

Department of the Navy SBIR/STTR Transition Program

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ONR Approval #43-8818-21

Topic # N201-X02

Adapting SRT's M1 Hardware Portal for Navy Facility Health Monitoring and Prioritization Service Robotics & Technologies, Inc.

WHO

SYSCOM: ONR

Sponsoring Program: Naval Enterprise Sustainment Technology Team

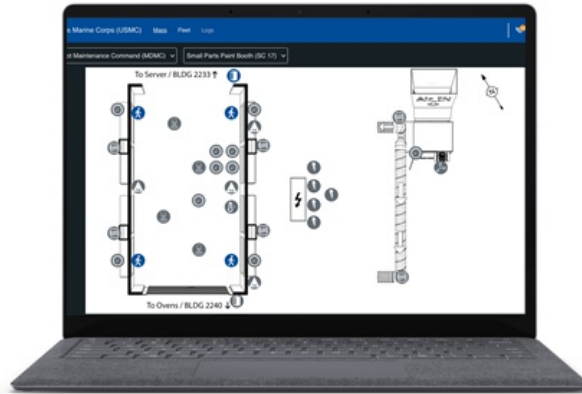
Transition Target: NAVSEA Naval Shipyards, NAVAIR Fleet Readiness Centers (FRC), USMC Logistics Command (MARCORLOGCOM)

TPOC:

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Other transition opportunities: NAVFAC, MARCORLOGCOM

Notes: SRT's M1 Portal is a Mission Control Center for monitoring facility health and infrastructure systems. Our patented software pulls data from deployed sensors across the facility into a common data management ecosystem and performs cross-platform data analytics. This hardware agnostic device integration platform provides wide-ranging facility insights based on individual deployment needs.



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WHAT

Operational Need and Improvement: DON seeks modern tools, solutions, and processes to reliably and safely get assets back in the field as quickly as possible and intends to collaborate with innovative small businesses. The US DOD and DOD infrastructure has been successful because of both maintenance of existing systems and consistent looking ahead for new technologies. The MARCORSYSCOM solicitation invited applicants to introduce cross-platform cooperation of infrastructure, bringing necessary legacy infrastructure into shared data ecosystems with sensors and intelligence, allowing for greater information to support decision making.

Specifications Required: Navy/USMC is looking to reduce downtime of critical facility infrastructure, primarily focused around maintenance depots and machine shops supporting warfighter operations. Facility managers seek an integrated facility health monitoring system that will be able to track real-time health status of buildings, identify and prioritize areas for repair, and predict where future failures might arise.

Technology Developed: SRT is a software integration company that has developed a software platform to optimize smart facility data management, allowing facility leaders to monitor, analyze and automate across platforms. We specialize in the development of an integrated, hardware-agnostic software ecosystem for robots, smart sensors, and Internet of Things (IoT) devices. This M1 Hardware Portal provides building managers with real-time insight into all aspects of the building—from custodial or delivery robots, to environmental conditions, to security or utility monitoring within the facility. SRT has demonstrated our software in a USMC MDMC Depot, monitoring runtime, machine health, and air quality management. This project will expand across 4 additional shops during the course of this program.

Warfighter Value: SRT's software will modernize legacy and manual systems to provide predictive notifications for anticipated machinery downtime. SRT worked with the client to establish how a smart facility deployment would reduce shop downtime, providing actionable information to adjust workflow. By leveraging SRT's smart building ecosystem, the integration of existing hardware and sensors, the deployment of additional sensors, and SRT's predictive analytics module, SRT's system can profoundly improve facility efficiency, optimize maintenance requirements, and improve reporting of machinery operations.

WHEN

Contract Number: N68335-21-C-0196 **Ending on:** July 15, 2022

Milestone	Risk Level	Measure of Success	Ending TRL	Date
NSF SBIR funded initial platform capabilities	N/A	Devices Share Data in a Common Ecosystem	4	1st QTR FY18
Navy Phase 1 project prepared for specific DoD applications	N/A	Simulation of data environment to demonstrate meets USMC need	5/6	4th QTR FY20
Navy Phase 2 Base project led to first DoD deployment	Low	Deployed Fully Integrated System and Detected Off-Nominal Conditions	8	4th QTR FY21
Navy Phase 2 Option 1 project will include 4 additional deployments	Low	Demonstrate cross functional applications at multiple sites	9	2nd QTR FY22

HOW

Projected Business Model: SRT's M1 Hardware Portal is a software framework for integration of new and existing Building Automation Systems, smart hardware, and legacy software. SRT's modular software allows for rapid standup and deployment of systems licensed to end users with consultative customization and recurring maintenance. SRT engages in both direct sales and working through Prime's. SRT's commercial traction for facility health monitoring is currently in commercial real estate, higher education and warehousing.

Company Objectives: DON maintains extensive infrastructure across the US and around the world. Maintenance and management of this infrastructure falls to facility managers, who seek an integrated facility health monitoring system that will be able to track real-time health status of buildings, identify and prioritize areas for repair, and predict where future failures might arise. SRT will continue to work with localized deployments that support these facility managers, while highlighting the capability to assess and investigate data from across locations easily, thereby providing information to support DON decision making across their fleet.

Potential Commercial Applications: SRT presented several commercial applications during the PoP which focused on deployments to address: warehouse logistics and asset management, remote monitoring to reduce manual inspection, low power mode for buildings to distribute power to most essential infrastructure, performance monitoring of motors to proactively schedule condition-based maintenance, enterprise level integration of data and legacy software, and robotics for mapping and multi-robotic fleet control.

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