

OFFICIAL



Hunter Class Frigate Program (HCFP) Land Based Test Site Synthetic Environment

Expression of Interest: HCF20210033

BAE SYSTEMS

Maritime Australia

Acronyms and Definitions

Abbreviation	Definition
AIC	Australian Industry Capability
ASCS	ASC Shipbuilding
AUD	Australian Dollars
BAESMA	BAE Systems Maritime Australia
DIS	Distributed Interactive Simulation
EMC	Electromagnetic Capability
EOI	Expressions Of Interest
GCS-A	Global Combat Ship-Australia
HCFP	Hunter Class Frigate Program
LBTS	Land Based Test Site
NATA	National Association of Testing Authorities
OQE	Objective Quality Evidence
RAN	Royal Australian Navy
RAP	Reconciliation Action Plan
RFT	Request for Tender
T26	British Type 26 Global Combat Ship

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1. INTRODUCTION

ASC Shipbuilding, trading as BAE Systems Maritime Australia (BAESMA) is seeking Expressions of Interest (EOI) to provide a Synthetic Environment solution for use in the Land Based Test Site (LBTS) for the Hunter Class Frigate Program (HCFP).

BAE Systems Maritime Australia has been down selected to design and build nine future frigates for the Royal Australian Navy (RAN). The BAE Systems Future Frigate offering, also known as the Hunter Class GCS-A (Global Combat Ship – Australia), is a variant of the British Type 26 GCS (T26).

The Hunter Class Frigates will be built at the BAE Systems Maritime Australia Facility in Osborne, South Australia. The program requires maximisation of Australian content.

The construction of the LBTS facility is currently scheduled to be completed by March 2023. This EOI is for the provision of a software based Synthetic Environment. A Request for Tender (RFT) may be sent to down selected parties that have expressed interest closer to this time.

2. PURPOSE

The purpose of the EOI is to establish the feasibility of prospective partners to supply and support a Synthetic Environment for use in the LBTS to BAE Systems Maritime Australia for the HCFP. The LBTS facility has the initial purpose of integration testing of the HCF Combat System components prior to installation on ship. The Synthetic Environment will create realistic scenarios to drive the actual/simulated/emulated combat system components to test the various equipment interfaces.

The Synthetic Environment will be a software product that complies with the areas listed in section 3 below.

The Hunter Class Program will require maximisation of local content in Australia.

3. SCOPE OF WORK

The Synthetic Environment will be a software product that:

- Can create, run, record and replay scenarios.
- Contains a library of maps of existing world locations, or preferably a whole earth system.
- Contains a library of aircraft, surface ships, sub-surface ships, land entities and spacecraft with realistic performance characteristics for insertion into scenarios.
- Can simulate radar stations and support line of sight calculations that take into consideration land heights.
- Provides an Application Program Interface to allow user access to the virtual world parameters to extend the functionality of the system.
- Supports IEEE Distributed Interactive Simulation (DIS) interface v 6.0 as a minimum, with a preference for v7.0 so it can connect to other simulations. HLA support would also be desirable.

- Can be used as a central time reference, providing the simulation time to the Scenario.
- Allows for the playing of three concurrent scenarios.
- Can run on Commercial off the Shelf computing equipment using an industry standard operating system.
- Has user licence agreement that allows BAESMA to transfer the licences to the Commonwealth of Australia at a later stage.
- Has Australian based technical support resources.

Any previous experience where the Synthetic Environment product has been successfully utilised for naval combat systems integration testing will be favourably considered.

4. PRE-QUALIFICATION QUESTIONNAIRE

1. Are you an Australian registered company? Provide ABN details.
2. Are you an Indigenous company and registered with Supply Nation? If yes, provide a link to your profile on the Supply Nation Website or other supporting evidence.
3. Do you have a Reconciliation Action Plan (RAP) in place? If yes, please provide evidence.
4. Do you hold Defence Industry Security Program (DISP) Membership? If so, please state what membership level you hold.
Refer to the [DISP Webpage](#) on information regarding DISP Membership and how to apply.
5. Provide details of the company's management organisation structure and full time headcount.
6. State your Professional Indemnity, Product and Public Liability and Work Cover Insurance coverage.
7. Please state and provide evidence of any relevant certifications and accreditations held, in particular any Quality (e.g. ISO-9001) or Engineering (e.g. ISO-12207) accreditations.
8. On Time Delivery – Are you able to consistently provide on time guarantee service to agreed time frames? How do you self-evaluate and analyse your performance? Provide examples.

5. CAPABILITY QUESTIONNAIRE

1. Provide details including value and location of previous relevant defence, maritime or commercial projects in which your company has delivered a Synthetic Environment. Detail the type, value, quantity and specific requirements of the equipment supplied to each project.
2. Do you have capability to support the Synthetic Environment locally in Australia? If yes, please provide examples of local support. If not, please provide country of origin and estimated percentage of Australian Industry Capability content.

3. What level of support including for installation, training and/or operation would your Synthetic Environment require? Provide a Rough Order of Magnitude for these services.
4. How does your licencing model work?
5. Do you have a clear understanding of the requirements for providing Objective Quality Evidence documentation? Please provide examples of experience.
6. Do you have IT competency to manage secure File Transfer Portal?
7. Provide details of how your company can support ASC Shipbuilding's commitment to support AIC. Detail if the labour to complete the Scope of Work will be provided by Australian permanent residents.
8. Stipulate any further competitive discriminators currently not identified including how your organisation would collaborate as a team sharing data, schedules and resources if required to ensure best for program outcomes are achieved.

Closing date for Expression of Interest:

Friday 18 June 2021