

Department of the Navy SBIR/STTR Transition Program

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NAVSEA #18-549

Topic # N05-053

Modeling the Impact of Technology Transition on Ship Operational Capabilities  
SimVentions, Inc.

WHO

**SYSCOM:** NAVSEA

**Sponsoring Program:** N96

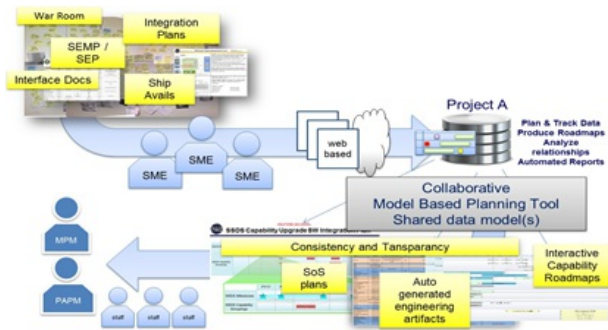
**Transition Target:** PEO IWS 1 AEGIS

**TPOC:**

(540)653-0980

**Other transition opportunities:** IWS 6 CEC, IFF Mode 5, IWS 2 Sensors, IWS 5 Subs, IWS 10 SSDS, IWS 12 Missiles, MDA BMD, PEO LCS, NSWCDD (WSPO, V10)

**Notes:** Modernization timelines have been driven by several independent processes, (i.e. availability schedules, budget cycles, programmatic planning & milestones). Current process will not support the Fleet's requirements for integrated, capable weapon systems; there is a gap between programming, planning, and acquisition and training & certification processes. Informedb facilitates the linking of modernization planning and deployment schedules streamlining intelligent changes to the plan, provides informed decisions affecting capability and capacity of deploying forces, and offers a real-time authoritative programmatic data available to Fleets and OPNAV for planning discussions.



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WHAT

**Operational Need and Improvement:** Informedb is an enterprise solution moving programs from document centric to data centric collaboration, offering improved methods and tools to optimize platform lifecycle management. Understanding the complete system of systems integration issues and coupling it with the other key challenges of a program's tradeoff decisions is critical in proactively aligning and coordinate numerous new capabilities from the R&D through shipboard integration. Stakeholders can now manage, track, report and visualize dependencies based on a real-time authoritative data.

**Specifications Required:** With the expected service life of U.S. Navy ships is 30 to 50 years and beyond, NAVSEA needs creative and innovative approaches to reduce Total Ownership Costs (TOC). SimVentions' Informedb technology helps the engineering community to proactively align and coordinate numerous new capabilities from the Research and Development (R&D) stage through shipboard integration to meet operational needs. Informedb enables TOC reduction and program cost savings by also providing the basis for better communication and analysis.

**Technology Developed:** Historically, modernization timelines have been driven by several independent processes; availability schedules, budget cycles, programmatic and planning milestones. The current processes will not support the fleet's requirements for integrated capability and weapon systems. Informedb will enable effective planning and execution of surface and expeditionary warfare maintenance and modernization to ensure fleet reliability, sustainability and relevance against modern and evolving threats.

**Warfighter Value:** Informedb enables multi-program/project data collaboration. Creating a semi-automated exchange of data among data sets within Informedb breaks down the stove-piped program walls reducing the risk of system of system failure based on the lack of collaborative program management and planning. Enabling collaboration across Fleet, SYSCOMs and PEOs facilitates the intelligent mitigation of risk while providing a digital War Room and reports for information sharing. Finally, Informedb enables significant cost savings in the development and generation of engineering artifacts currently built by hand.

WHEN

**Contract Number:** N00024-17-C-4025 **Ending on:** January 18, 2019

Milestone	Risk Level	Measure of Success	Ending TRL	Date
Multi Project Data Collaboration	Low	GUIs for Managing Data Exchange	8	January 2019
What If Capability	Low	Interactive Sandbox for Estimating	8	January 2019
Quality Report	Low	Generated Word Documents	8	January 2019
Deploy Secure	Low	Low to High Data Exchange	8	January 2019

HOW

**Projected Business Model:** SimVentions will deliver software of the technologies developed for customer. SimVentions will deliver briefings/presentations on the tools developed, taxonomy schema, roadmaps and reports generated, report templates, as well as a walkthrough of methodologies and demonstration of user navigation. SimVentions will also deliver and provide training materials for all prototype systems developed for customer use, and provide training to customers on how to make use of the new features. SimVentions staff will provide program management, engineering, and training for successful implementation. These functional areas assist in establishing the data taxonomy with attributes, validating the data structure, inputting legacy data, customizing view profiles to display appealing data views that simplify understanding, and performing any required software tailoring. Potential risks are mitigated by constant stakeholder collaboration and via agile software development.

**Company Objectives:** The upgrades of SimVentions' Informedb Enterprise technology will provide capabilities to help understand and assess complex development efforts to identify issue and gap requirements. The scope of this effort will be focused on improving system engineering and planning capabilities in a complex decision space that includes engineering considerations, time, risks, technical interfaces, and operational needs. One objective will be to allow decision makers the capability to model plans and quickly determine the impact of issues and risks across program lines and plans. Additionally, the improvements in data sharing and data metrics will allow the use of the tool across and between programs.

**Potential Commercial Applications:** Informedb is an enterprise solution moving programs from document centric to data centric collaboration. Informedb is deployed on a .com and .mil with a TRL 8 and can be used under mission conditions suitable for DoD and commercial operations.

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