

TERADATA®

HUMS





# Agenda

- Who is Teradata?
  - Why can we talk about HUMS
- US Navy DECKPLATE Program
  - What
  - How
- USAF (more than Navy)
  - Air and
  - Ground
- Global Transport Command
- Australian Army
- Questions.

# Who is Teradata

- Why can we talk about HUMS

Figure 1. Magic Quadrant for Data Warehouse and Data Management Solutions for Analytics



Source: Gartner (February 2015)

# *In-Service Data Program* Helps Boeing Design, Build, and Support Airplanes

By John Kneuer  
Team Leader, In-Service Data Program

The Boeing In-Service Data Program (ISDP) allows airlines and suppliers to securely share fleetwide reliability data with other ISDP members. The program allows Boeing to better support member airlines by using airline data to locate and resolve issues specific to each operator. Additionally, the ISDP enables Boeing to improve the entire fleet by closely analyzing issues such as early component removals.

# DECKPLATE

- Official up-line repository for inventory, maintenance, flight, usage and readiness reporting data
- Fulfills United States Code Title 10 Section 117 requirements: Defense Readiness Reporting System which measures and reports on the readiness of military forces and the supporting infrastructure
- Fulfills the U.S. Naval Aviation policy requirement for an Aviation Data Warehouse (ADW)
- **Provides a comprehensive view of aircraft, engines and aeronautical components across the Naval Aviation Enterprise (NAE)**
- **Enables decision makers with usable, actionable and reliable information**



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# Teradata MH-60S Vibration Analysis



# Overview

## Load

- Loaded and parsed data provided by Apryl

25.8M  
Rows

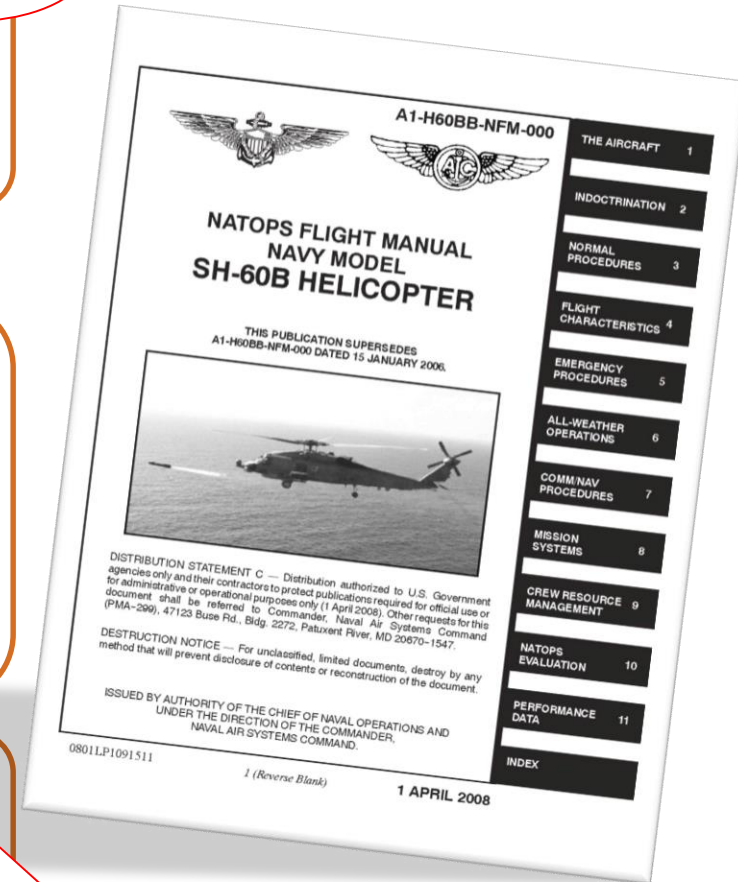
## Query

- Initially ran simple queries to gather stats on items of interest
- Compared results against NATOPS Flight Manual
- Ran nPath queries to discover relationships between parameters

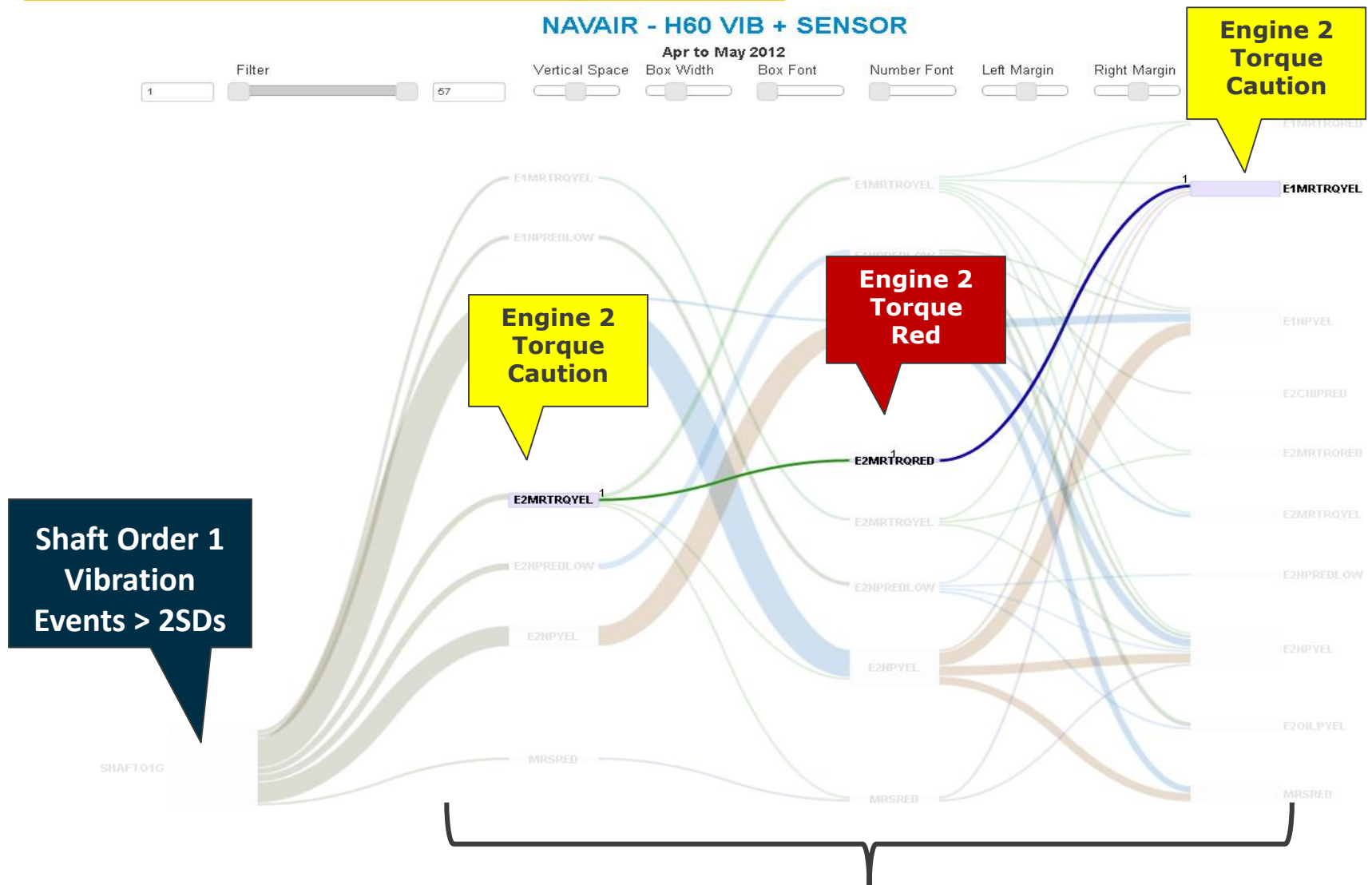
## Analysis

- Studied results and ran additional queries for further refinement

1-2  
seconds



## Results #4: Narrowing Results



Parametric events that exceed operating limits  
that occur after a vibration event



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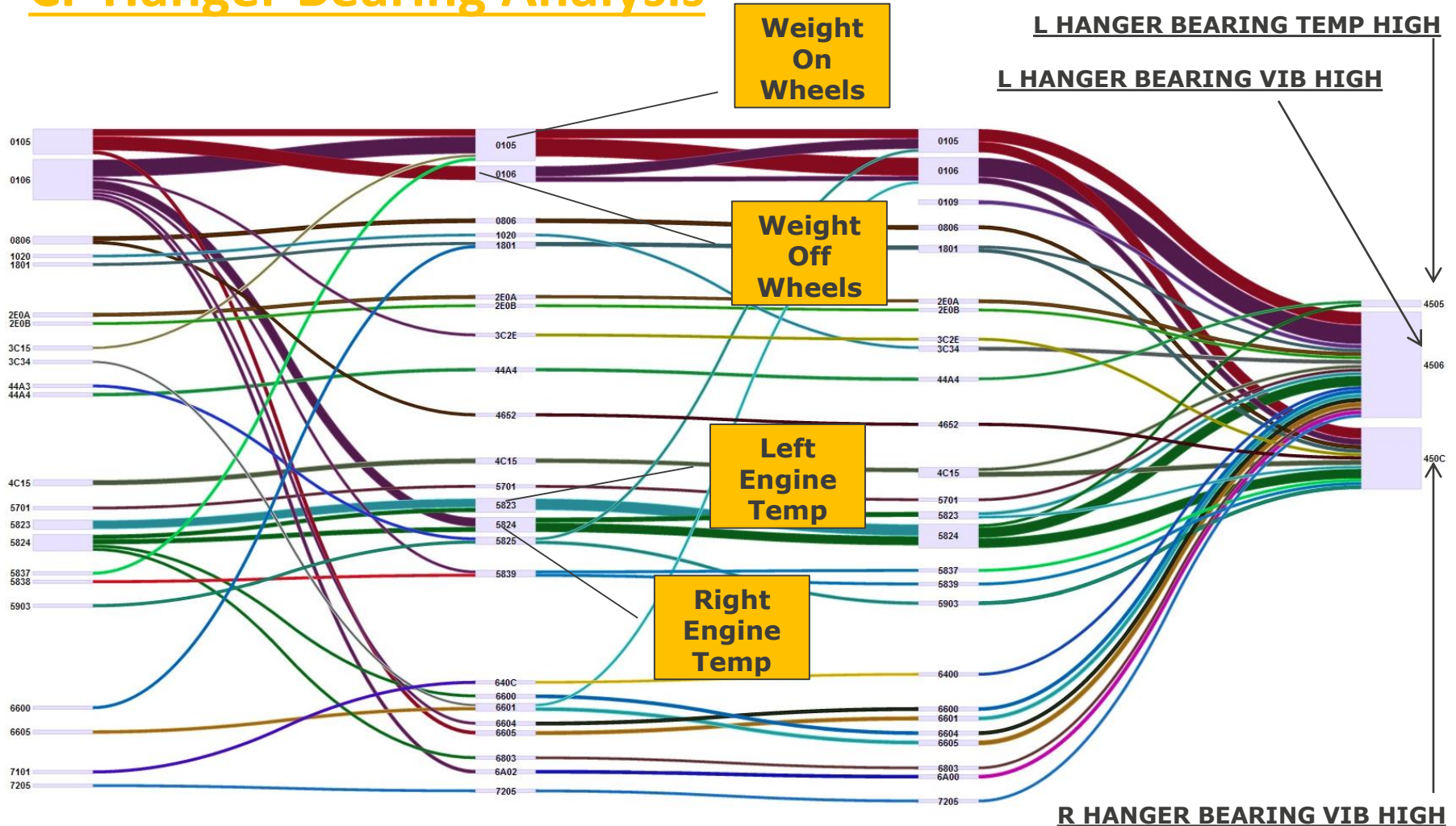
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# Teradata MV-22 Analysis



# CF Hanger Bearing Analysis





## TERADATA 2015 PARTNERS

Conference & Expo | Anaheim, CA | Oct 18 - 22



# Data-Driven Vehicle Management at United States Air Force

**Robert Uren**

*Vehicle Fleet Manager/Analyst, USAF*

**Darrin Gaines**

*Principal Consultant, Teradata*

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# USAF Vehicle Fleet

- Nation's 4th largest federal vehicle fleet
  - ✓ Valued at more than \$7B
  - ✓ Over 90K authorizations
  - ✓ Over 78K assets
- Installations in US and numerous countries across the globe



# USAF Enterprise Fleet Management

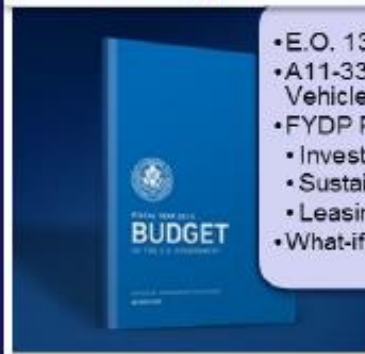
## Policy

### Vehicle Management

- Overview
- Fleet Manager of the Year Awards
- Councils
- Exchange/Sale of Motor Vehicle
- Federal Fleet Reports
- Vehicle Management Library
- Wheels & Wings Blog
- FedFleet Training
- Shuttles to Transport Employees
- ▶ Vehicle Allocation Methodology

- Public Law 766
- 42 U.S.C. 13211
- 41 CFR 102-34.50
- 49 CFR 571
- FMR
- DOD 4500.36R
- AFPD 24-1
- AFI24-302
- Local

## Budget



- E.O. 13589
- A11-33 Annual Motor Vehicle Fleet Report
- FYDP Planning
  - Investment
  - Sustainment
  - Leasing
- What-if drills

## Asset Management



- Record Updates
- Vehicle Registrations
- HMS Requirements
- Data Analysis

## Enterprise Fleet Management

## Maintenance & Repair



- Condition-base Maintenance
- Tools Management
- TCTO/OTI/SB
- Waste Stream Management
- Technician Training
- Product Evaluations
- Parts Sourcing

## Energy



- POTUS Memo
- EPact 2005
- E.O. 13514
- VAM Reporting
- F.A.S.T Reporting
- Electric vehicles
- Hybrids
- AFV
- 701 Waivers

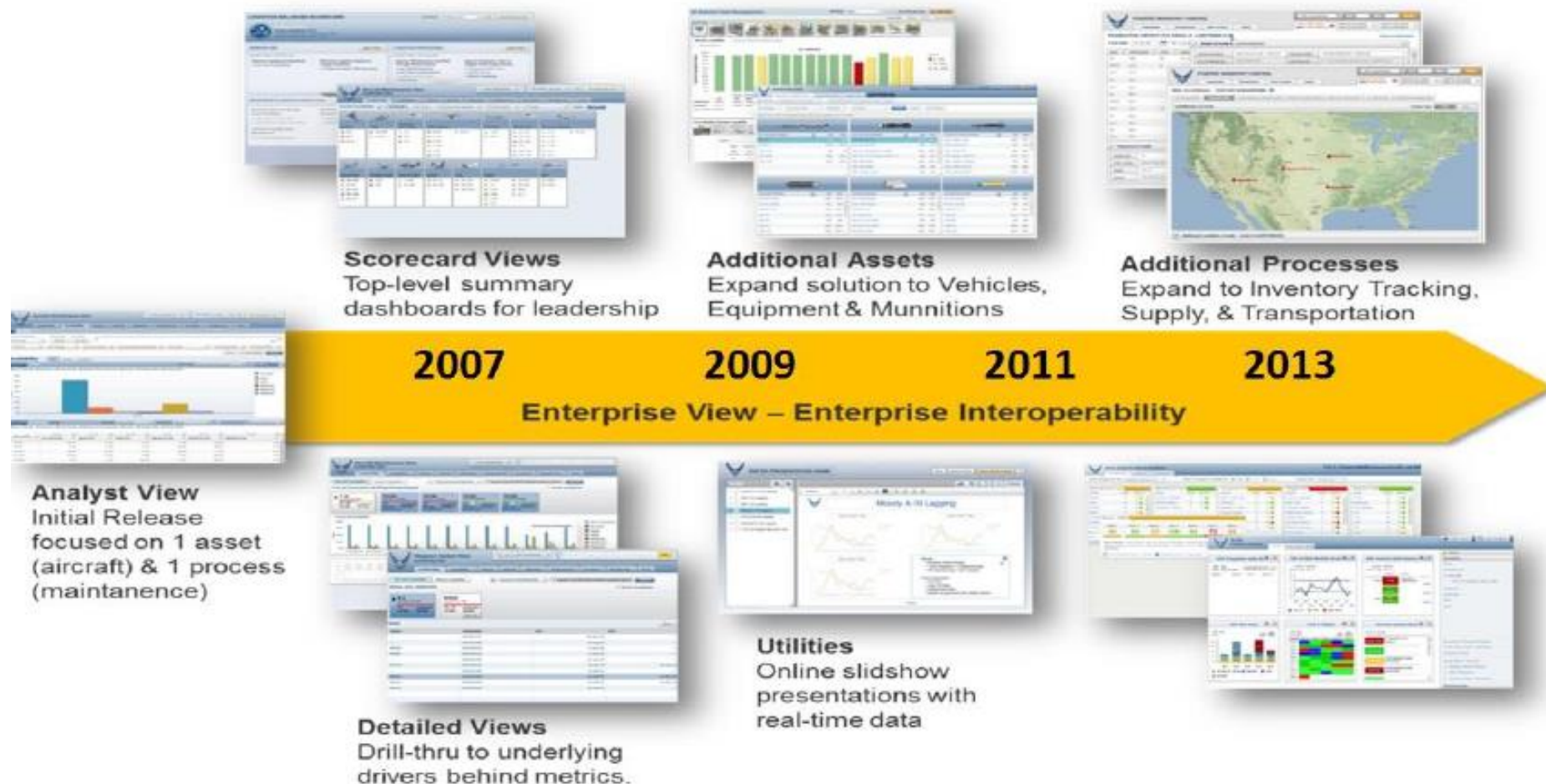
## Requirements



- Under-Utilization
- Authorization Changes
- Mission Review
- Vehicle Movement



# LIMS-EV Evolution

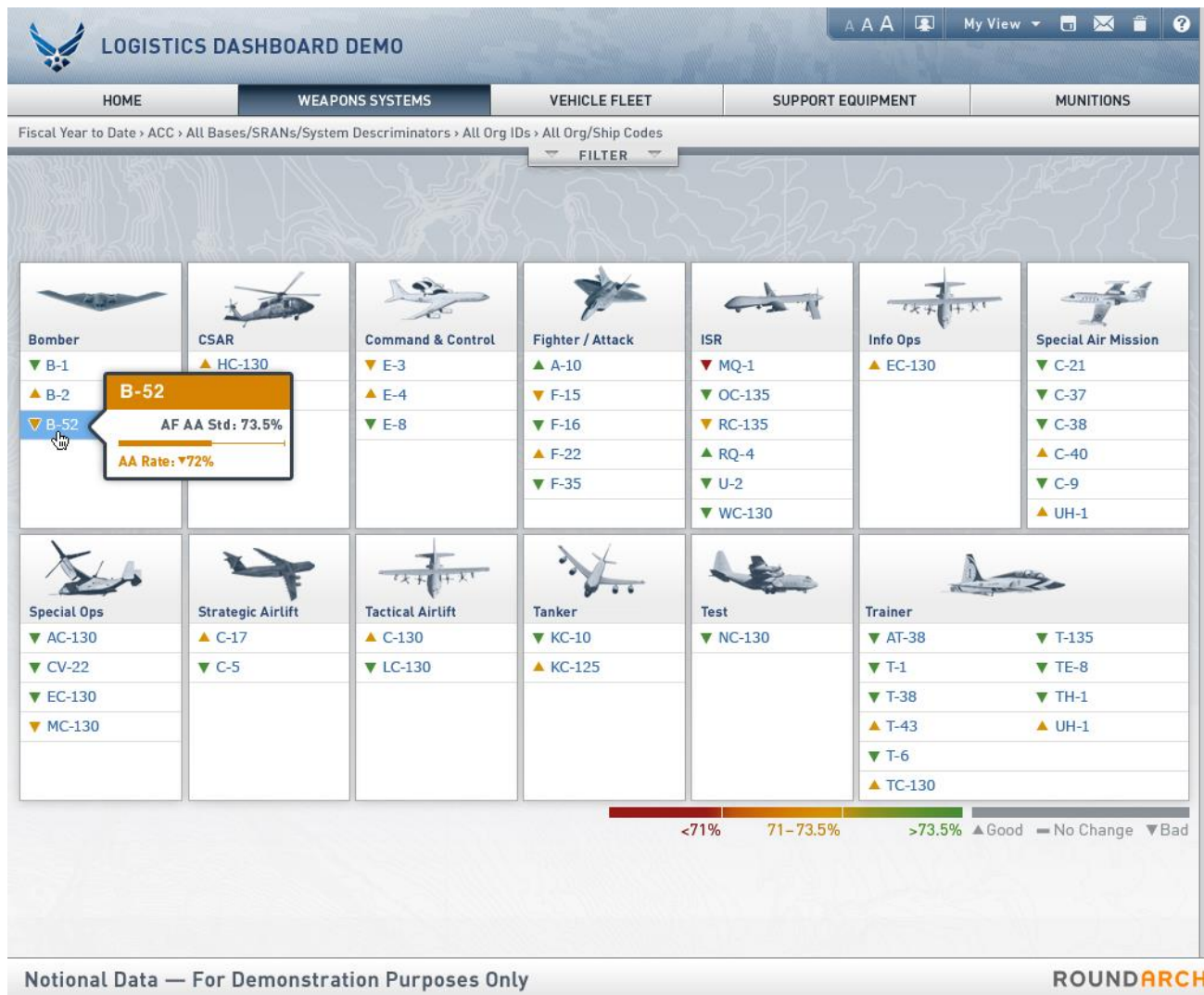


# Phase 1

## 1 Asset (aircraft), 1 Process (maintenance)



# Leadership – Fleet Score Card

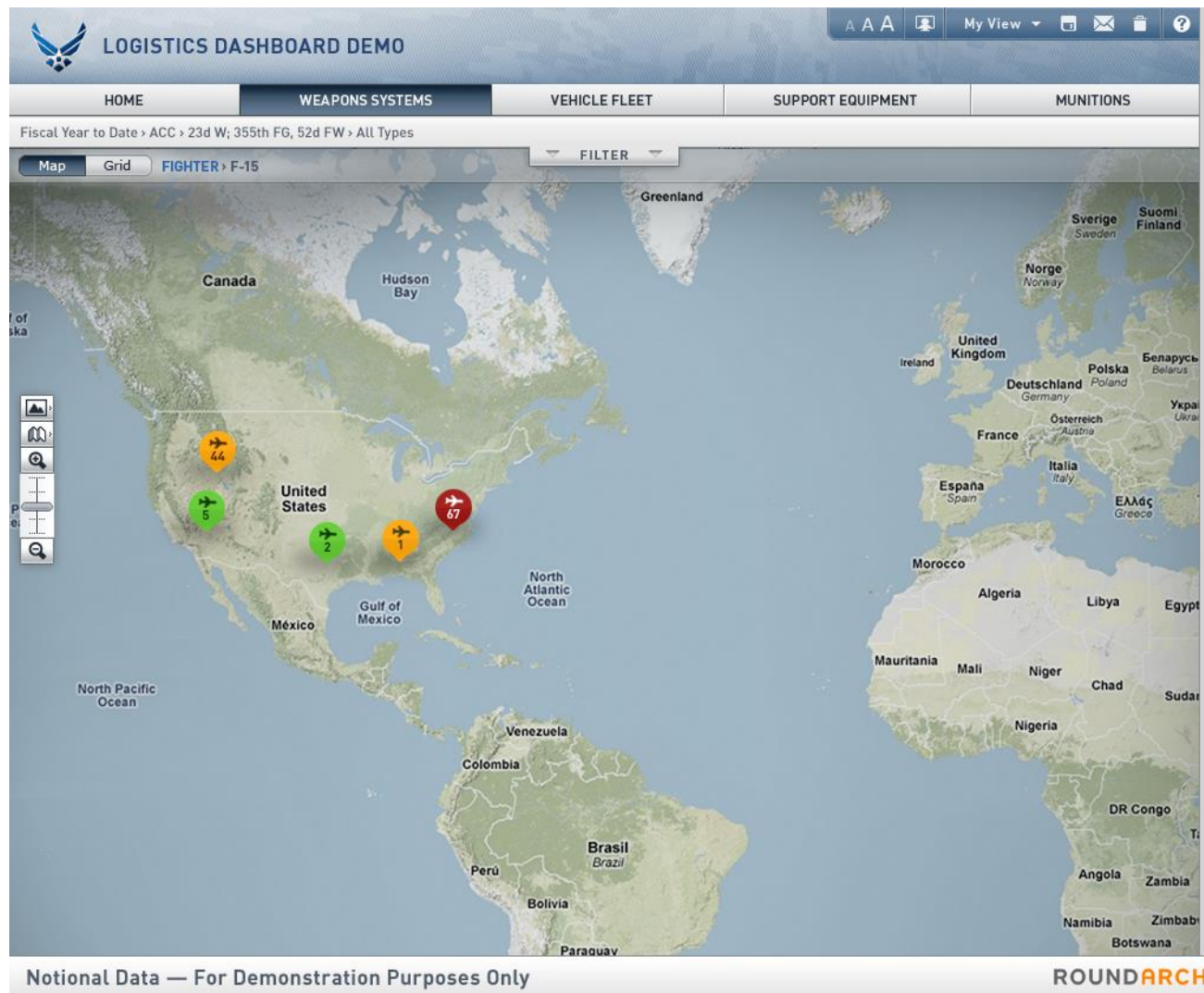


# Year to date – By Asset Type Summary



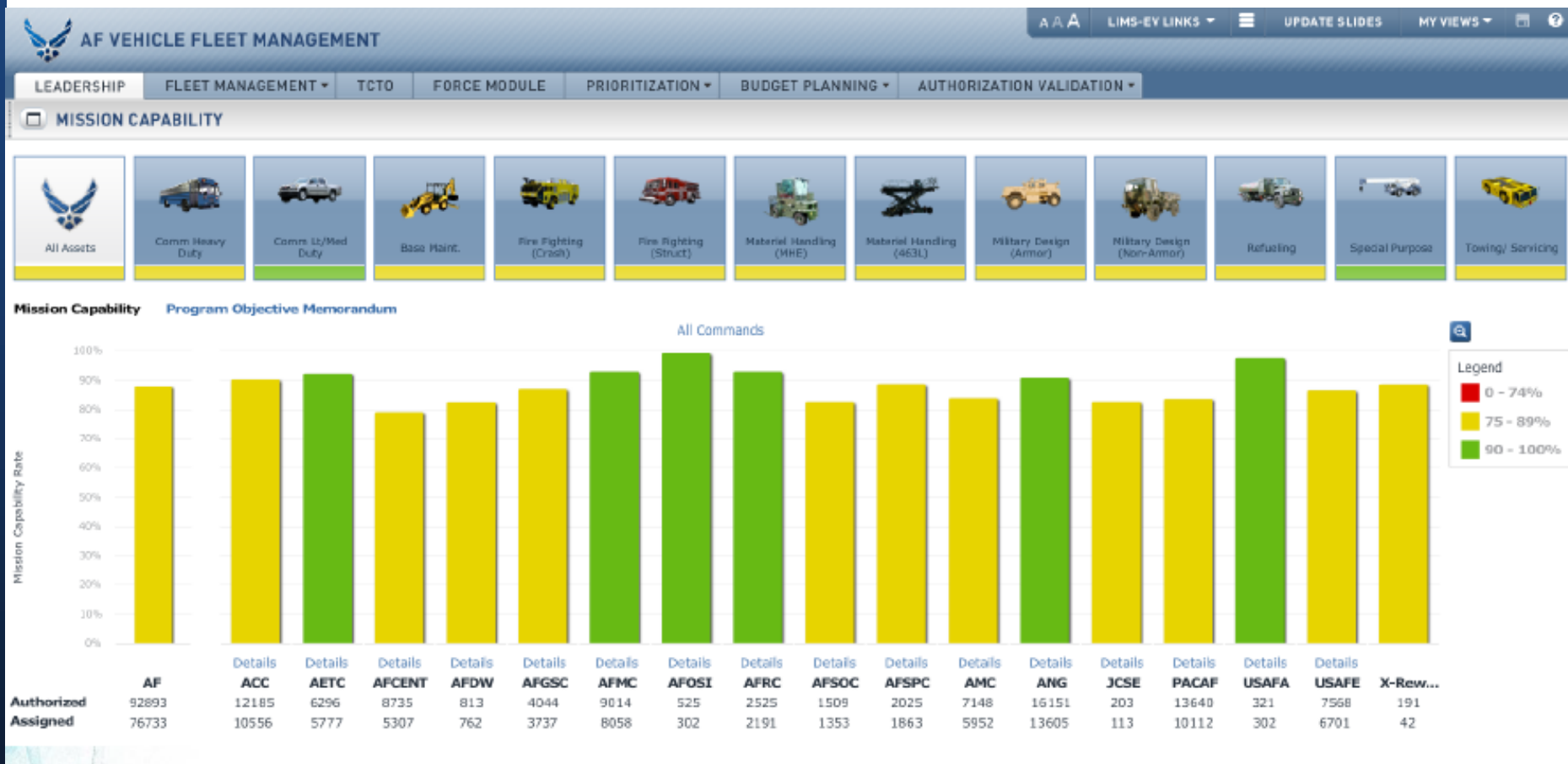


# Geo Located Unit Status View





# LIMS-EV Vehicle View Application



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# Integrated Data Environment & Global Transportation Network



# Global Transportation Network

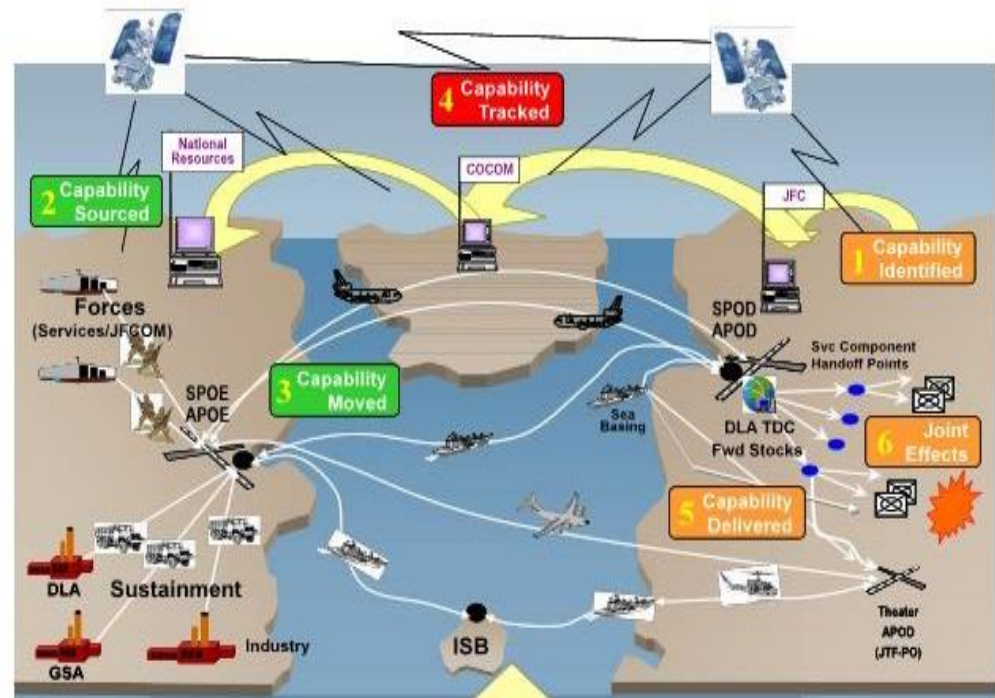
**Vision:** Provide common integrated data and application services enabling cohesive distribution solutions for the DoD

## **Enables:**

- Common logistics picture
- Distribution visibility
- Material asset & in-transit visibility

## **Benefits:**

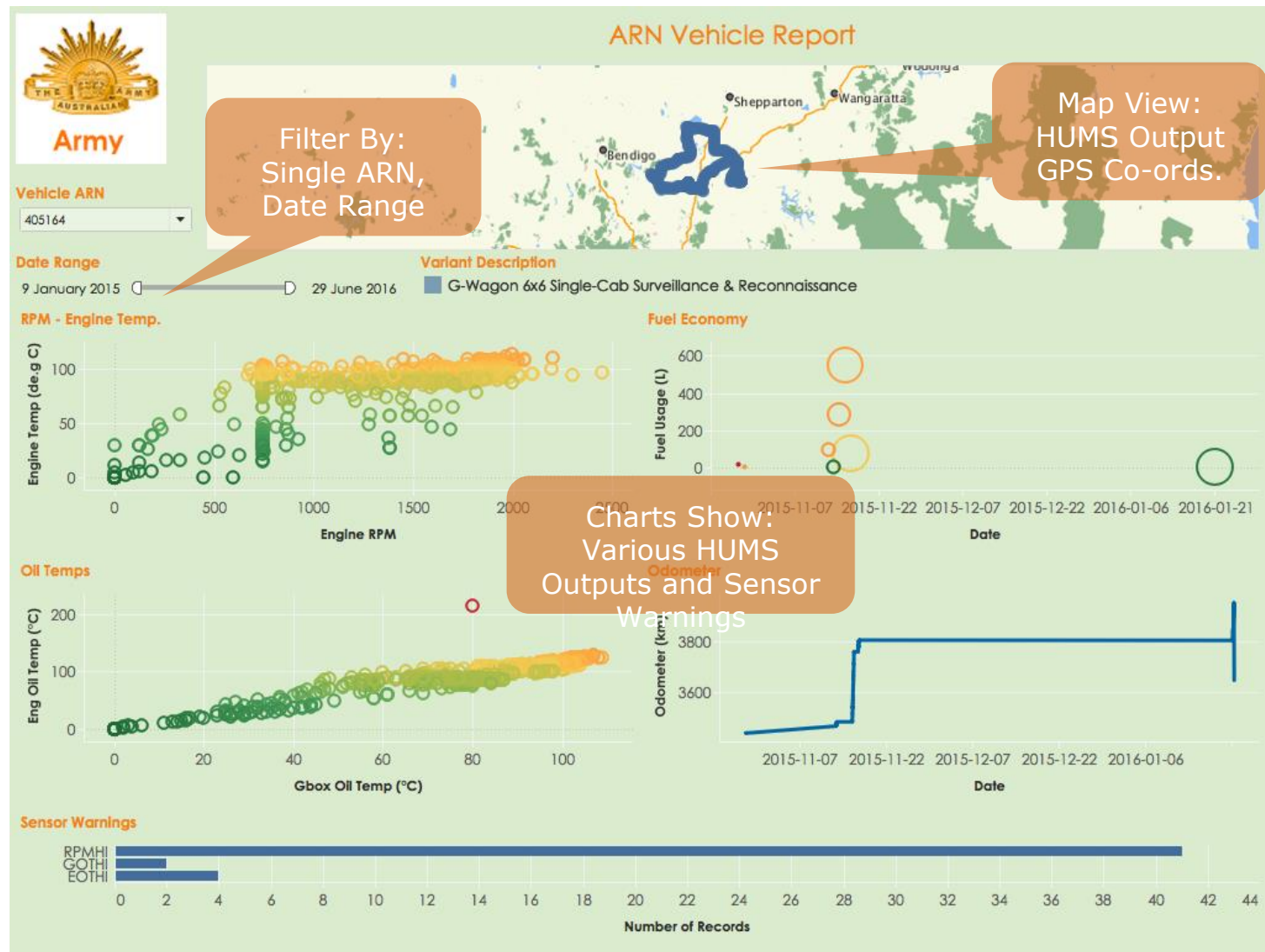
- Enhanced delivery of forces & sustainment
- Improved situational understanding
- Near real-time Enterprise Access to logistics and transportation data
- Improved trust and confidence





# LDSE Dashboard – Use Case 1

## ARN Vehicle Report



Thank you