5 Questions toâ€¦ Anders Ekelund, Hexagon Geosystems

To gain real insight into today's hydrographic business landscape, *Hydro International* asked some of the sector's most influential companies for their opinions. This series of Q&As focuses on the current state of the industry from various perspectives, such as which technological developments will have the most impact on the market, which market segments are the most promising and which areas offer the most growth. Here, Anders Ekelund from Hexagon Geosystems shares his view of and expectations for the business.

How do you expect the hydrographic market to evolve over the coming year?

The hydrographic market is currently seeing an upside trend after a few years of downturn. Specifically looking at airborne bathymetric Lidar, more and more Hydrographic Offices are integrating this technology as the preferred solution for surveying very shallow zones (<5-10m). Using bathy Lidar before capturing data with traditional multibeam surveys offers large cost savings and a significant increase in efficiency. This is the result of using bathy Lidar in areas where multibeam capture is inefficient. Nowadays, bathy Lidar is accepted to IHO order 1A accuracy by many Hydrographic Offices.

In what ways could the ocean technology industry benefit from artificial intelligence and/or machine learning?

Artificial intelligence (AI) and digitalisation will have the same effect on today's society as the industrial revolution had in the 18th century. It will affect any industry, and completely change the way we live and work. The Internet of Things connects any device and/or built-in component. Technical problems that were impossible to solve a few years ago can now be solved after a few weeks of training using commercial off-the-shelf AI tools. Big data sources allow efficient machine learning of neural networks. It is a game changer, which offers our society a lot of opportunities. Within airborne Lidar, for instance, we already see AI-based classification of data, refining the number of classes identified and reducing human labour intensive parts from the process.

How is your company addressing the market for autonomous vehicles?

Autonomous vehicles are a natural development to increase efficiency. Within Hexagon, we offer several technologies supporting the autonomous vehicle market, such as smart positioning solutions, components and services for the engineering of autonomous vehicles, base maps and mapping solutions to direct such vehicles, simulation software, self-driving vehicles and fleet management software for the mining and agriculture industry, and machine control solutions for the construction sector, amongst other things. Along with strategic partnerships and acquisitions, such as the 2018 acquisition of AutonomouStuff, at Hexagon we are continuously striving to create technologies that harness the power of the IoT and leverage the vast potential of autonomous connected ecosystems.

What could governments do to support the new market for automated surveying?

It's necessary for any government to continuously adapt to change. I recommend governments to continuously monitor new technology in the market and have an open mind to update specifications for tenders such that modern technology can be used. When a government defines the problems to be solved, the industry is good at providing the solutions.

What is the main technological advancement to watch for in the future?

I believe that the digitalisation of society and the use of AI will be a game changer. Global climate change and the growing world population will also push environmentally friendly solutions. By using the technology available on the market, any organization can help 'shape smart change' and drive the acceleration of new and innovative technologies.