

First Official Test Bed for Autonomous Shipping in Norway



An extensive area of the Trondheimsfjord in northern Norway was designated as an official test bed for autonomous shipping by the Norwegian Coastal Authority (NCA) during a special event in Trondheim, Norway, on 30 September 2016. As potentially the first coastal area in the world officially dedicated to the development of technology for autonomous ships, the new test bed is set to become a vital facility for the future of shipping. Norwegian maritime technology company Kongsberg has been integral to the opening of the test bed and will become a major user in order to continue its development of sensors, software and systems that enable more autonomy for ships.

Announced in March as a follow-up to the Norwegian government's new National Transport Plan, the fjord offshore Trondheim is an ideal location for the development of technology that will make autonomous shipping a reality. The area experiences light vessel traffic, making it a safe place to conduct autonomous vehicle trials. It is also home to high levels of maritime competence through an extensive maritime technology cluster and several major academic and research organisations. The initiative was established by the Norwegian Marine Technology Research Institute (MARINTEK), the Norwegian University of Science and Technology (NTNU), the Trondheim Port Authority, Kongsberg and Maritime Robotics. Other stakeholders include the Ocean Space Centre, and NTNU's Centre for Autonomous Operations and Services (AMOS).

Gard Ueland, president, Kongsberg Seatex does not recall test sites of this kind in the world so the Norwegian Coastal Authorities are according to him taking the lead in a changing maritime world. He expects to see massive changes in the future leading to smart ships that will make maritime transport safer and more efficient. He also foresees technology that has the potential to enable fully autonomous cargo vessels.

Earlier Autonomous Technology Trials

Kongsberg has played an important role in the Trondheimsfjord test bed, having already demonstrated the suitability of the area for autonomous technology trials. The company's Trondheim-based subsidiary Kongsberg Seatex tested various new autonomous technology solutions in Trondheimsfjord this June, together with the NTNU and the Norwegian Defence Research Establishment.

Furthermore, the AUTOSEA project with focus on automated situational awareness will use Trondheimsfjord as a test site when utilising sensor fusion to reduce the risk of collisions between ships and vehicles, when increased level of autonomy is introduced. In order to improve detection capabilities also on small objects and improved coverage of the close-range sector, the AUTOSEA project will, in addition to conventional maritime radar, include sensor types not normally used for such purposes in the maritime sector, such as cameras, infrared and Lidar.