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## Innovation Challenge 4: Data – Statement of Work

Hunter Class Frigate Program

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Innovation Research & Technology  
BAE Systems Maritime Australia

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**BAE SYSTEMS**

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## Acronyms and Abbreviations

Acronym	Description
API	Application Programming Interface
AUD	Australian Dollar
BAESMA	BAE Systems Maritime Australia
BOM	Bill of Materials
CBS	Cost Breakdown Structure
CNS	Continuous Naval Shipbuilding
COB	Close of Business
DISP	Defence Industry Security Program
ED	Effective Date
GST	Goods & Services Tax
IC	Innovation Challenge
ICN	Industry Capability Network
IP	Intellectual Property
HCFP	Hunter Class Frigate Program
MES	Manufacturing Execution Solution
MRP	Manufacturing Resource Planning
MSA	Minor Services Agreement
NSE	Naval Shipbuilding Enterprise
NUC	Next Unit of Computing
OEE	Overall Equipment Effectiveness
PO	Purchase Order
PoC	Proof of Concept
PPE	Personal Protective Equipment
R&T	Research & Technology
RA	Risk Assessment
RFP	Request for Proposal

Acronym	Description
ROM	Rough Order of Magnitude
SA	South Australia
SaaS	Software as a Service
SHE	Safety, Health & Environment
SOP	Safe Operating Procedure
SoW	Statement of Work
VfM	Value for Money
VOC	Volatile Organic Compound

## Definitions

Term	Definition
ASC Shipbuilding	ASC Shipbuilding Pty Ltd.
BAE Systems Maritime Australia	Subsidiary of BAE Systems Australia
Commonwealth	Commonwealth of Australia
Line Zero	Line Zero - Pilot Factory of the Future
Tonsley Precinct	Tonsley Manufacturing Innovation Hub

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# 1 Introduction

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The purpose of this document is to provide the scope and expectations to industry participants regarding Innovation Challenge – Data which is being led by BAE Systems Maritime Australia’s (BAESMA) Innovation Program via the Hunter Class Frigate Program (HCFP).

## 1.1 Hunter Innovation Program

The Research & Technology (R&T) team within the BAESMA business are based at the Tonsley Innovation District in South Australia (SA) and serve an important part of the HCFP Innovation Program. One of the ways the Research team conducts Innovation is through Innovation Challenges.

The Innovation Challenge is a periodical call to engage and seek to collaborate with the Australian industry and research sector to create innovative and creative concepts, undertake experimentations and perform demonstrations of new and existing products and processes which would be applicable to shipbuilding.

- Phase 1 of the Innovation Challenge is to determine the Proof of Concept (PoC), demonstrate and trial the innovation, and report findings and recommendations on the concept throughout this process.
- Once Phase 1 is complete, BAESMA may see value in innovation concepts worthy of further investment requiring additional concept development, prototyping and shipyard integration at Osborne Naval Shipyard. This phase is known as Phase 2.
- Innovation Challenges are a stand-alone activity supported by BAESMA funding and have no contractual deliverables to the design, manufacture, build and sustainment activities of the HCFP.
- Where the Innovation Challenge does support HCFP and Continuous Naval Shipbuilding (CNS) is its value in being able to engage industry to develop and demonstrate innovative Shipbuilding and Design solutions.
- Each Innovation Challenge follows a different theme and is developed by BAESMA’s R&T team whom seek industry and academia participants via the Industry Capability Network (ICN). BAESMA will utilise the HCFP ICN Gateway Portal in this instance to seek Proposals from industry for an assigned period.

## 1.2 Purpose

This Innovation Challenge – Data focuses only on Phase 1 PoC. The objective is to investigate and evaluate the capabilities, opportunities and limitations of Data technologies within a test environment that replicates that of a shipyard. BAE Systems Maritime Australia seeks to build a National Approach to the capture, processing and exploitation of data with a Naval Shipbuilding Enterprise (NSE) context. BAESMA intends to utilise this Innovation Challenge to permit access to and uplift of technologies from Australia’s Industrial Base, namely targeting startups, SMEs and the academic sector participants.

It is presented such that vendors will respond with a particular technology, algorithm or data exploitation technique for consideration for adoption within BAESMA and the Naval Shipbuilding Enterprise.

### 1.2.1 Expected Outcomes

As a result of undertaking the Innovation Challenge – Data, it is expected that BAESMA is presented with an understanding of various vendors’ Data solutions that could be further developed for industrialisation and insertion into the HCFP. In this, IC – Data seeks in the first instance to explore vendor’s data through a PoC.

This includes understanding the concepts:

- Design Features;
- Processes and Interfaces;
- Application and Performance
- Limitations;
- Commercial Viability/ Feasibility;
- Opportunities for Program Insertion.

Specific outcomes are described in Section 2.2 of this document.

### 1.3 Demonstration Site

Established in 2020 by BAE Systems Maritime Australia, Line Zero is an industrial area of the Tonsley precinct in SA. BAESMA has constructed Line Zero – Pilot Factory of the Future which is the location of the Innovation Challenge demonstrations.

Vendors participating in the Innovation Challenge are required to demonstrate their proposed Innovation Challenge solution and its capability at this purposely built facility, whereby innovative solutions can be tested and demonstrated in a facility that imitates that of a manufacturing setting and/ or shipyard environment.

## 2 Request for Proposal

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### 2.1 Scope

Innovation Challenge – Data seeks to demonstrate a number of data enabled technologies in a 'black box' format, with data served to the vendors via BAESMA provided APIs and outputs presented back to BAESMA in API and/ or visualisation formats.

These activities and the demonstrations contained within are intended to be hosted at Line Zero - Pilot Factory of the Future in Tonsley, SA as discussed in Section 1.3. These demonstrations and the presented solutions shall be on premise without connection to the internet in accordance with the technical and non-technical eligibility in the following sections.

Consideration for commercial adoption of these demonstrations is intended as a post-challenge activity, pending results from Demonstrations.

This document covers the organisation and operational requirements for the Innovation Challenge whereby:

- The Vendor shall undertake and deliver a PoC Report in relation to their innovative data solution;
- Upon acceptance and approval of the PoC Report, the Vendor shall deliver and demonstrate their solution design which, is applicable to and addresses the provided problem statement (Annex A). The aim is for a solution that can be potentially integrated into a Shipyard environment and/ or installed on a naval vessel;
- The Vendor must make all cost allowances and procure, supply, transport, install and test all materials, plant and equipment, tools, accessories and the like to perform temporary and permanent works to be performed, associated with the innovation activities as per this SoW;
- The Vendor must deliver all agreed deliverable milestones in accordance with this SoW.

### 2.2 Subject of Data Challenge and Eligible Data Use Cases

The following objectives are identified for this approach to market:

- Understand what data needs to be exposed to vendors for 3<sup>rd</sup> party data insights;
- Understand what format of data exchange is appropriate to make data available;
- Understand the architectural topology to permit 3<sup>rd</sup> party blackbox algorithms and data enabled services;
- Understand the commercial procurement model for 3<sup>rd</sup> party algorithms and data enabled services;
- Understand the technical test, verification and validation required for acceptance of 3<sup>rd</sup> party data enabled services.
- Aspects relating to productive outcomes such as:
  - Overall Equipment Effectiveness,
  - Andon, Production norms, process lean/ optimisation
  - Production quality assessment,
  - Production testing, production inspections,
  - Machine vision, object/ fiducial/ part marking/ person detection,

- Workplace smart workcell environment and security
- Equipment scheduling
- Any additional sensors, algorithms or capabilities associated with these listed systems:
  - Additional capabilities presented in non-compliant offers may be considered based on individual disruptive merit.
  - Vendors considering non-compliant offers are recommended to also make compliant offers.

The following technical areas of interest are applicable but are not limited to:

- Aspects relating to the Tonsley Line Zero demonstration environment:
  - Line Zero Sensors:
    - Temperature;
    - Humidity;
    - Acoustic SPL Exposure;
  - Welder, MIG, electrical, ESAB:
    - Including electrical, acoustic, light sensing and data processing;
    - Including weld machine data logfile processing
  - Fan (Electrical):
    - Inbuilt data streams;
    - Aftermarket sensors
      - Vibration (electrical)
  - Pump (Centrifugal/ Electrical)
  - Robot, Quadraped, Boston Dynamics
  - Laser scanner, Faro Focus
  - Camera (Industrial):
    - IDS NXT
    - Motion Tracking Camera
    - Security cameras

There are specific technical scope areas are being considered separately and are not included in this IC technical scope. Therefore the following areas are not eligible in this current approach to market:

- Aspects relating to Digital Work Management/ Connected Workcell/ Work Orders/ MES/ ERP/ MRP;
- Aspects relating to part tracking;
- Aspects relating to training;
- Aspects relating to ship product and ship sustainment.

The outcomes of this Data Innovation Challenge may be:

- Industrialised directly into the Hunter program Data Management System technical baseline;
- Used to inform future Innovation tasking "Algorithms as a Commodity";
- Passed from Hunter Innovation to other BAE Systems adjacent teams for consideration;



- Placed onto tasking backlog for possible future investigation;
- Not progressed.

## 2.3 Work Description Requirements

To undertake the Innovation Challenge, the Vendor must deliver all key deliverables to successfully meet the Innovation Challenge's requirements and expectations:

- Complying with all RFP attachments and annexures, including this SoW and associated referenced documentation and the like;
- Providing all necessary labour, materials, vehicles, plant, tools, equipment, goods, items, consumables (e.g. cleaning materials etc.), testing apparatus, environmental, safety and quality controls and logistics resources to perform all necessary temporary and permanent works;
- Performing any design services as required by this SoW and RFP's attachments and annexures, to perform all necessary temporary and permanent works.

In all instances of the Innovation Challenge, Vendors are required to firstly develop and deliver a PoC Report to BAESMA.

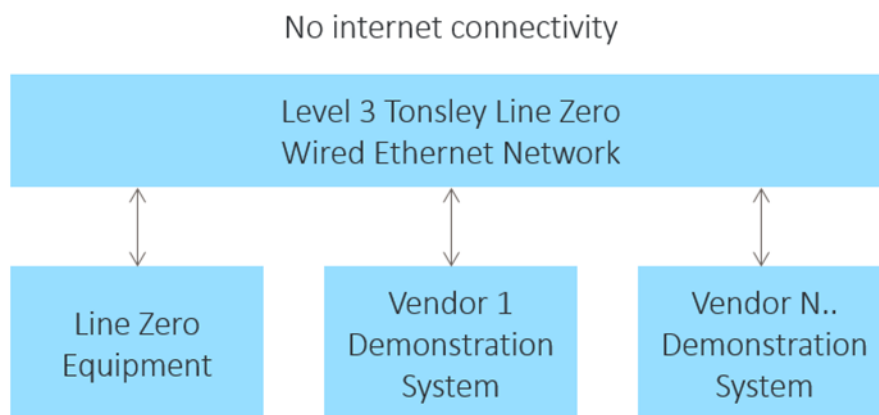
BAE Systems Maritime Australia will review the value of the PoC Report and determine whether to proceed or not with the Vendors concept to full demonstration and thus the fulfilment of deliverables 2-7 listed in Section 2.6.

- The Vendor will be formally notified by BAESMA in writing as to whether it wishes to:
  - Proceed to physical demonstrations; or
  - Conclude the Project and not proceed to any further deliverables.

It is understood by both parties that BAESMA is under no obligation to pursue with the project after the PoC Report if it chooses the option to not proceed.

## 2.4 Reference Architecture

The following architectural and system design shall be deemed compliant for vendor demonstrations:



- Vendor Demonstration systems shall be in the form of a laptop with vendor capabilities loaded.

- Vendor provided laptops operating at Level 2 and below will connect to the Line Zero wired Ethernet network, operating as a Level 3 network. Levels are in accordance with Purdue / ISA 95 / IEC 62264.
- Vendor laptops and Next Unit of Computing (NUC) devices are required to undergo a goods inwards inspection by BAESMA in order to scan for any malicious software contained on device.
- All capabilities shall be contained within the Vendor laptop (at level 2 and below), no internet connection is permitted or will be provided. Connections to the Line Zero equipment and sensors will be provided through the Level 3 local network only.
- Interfaces between the vendor demonstration system and the level 3 network shall be provided upon request. Data interfaces may take the form of:
  - MQTT data streams
  - Kafka topics
  - PostgreSQL data access
  - InfluxDB data access
  - CSV/ XML/ JSON file formats
- Other data interfaces may be provided upon vendor request.

Vendors are recommended to identify their preferred method of data absorption from BAESMA.

A primary objective of this activity is to author a general interface specification that will aggregate all learnings from all vendors to inform this specification at the completion of this task.

## 2.5 Demonstration

Demonstrations shall be held in person at Tonsley Line Zero, SA during a 1 week period to be agreed by the vendors and BAESMA. On a case-by-case basis BAESMA may invite stakeholders from the wider Naval Shipbuilding Enterprise to view demonstrations.

At the completion of Demonstrations, all demonstrators shall be delivered and ownership shall be transferred to BAESMA for ongoing use within Line Zero.

## 2.6 Innovation Challenge Deliverables

Milestone	Description	Deliverables
1	Proof of Concept (PoC) Report	Must include: <ul style="list-style-type: none"> <li>• Concept Overview:                             <ul style="list-style-type: none"> <li>○ Concept Capabilities</li> <li>○ Concept application and need for concept in Shipyard environment</li> </ul> </li> <li>• Design Segment:                             <ul style="list-style-type: none"> <li>○ Interface Diagram</li> <li>○ Specific Data Interface lists / Interface Control Documentation</li> </ul> </li> <li>• Operational Processes &amp; Instructions</li> <li>• Viability of Concept:                             <ul style="list-style-type: none"> <li>○ ROM Pricing for scale</li> </ul> </li> <li>• Key PoC Outcomes</li> <li>• Recommendation to BAESMA</li> <li>• Presentation of findings to BAESMA:                             <ul style="list-style-type: none"> <li>○ Key processes</li> <li>○ Key outcomes</li> <li>○ Future options</li> </ul> </li> </ul>

2	Innovation Challenge Project Plan	<p>Must include:</p> <ul style="list-style-type: none"> <li>• Project Overview</li> <li>• Project Approach/Methodology</li> <li>• Scope of Work</li> <li>• Milestone List</li> <li>• Schedule Baseline</li> <li>• Work Breakdown Structure (WBS)</li> <li>• Personnel List</li> <li>• Cost Baseline</li> <li>• Risks and Assumptions</li> </ul>
3	Design Documentation Delivery	<p>Must include:</p> <ul style="list-style-type: none"> <li>• Block diagram</li> <li>• Interconnection</li> <li>• Hardware &amp; Software BoM                             <ul style="list-style-type: none"> <li>○ Individual Lines</li> </ul> </li> </ul>
<p><b>BAESMA Stage Gate Review</b></p> <p><i>BAESMA to accept and endorse the PoC before Vendor progressing to Demonstration.</i></p>		
4	Demonstration Integration Complete	<p>Must include:</p> <ul style="list-style-type: none"> <li>• BAESMA Safety Risk Assessment</li> </ul>
5	Demonstration Trials Complete	<p>Must include:</p> <ul style="list-style-type: none"> <li>• Vendor demonstrating a working Innovation Challenge solution to BAESMA</li> </ul>
6	Final Report & Handover	<p>Must include:</p> <ul style="list-style-type: none"> <li>• Capability gap analysis                             <ul style="list-style-type: none"> <li>○ With respect to the original intent as set out in the Project Plan:                                     <ul style="list-style-type: none"> <li>▪ Detail work undertaken and any deviation from the project plan (including reasoning for deviation);</li> <li>▪ Project successes;</li> <li>▪ Noted shortcomings or areas for improvement;</li> <li>▪ Compliance matrix against requirements as set out in the Project Plan.</li> </ul> </li> </ul> </li> <li>• Capability gap analysis for shipyard and fleet rollout / assumed requirements for application into the naval platforms.</li> <li>• Recommendations for:                             <ul style="list-style-type: none"> <li>○ Next steps</li> <li>○ Technology insertion roadmap</li> </ul> </li> <li>• Indicative (scalable) costing of future steps</li> <li>• Actual cost for trial as delivered against the CBS                             <ul style="list-style-type: none"> <li>○ As a minimum to include breakdown of cost of labour and cost of non-labour</li> </ul> </li> </ul>
	Monthly Progress Reports	<ul style="list-style-type: none"> <li>• Schedule progress against Project Plan</li> <li>• Brief narrative on progress for the past month and anticipated progress for the upcoming month</li> <li>• Agreed scope changes in the last month</li> <li>• Any updates to risk / opportunity</li> </ul>

Note: All deliverables are subject to clarification and acceptance by BAESMA through written communication.

## 2.7 Exclusions

Nil. This SoW is anticipated to be all inclusive to meet the requirements of the specification.

## 2.8 Assumptions

### 2.8.1 Defence Information Security

All respondents shall show evidence of holding or an in-progress application for DISP membership at Entry Level or higher.

### 2.8.2 Intellectual Property

- Participation in this Innovation Challenge shall not change any Background IP ownership of any organisation.
- Any successful vendors shall provide to BAE Systems a license to use any delivered demonstration at Line Zero for demonstration and research purposes.
- Any successful vendors shall provide to BAE Systems Foreground IP in the form of design reports and final reports, which BAE Systems will use to derive general data interface specifications. This Foreground IP will be owned by BAE Systems.
- BAE Systems intends to develop an aggregated general specification for data interfaces and supply chain integration as Foreground IP for this activity and this specification will be owned by BAE Systems.
- BAE Systems intends to use this general specification for data interfaces to contract for work and capabilities from the supply chain for data enabled capabilities.

### 2.8.3 Term, Completion and Acceptance Requirements

- The Innovation Challenge project will run for a total term as agreed in the contracted Minor Services Agreement (MSA);
- The Effective Date (ED) for the Innovation Challenge will be on the day of issuance of a Purchase Order (PO) by BAESMA;
- BAESMA will evaluate acceptance of each milestone once the milestone has been completed and delivered to BAESMA;
- The acceptance of each milestone will trigger a milestone payment to the vendor or as agreed in the MSA.
- Vendors acknowledge that the Innovation Challenge is an independent activity of the HCFP and that BAESMA are under no obligation to pursue any further scopes of work/ activities with participating vendors beyond the scope agreed to as part of the Innovation Challenge.

### 2.8.4 BAE Systems Maritime Australia Furnished Facilities & Equipment

- It is assumed that all requirements for the installation of the vendor's innovation challenge solution will be identified, detailed and agreed in the vendor's Innovation Challenge Proposal submitted to BAESMA prior to signing the MSA;
- BAESMA shall provide a designated test/ demonstration space required at Line Zero, Tonsley Precinct for the Vendor at no cost;
- BAESMA shall provide power to the vendors designated test/demonstration site at Line Zero, Tonsley Precinct;
- BAESMA shall provide access to the vendor to any agreed project applicable data and/ or information necessary to conduct and complete the Innovation Challenge activities;

- The vendor is to provide all equipment and materials required in order to undertake the Innovation Challenge project;

The vendor is to disclose to the BAE Systems stakeholders as to what requirements will need to be met in regards to furnished facilities and equipment at Line Zero and or any other BAE Systems facility locations.

### 2.8.5 Personnel

- The vendor must allow for and attend any site specific training and inductions provided by BAESMA as described in this SoW;
- For the purpose of site inductions and procedures at Line Zero when undertaking demonstrations it would be expected that the vendor would select a core group of personnel that would attend the site;
- The vendor will further identify any third party personnel who are proposed to conduct activities in contribution to the Innovation Challenge project. The vendor will further identify the third party members' roles and responsibilities to BAESMA;
- The vendor will ensure that any third parties also undertake and complete the specific training and site inductions provided by BAESMA if deemed necessary;
- BAESMA are responsible for ensuring that all personnel on site at Line Zero conducting works for the Innovation Challenge will have undertaken the necessary inductions and training to be compliant with all site, equipment and plant handlings, Safe Operating Procedures (SOP) and other safety procedure requirements.

### 2.8.6 Stakeholder Engagement

- The Vendors' personnel will be expected to actively coordinate and effectively interact and communicate with various stakeholders in order to complete the Innovation Challenge project detailed in this SoW. These people may include, but are not limited to;
  - BAESMA Personnel;
  - Third Party Representatives/ Auditors
- Throughout the project the vendor is required to provide a predetermined monthly progress report to BAESMA Project Manager.

## 3 Response Format

- All Proposal submissions are to be provided using the Innovation Challenge Proposal Template provided with this document through the HCFP ICN Gateway Portal.
- Proposal submissions are due by close of business **10 February 2023**.

### 3.1 Cost Breakdown Structure & Schedule Deliverables

- Due to the nature of data technology, BAESMA recognises that vendors may have solutions in which functionality/ performance can be tailored based on pricing. To accommodate this, vendors are asked to demonstrate how they would achieve the optimal data solution for IC Phase 1 through a series of sprints of up to \$25k AUD, up to \$50k AUD, or up to \$100k AUD in totality which BAESMA will assess and determine value for money (VfM).
- Prior to agreeing to proceed with the Vendors proposal to the Innovation Challenge, BAESMA require the vendor to provide a clear and transparent articulation of a project Cost Breakdown Structure (CBS) in accordance with the deliverables, which is to be included within the Vendor's Innovation Challenge Proposal. This includes but is not limited to a cost breakdown of:
  - Direct and Indirect Materials;
  - Digital Hardware equipment;
  - Software;
  - Plant Equipment/ Items
  - Labour rates and hours;
  - Deliverables at each milestone;
  - Installation;
  - Overheads;
  - Third Party Sub-contractors
- The vendor is to provide a milestone schedule in accordance with the table below unless the Vendor has an alternative milestone payment schedule which is agreed upon by BAESMA and is articulated in the vendors proposal and referred to in the MSA.

Milestone	Deliverable	Date (ED+)	Value (\$) excl. GST
1	Proof of Concept (PoC) Report	ED+ x weeks	\$ x
2	Innovation Challenge Project Plan	ED+ x weeks	\$ x
3	Design Documentation Delivery	ED+ x weeks	\$ x
4	Demonstration Integration Complete (Line Zero)	ED+ x weeks	\$ x
5	Demonstration Trials Complete (Line Zero)	ED+ x weeks	\$ x
7	Findings Report and Recommendation	ED+ x weeks	\$ x
<b>Total (excl. GST)</b>			<b>\$ x</b>

- If the vendors alternative milestone payment schedule is preferred, the vendor must provide the preferred milestone payment schedule in their proposal document to BAESMA. Which must detail:
  - a list of the vendors preferred milestones;
  - payment schedule dates at the deliverable milestone;
  - The value (AUD) of each milestone which excludes GST.
- The vendor will be paid in accordance with the agreed terms and conditions listed in the contract and only for the deliverables which it fulfils.
  - The vendor will be paid for the PoC amount once this first deliverables has been achieved.
  - BAESMA will not provide funding, nor shall the vendor expect funding to the subsequent deliverables beyond the PoC Report if BAE Systems Maritime Australia wishes to not progress with the project further.

## 4 Tonsley Line Zero Access

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- It is assumed that all requirements for the installation of the vendor's Innovation Challenge solution will be identified, detailed and agreed in the vendor's IC Proposal submitted to BAESMA prior to signing the MSA;
- BAESMA shall provide designated test/ demonstration space at Line Zero for vendors at no cost;
- BAESMA shall provide power to the vendors designated test/ demonstration site at Line Zero;
- BAESMA shall provide access to the vendor to any agreed project applicable data and/ or information necessary to conduct and complete the Innovation Challenge activities;
- The vendor is to provide all equipment and materials required in order to undertake the Innovation Challenge project.

### 4.1 Temporary Access

- BAESMA are to provide all designated vendor and subcontractor personnel with a Tonsley site induction prior to them accessing the site. Once personnel have undertaken the relevant site induction they will be classed as an authorised person;
- Personnel, including site visitors, vendors and/ or subcontractors, that have not undertaken a site induction are required to be escorted at all times by an authorised person that has undertaken the necessary site induction whilst at Line Zero;
- BAESMA shall ensure that the vendor and their subcontractors are provided with the necessary site access for personnel as well as equipment;
- BAESMA security will issue and control swipe access passes for all authorised vendor and their subcontractors personnel to conduct work at Line Zero;
- Although not required for site access to Line Zero, vendor and any subcontractor personnel must have the ability to obtain a valid police clearance if they are required to visit other BAESMA sites in support of the Innovation Challenge project;
- If required within Line Zero, the vendor will supply all materials, erect, certify and make allowable costs for the use of all fixed access systems such as scaffolding and the like or mobile elevated work platforms with the assistance of BAESMA;
- Vendors and their subcontractors are to cap the number of designated personnel requiring site access to perform activities at any one time to 2x people.

### 4.2 Personal Protective Equipment (PPE)

- All vendor and subcontractor personnel on site at Line Zero are required to wear:
  - Vendor or subcontractor supplied safety glasses;
  - Vendor or subcontractor supplied enclosed steel toe capped footwear;
  - Vendor or subcontractor supplied high visibility work wear;
  - Long sleeve shirt/top and long pants.
- It is mandatory for gloves to be carried on glove clips at all times by workers who will be undertaking physical work, even when not in use;
- Workers shall use any additional PPE for any tasks being performed as determined by the relevant risk assessment including:



- Vendor or subcontractor supplied bump caps;
- Vendor or subcontractor supplied gloves;
- Vendor or subcontractor supplied hearing protection;
- Vendor or subcontractor supplied dust mask/ face shield.
- In the case of events or dignitaries attending Line Zero, PPE may be relaxed to normal attire once a risk assessment for the activities being performed during the visit records the risks is deemed acceptable without PPE. Approval must be obtained from the SHE site Manager or delegate and will be documented in the Plan of the Week.

### 4.3 Site Workstation

- BAESMA shall provide the vendor with a designated workstation area of approximately 4 metres squared (as a minimum) at Line Zero to conduct all activities, unless prior agreement has been arranged between BAESMA and the vendor. Additional working space requirements are to be negotiated on a case-by-case basis with BAESMA prior to work commencing;
- BAESMA shall provide the vendor with a work bench or desk in the vendor's designated working area at Line Zero, unless prior agreement to an alternative between BAESMA and the vendor;
- BAESMA shall ensure that all designated vendor workstations have a power source and task lighting.

### 4.4 Storage Facilities and Materials Handling

- BAESMA shall be responsible for the safeguarding and security of all listed vendor materials, equipment and other items that are kept in the provided on-site storage at Line Zero;
- The vendor is to provide details on all equipment and materials which are required to be stored at Line Zero prior to any Innovation Challenge project work commencing;
- The vendor must ensure that all equipment and materials not disclosed are to be stored offsite and supplied just in time and as required in line with project programme, to minimise on site storage;
- The vendor is required to conduct a Risk Assessment (RA) of the site prior to the commencement of any project activities being conducted at the Tonsley Precinct whereby:
  - All powered plant must be risk assessed;
  - All equipment is to be in date for electrical Test and Tag;
  - All significant activities require risk assessments.

### 4.5 Mobile Plant

- The vendor is responsible for the supply of all required mobile plant and equipment required for the demonstration at the Line Zero site with the assistance of BAESMA;
- The vendor is required to communicate requirements for mobile plant equipment with BAESMA prior to the equipment's arrival onsite;
- BAESMA shall inform the vendor of any Legislative, BAESMA or other requirements for operating mobile plan equipment onsite if applicable.

### 4.6 Site Internet

- Refer to Section 2.4.

## 4.7 Vendor Risk Register

- BAESMA requires the Vendors to maintain a Risk Register as part of completing the Innovation Challenge project. This is not a required deliverable but may be requested at any stage by BAESMA for review or auditing purposes.

## 4.8 Line Zero Site Awareness

- Maximum floor point loading is equal to 1,500kg;
- Area Floor loading is equal to 2,300kg/m<sup>2</sup>. BAESMA shall provide a plan on request of the vendor or any subcontractors.

## 4.9 Environmental Awareness

- Due to various other R&T projects being conducted simultaneously at Line Zero – Pilot Factory of the Future by BAESMA, other vendors and subcontractors, the vendor in this instance understands and accepts that following factors may cause interference and/ or impact upon the way in which vendors may conduct project activities. These include but are not limited to:
  - Excessive Noise;
  - Frequency Interference;
  - Magnetic Fields Generation;
  - EMF Radiation;
  - MIG/TIG Welding;
  - Floor Vibration;
  - Volatile Organic Compound (VOC) Fumes (paint etc.)

## Annex A Problem Statement – Data

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### Innovation Challenge 4 – Data

BAE Systems Maritime Australia (BAESMA) seeks Vendor, Academia and SME input to deliver data enabled capabilities.

Specifically BAESMA is calling for:

- Data enabled capabilities based on data served by BAESMA to a vendor with insights served back from a vendor to BAESMA.
  - BAESMA intends to develop generic data interfaces and hosting infrastructure based on aggregated vendor capabilities.
  - BAESMA also intends to develop commercial and financial models for procurement of “Algorithms as a Commodity” as a follow on effort. SaaS (per use, per user, token), perpetual licenses, open source and proprietary solutions are intended – as feasible – within a resilient, cyber and cloud / communications denied environments.
- Eligible procured capabilities associated with production workcells including:
  - OEE, Quality, Testing, Inspections, machine vision, smart workcell environment & security, equipment scheduling.
- Specific aspects not eligible at this time include:
  - Digital Work Management/ Work Orders/ MES, Part Marking & Tracking, Training, Ship Product/ Ship Sustainment.

BAESMA will serve data from equipment locally in Tonsley Line Zero, SA for the purposes of Demonstration.

Compliant Vendor Demonstrations are to be conducted by bringing a standalone vendor laptop or NUC for integration into Line Zero without internet or cloud services. Non-compliant capabilities may be considered based on individual merit.