

# Maritime test and evaluation capabilities support the Royal Navy in maximising operational time whilst minimising cost

## UK Operational Capability Confidence Check (UKOCCC)

### The Customer

The Maritime Capability Trials and Assessment (MCTA) is an independent authority focusing on the testing and acceptance of wide range of naval equipment including weapons, sensors, communications systems and combat systems within the Royal Navy.

As part of its role, MCTA is driving an initiative called the Maritime Force Capability Assurance (MFCA) whose primary task is to ensure that the systems of Royal Navy ships, both new build and in-service, meet the required performance levels.

As part of MFCA, the UK Operational Capability Confidence Check (UKOCCC) has been introduced to deliver a UK based service to ships' Commanding Officers and their teams to give them a clearer understanding of the combat system capabilities of their platform. This programme is being run in support

of Navy Command's overall operational assurance programme.

### About the MCTA project

For Royal Navy ships that are deployed East of Suez (EoS) the OCCC is carried out at a NATO facility in Crete, known as NATO Forces Weapon and Sensor Accuracy Check Sites (FORACS) to which eight nations including the UK contribute. Its mission is to measure the bearing, heading and positional errors of sensors on-board ships, submarines and helicopters.

This case study relates to a project set up to explore and implement the testing of combat systems on Royal Navy ships in the UK prior to deployment to all operational theatres. Being able to deliver a UKOCCC will result in earlier identification of potential issues allowing the opportunity to resolve or make system changes in the UK reducing the high costs of out of UK assistance.

*"Working closely with QinetiQ and BAE, who jointly deliver MOD's Naval Combat System Integration Support Services (NCSISS) service, we explored a number of potential locations to deliver the OCCC capability in the UK. Ideally we wanted a location that was close to the main base ports of Plymouth and Portsmouth,"*

Lt Adrian Botham, MCTA MFCA System Engineer, Royal Navy.

An important project consideration was budgetary pressures which meant that the MCTA team needed to find a solution that could be integrated into and successfully leverage existing UK combat system testing programmes without incurring significant additional costs.

*"Following an analysis of all the potential testing facilities in the UK and the existing contracts that were in place including the NCSISS and the Long Term Partnering Agreement (LTPA) it was decided to establish the UKOCCC facility at Portland, Dorset utilising an existing QinetiQ managed testing and evaluation centre,"*

Lt Cdr Darren Reynolds, MCTA FORACS Liaison and MFCA lead, Royal Navy.

The MCTA team enabled the UKOCCC capability via two existing service contract that have been in place for some time:

- Under the LTPA, QinetiQ provides Test and Evaluation (T&E) and Training Support services to MOD under a 25-year contract. Many of these services are centrally funded, ensuring maximum value for money for MOD project teams using these facilities and capabilities.
- The NCSISS contract is a four year programme to provide shore test facilities, specialised testing and analysis equipment and technical expertise to approve combat systems equipment for warships before being fitted on ships.



## The key challenges of the project

To deliver a UKOCCC capability the MCTA was faced with a number of challenges:

- limited budget
- a need to deliver an Initial Operating Capability (IOC) for the UKOCCC in a very short timescale to meet ship deployment programmes
- identifying an appropriate testing centre for combat systems in the UK
- ensuring the availability of relevant subject matter experts
- finding an organisation that had the relevant experience, capabilities and expertise
- ensuring all the equipment was in place to meet the initial UKOCCC testing requirements
- a need to consider longer term plans to deliver a full UKOCCC service

*“Significant budgetary pressures meant that we needed to look for ways we could deliver the first UKOCCC as part of an existing programme with an experienced, flexible and capable partner. QinetiQ had what we needed to allow us to do this along with their tried and tested electronic calibration facilities,”*

Lt Adrian Botham.

## The role and value of QinetiQ

QinetiQ and its predecessors have a long and successful track record of testing naval platforms, submarines and ships, for both the UK Royal Navy and navies around the world. In addition the LTPA, which is already in place with the MOD for the provision of comprehensive test and evaluation services made it a natural partner for the MCTA.

*“QinetiQ were an obvious choice to get engaged right at the beginning of the project to assist the MCTA team in finding an acceptable solution to delivering a UKOCCC capability. Not only did they have the experience gained from the LTPA but they also have gained significant*

### QinetiQ

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*experience on the testing and evaluation of combat systems via NCSISS. They were very good at explaining the nature and value of the existing contracts to allow us to maximise the value from them and find an acceptable cost effective solution,”*

Lt Cdr Darren Reynolds.

QinetiQ played an important role in the development of the UKOCCC solution identifying innovative and value for money ways of exploiting the existing capabilities. In addition QinetiQ was able to design specialist equipment to enable the delivery of an Antenna Radiation Pattern (ARP) assessment that had not been previously achievable in the UK. This provides a ship with an assessment of its transmitter and antenna equipment.

*“QinetiQ engineers have an excellent understanding and deep knowledge*

*of combat systems and testing and evaluation processes which is extremely valuable to us,”*

Lt Adrian Botham.

The UKOCCC process involves the use of qualified QinetiQ, BAE Systems and MOD personnel on the ship during trials, who among other things are able to deliver a ‘quick look’ top line analysis of the results of tests whilst on-board. This is followed up later by in-depth reports to enable changes and fixes to the combat system to be made as required.

*“All the stakeholders, including QinetiQ, are working to improve the efficiency and effectiveness of the UKOCCC programme as we gain more implementation experience,”*

Lt Cdr Darren Reynolds.

### About the LTPA

The LTPA is a 25-year contract between MOD and QinetiQ to deliver T&E and training support services to the UK military. The LTPA runs until 2028, with the option of a 25-year extension. The contract is designed to be an innovative partnering arrangement, which will enable long-term planning to meet MOD’s current, evolving and future T&E needs.

The governing partnering principles are:

- ✓ Teamwork
- ✓ Safety
- ✓ Innovative investment
- ✓ Performance
- ✓ Risk-based rewards

### About NCSISS

The NCSISS programme is jointly delivered by QinetiQ and BAE Systems. It aims to secure cost effective delivery and the long term future of the facilities and expertise at QinetiQ’s Portsdown Technology Park in Portsmouth. NCSISS is an enduring ‘best for enterprise’ solution for Portsdown, optimising combat systems integration and test output for MOD.

This is being achieved through:

- ✓ leaner, risk-based processes
- ✓ greater availability, accessibility and utilisation of Portsdown to support the MOD’s requirements and potentially, UK defence export initiatives
- ✓ the rationalisation of the existing multitude of contracts

*“QinetiQ has made a significant contribution in assisting us in the development of an UKOCCC solution, providing the managed testing and evaluation facilities, the development of specialist equipment, and the provision of experienced combat system engineers,”*

said Lt Adrian Botham.