As the U.S. Navy’s fleet has advanced in technological complexity, maintenance planned on a periodic basis alone is no longer sufficient. Nearly every aspect of a ship now requires continuous monitoring and proactive action, including combat systems, hull, mechanical and electrical components and their subcomponents. Even with recent technological advancements, the onboard ship diagnostics systems lack the ability to remotely access logs for comprehensive ship health using predictive analytics.

The ADEPT Distance Support Sensor Suite (ADSSS) has received Army-Navy Nomenclature as AN/SYM-3(V) and fulfills the needs for localized sensing coupled with remote data collection for deterministic and predictive modeling—ultimately providing maintainers, logisticians and analysts with data to understand systems’ health and tools to proactively prevent system failures.

Noblis Prognostics Framework Analytics Software
Empowering users to make the most impactful decisions for continuous ship operation
Continuous Ship Operation
Built on a Modular Framework

SYM-3 was deployed to the U.S. Navy’s Littoral Combat Ships (LCS), combining deterministic modeling with various sensors to capture status of LCS combat system elements and feed relevant information to analysts for human consumption and decision support. The SYM-3 system pairs seamlessly with Noblis’ Prognostics Framework analytics software to provide accurate, powerful condition assessment. The Prognostics Framework can be embedded on-platform on the SYM-3 core to perform real-time prognostics, diagnostics and status monitoring, or utilized off-platform to process all data collected by the SYM-3 smart sensor suite. This modular framework for software and hardware empowers users to make the most impactful decisions for continuous ship operation.

Due to its modular, open architecture design, ADSSS/SYM-3 is applicable to almost any complex, distributed system. Future applications include autonomous systems, air traffic control systems and other DoD-related applications.

About Noblis
Noblis helps assure mission readiness through advanced maintenance and monitoring solutions for mission-critical systems. Our smart sensors, secure networks and data analytics help platforms—such as the U.S. Navy’s Littoral Combat Ship—stay up and running while optimizing performance and minimizing overall lifecycle costs. An ISO 9001-certified company, Noblis also develops and manufactures the hardware and software used in our advanced maintenance applications. Visit Noblis.org for more about our mission-driven, custom solutions.

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