

Bridging the gap

When asked what MARIN is doing as a maritime research institute, I always say: "We are trying to make ships cleaner, safer and smarter." We are not just developing knowledge because this is interesting. No, all this knowledge should be focused on these objectives. So we are trying to bridge the gap between knowledge and application. But in our efforts to make ships cleaner, safer and smarter we are also trying to bridge another gap in the maritime industry: the one between ship builders and ship owners, between the office and the fleet, between designers and operators. Who isn't familiar with complaints in both directions?

Actually this is not new. When MARIN was founded over 80 years ago, the initiators were the major ship owners in the Netherlands. They wanted to know the behaviour of their ships before they were built. Also the Royal Netherlands Navy was an early and strong advocate of hydrodynamic research to make sure its ships were performing well. Their chief engineer Dr. B. J. Tideman (1834-1883) started the first towing tank in the Netherlands around the same time (1874) as the famous William Froude in the UK. So the final aim of hydrodynamic research has always been: better operating ships.

Besides model testing, MARIN's activities have since then been extended to calculations, bridge simulators and full scale monitoring. This provides new opportunities to serve our clients handling their vessels more efficiently and safely: model tests and simulations in the design stage can now be coupled to the operational phase through our bridge simulators and full scale monitoring.

This link between engineering and operations got a boost when Shell started to consider the production and offloading of LNG offshore on LNG FPSOs. The offloading operation is such an important factor in the operability of such system, that the evaluation of the operation on full mission bridge simulators was an integrated part of the development. Later this became an important issue for offshore (DP) heavy lift operations, where the operation is so complex that it cannot be developed without a proper interaction

between the engineers and the operational people from the fleet. Such interaction is possible on full mission bridge simulators with everybody present. Recently the MARIN Joint Industry Project 'Obelics' was completed with many offshore heavy lift contractors working together to develop this methodology.

So a bridge simulator actually helps to bridge the gap between engineering and operations. Or even better: between engineers and operators, because the experience in this type of projects makes clear that the 'human factor' is extremely important. It is about cooperation, communication, workload, and stress. In that respect there is one important feature on a simulator that is not there in reality: a 'pause' and 'rewind' button. It is used regularly.

'Bridging the gap' is what we try to do at MARIN. Between knowledge and application and between design and operation. Both requires motivated people that cooperate. Or to say it with the philosopher Goethe: "Knowing is not enough; we must apply. Willing is not enough; we must do."

Bas Buchner

President

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Industry's view is provided by one of the leader firms participating in the Dutch maritime network organisation Maritime by Holland.



Engineers and operational people working together on a bridge simulator during the Obelics IIP to develop safe and efficient offshore heavy lifts