News release

QinetiQ, Inzpire and BAE Systems Deliver Next Synthetic Training Concept Demonstration to the Royal Navy

4 September, 2023: A team from QinetiQ, Inzpire and BAE Systems has delivered a further demonstration under Phase 2 of the Platform Enabled Training Capability (PETC) to the Royal Navy.

Delivered in late June, the complex synthetic collective training demonstration was operated from Portsdown Technology Park delivering training to three platforms docked at HM Naval Base in Portsmouth: HMS KENT, HMS DIAMOND and HMS QUEEN ELIZABETH, operating together.

Connecting into the three platforms simultaneously via satellite communications, the QinetiQ, Inzpire and BAE Systems team enabled the delivery of the complex synthetic collective training environment, through scenarios adapted and delivered by a dynamic White Force. This allowed the crews of the three ships to conduct realistic training against a peer adversary.

Lieutenant Commander Stephen Gowling, SPARTAN Programme Officer and PETC lead for the Royal Navy said, "The PETC concept poses a significant increase to the synthetic training capability for the Royal Navy, transitioning our ability to train and prepare our warfighting teams for the current threats faced in today's rapidly evolving maritime battlespace. Whilst the use of simulation to train our Ship's crews is far from new, the ability to train them collectively across multiple geographically dispersed units, from their own organic operations room, will be a step change. Through the development of PETC, we aim to provide our Maritime Task Groups (MTGs) an ability to train against realistic and representative threats in an immersive environment, whenever and wherever. The utility of PETC as a training enabler will be relevant across all tiers of training, in time, supporting the ability of the RN to effectively train as they fight."

James Anderson, Senior Campaign Manager for QinetiQ said, "Building on the first PETC demonstration held in February 2022, which validated the use of the capability on a single platform, this next trial aimed to prove the ability of the approach to deliver a high-end collective training exercise across multiple platforms. The combined strengths of QinetiQ's management of the synthetic environment and communications, BAE Systems' integration of the digital shadow of the combat management system into the ships, and Inzpire's design of the scenario and delivery of the White Force and After Action Review, resulted in a strong outcome. I was proud to see how the organisations worked together, along with RN staff as a single team, to deliver the demonstration."

Alongside teams from QinetiQ, Inzpire and BAE Systems, the demonstration was attended by a team from Fleet Operational Standards and Training (FOST) and a number of high ranking Royal Navy personnel.

As an alternative to fully live or shore-based synthetic training, PETC is allowing the Royal Navy to demonstrate how synthetics can be used to create a fully immersive training environment within a ship's own operations room. The use of this synthetic training environment aims to allow for the delivery of training whilst on deployment, across a number of vessels that may not be geographically close by, presenting opportunities for ships from multiple international forces to practice training together. PETC therefore aims to provide more opportunities for training alongside international partners within a wartime environment, whilst offering significant time and cost savings to the customer, as well as environmental benefits due to the ships and crews not having to travel to the same extent for the synthetic collective training, compared with live training.

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About Platform Enabled Training Capability (PETC)

PETC is part of the Royal Navy's {Maritime Operational Training Environment (MOTE) SPARTAN programme – previously Defence Operational Training Capability (Maritime) (DOTC(M)) – which aims to deliver a network of shore-based and ship-based capabilities to generate operationally relevant training environments, allowing the Royal Navy to train as they would fight and irrespective of their geographical location.

For the first time the crews of the Carrier Strike Group were able to train against the threats and tactics that are expected to be seen should they ever go up against a peer adversary. The trial used real-world geographies in the high north, accurately simulating peer adversary platforms and weapon profiles to stimulate the ships sensor against which the operations teams had to work together to defend the Aircraft Carrier. This is the first time some of these threats had been seen by a ship's company. The scenario used threat data in all domains, above water, surface and underwater to give the most realistic representation of what could be experienced in the real world. This was all done while in their operations rooms, making it feel very real to the crews involved.

Find out more about PETC [here](#).

About QinetiQ

QinetiQ is an integrated global defence and security company focused on mission-led innovation. Our purpose is protecting lives by serving the national security interests of our customers. We employ more than 8,000 highly-skilled people, committed to creating new ways of testing technologies, systems, and processes to make sure they meet operational needs; and enabling customers to deploy new and enhanced capabilities with the assurance they will deliver the performance required.

About Inzpire Limited

Founded in 2005, and part of QinetiQ Plc, Inzpire is a multi-award-winning supplier of advanced defence training, technical services and cutting-edge mission systems. Inzpire's maritime experts have designed and delivered over 300 live and synthetic exercises and provided operationally realistic training to over 10,000 frontline personnel.

About BAE Systems

We provide some of the world's most advanced, technology-led defence, aerospace and security solutions and employ a skilled workforce of some 87,800 people in more than 40 countries. Working with customers and local partners, we develop technology that helps to

save lives, protect borders and people, strengthen nations, and keep critical information and infrastructure secure.

Notes to Editors

Quote from BAE Systems:

Chris Rowlands, Head of Training Services Group at BAE Systems says, "The training demonstration phase of PETC allowed the crews of HMS KENT, HMS DIAMOND and HMS QUEEN ELIZABETH to conduct realistic training within a complex synthetic training environment using our digital twin of the combat system, sensors and effectors. It's another important step toward the Royal Navy being able to safely train on-board as individual ships and as part of a wider task group to deal with the evolving threat landscape."

Quote from Inzpire:

Nick Borbone, Head of Maritime Division at Inzpire says, "We were delighted to participate in this combined industry and Royal Navy team to demonstrate the potential of shipborne collective synthetic training. In particular, our close collaboration with Royal Navy agencies including the Carrier Strike Group, JTEPS and FOST enabled our team to design and control realistic and relevant training scenarios against which the ships' teams could test the technology and their own war fighting capability."

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