

Title Abstract: VTS and MASS - Responsibilities and consequences

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Pia holds an MBA and has broad management experience from shipping and the maritime industry from companies such as Klaveness, Radio Holland, Clean Marine and Wilhelmsen Ships Service. Pia is also the President of WISTA (Women's International Shipping & Trading Association) Norway.

Lene holds an MSc in Industrial Engineering and Management and has, for several years, led international e-navigation projects. Before moving into maritime surveillance and VTS systems, Lene has had several years of experience with strategy work and international product management within the telecom industry.



Abstract:

In a just a few years from now, vessels with varying degree of autonomous operations will be sailing with either reduced manning or with no crew onboard. Unmanned vessels will need continuous monitoring and control from certified Shore Control Centers (SCC), and there are various communication tasks that must be solved, both between the unmanned vessel and other manned vessels, as well as between the unmanned vessel and shore-based entities and authorities.

The VTS is the link between ship and shore, for communication, situational awareness, information management, decision support, approvals and local regulations. Hence, the role of the VTS will become even more important when MASS are introduced and will operate in mixed traffic with conventional vessels. VTS authorities should already start planning for what added services and extended roles they can offer:

- The VTS could have a back-up capability for the SCC that is controlling the unmanned vessel, in case the primary SCC experiences system or communication failure
- Providing proactive traffic management through traffic forecasting will become more important as well as more efficient in tomorrow's MASS scenario
- Remote pilotage is now allowed by law in countries like Finland and Norway. The VTS could be the best physical location for pilots to perform their duties
- Communication and cybersecurity are imperative for a safe operation of MASS, and the VTS can be the trusted party who offers unified and safe information sharing. Innovative solutions, including blockchain, are under consideration

In conclusion, the VTS will play an important role in the safe operation of MASS and should start preparing for additional services and certifications in close cooperation with MASS owners and operators.