NAVAIR System Engineering Revitalization

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Briefing Agenda

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- The Players-Users, Acquisition Team, & Industry
- The Environment-CDD & Contract
- The Grade-Financial & Performance
- Why We Are Here
- Current Challenges To Success
- The Death of Acquisition Reform
- Three Phase Procurement Initiative

Users

Industry

NAVAIR

Procurement Agency

The Players

CDD

Contract

NAVAIR

The Environment

Budget/Schedule

DOT&E

NAVAIR

The Grade

High Visibility Programs

- Army And Navy ACS Program
- Comanche
- Littoral Combat Ship (LCS)
- Presidential Helicopter (VH-71)
- Coast Guard Deep Water Program
- Army Future Combat System
- Launch & Recovery (EMALS & AAG)
- Seal Delivery Vehicle
- CVN-78 USS Gerald Ford

NAVAIR Burning Platforms

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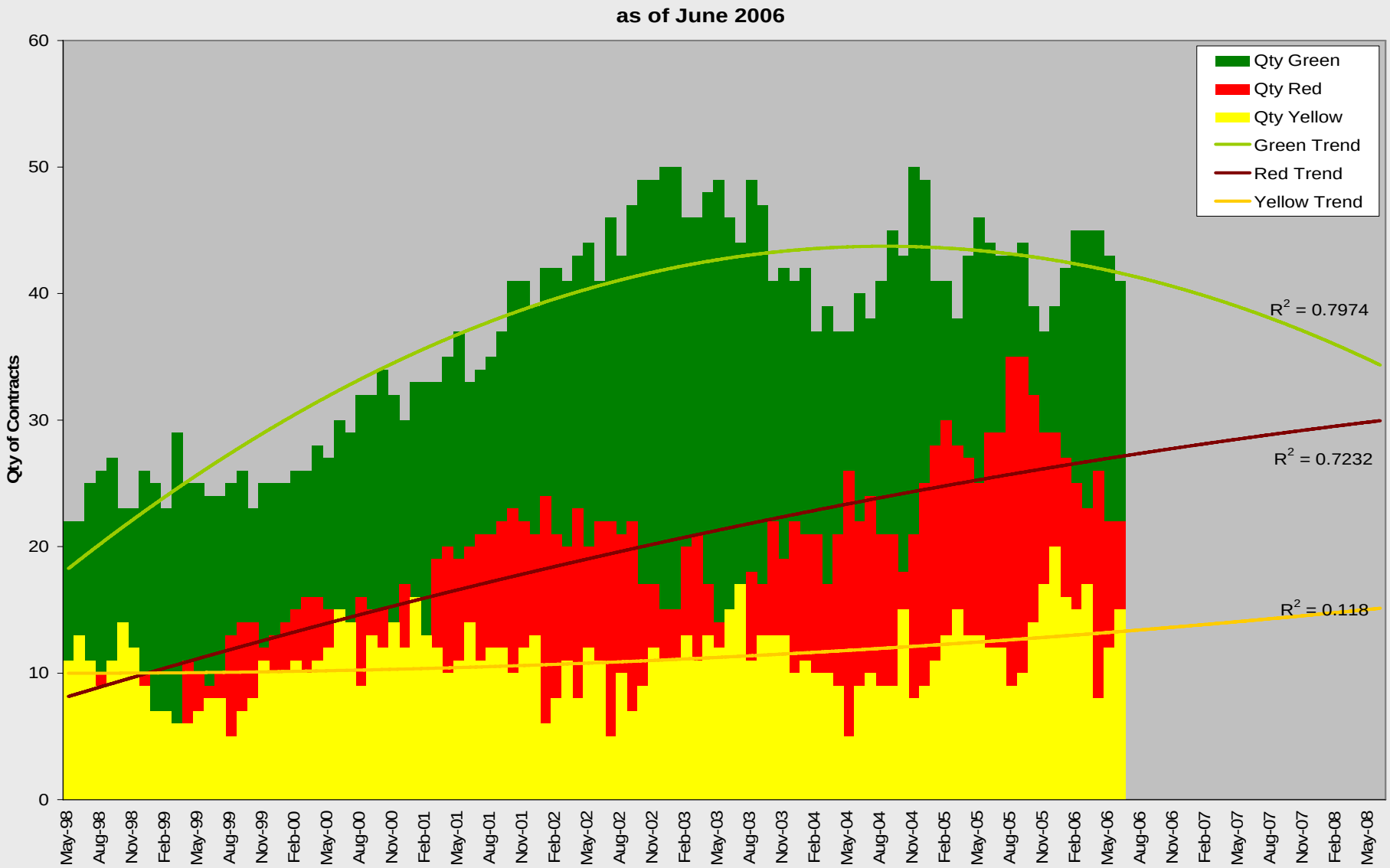

Stressors To Current SE Process

- **Inadequate "Pre Systems Acquisition" Phase**
  - CONOPs, OPSITs, TACSITs, Modeling & Simulation
  - Industry Involvement Required To Bound CDD
- **Specifications Lack Clarity**
  - Performance Based Specs
  - Design & Certification Standards-Non-Tailorable Requirements
  - COTS/NDI
  - Strategic View of Life Cycle Cost
- **Programmatic Stressors**
  - Cost And Schedule Set At Contract Award
  - Award Fee Schedule Promoting Bad Behavior
  - Lack Of Early Sub-Contractor Involvement
  - Government System Development Oversight

Acquisition Reform Retreat

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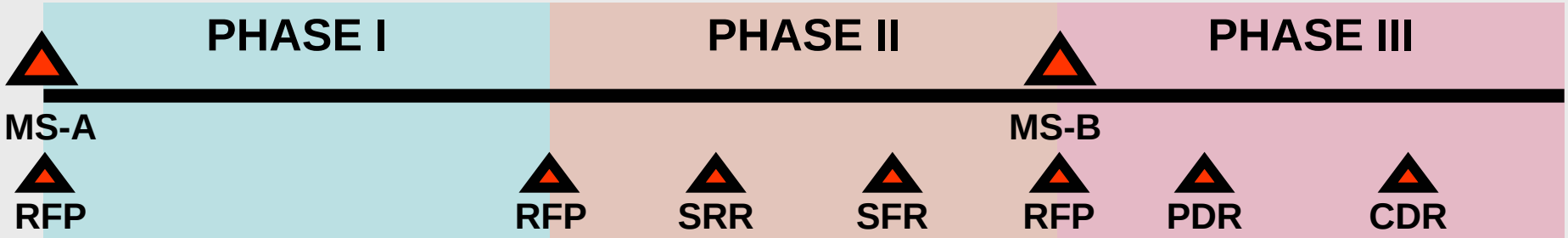
- **Acquisition Reform Tenets Proven WRONG**
  - Broader Performance Based Specifications
    - Required Design Standards Missing
    - Certification Standards Missing
  - Less Government Involvement
  - Contractor And Government Goals Aligned
  - 90 Percent Solution Post CDD Is Acceptable
  - CDRLs And Documentation Not Required
  - Risk Identification Is A Management Tool
  - Award And Incentive Fees Motivate Contractors

New Approach

- **Clear Requirements**
  - Industry Involvement In Requirements Development
  - Design, Build, And Certification Standards
  - Derived And Correlated Requirements
  - Use Case Analysis
- **Contract Governs Communication**
  - Objective, Deliverable Evidence To Support Oversight
  - SEP Issued With RFP
  - Enforce “Event Driven” Design Maturity To A Schedule
  - IMS & EVM Is Essential Forum For SE Management
- **Government Acts As Prime Integrator Role**
- **Reality Based Budget And Schedule**

Design Review Process

Design Review	Baseline
SRR-System Requirements	Performance
SFR-System Functional	Functional
SSR-Software Specification	Software Requirements
PDR-Preliminary Design	Physical
CDR-Critical Design	Build
IRR-Integration Readiness	Integration
TRR-Test Readiness	Test
FRR-Flight Readiness	Airworthiness



Objectives/Process

- Multiple Contractors Engaged
- Develop CDD Through JROC
- Understand Non-Tailorable Specifications
- Assess Technology TRL 6
- Develop CONOPS, OPSITs, & TACSITS

Output

- Reasonably Bounded CDD
- Formal CONOPS
- USE CASE Analysis
- Conceptual Solutions
- Cost/Schedule Cut

Objectives/Process

- Down Select To Few Primes
- Derive System Development Specification
- Finalize Tailorable Specifications
- Apply USE CASES To Derive Funtionality
- Develop Interface Specifications
- Engage Major Sub-Contractors

Output

- Fully Derived System Development Specification
- Sub-System Specifications
- Models & Prototypes
- IBR Quality Cost & Schedule Estimates
- IMS And Initial EVM System

Objectives/Process

- Down Select To Single Contractor
- Traditional SDD Process
- Reduced Risk Environment
- Derived Requirement Define
- Realistic Cost And Schedule Constraints

Output

- Proceed To Normal Milestone C

Summary

- **Revitalization Goal**
  - Better Requirements Understanding And Stability
  - Better Budget And Schedule Discipline
- **Additional Phase With Multiple Contractors**
  - Supports Bounding Of CDDs
- **Control Program Inertia Into Milestone B**
- **Implementing Contracting Strategies Still In Review**