

Futureproof Location Intelligence Requires Customizable Solution Platforms

What Does The Future of Location Intelligence Look Like?

Big data requires attention to small details, especially if you want to harness and analyze data that continues to get bigger and bigger. In fact, National Geospatial-Intelligence Agency (NGA) predicts that in the next

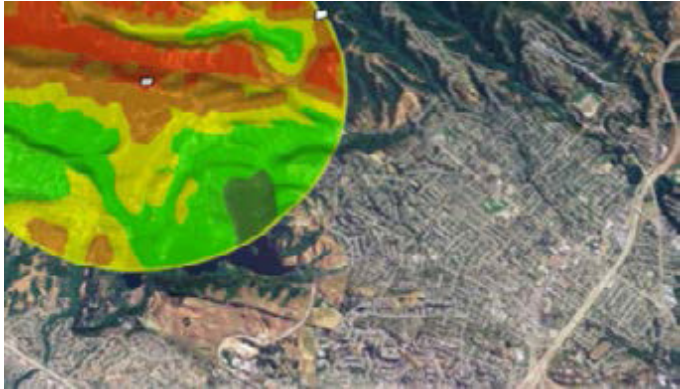
five years, there will potentially be a million times more geospatial data than there is now.

Hexagon's Geospatial division executives agree that processing this much geospatial data requires a modern approach. Not only is the amount of data growing, but the lifespan of the data is shrinking. "Traditional



processes would require a longer time to pre-process the data than the data would be useful,” said Chief Technology Officer (CTO) – Applications, Georg Hammerer, echoing the words of CTO – Platforms, Frank Suykens.

Gartner analyst Ted Friedman recommends evaluating technologies with strengths in “capturing streaming, time-series and unstructured data, as well as those supported via the elastic scalability of cloud, because these requirements will be common for future IoT use cases” (emphasis added).



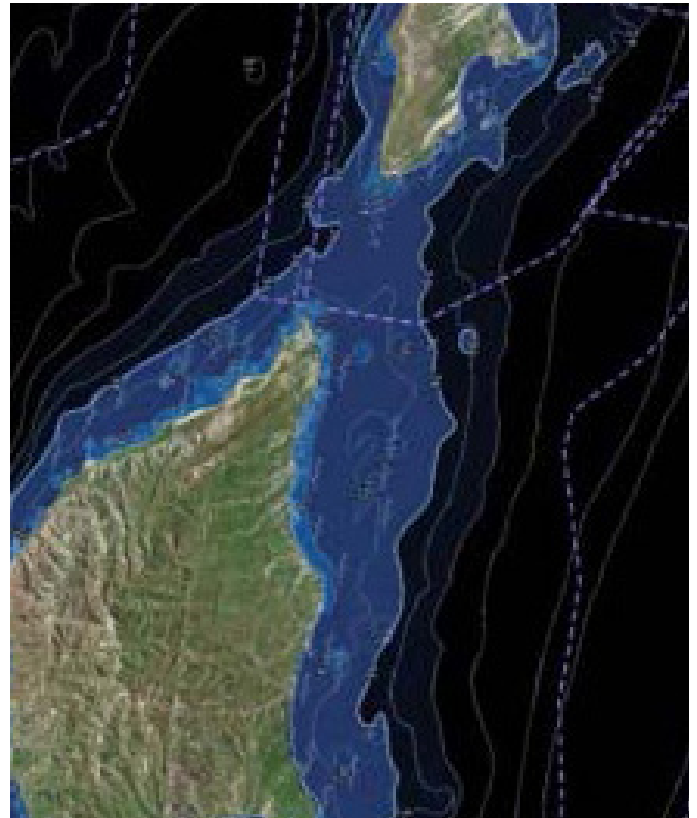
What Does it Mean to “Future-proof” Location Intelligence?

Hexagon’s Geospatial division, an industry leader in remote sensing and GIS solutions that had already begun extending desktop solutions to the cloud, sought to add real-time data visualization to its software solutions. In late 2017, Hexagon’s Geospatial division acquired Luciad, the real-time situational awareness software industry leader, because they recognized the details noted by Friedman:

- **Streaming** – Track anything that moves on, above, or below ground in real-time.
- **Time-series** – Allow the fusion and distribution of multiple 2D, 3D, and 4D files, such as weather data, maintaining all dimensions and temporal slices.
- **Unstructured data** – Connect to data in its native format, with no pre-processing necessary.
- **Scalable for the cloud** – Deliver the fastest GPU-based geospatial visualization software on the market.

The result is that, “we can give our customers the assurance that our technology is fit for tomorrow,” said Christoph De Preter, Chief Sales Officer of Hexagon’s Geospatial division.

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“People used to think of the real-time data overlaid on top of a static basemap or background image. Now, even that background image is becoming dynamic. Today, you don’t just get a picture out of space, you get live video streams from satellites. Everything is becoming real-time, and we are fully equipped for that.”

But what really makes Luciad technology fully equipped for the future is its extensible “building-block” API design. Luciad Portfolio products are designed with interfaces that can be implemented and extended. That allows them to ingest any data format and to build a sustainable application that can be extended and adapted to meet future demands.

Hexagon’s cloud-based solutions and component-based Spatial Modeler technology also employ a modular design. These let users build their own desktop, server, or cloud solutions that incorporate only the geoprocessing that they need. The 450+ geoprocessing services use multi-source data to perform operations such as georeferencing, orthorectification, and change detection. By extracting and repurposing proven geospatial technology into stand-alone functional elements, Hexagon has enabled users and partners to create streamlined, targeted applications that solve their specific problems.

How is Hexagon Changing Location Intelligence?

Modernizing The National Census

For countries that have not yet moved to electronic registration, conducting a paper-based national census is a time-consuming and error-prone project. Statistics South Africa and GeoSpace International used Hexagon technology to digitalize all the census phases – pre-enumeration, enumeration, and post-enumeration – saving time and money and improving data accuracy. Census interviewers canvass their assigned enumeration areas and use their own smartphones or tablets to input each household's information. Managers can get up-to-the-minute progress reports and re-balance the remaining workload when necessary. End users, including the public, can use the self-service analytics from the map-centric census dashboard.

Expediting Disaster Relief Efforts With Real-time Data

Special Operations Solutions (SOS) uses Luciad real-time technology to combat wildfires. Aircraft, equipped with sensors and a full-motion video system, fly over forest fires. SOS uses Luciad technology to produce images of the fire that show exactly how the fire is growing, and how far away it is from roads and vital assets. This information is relayed to the units on the ground – the personnel that are actually fighting the fire – so they understand how to attack, reduce, and contain it.

Dynamic Visualization and Analysis of Secure Data

The government of the city of Baton Rouge, Louisiana, struggled with complex, location-based big data issues. First, the city needed to keep track of citizen reports regarding dilapidated, unsafe, or unsightly properties. They also required a dynamic, location-based view of the revenue lost to tax exemptions by council district. Lastly, they sought a tool to help them understand crime data and better allocate resources. They implemented a Hexagon enterprise solution

to build and privately host map-centric dashboards. These dashboards require no GIS experience and allow them to view their data plotted on a map, along with simultaneous chart and graph views, all within one solution.

Re-Routing In-progress Flights to Avoid Hazards and Delays

With the visualization software that Lufthansa Systems developed with Luciad Portfolio technology, flight dispatchers monitor storms, airport back-ups, military operations, and other flight obstacles that could impact passenger safety and disrupt flight schedules. The software calculates alternative routes, minimizing schedule delay and fuel costs. Pilots receive real-time information about potential problems in their path, allowing them to make minor course adjustments and arrive at the destination airport safely and with minimum delay.

Contact us

Are you ready to explore location intelligence solutions with Hexagon? We'll help you make the most of your data.



<https://go.hexagongeospatial.com/contact-us-today>



Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's Geospatial division creates solutions that deliver a 5D smart digital reality with insight into what was, what is, what could be, what should be, and ultimately, what will be.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 4.3bn USD. Learn more at hexagon.com and follow us @HexagonAB.

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