

Geospatial Data for an Interconnected World

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For some time now, the geospatial industry has witnessed a continual flow of technological advancements, and it is sometimes difficult to keep track of all the developments.

In a crowded landscape, how can businesses decide which technologies will make a difference to their operations? Adoption of new technology, such as the Internet-of-Things, Machine Learning, Robotics and Artificial Intelligence, is not a goal in itself. As an industry, it is our duty to help our clients navigate these developments to solve their challenges and support their strategic objectives, while passing on the benefits to society as a whole.

Geo-data is key to asset mgmt

Owning large and complex assets on land and at sea, our clients play a critical role in society by ensuring safe, reliable and affordable access to energy, and the transportation of people and goods. Yet these assets are under increasing strain due to the combined effects of a growing world population, increasing urbanisation, and climate change. Additional challenges facing asset owners include ageing assets and a gradual loss of local knowledge due to a retiring workforce that is not being replaced.

When it comes to critical infrastructure, traditional asset-condition assessment and management are often inadequate at dealing with these increasing challenges. Understanding where the assets are, assessing their condition and predicting how they will evolve in a dynamic environment are essential to better risk management. Through accurate Geo-data and artificial intelligence, we hold the key to providing asset owners with new digital ways of working that allow clients to design and develop more resilient assets and extend the life of existing ones.

Such Geo-data driven solutions already

exist and are contributing to more efficient asset management, as well more sustainable world. Reducing accidents on roads and rail, lowering the risk of electricity networks sparking bush fires, and minimizing unplanned maintenance in industrial processing plants are just some examples of what the new sophisticated geosolutions are bringing to today.

Electricity utilities go digital

Currently, the most disrupted industry is the electricity utility industry. Electricity utilities are being challenged to accelerate the transition to an energy supply chain that is carbon-free, efficient, digital and distributed. Clients, solution-providers and utilities are moving towards a service-oriented platform that allows them to participate in an open energy marketplace that supports our rapidly changing world with a fast-growing population, high rate of urbanization, greater economic prosperity and a strengthening call for climate resilience.

Built more than 60 years ago, today's electricity infrastructure is under increasing strain. Add to that an ageing workforce, increasing demands from tech-savvy clients, and price pressures from new competition: in this landscape, existing, disconnected and disparate asset datasets create a knowledge gap that prevents utilities from effectively serving their clients. Today's utilities can close this gap by implementing the latest remote-sensing technologies combined with cloud-computing, automation, artificial intelligence, immersive visualizations and advanced data analytics. They can utilize these geosolutions to build 4D representations of T&D networks that form the nucleus of a digital twin for use across their business to connect disconnected datasets and underpin their digitization strategy.

The application of powerful tech-

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nologies such as Machine Learning and Artificial Intelligence to critical infrastructure must be accompanied by scrupulous attention to cyber security and data privacy. Our future goes well beyond the provision of data. We must unlock insights from Geo-data by providing integrated digital solutions that serve our clients' purpose and society as a whole. 🌐

