

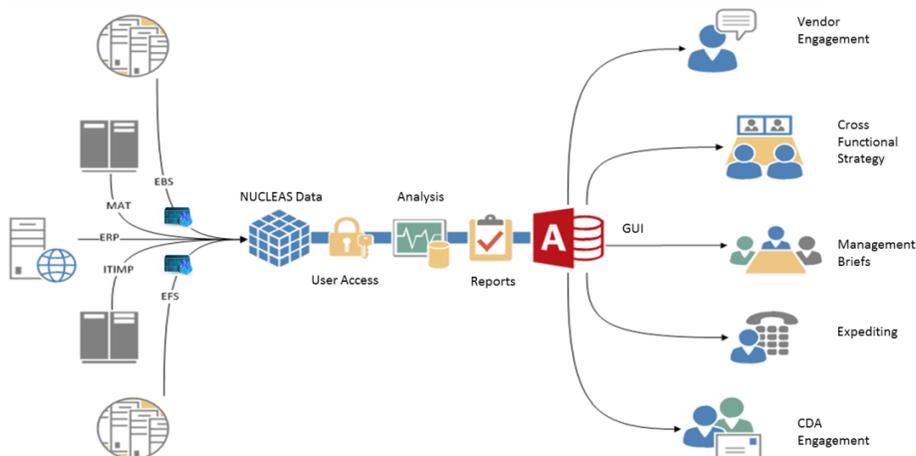
2015 SECNAV Innovation Award Winner: Nuclear Logistics Enterprise Application Suite (NUCLEAS) Team

By **DON Innovation**

The Nuclear Logistics Enterprise Application Suite (NUCLEAS) team developed business intelligence capabilities to unify the functional business areas of the Naval Supply Systems Command Weapon Systems Support (NAVSUP WSS) Nuclear Reactors Supply Chain Management Directorate (NRSCMD) into a highly transparent, common operating picture capable of achieving tailored data analytics.

NUCLEAS connects weapon systems support business processes through integration and real-time dissemination of supply chain data using existing IT tools and sources. This suite of software tools provides strategic vision and operational insight for procurements, contracts, inventory management, and annual sales while improving operational effectiveness. Historically, each functional area operated with a select few subject matter experts (SMEs) familiar with their end-to-end processes and capabilities. Now, there is an unprecedented level of cross-functional interaction and the ability to create a path from data to information to knowledge in support of Provisioning, Planning, Contracting, Quality Assurance, and Customer Support. NUCLEAS also uses statistical methods and visualization in order to clarify and explain data relationships and to discover previously unknown relationships among the material support entities from cradle to grave: vendors to customers.

NUCLEAS Data Visualization Framework



NUCLEAS stores UNCLASSIFIED data in a single location. User Access is controlled on a need to know basis, but provides a full range of visibility to data across the Enterprise to enable both standardized and Ad-Hoc Analysis. Reports depict essential data elements to make an objective decision and the GUI is fully customizable/flexible and can be adjusted without change requests or lengthy development time.

Built with NMCI programs including Microsoft Access, Structured Query Language (SQL), and Visual Basic (VB), NUCLEAS is fully customizable and easy to maintain, upgrade, and deploy. Through process automation, complex algorithms, and intricate queries, volumes of data are processed in a centralized location to deliver novel capabilities. The ability to pool data on demand solved one of the greatest challenges with modern day information technology: the disaggregation of essential data elements amongst multiple repositories (Enterprise Resource Planning - ERP, Integrated Technical Item Management and Procurement - ITIMP, Enterprise Business System - EBS, Material Access Technology - MAT, and Electronic Field Support - EFS). The utilization of new data-driven tools by the ambitious NUCLEAS team created a "Big Bang" effect, improving the overall directorate supply chain management processing efficiency, and led to the identification of surplus inventory at the shipyard, improved sourcing of material, and reduced administrative lead time for parts such as those required for CVN-78 -- the first in a new class of aircraft carriers.

The team designed a smart algorithm to eliminate manual processes and identify excess material. The NUCLEAS toolset quickly identified surplus inventory and facilitated the rebalancing of material across Naval Shipyards and centralized distribution depots. Steps were then taken to eliminate unnecessary procurements as well as re-distribute assets to strategic locations. NUCLEAS drives the philosophy of "Right parts, right place, right time." Reduced inventory also means reduced inventory management thus increasing efficiency of operations and enabling functions to focus on other mission essential requirements.

By replacing legacy programing designs with intricate provisioning algorithms, NRSCMD is able to maximize their relationship with DLA to manage common hardware. The simplified audit tools identify parts supported or capable of being supported by DLA. The new process reduces duplicative inventory management by properly assigning material to the cognizant procurement activity.

NUCLEAS also provides a platform for integrated support across all functional areas to ensure constrained resources are aligned and applied commensurate with timely requirements. For example, the promotion of cross-functional dialogue was critical in achieving the 100% on-board repair material requirement in support of USS GERALD R. FORD. The tool was used to develop relationship models that informed leadership on proactive acquisition actions prior to fast cruise. NRSCMD will apply this as a best practice for future new construction.

NIIN Scorecard

Search NIIN: SEARCH PRINT RECORD
PRINT ALL

Scorecard

COG 1H	FSC 4730	NIIN 002345989	SMIC X6	NOMENCLATURE STRAINER ELEMENT_SE	U/I EA	DRIPR W I B N	IRPOD B	STD PRICE \$35,847.00	REPL PRICE \$18,391.59	RPR PRICE \$0.00			
LRC IXU A9	IM Missie Stutting	AQD 1.53	Req Freq 1.45	PCLT in QTRS 6	PLT 3.9	N945 R	CIC S No	BB Mtg No	UCO Mtg Yes	BPA No	CVN78 No	78HS No	CDA Mtg No
Pri A	AMSC 3P	CDA BPMI - Bechtel Plant Machinery Inc.		LAR Active/Mtg No *	ON HAND 3	CC D	STATUS 26 BB 20 BP 6	SO 3 20 6	QTY 3 22 6	List Requisitions	Folder Status		

873 SYNOPSIS
The 3 assets in E condition are actually the 3 assets on the PEL12 repair order. They should be shipped around March 4th.
12/2/15 - N9422 action item - Confirm expedited qtys. The Planner provided the following qtys to admin: IPG-1 = 6; IPG-2 = 12; IPG-3 = 6; Replen = 3 for a total of 27.
7/22/15 - 18 UCOS/19 Qty

N945 SYNOPSIS
SSN 786 qty 1 -- BPMI pulled SLL (need payback)
ON PNR
Pearl needs 2 for N322535211V002 RDD has passed

873 SYNOPSIS
4/19/16: BA55 - TELCOM with VACCO - Vendor has all material in house now awaiting approval of LPT. Can complete order in 30 days plus ROTL.
4/19/16: BA-39 - vacco sees no problem with meeting deadline. Based upon BA55 submittals.
4/19/16: 15XE752 - No change - J&A in process, waiting on vendor pricing.
4/19/16: Repair 15PEL12 was shipped complete.

S/R	PD NUMBER	FOLDER	EARTAG	STATUS	O2_AGE	PR ALT	SOLICITATION #	QTY	DOLLAR AMT	SIZE	BUYER	Resp.
S	N0010415XE752	152580016		QP00	180	216	N0010416RBJ80	10	\$188,330.00	L	JASON R TAYLOR	N9434.22

S/R	CONTRACT	MOD	DEL DATE	RDD	FOLDER	COMPANY	QTY	DUE IN	DOLLARS	Office Code
S	N0010414CBA55		11/20/2015		080390019	VACCO INDUSTRIES	21	21	\$386,223.39	N9433.14
S	N0010415CBA39		1/23/2017		143390012	VACCO INDUSTRIES	24	24	\$451,992.00	N9433.14
R	N0010415PEL12		7/23/2015	4/1/2016	150500018	VACCO INDUSTRIES	3	3	\$12,195.00	N9434.22

Thursday, April 21, 2016

PREVIOUS RECORD RETURN NEXT RECORD

Record: 1 of 25 No Filter Search

Standard Reports such as the **NIIN Scorecard** contain all the cross functional elements required for procurement, planning, program management and quality assurance teams to review quickly the logistics status of a particular item. The scorecard provides an easy visual summary of contractual actions taken, the stock position of wholesale material, customer requisitions and existence of any open technical referrals to engineering activities. The report also provides notes and a record of actions taken that provide an easy-to-reference Common Operating Picture for the team. All NUCLEAS reports are **fully customizable** and can be tailored for each user's individual need and without lengthy development time.

The Latin word nucleus is defined as the central and most important part of an object, movement, or group, forming the basis for its activity and growth. This concept of the nucleus is ingrained within the core philosophy of this team. Today, and increasingly in the future, logistics planning will be defined by the ability to perform comprehensive data analysis in less time. Tools such as NUCLEAS allow the Navy to operate at peak performance while utilizing fewer resources. Supply chain managers can now dedicate resources for analysis and strategy in lieu of compiling and sorting data. NUCLEAS removes all non-value added processes and replaces them with value added data analytics.