Its market worth is expected to grow to around US\$440 billion in 2020.¹

The benefits of spatial technology

The rapid growth of the spatial technology market is a testament to expected and realised improvements in productivity and efficiency.

In recent years the positive economic impact of the spatial industry has been nearly double the industry's revenue growth.² This stems from new technologies becoming available and their wider and deeper adoption.

Spatial technology also has commercial, social, political and environmental benefits. It can help both businesses and consumers optimise travel routes to beat traffic congestion and increase fuel efficiency and road safety. This helps save time, reduce emissions and improves road safety. Ridesharing companies use spatial technology to accurately determine where users are when they request a ride and how much to charge. In construction, some companies are using high quality satellite imaging combined with spatial technology to quote on certain jobs without having to visit the site. Insurance companies are using the technology to determine risk by remotely assessing the proximity of surrounding buildings and threats and even dating apps accurately determine where future possible matches are waiting.

Recently CargoWise One introduced address validation using spatial technology and since then it has enabled more than 200 million address validations

Spatial technology in logistics

Spatial technology has diverse and important applications in the global logistics solutions industry. Trade volumes and regulatory complexity increase. International ecommerce is changing commercial demands, border compliance risks, and customer expectations. Spatial technology, or more specifically geofencing, offers significant operational productivity improvements.

Geofencing involves drawing a virtual boundary around a geographic entity. This could be a national border, a suburb, a building, or even the loading area at a site. Once an area is geofenced, it can be paired with a software program that is triggered in response to a predetermined boundary breach. For example, one could geofence a warehouse and set up an alert when a truck carrying goods to the warehouse is soon to arrive.

End-to-end logistics is complex, particularly when it covers diverse geographies. It requires many components working together across the entire supply chain. The typical end point of the chain is a delivery address in a postcode. That postcode is used to determine routing, timing, and cost. The size of a postcode area is not defined and some countries don't even have a postcode, ZIP code or reference code system. Therefore postcodes are not the best method of locating a specific point on the earth. These inconsistencies impact decisions around optimised routing, pricing, and reporting.

Our global logistics execution platform CargoWise One, engineered an address validation engine using spatial technology. The service ensures delivery addresses can only be entered accurately. The platform uses geocoded co-ordinates aligned to a geographic location. This service allows CargoWise One users who manage freight shipments globally to make more accurate delivery and routing decisions. Since its introduction, more than 200 million addresses have been validated.

References

¹ <https://geospatialmedia.net/spatial-technologies-in-fieldwork>

² <https://www.crcsi.com.au/assets/Resources/CRCI-Global-Outlook-Report-2018.pdf>

³ Armstrong & Associates: Top 50 Global Third Party Logistics Providers List, ranked by 2017 logistics gross revenue/turnover.

⁴ Armstrong & Associates: Top 25 Global Freight Forwarders List, ranked by 2017 logistics gross revenue/turnover and freight forwarding volumes.

Notes to editor

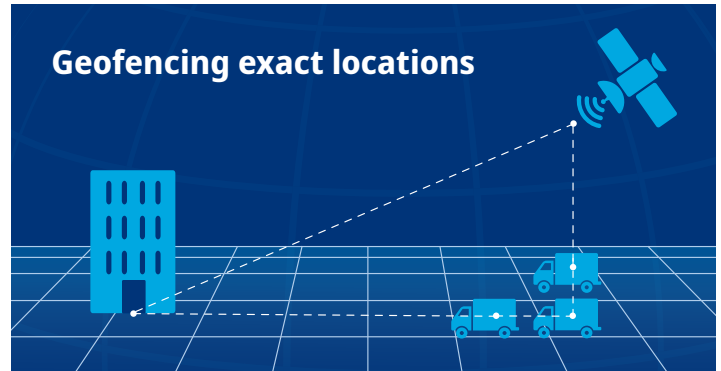
WiseTech Global is a leading developer and provider of software solutions to the logistics execution industry globally. Our customers include 12,000 of the world's logistics companies across 150 countries, including 43 of the top 50 global third party logistics providers³ and all 25 of the 25 largest global freight forwarders worldwide.⁴

Our flagship product, CargoWise One, forms an integral link in the global supply chain and executes over 50 billion data transactions annually. At Wise-Tech, we are relentless about innovation, adding more than 3,500 product enhancements to our global platform in the past five years while bringing meaningful continual improvement to the world's supply chains. Our breakthrough software solutions are renowned for their powerful productivity, extensive functionality, comprehensive integration, deep compliance capabilities, and truly global reach.

For more information visit: wisetechglobal.com or cargowiseone.com

Put a fence around it – a geofence

Geofencing can help logistics providers in a variety of ways. Some countries contain internal borders that distinguish between different legal or regulatory regimes. For instance, in the UK, England and Scotland's distinct legal systems provide shippers some variance in legal and regulatory requirements depending on the legal jurisdiction a movement falls under. Geofencing allows shippers to determine exactly where their delivery goes so they can prepare documentation accordingly.



Previously, delivery times at a port might not take into account congestion on the roads, where trucks can often back up in queues outside the port, meaning the reserved dock sits unused until the truck does arrive. However, geofencing allows a specific part of the delivery area to be geocoded, so the delivery notification can only be made when the truck actually arrives and there is no wasted time at the reserved dock. Many trucks are now fitted with GPS devices that allow shipments to be tracked including port notification or triggering an event at a warehouse for unloading.

The potential of geofencing is vast. This technology could one day enable many more people to import and group their own geoshapes, such as post offices, government bodies, or border agencies. This will allow people to be more accurate and specific with logistics and delivery decisions.