HUNTER CLASS R&D AND ENGAGEMENT FOCUS


BAE SYSTEMS AUSTRALIA

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AS part of the National Shipbuilding Plan, BAE Systems' Hunter class (based on the Global Combat Ship that both the UK and Canada have also chosen) design is on track to hit some key milestones this year. The first of five prototype blocks will begin construction in December in the new yard at Osborne. The new yard is complemented by the digital shipyard approach that the company has been finetuning for over 18 months in preparation for the work to begin.

The work is being done by ASC Shipbuilding, a subsidiary of BAE Systems Australia, for the life of the program.

"The main focus of the work that we're doing at the moment that overlaps with Red Ochre Labs is around data, data analytics, build for sustainment and sustainment technologies and how we leverage those technologies into the block builds early in the process," Sharon Wilson, Continuous Naval Shipbuilding Strategy Director at ASC Shipbuilding explained to *ADM*.

ABOVE: The design process for the Hunter class uses a range of Industry 4.0 tools

RIGHT: Visualisation tools are an important design and training tool for the Hunter class.

While the Hunter clearly has a reference ship design, the engineering team has been looking at a range of local solutions that can help Australianise the entire capability lifecycle of the class. With an Aegis combat system core and CEA radars, some of the major system aboard are already seeing the Australianisation process taking place. Red Ochre labs will contribute to Australianisation opportunities in the future with technologies such as high speed weapons, autonomous systems and directed energy weapons to name a few. It also means that BAE Systems and ASC Shipbuilding are looking to also make the most of Australian small to medium enterprises (SMEs) and their innovation where they can.

There are a few ways for companies looking to be involved to get engaged. Evangelos Lambrinos is the Innovation Manager, a key point of contact for industry, keeping up to date with the ICN portal, and the regular innovation challenges the company runs (again details posted on ICN for upcoming rounds).

"We're always interested in new technologies and new solutions," Wilson said. "The key thing is that it might not be yes straight away but it might be yes eventually. These things do take a bit of time, depending on what you're offering of course."

Red Ochre Labs also provide the Hunter team with 'Technology Watch' which is a regular newsletter update on the latest technologies available from industry and researchers – a valuable resource to the team.

For innovation challenges the company has teamed with Flinders University and moved in to the old Mitsubishi plant at the now Tonsley Innovation Precinct to create Pilot Line Zero, basically a mini shipyard, and part of a much bigger Line Zero Factory of the Future concept for advanced manufacturing. There are now more people working in the Tonsley facility than there was when it was a car plant.

"Line Zero is intended as a collaboration space where SMEs can come and showcase their technology," Wilson said. "For example, the smart logistics systems and people working with robots is something that we can demonstrate at Line Zero.

The whole idea behind Line Zero is that we can emulate the shipyard but without the security or access requirements. We can also engage with people in a more collaborative way that is more open so we can test and try different Industry 4.0 technologies as part of Line Zero.

In the same way, the building of the prototype blocks is not about proving that a ship can be built; it's more about testing and proving all the new systems behind the digital shipyard approach, according to Wilson.

"We need to make the technology people-centric. So it's not about the tools, it's about how our people work with the tools which will lead to success."


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