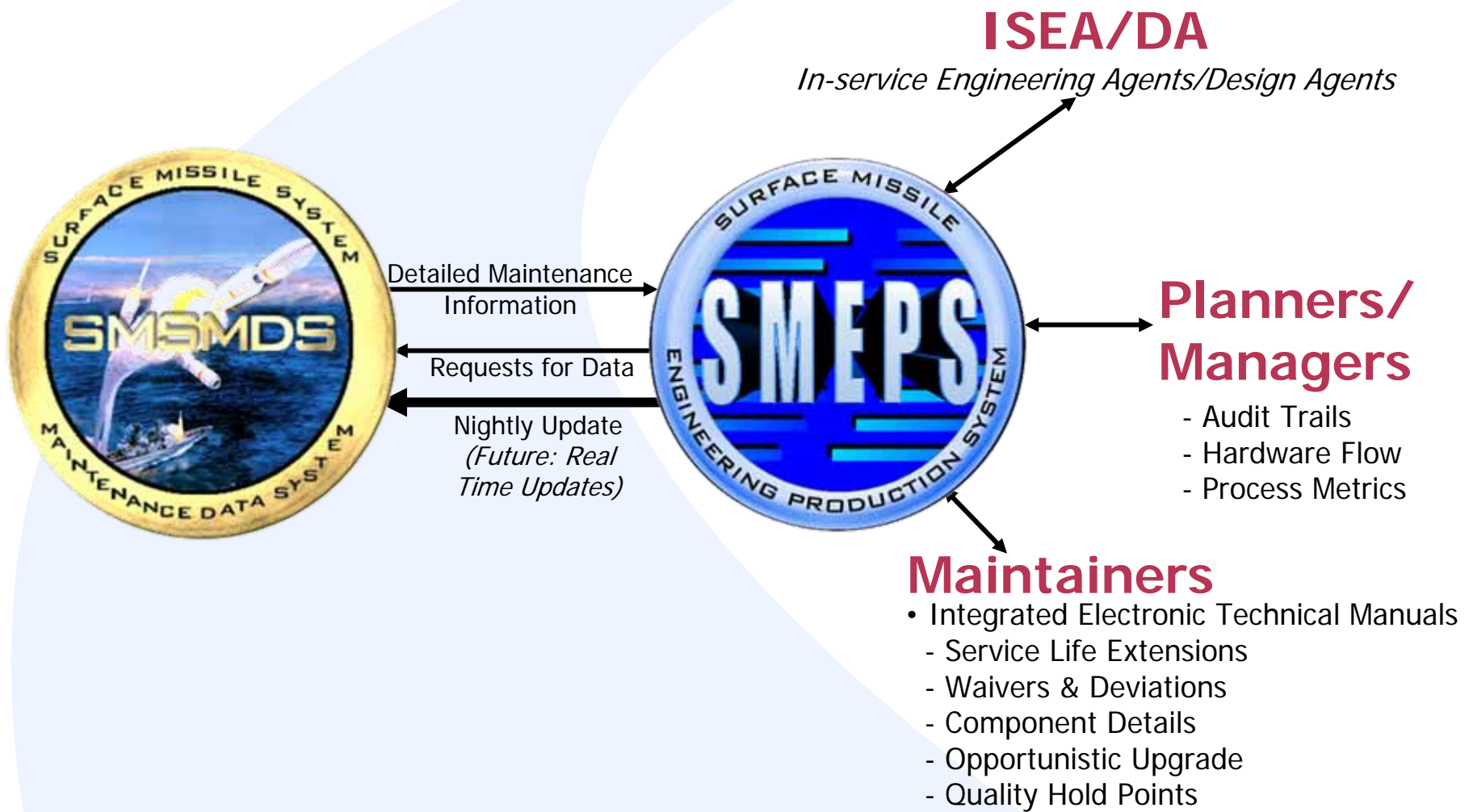


ELECTRONIC PROCESS CONTROL & INTERFACE

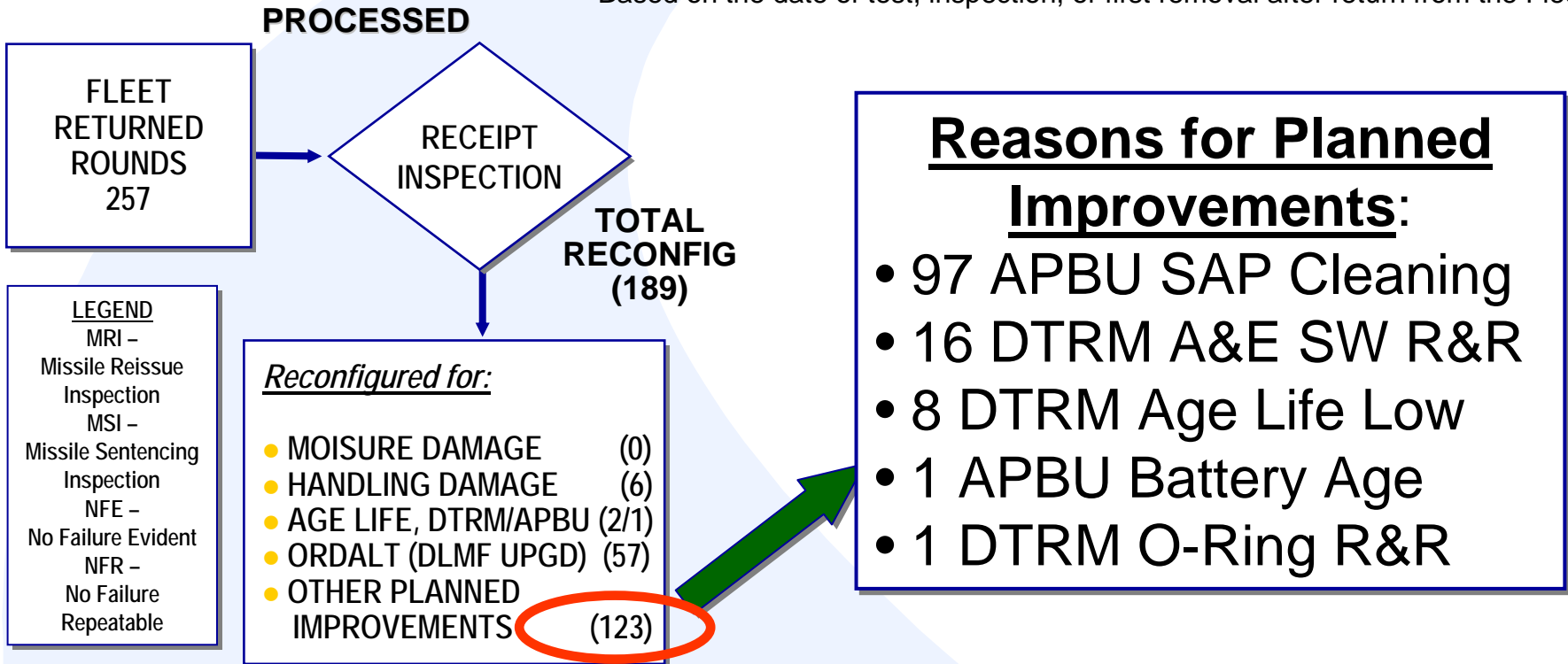


USN FLEET RETURN PROCESSING RESULTS

27 - 28 OCTOBER 2004 TEAM MEETING

HARDWARE FLOW AND ANALYSIS CRITERIA FISCAL YEAR 2004*

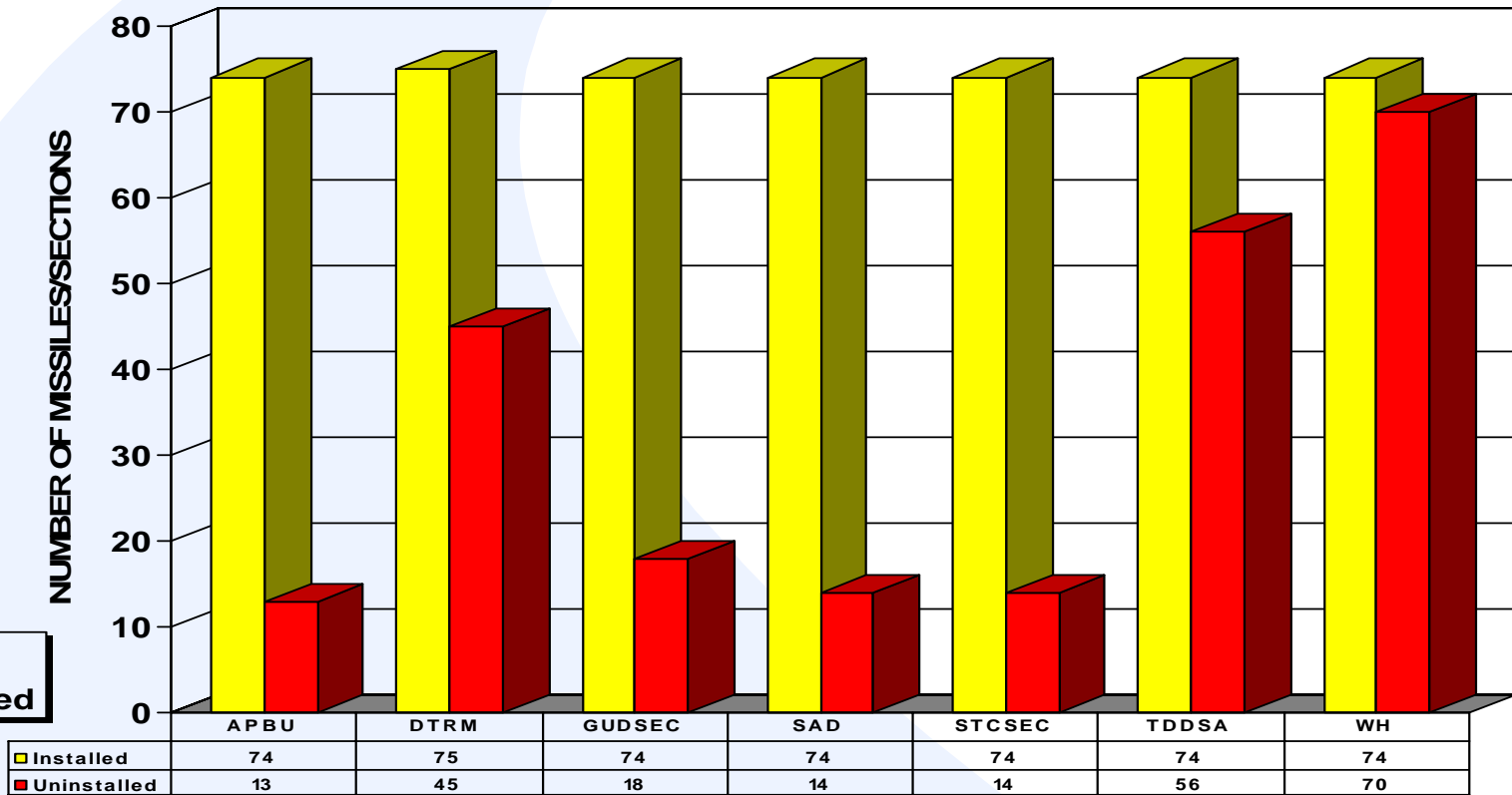
* Based on the date of test, inspection, or first removal after return from the Fleet



We Provide Analysis of Logistic Bottlenecks and Cost Drivers

ASSET PROFILE REPORT FROM SMS MDS INCLUDES ONLY ACTIVE HARDWARE

**TOTAL NUMBER OF ACTIVE SM-1 BLOCK VIVIA MISSILES = 77
EXCLUDES CODE 'X' AND CODE 'G' MISSILES WITH NO SECTIONS**

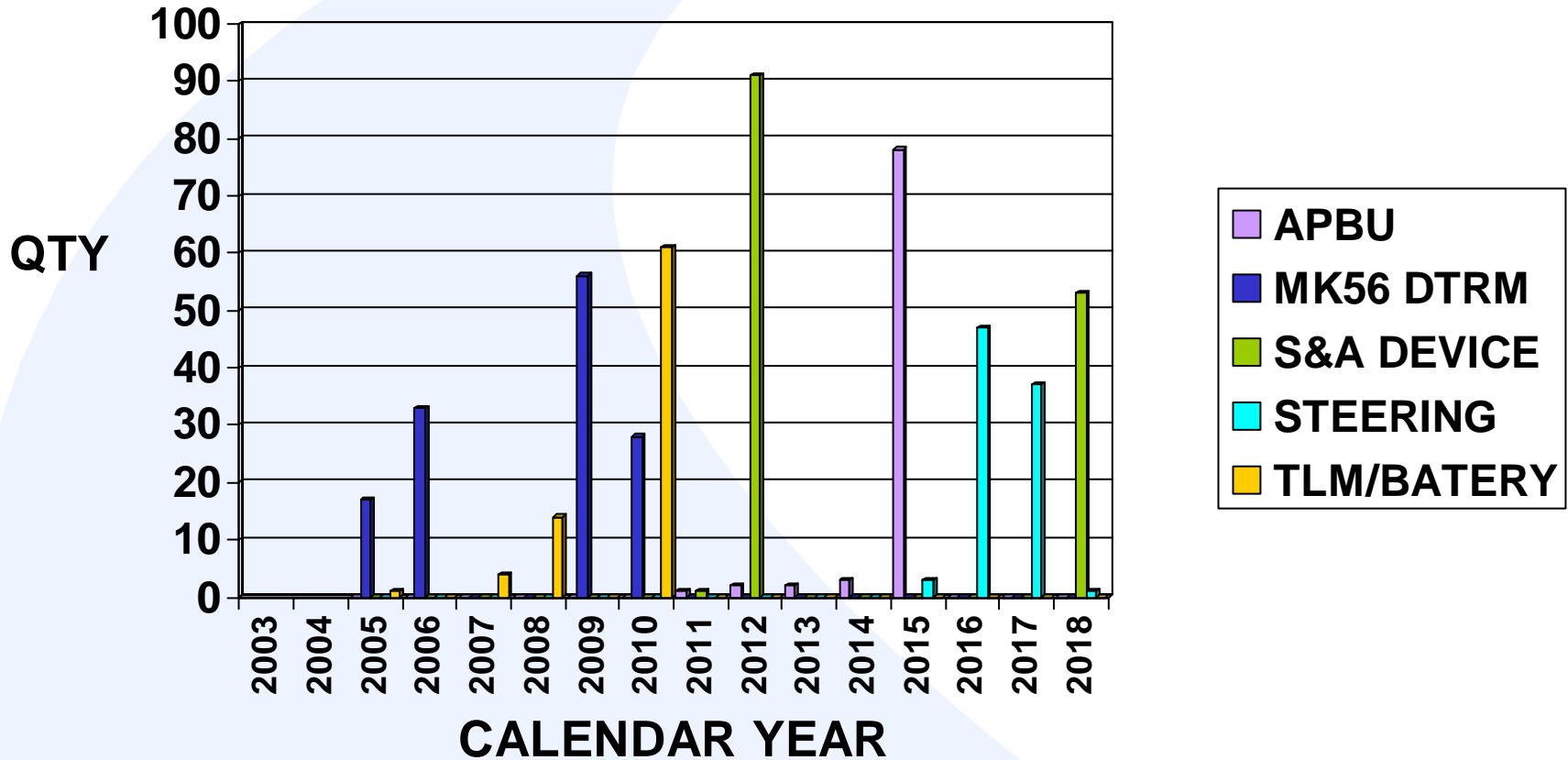


CODE 'X': Torn Down, missile reduced to a decal
CODE 'G': Unserviceable, missing parts

We Provide Inventory and Spares Analysis

SERVICE LIFE ASSESSMENT BASED ON ITEM EXPIRATION CALENDAR YEAR FROM SMS MDS DATA

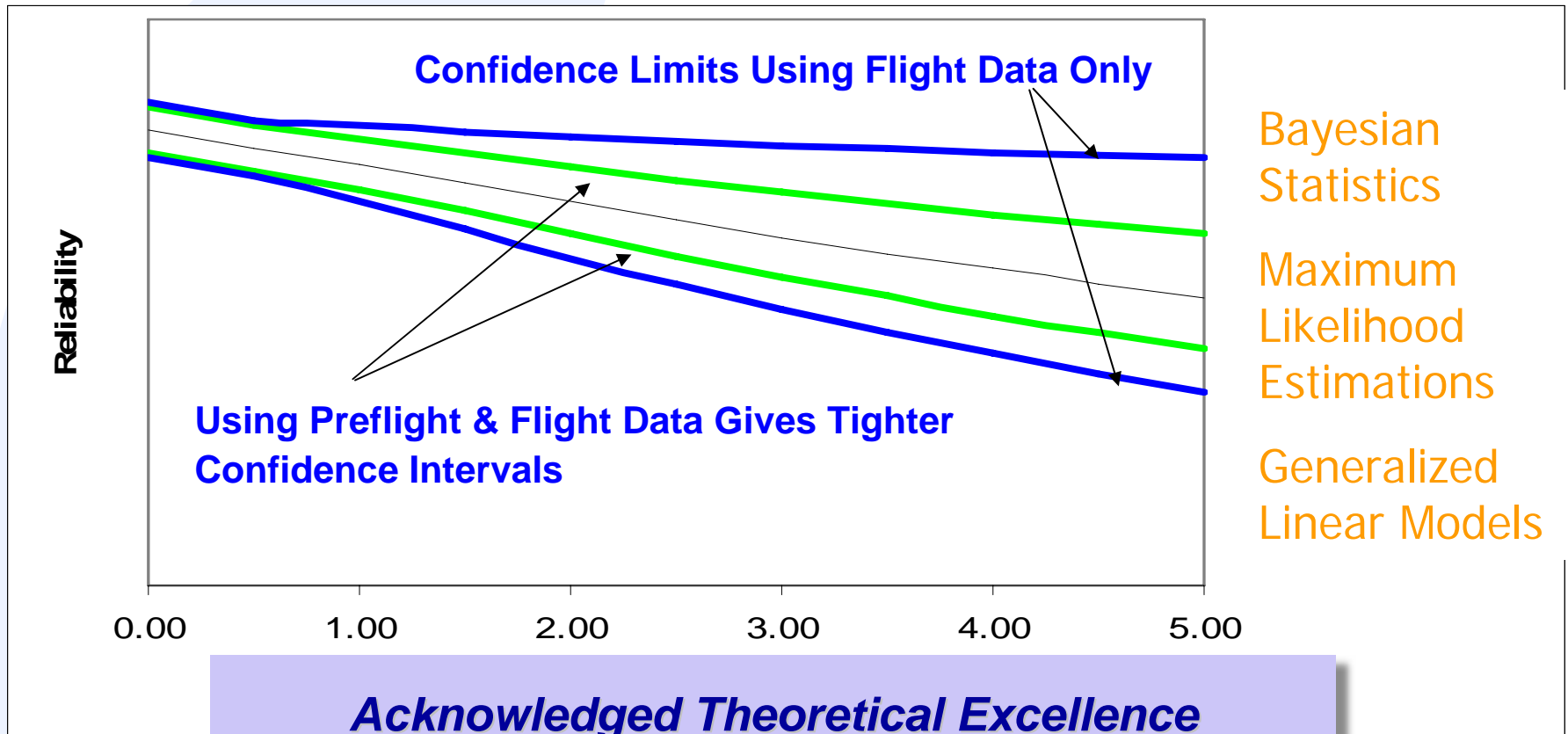
INCLUDES SM-1 BLOCK VI/VIA USABLE ASSETS ONLY*



We Provide Analysis for Out-Year Planning

Multivariable Reliability Model Capabilities

- We Partner with Los Alamos National Laboratories
- We have Breadth and Depth of Statisticians and Engineers
- We Partner with other Commands and Industrial Leaders



TEST SYSTEM DATA ANALYSIS MAINTENANCE PROBLEM

Issue

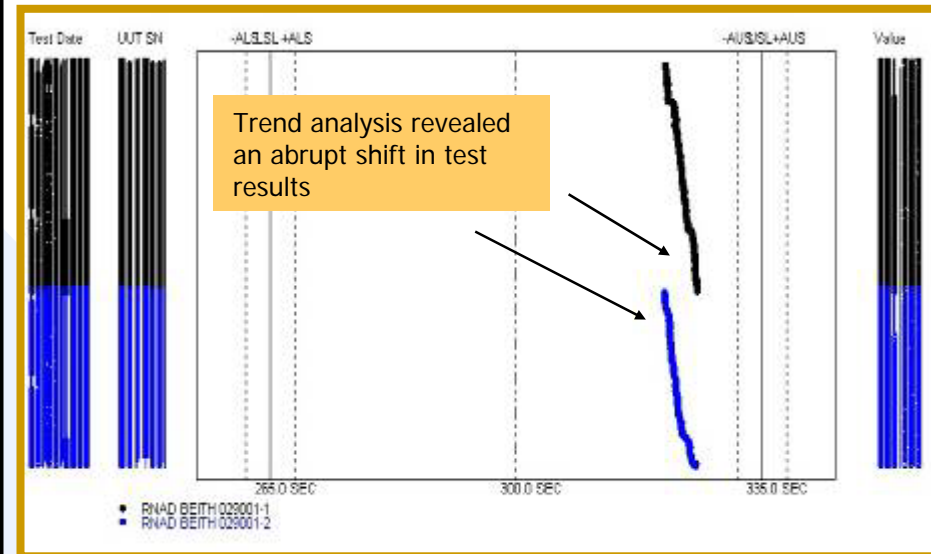
During a routine analysis of the test data, Corona Engineer identify an abrupt shift in a particular test parameter. Further investigation revealed that this test anomaly was a result of an unplanned maintenance action to correct a test equipment clock drift issue. Contractor uncovered this problem when good missiles began to fail production testing.

Action

Through data extrapolation, Corona was able to predict fail date of the parameter. Contractor was contacted. Recommendation was provided as to when the internal test equipment clock should be replaced so as to avoid false rejects.

Result

Contractor's test equipment plan was modified to include instructions for replacing the internal test equipment clock during regularly scheduled test equipment maintenance. Thus avoiding missile failures (false rejects) and unnecessary production down time.



Test Comparison Chart

TEST SYSTEM ASSESSMENT CORRELATION PROBLEM

Issue

Two different test facilities (Factory & Depot) testing the same hardware were yielding different test results. Test results showed hardware passing in one facility and failing in the other. Both facilities were testing to the same test requirements and using similar test equipment.

Action

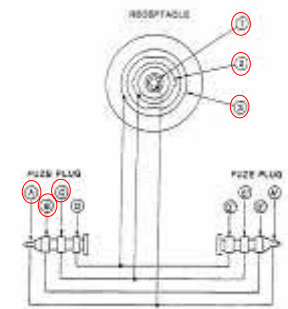
An on-site test assessment of each facility was conducted to determine the source of the problem. This assessment consisted of an in-depth analysis of the facility's test processes and test system.

Result

The on-site assessment revealed that the facility failing the good hardware had major deficiencies in the areas of test setup/methodology, calibration and maintenance support, environmental control, and test personnel adequacy. As a result, the Program Office decided that the cost to upgrade the second facility was too high and shifted all of the hardware testing to the first facility.



Typical test set-up



Items highlighted in red were discovered as not being tested by the second facility

Integrated Information Systems

INPUTS

- FLEET
 - ATR & PUH/PUD
- PEO/SC
- Manufactures
- AUR Facilities
- Weapon Stations
- NAVMAGs
- DLMFs
 - Repair History & Results
- ISEAs
- Tech Reps
- NSWC, Corona
 - Expenditure Results

CONTENT

- Missile/Section/Canister
 - Maintenance History
 - Current Status
 - Location
 - Test Data
 - Configuration Data
- Propulsion Unit Data
- Test Data by Test Procedure
- Modification/Alterations History
- Workload Projections
- Maintenance Due Dates
- Repair History & Cause
- GFE Status & Location
- S&HE Status & Location
- Failure Cause Analysis
- Production Planning Requirements

ANALYSIS

- Data Marts
- Readiness Indices
- Multivariable Statistical Analysis
- Flight/Preflight Correlation
- Quality Evaluation Analysis
- Warranty Factory Quality
- Fleet Return Success Rates
- DUD/Misfire Analysis
- FRACAS/NFRCAT/RWG Support
- Failure Investigations
- Trends Analysis
- Logistics Analysis
- Reliability Analysis
- Production Test Data Analysis

UTILIZATION

- Service Life Extensions
- Reliability Based Maintenance
- Configuration Management
- System Effectiveness
- Flight Test Planning
- Certification Interval Decisions
- Battlegroup Reliability
- Ship Load-out Reliability
- Flight/Preflight Correlation
- MDD Impact Analysis
- Fleet Safety

- In-Service Reviews
- Program Reviews
- Award Fees

- Asset Readiness
- Asset Location
- Asset Status
- Asset Logistic Health

- Test System Assessment Studies

- Special Studies

- On-Line WEB & Internet Access

Data → Information → Knowledge