

# Development of a Performance Monitoring Instrument for Vessel Traffic Service Operators

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## **Abstract**

A Performance Monitoring Instrument (*PMI*) was developed to get more insight into the practical job performance of Vessel Traffic Service (VTS) Operators. *PMI* consists of three modules. First, a performance module based on a standardised simulation scenario with a detailed assessment protocol breaking down VTS performance into the various types of information that can be given to the vessel traffic. Second, a well-being module that consists of questionnaires focusing on factors that influence performance, such as sleeping problems and recovery need. Third, a medical module aimed at eyesight and hearing. *PMI* was administered to all Rotterdam VTS operators. Using multivariate analysis the reliability and validity of *PMI* were studied. It turned out that the inter assessor reliability is high and that the instrument has discriminatory power with respect to the various Rotterdam VTS regions where the operators work and their overall effectiveness.

## **Introduction**

Like Air Traffic Controllers in aviation, Vessel Traffic Service (VTS) operators are responsible for a safe and efficient handling of traffic in the water borne sector. They monitor traffic, co-ordinate manoeuvres between vessels in conflicting situations and give information on request or when needed. However, they do not really control traffic. In the case of the Port of Rotterdam the VTS area extends from the approach areas on the North Sea to more than 30 km upstream the river Rhine. As each operator is responsible for a specific sector, the job of a VTS operator is rather individual. Therefore, there is no extensive knowledge of the way in which the operators execute their job in the real situation. To shed more light on VTS job performance, the Rotterdam Port Authority asked MSR (Maritime Simulation Rotterdam) to develop an integral monitoring instrument allowing the measurement of the overall job performance of VTS operators, that is, performance as such, job related well-being and health related parameters.

In D. de Waard, K.A. Brookhuis, J. Moraal, and A. Toffetti (2002), *Human Factors in Transportation, Communication, Health, and the Workplace* (pp. 387 - 396). Maastricht, the Netherlands: Shaker.