

# GENERAL DYNAMICS

## NASSCO

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### AI Island: Autonomous System for Accelerating Solutions and Organizational Learning in Shipyards

Christopher Bennettson – Quality Engineer – GD NASSCO

5/6/26



# Project Team

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- NASSCO
  - Duke Vuong
  - Christopher Bennettson
  - Samantha Ruzich
  
- Avathon Gov
  - Jason Gross
  - MaTyna Fessler

# Problem Statement and Proposed Solution

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**Issue:** Shipyards struggle with inefficient data collection, fragmented reporting, and inconsistent analysis. This leads to delays, rework, and compromised data integrity during critical project phases.

**Proposed Solution:** Development of an AI Island that will be a standalone, autonomous AI system to help accelerate problem solution, decision-making, and organizational learning.

# Objectives and Scope

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- **Objective:** Deliver a scalable data preparation and analysis methodology, incorporating advanced AI tools such as NLP models, anomaly detection, and predictive workflows.
- **Scope:** Four-phased approach: Discovery, Initial Development, Testing & Optimization, Documentation & Handover
- **Timeline:** March 2026 - March 2027

# Early Challenges and Risks

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- **Data Quality:** Ensuring processed datasets meet technical and project requirements.
- **Resource Availability:** Availability of key personnel for reviews.
- **Alignment Risks:** Maintaining clear communication between Avathon and NASSCO to align technical outcomes with project objectives.

# Current Status and Next Steps

- **Current Phase:** Discovery. ECD: 7/3/2026.
- **Completed Tasks:** Data set examples created and reviewed. Larger dataset collected and reviewed.
- **Next Steps:** Avathon Gov will start developing scripts for data ingestion and model development.
- **Overall Project Status:** On track.

1. Discovery Phase				
Tasks	Due Date	Owner	Status	Priority
Create cleansed data examples for Avathon to use for development and testing.	4/3/2026	Christopher Bennetson	Complete	High
Review cleansed sample data set for technical data before sending to Avathon.	4/10/2026	NASSCO IT / Duke Vuong	Complete	Medium
Collect larger dataset that has been processed separately by NASSCO	4/20/2026	Christopher Bennetson	Complete	Medium
Review the provided data set and intended outcomes to ensure alignment with project objectives.	4/24/2026-5/7/26	Jason / Nathan	Upcoming	High
Create Status Presentation for NSRP Technology panel meeting	4/30/2026-5/7/26	Christopher Bennetson	Upcoming	High
2. Initial Development				
Tasks	Due Date	Owner	Status	Priority
Develop and test scripts for data ingestion and cleansing.	5/29/2026	Jason / Nathan	Upcoming	High
Incorporate a data confidence scoring mechanism.	6/5/2026	Christopher Bennetson / Jason	Upcoming	Medium
Build and validate AD-NLP models, anomaly detection algorithms, and predictive workflows.	6/19/2026	Jason / Nathan	Upcoming	High
Ensure system compatibility with NASSCO's existing infrastructure to support future integration.	6/26/2026	NASSCO IT	Upcoming	High
Create Status Presentation for NSRP Technology panel meeting	7/3/2026	Christopher Bennetson	Upcoming	Medium
3. Testing and Optimization				
Tasks	Due Date	Owner	Status	Priority
Implement the data prep and analysis tools in NASSCO's environment.	9/31/2026	NASSCO IT	Upcoming	High
Assist NASSCO in implementing the data prep and analysis tools in NASSCO's environment.	9/31/2026	Jason / Nathan	Upcoming	High
Provide feedback to Avathon regarding any implementation issues	9/31/2026	NASSCO IT	Upcoming	Medium
Implement feedback and assist NASSCO in implementing the changes iteratively.	9/31/2026	Jason / Nathan	Upcoming	High
Perform larger scale analysis with real-world data within NASSCO's environment	10/31/2026	Christopher Bennetson	Upcoming	High
4. Documentation and Handover				
Tasks	Due Date	Owner	Status	Priority
Compile final documentation (Implementation instructions, troubleshooting resources, and recommendations for scaling the tools across broader datasets or workflows.)	11/15/2026	Jason / Nathan	Upcoming	High
Deliver to NASSCO a fully functioning, scalable methodology for independent use.	11/15/2026	Jason / Nathan	Upcoming	High
Provide training and knowledge transfer sessions to facilitate seamless adoption by NASSCO teams.	11/15/2026	Jason / Nathan	Upcoming	High
Compile final NSRP report and presentation	11/31/2026	Christopher Bennetson	Upcoming	High

Questions?

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