

U.S. Navy Benefits from Expanded Scope of SCORE Tool



Fiscal Year: 2020

Location: Virginia

Company: MI Technical Solutions, Inc.

Value: \$141 million

Office: U.S. Navy, Naval Sea Systems Command (NAVSEA), Commander, Navy Regional Maintenance Center (CNRMC)

Project: Social Network Data Convergence into Reliable Information for Emergencies (SCORE) Tool

The Challenge:

The U.S. Navy needed a systems solution capable of transforming numerous raw data into actionable intelligence and situational awareness for crisis response. During Phase I, the Navy acquired SCORE – a modular system that analyzes and converges multiple sources of data into useful, verified, and reliable information. The initial scope focused on analyzing real-time human intelligence using social network data.

In FY 2020, the Navy approached GSA with a need to expand the original SCORE framework and software agent system (Phase III) to meet additional process and efficiency challenges impacting fleet readiness. Specifically, CNRMC sought to consolidate and unify the operational mission planning process using SCORE's modular system capabilities.

The Solution:

In coordination between CNRMC and GSA's Assisted Acquisition Services (AAS) Client Support Center in Region 5, MI Technical Solutions was awarded a Phase III contract to expand the SCORE algorithm and model. SCORE obtains and centralizes data, performs automated data analysis, then merges information from common events into summarized intelligence reports that can be integrated into collaborative management systems or mapped to see a larger situational picture. By adapting SCORE, MI Technical Solutions provided Navy fleet maintenance with technical key performance indicators that monitor fleet readiness and incorporate lessons learned via an automated knowledge engine to ensure a continuous improvement feedback loop for all data and information. Utilizing regression analysis and association rule techniques, the resulting tool derives correlation coefficients associated with core evolutions and allows CNRMC to gain insight and efficiencies into critical activities.





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The Impact:

This Small Business Innovation Research (SBIR) project enabled CNRMC to avoid numerous costly shipyard delays, reduce system downtimes, and provide seamless life-cycle management. For example, CNRMC extended SCORE to manage the Temporary Local Area Network System (TempLAN) when ships are dry docked, to include the initial planning and scheduling of ships, sustainment/logistics support, and configuration management. SCORE helped improve the operational efficiency of the TempLAN by identifying "the needle in the haystack" that resulted in system downtimes and thus maintenance delays. As challenges arose with the Pier Wide Area Network, CNRMC was able to extend the current infrastructure and implement a commercial off-the-shelf (COTS), Defense Information Systems Agency–approved universal communications kit for virtual routing and forwarding of data. This system has revolutionized the ability to provide continuity of services throughout the fleet.

SCORE has been enhanced, derived from, and expanded numerous times under SBIR Phase III. For example, CNRMC was also able to extend the current infrastructure to resolve the challenges sailors faced with bandwidth inefficiencies and provided two prototypes of a Wireless Connectivity Bridge (WCB). The WCB again utilized a COTS solution to provide an encrypted wireless 100Mbps connection, which not only supplied "life-changing" internet speeds for the sailors but also eliminated the need for expensive and costly infrastructure upgrades.