Outline

- Overview
- Data Access
- Naval VAMOSC Components
- VAMOSC VIEWS
- METEOR
- OSCAM
Naval VAMOSC collects and reports historical Navy and USMC Operating and Support data.

- **$99 B/year**
  - Annual weapon system specific costs including DON Personnel

- **130 sources**
  - Financial and non-financial data sources

- **1200 Elements**
  - O&S cost and non-cost elements

- Weapons systems direct and linked indirect costs
- Related non-cost operational and support data
- Costs in Then Year and Constant Year dollars
- Data presented in alternative hierarchical formats
  - Navy Cost Element Structure
  - OSD CAPE 2014 Cost Element Structure
VAMOSC continues to evolve and provide increasing value to its users

1975
Deputy Secretary of Defense directed Services to collect actual weapon system O&S costs

1976
CNO initiated Navy and Marine aircraft data system managed by Naval Air Systems Command

1984
DoD established VAMOSC program and steering group

1988
Senate Appropriations Committee directed Services to develop VAMOSC capability

1992
Management of Naval VAMOSC assigned to NCCA, and OSD CAPE (formerly CAIG) identified to provide executive oversight

1997
Naval VAMOSC moved to electronic database environment

2002
Major Naval VAMOSC re-engineering completed, significant enhancements and improvements delivered

2003
Military Personnel database released

2008/2009
Navy Infrastructure, Ships Depot, CIVPERS databases and updated manpower model released

2012
Additional manpower models released

2016
Military Training database released

2018
Naval VAMOSC BI upgrade released
Data collected and reported from ~130 data sources

**Military Personnel**
- BUPERS
- CMC
- DFAS-CL (STARS)
- DMDC
- HQMC
- MSC (N11, N82)

**Depot Maintenance**
- AIRLANT
- COMPACFLT (SRF data)
- MSC (N82)
- FRC SW
- NAVAIR
- NAVICP
- Navy Shipyards
- Program Offices
- SSP
- SUBMEPP
- SUPSHIPs/RMCs
- USMC (MSC data)
- USMC LOGCOM

**Civilian Personnel**
- DFAS
- CPMS

**Infrastructure**
- CNIC
- MCICOM
- iNFADS

**O&I Consumption**
- CNET
- CNO N43 (FHP)
- DFAS-CL (STARS)
- MSC (N82)
- NOLSC (OIS)
- NSWC Crane
- SSP
- USMC (MSC data)
- USMC LOGCOM

**O&I Maintenance**
- CNET
- CNO N43 (FHP)
- DFAS-CL (STARS)
- MSC (N82)
- NAVAIR (AV-3M)
- NAVSUP
- NSLC (OARS/Ships 3M)
- Program Offices
- SUPSHIPs/RMCs
- USMC (MSC data)
- USMC LOGCOM

**Modernization**
- COMPACFLT (SRF data)
- DFAS Charleston
- MSC (N82)
- NAVAIR
- NAVSEA 04 (NDE Mod)
- Navy Shipyards
- Program Offices
- SPAWAR D6
- SSP
- SUPSHIPs/RMCs

**Training**
- MSC (N82)
- NETPDTTC
- Program Offices
- SSP
- USMC TECOM

**Miscellaneous**
- iSIMS (OPNAV N9I)
- RMCs
- MSC (N11, N82)
- NOLSC
- NATEC
- NAVAIR
- Naval Logistics Library
- NAVSUP 51
- NAWC TSD
- Program Offices
- USMC SYSCOM
Summary of the data collection and transformation process

<table>
<thead>
<tr>
<th>Collect Raw Data</th>
<th>Validate and Transform</th>
<th>Process</th>
<th>Final System Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw data is collected from ~130 data sources throughout the Navy, USMC, and Department of Defense</td>
<td>Data is validated and transformed prior to loading and subsequent processing</td>
<td>Data is transformed based on specified business rules for the data set into alternative hierarchical formats</td>
<td>Data reported for a specified time range in alternative hierarchical formats. Data anomalies and deficiencies are investigated and documented</td>
</tr>
</tbody>
</table>

Test & Evaluation performed throughout all phases of the process
Over 650 registered VAMOSC users plus hundreds of ad hoc requests

Key Use Cases

Cost communities
- Analysis of Current Systems
  - SYSCOMs, Other Services
- Estimates for emerging systems
  - NCCA, SYSCOMS, OSD CAPE

Operations
- Navy maintenance, readiness, logistics communities
  - SYSCOMs (Program Offices, Naval Warfare Centers)
  - Naval Aviation & Surface Warfare Enterprises

Research
- Academic and cost research organizations
  - NPS Monterey, Navy War College
  - Other government offices
    - Congressional Budget Office
    - Government Accountability Office

Key Users
Data Access

Naval Center for Cost Analysis
Data access provided in the left sidebar

- Access granted to authorized users
  - Government personnel and government-sponsored contractors

- Obtaining data:
  - Special request
  - VAMOSC user account
    - Corporate documents
    - Custom queries
Obtaining data with special data requests

For the most efficient service, please fill out this form to request VAMOSC data. Allow two to three business days for your request to be filled. Please note that this information is required in case we need to contact you about your data request. Our goal is provide you with the right data for your analysis.

* Mandatory fields

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Full Name:</td>
<td></td>
</tr>
<tr>
<td>2. Do you currently have a VAMOSC user account?</td>
<td>No</td>
</tr>
<tr>
<td>3. Organization/Activity:</td>
<td></td>
</tr>
<tr>
<td>4. Phone number: (use format: xxx-xxx-xxxx)</td>
<td></td>
</tr>
<tr>
<td>5. Email Address:</td>
<td></td>
</tr>
<tr>
<td>6. Are you a US Federal Gov't. employee?</td>
<td>Yes</td>
</tr>
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</table>

If not, provide:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gov't Sponsor Name:</td>
<td></td>
</tr>
<tr>
<td>Gov't Sponsor Phone Number: (use format: xxx-xxx-xxxx)</td>
<td></td>
</tr>
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</table>
Obtaining data
by requesting an account

Sign Up Now for Your VAMOSC Account

What's the difference between accessing VAMOSC and requesting data?
Accessing VAMOSC refers to the process where individuals receive user names and passwords so they can access our database on-line using a front-end program called Web Intelligence. Training is often required for new users of Web Intelligence so it may be far easier to simply request data.

In fact, if you suspect you will only need VAMOSC data on an infrequent basis, a data request is the recommended course of action.

Please enter a valid e-mail address and select the appropriate employment option or you will not be able to access the online application form. (example: Name@navy.mil) This address will be used for official Navy VAMOSC communications (account confirmation, forgotten password retrieval, etc).

Your e-mail address: ____________________________

☐ US Government Employee ☑ US Defense/Support Contractor

Continue

Current VAMOSC user, but forgot your password? Please click here

Online Access is only available to:
US Government Employees and US Defense/Support Contractors!
Obtain data with an account through the use of corporate documents.

Select the blue 'Documents' button in the toolbar.
Obtain data with an account through the use of custom ad-hoc queries
**Data Output**

### Report 1

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Hull Number</th>
<th>Element1</th>
<th>Element1 Desc</th>
<th>Element2</th>
<th>Element2 Desc</th>
<th>Constant FY 18 Dollars</th>
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<tr>
<td>2017</td>
<td>DDG-0052</td>
<td>1.0</td>
<td>Unit-Level Manpower</td>
<td>1.1</td>
<td>Operations Manpower</td>
<td>21,976,312</td>
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<td>2017</td>
<td>DDG-0052</td>
<td>2.0</td>
<td>Unit Operations</td>
<td>2.1</td>
<td>Operating Material</td>
<td>13,635,437</td>
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<td>2017</td>
<td>DDG-0052</td>
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<td>Unit Operations</td>
<td>2.2</td>
<td>Support Services</td>
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<td>DDG-0052</td>
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<td>Unit Operations</td>
<td>2.3</td>
<td>Temporary Duty (TAD/TE)</td>
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<tr>
<td>2017</td>
<td>DDG-0052</td>
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<td>Maintenance</td>
<td>3.1</td>
<td>Consumable Materials at</td>
<td>4,475,120</td>
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<tr>
<td>2017</td>
<td>DDG-0052</td>
<td>3.0</td>
<td>Maintenance</td>
<td>3.2</td>
<td>Depot Level Reparables</td>
<td>143,336</td>
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<tr>
<td>2017</td>
<td>DDG-0052</td>
<td>3.0</td>
<td>Maintenance</td>
<td>3.3</td>
<td>Intermediate Maintainance</td>
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<tr>
<td>2017</td>
<td>DDG-0052</td>
<td>3.0</td>
<td>Maintenance</td>
<td>3.4</td>
<td>Depot Maintenance</td>
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<tr>
<td>2017</td>
<td>DDG-0052</td>
<td>4.0</td>
<td>Sustaining Support</td>
<td>4.1</td>
<td>System Specific Training</td>
<td>790,460</td>
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<tr>
<td>2017</td>
<td>DDG-0052</td>
<td>4.0</td>
<td>Sustaining Support</td>
<td>4.3</td>
<td>Sustaining/Systems Engi</td>
<td>1,580,421</td>
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<td>2017</td>
<td>DDG-0052</td>
<td>4.0</td>
<td>Sustaining Support</td>
<td>4.6</td>
<td>Data and Technical Pubi</td>
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<tr>
<td>2017</td>
<td>DDG-0052</td>
<td>4.0</td>
<td>Sustaining Support</td>
<td>4.8</td>
<td>Other sustaining Support</td>
<td>25,618</td>
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<tr>
<td>2017</td>
<td>DDG-0052</td>
<td>5.0</td>
<td>Continuing System Improvement</td>
<td>5.1</td>
<td>Hardware Modifications</td>
<td>10,911,432</td>
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<tr>
<td>2017</td>
<td>DDG-0052</td>
<td>5.0</td>
<td>Continuing System Improvement</td>
<td>5.2</td>
<td>Software Maintenance</td>
<td>1,054,284</td>
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</tbody>
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User Reference Materials
Government CAC required for access

- Release Notes
  - Updates and improvements
- Training Videos
  - General “How-to” videos
  - Specific database videos
- User Manuals
  - Definitions of cost & data elements
  - Escalation indices, data flow diagrams, valid values, etc.
- Data Anomalies Documents
  - Changes in data sources, structures, etc.
  - Abnormally high or low values with data provider explanations
- Data Deficiencies Documents
  - Lists specifics on missing or incomplete data
- Quick Reference Guide and how-to documents for obtaining and manipulating data
## NAVAL VAMOSC COMPONENTS

### Aviation
- **A/C Level Report** FY86-18
- **O&I Level Maint.** FY96-18

### Ships
- **Ships** FY84-18
- **Detailed Ships** FY91-18
- **Depot Availability** FY93-18
- **Shipboard Systems** FY93-18
- **Military Sealift** FY93-18

### Personnel and Training
- **DON Military** FY02-18
- **DON Civilians** FY04-18
- **Military Training** FY10-18

### USMC Ground Systems
- **Ground Systems** FY95-18
  - 1,545+ Ground Combat Systems and Weapons

### Infrastructure
- **Navy Infrastructure** FY06-18
  - CNIC Certified Obligations
  - MCICOM Certified Obligations
  - NAVFAC Property Records

### Weapon Systems
- **Weapon Systems** FY90-18
  - 18+ Air-launched missiles
  - 9+ Surface-launched missiles
  - 5+ Torpedoes
VAMOSC Tools

**METEOR**
- Manpower Cost Estimating Tool for Enhanced Online Reporting

**VAMOSC VIEWS – Available at CADE**
- Graphical representations of the historical VAMOSC costs for selected Ships and Aircraft
Manpower cost Estimating Tool for Enhanced Online Reporting (METEOR)

- METEOR is the manpower cost estimating tool consisting of 5 models for life-cycle cost analysis of Navy and USMC military and civilian personnel.

  - **Ships Model**
    - Direct and Indirect cost model for personnel attached to a ship platform.
  - **Aviation Squadrons Model**
    - Direct and Indirect cost model for personnel attached to an aviation squadron.
  - **USMC Personnel Model**
    - Direct and Indirect cost model for any organization (RUC/UIC) in the USMC.
  - **Navy Personnel Model**
    - Direct and Indirect cost model for any organization (UIC) in the Navy.
  - **Civilian Personnel Model**
    - Direct and Indirect cost model for Navy and USMC civilians.

- Models leverage direct cost and manpower data from VAMOSC and linked indirect costs to calculate and analyze manpower lifecycle costs through:
  - Selecting Scenario Parameters
  - Preparing Manning Document
  - Selecting Cost Elements
  - Performing Lifecycle Cost Analysis
  - Performing Delta Analysis
Sample Ships VIEW
Sample Aviation VIEW
O&S Cost Analysis Model

- Two models – Naval Suite and Air models
- Windows-based application approved for use in NMCI environment
- Dynamic, flexible O&S cost estimating model to support:
  - Analyses of alternatives
  - Life cycle cost estimates
  - Trade-off studies

- OSCAM’s use of System Dynamics theory to estimate future O&S costs
  - Based on a series of equations that focus on the true cost drivers of a system
  - Series of time-steps of simulations which allows the model to estimate each month of the system’s service life.
- VAMOSC data sets provide a starting point to develop tailored model inputs
OSCAM Models

- Naval Suite – comprised of Ship model and Ship System model
  - Ship v (8.4)
    - Object-oriented architecture
    - Increased user friendliness
    - Depot and deployment operating profiles
    - Multi-level manning and depot maintenance inputs
    - Expanded Uncertainty Tool to include 11 probability distribution functions
    - Output mapped to 2014 CAPE CES
  - Air v (4.1)
    - Leverages JSF improvements and functionality of Ships
    - New version 4.2 in development
**OSCAM Inputs & Outputs**

- **Model Inputs**
  - VAMOSC based data sets
  - User-defined individual inputs
  - Data Management Tool
  - Throughput Cost Facility

- **Model Outputs**
  - Tabular and Graphical data
  - Operations
  - Maintenance
  - Modernization
  - Training
  - Indirect