



MOWIS

Maritime Operational Waterfront Infrastructure and Services

Analysis of Royal Navy requirements to provide a robust, coherent and evidence-based set of cost-effective investment options

Executive summary

QinetiQ assessed the current Maritime Operational Waterfront Infrastructure and Services (MOWIS) provision and identified options and opportunities for investment decisions, out to 2050, which can be used to optimise the MOWIS capacity and capabilities at the three Her Majesty's Naval Bases (HMNBs) to meet current and future demands.

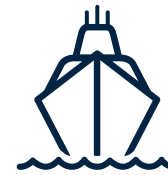
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This study has applied a level of analytical rigour to this problem that has not been seen for at least 20 years.
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RAdm Stokes, Assistant Chief of Naval Staff (Support)

The brief

Navy Command Headquarters (NCHQ), with the endorsement of the Maritime Support Board, directed an urgent review of MOWIS, including Sustain and Change requirements, to identify options and opportunities for MOWIS investment decisions out to 2050. This is to ensure it meets the demands of Future Force 2025, and the associated introduction into service of the Queen Elizabeth Class Aircraft Carrier, Successor SSBN, and the Type 26 and 31 Frigates.

Over recent years, MOWIS has progressively reduced, with closure of naval dockyards, and surface vessels increasing in size to the point where new vessels don't fit some of the existing infrastructure. Additionally, the infrastructure is ageing, and there is an increasing demand for it to support the defuelling and dismantling of laid-up nuclear submarines.



32
recommendations

Our analysis identified 32 recommendations for improving the effective provision of MOWIS, and provided a range of options to enable the customer to make crucial cost-effective decisions on the future of MOWIS.

Why the customer chose QinetiQ

Track Record: Our previous experience of delivering similar studies has provided robust evidence to enable customers to achieve significant savings. For example, MOD implemented a circa £200m reduction in investment requirements by following recommendations of a detailed study we conducted on a fuel infrastructure investment plan.

In-depth knowledge: Our deep understanding of MOWIS, and experience of similar infrastructure analysis for NCHQ, ensured that the customer's understanding about the factors driving the problem and associated assumptions were fully tested.

Independent: Being independent from the MOWIS supply chain meant that our analysis was impartial and provided robust and objective evidence to support decision making.

Our solution

To identify options and opportunities for investment decisions, QinetiQ's decision support experts provided the customer with an in-depth analysis, comprising:

- A review of existing infrastructure data, updated with data collection visits to the three HMNBs. This data and all assumptions were captured in a Master Data Assumptions List.
- A composite MOWIS demand schedule, containing 1000s of events, was produced from numerous data sources covering the operating and maintenance schedules for the Royal Navy and the Royal Fleet Auxiliary.
- A bespoke QinetiQ proprietary event-based simulation model was used that allocates MOWIS infrastructure to demand events based on a set of prioritisation rules.
- The model was validated at a series of stakeholder meetings to ensure it correctly represented stakeholder guidance.
- From the analysis, a set of Key Capability Requirements were defined for the HMNBs.

Outcomes

As a result of our expert analysis, we identified 32 specific recommendations for improving the effective provision of MOWIS. The three over-arching recommendations for improvements were:

- Design decisions for future classes of vessel must give due consideration to the availability of infrastructure across the enterprise, rather than by individual class, to avoid over-tasking of infrastructure.
- Enterprise level coordination of maintenance planning should be introduced for vessels and infrastructure to avoid conflicts and misalignment of activities.
- The requirements placed upon MOWIS should be included in a joint and coordinated annual review cycle between representatives from the key stakeholders to ensure all future decisions are made on a coherent basis.

For more information
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QinetiQ is always on your side, protecting, improving and advancing your vital interests

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