

# Building the Digital Highway



The development of autonomous shipping is making its way into our lives. This is presenting new challenges, but certainly also new opportunities. Autonomous surface vehicles (ASVs) have slowly but surely managed to get a bigger footprint in the hydrographic surveying domain over the past few years. A survey performed during the Hawaiian volcano eruption demonstrated the benefit of using ASVs in hazardous environments. In addition, the versatile onboard equipment gives better insight into these unique events. Communication is a key element when working with autonomous operations.

The fundamentals have to be re-invented. As described in the article by Vegard Haugen – [Optimising Workflows on the Maritime Information Highway](#) – nowadays, vessels are self-contained. With the introduction of broadband capabilities and ASVs the hydrographic industry should to re-think the way in which survey missions are being carried out. Interesting multi-platform cases in combination with multibeam, AUVs, ASVs and even relay balloons are described in his article. Very much related is the use of aquatic drones. The use of aquatic drones demonstrated that hydrographic data could be collected, processed and results broadcasted live to the World Wide Web directly from the ASV via a regular cellular network. It highlights that broadcasting of [live processed multibeam results](#) directly from survey platforms through regular cellular networks to the World Wide Web is possible. Again this gives new opportunities for survey operations.

Also highly recommended is the article '[New Challenges for Digital Chart Production](#)'. Hydrographic Offices have realised that bathymetric data is not sufficiently represented in ENC's. High Density ENC's are the future. Over the coming years, hydrographic organisations will need to decide on taking the step into regular production of High Density Bathymetry ENC's. Advanced technical solutions are available and will have to be implemented to cope with the new challenges, says the author Friedhelm Moggert-Kägeler of SevenCs in his article.

*Mark Pronk, contributing editor*  
*Wim van Wegen, content manager*