NATIONAL RECONNAISSANCE OFFICE

Achieving Affordable Programs
NRO Cost and Acquisition Assessment Group (CAAG) Support of Cost Driver Identification

For ICEAA

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SUPRA ET ULTRA

(U) Overview

- CAAG, Who we are….
- Cost Driver Study: Dec 12
- Optimization: On-going

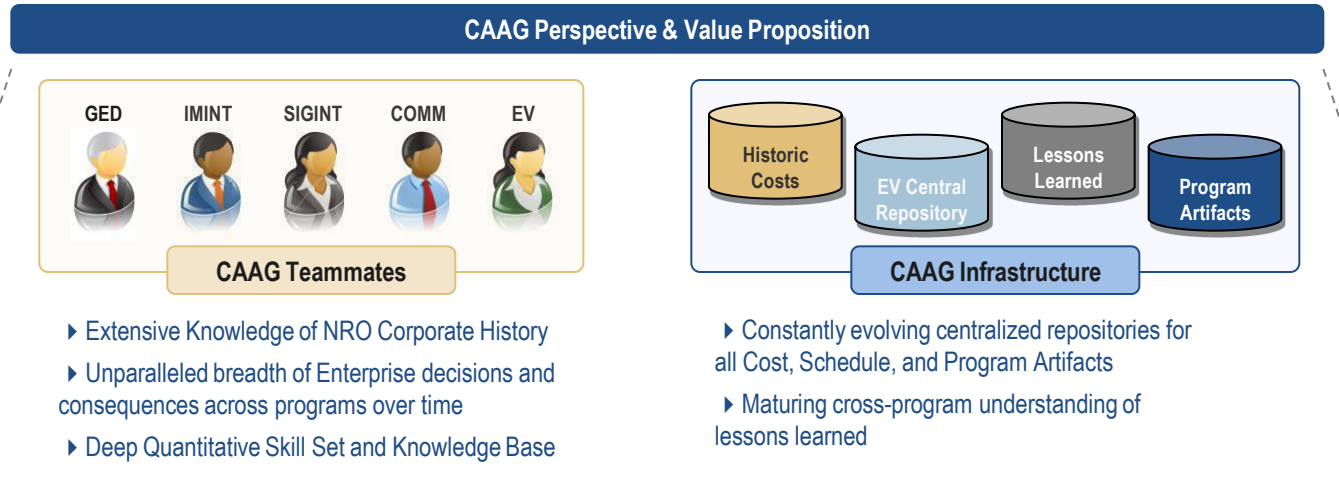
Cost and Acquisition Assessment Group

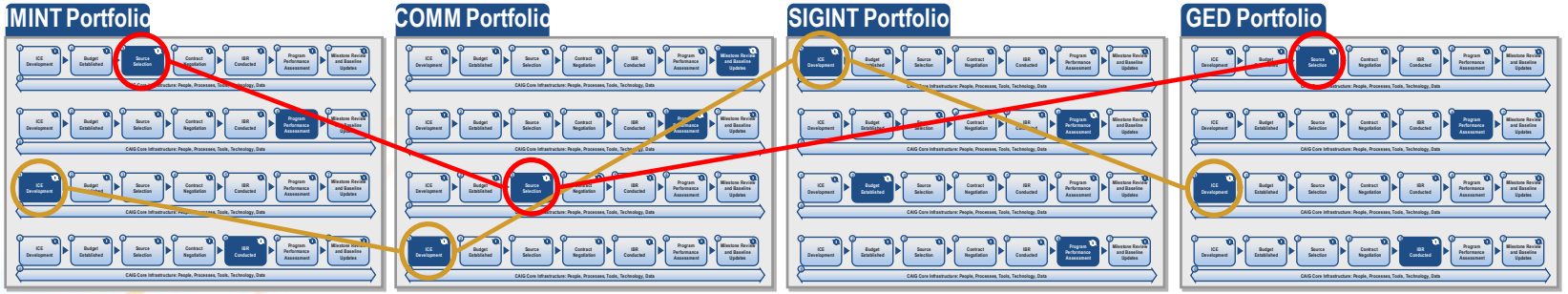
- **Critical Roles:**
  - Acquisition Planning - “How best to accomplish the acquisition?”
  - Independent Cost Estimates (ICEs) / Agency Cost Positions (ACPs) - “How much will it cost?”
  - EVM Center of Excellence - “Is the baseline executable and measurable?”
- **Key Responsibilities:**
  - Provide Independent Cost and Schedule Analyses for program planning, budget, acquisition decisions and design reviews
  - Support NRO Budget Build – IPBS and Congressional Budget Justification Book (CBJB)
  - Corporate level Earned Value Management (EVM) – Compliance and surveillance reviews, Integrated Baseline Reviews, program assessments, and Central Repository
  - Maintain external interfaces with ODNI, DoD and OMB for Major System Acquisitions and Acquisition Policy
  - Administer Joint Intelligence Acquisition Board (JIAB)/NRO Acquisition Board (NAB); conduct Acquisition Strategy Panels (ASPs) and Quarterly Program Reviews (QPRs)

(U) Enhanced Program Support: More Universal Access and Use of CAAG data, tools, …

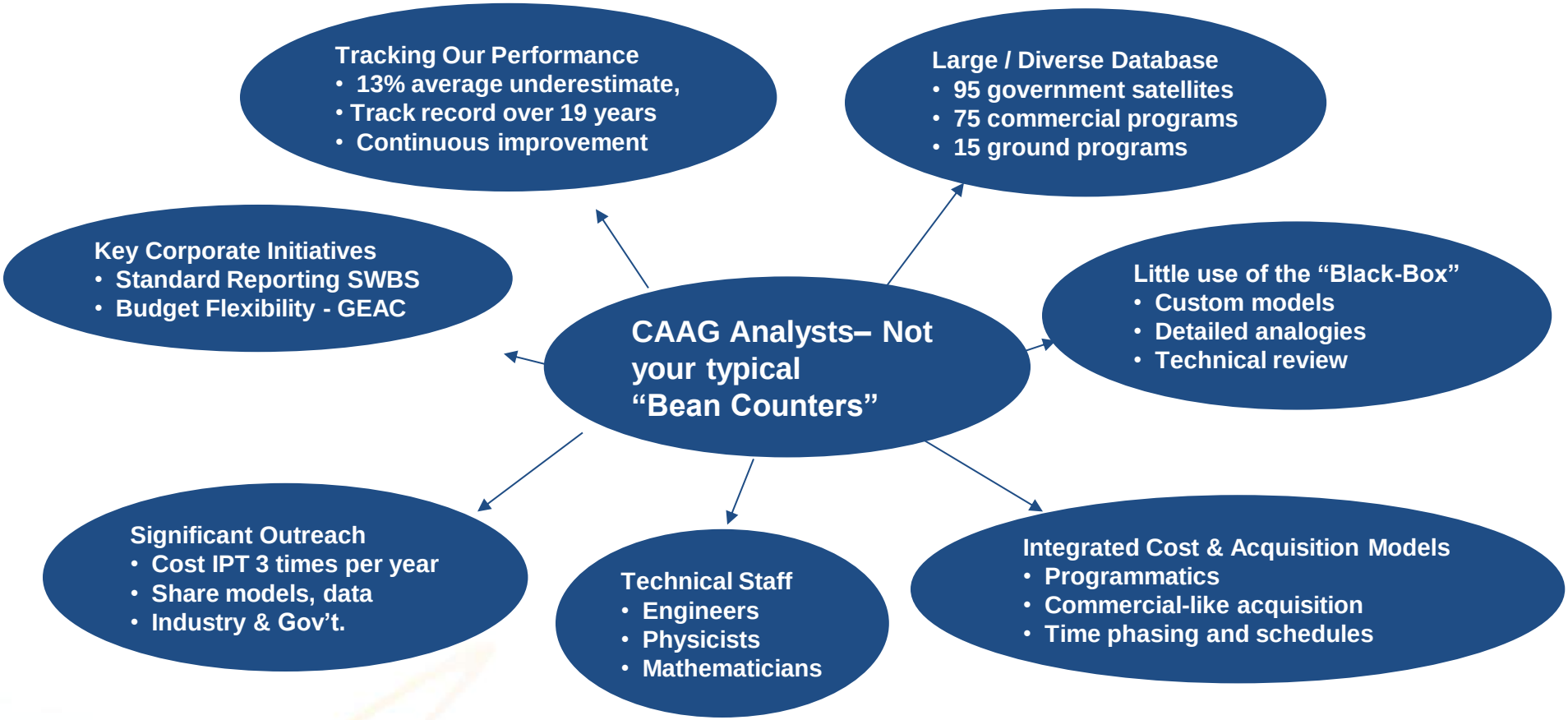
The NRO CAAG is uniquely positioned to provide cross-program insight and analysis:

- Supports operating as a single integrated entity optimized for Enterprise not individual-level performance
- Places renewed emphasis on Enterprise-Level planning and cross-INT integration





(U) Cost: Overview



Cost Driver Study

GOAL: Reduce enterprise costs to posture for potential budget reductions or re-invest into enhancing mission capability

CAAG Task:

- Identify cost drivers and reasons for cost growth:
  - Inform Budget Austerity
  - Identify Unexamined Cost Drivers
  - Provide Framework for Additional Opportunities

Approach:

- Assess Cost Drivers and Areas of Cost Growth:
  - Review of Internal/external cost studies
  - Perform Data Driven Assessments
  - Assess NRO processes related to cost control
- Budget Analysis: Characterize how the NRO spends it's money (Trending)
- Recommend opportunities to achieve future efficiencies

Literature Review
Themes and Definitions (✓ = CAAG Data Visibility)

Cost Drivers

Those ***Characteristics*** of a system, item, or organization which have a major effect on ***Cost***

+ **Organization**
  - People and Structure
+ **Regulatory and Oversight**
  - Internal and External Oversight
  - International Traffic in Arms Regulations (ITAR)
  - NRO Acquisition Manual and FAR
+ **Industrial Base**
  - ITAR and government investments
+ **Processes**
  - Corporate Business Processes (CBPs)

✓ **Architecture**
  - ✓ Number of Payloads, Mission types, and Ground Infrastructure

✓ **Technology**
  - ✓ Size, Weight, and Power
  - ✓ Lines of Code and Productivity Rate
  - ✓ Data Rate
  - ✓ Percent New Design
  - ✓ Spares and Qualification Units (Risk Posture)
  - ✓ Design Life (i.e. Mission Assurance Requirements)

✓ **Acquisition Strategy**
  - ✓ Contract type, Competitive/Sole Source, Quantity
  - ✓ Oversight, Contract Deliverables
  - ✓ Contract End Items Integration Strategy

(U) Cost Growth

The net change of an **Estimated or *Actual Cost*** amount, over a ***Base*** figure previously established

✓ **Changing Internal/External Requirements**
  - ✓ Launch Vehicle change
  - ✓ Risk Mitigation
  - ✓ Enhance Mission P/L
  - ✓ Modernize/improve/obsolescence SV and P/L
  - Comply with external regulations
  - ✓ Mission Assurance Standard Mod
  - ✓ Add Adjunct and Spares
  - ✓ Enhance or Modify Ground/Ops site

✓ **Unrealistic Baseline**
  - ✓ Optimistic technical, schedule, and cost
  - ✓ Lack of independent estimate before award
  - ✓ Starting more weapon programs than organization can afford, creates competitions for funding that encourages low cost estimating

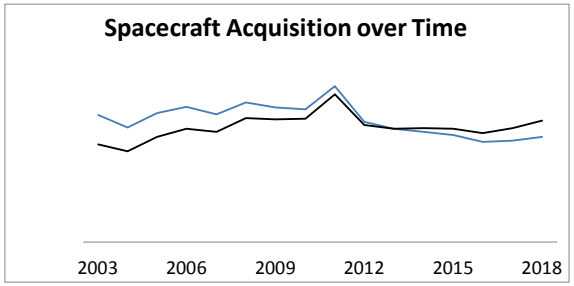
• **Cost Control Effectiveness**
  - Mission and Schedule Priority Higher than Cost
  - Contractor not incentivized to under run

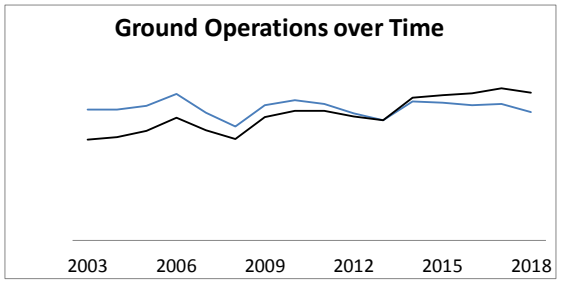
✓ **Volatile Funding**
  - Congressional marks, yearly execution pressures
  - ✓ Not budgeting to independent estimate

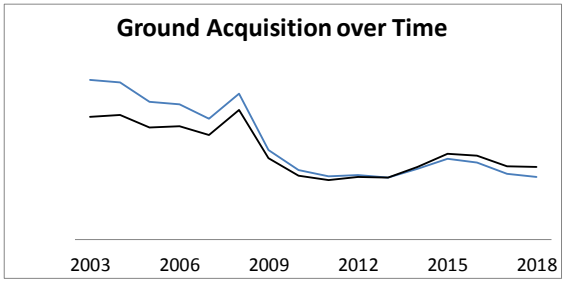
• **Personnel Experience and Expertise**
  - Military and CIA Rotations
  - Dependent on FFRDC and SETA Stability

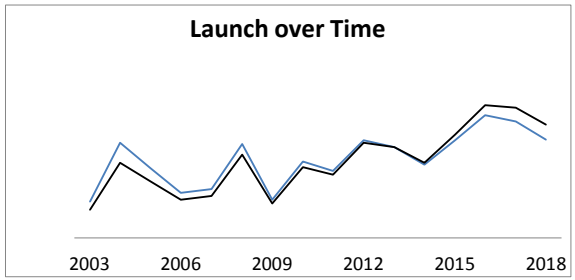
Upfront Planning → Program Execution

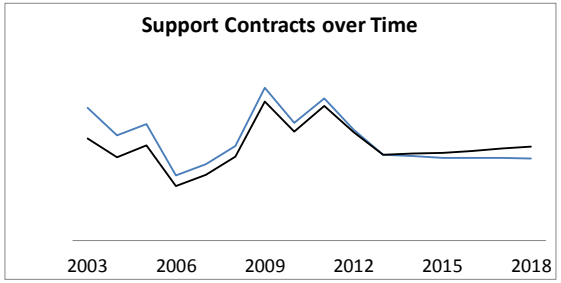
Budget Analysis by Object Class Over Time

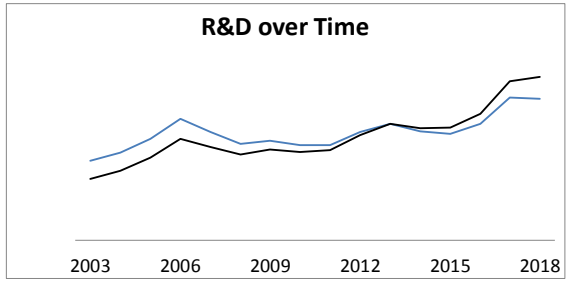


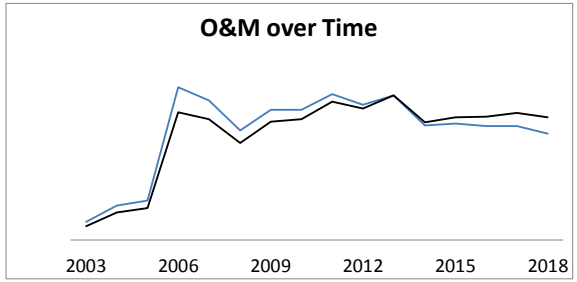


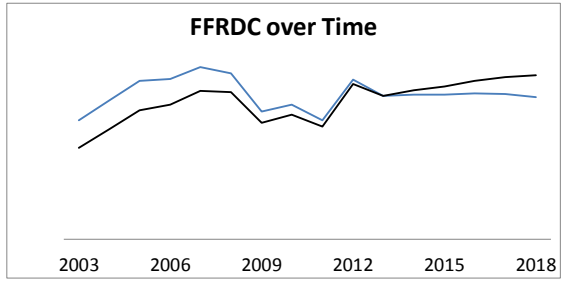


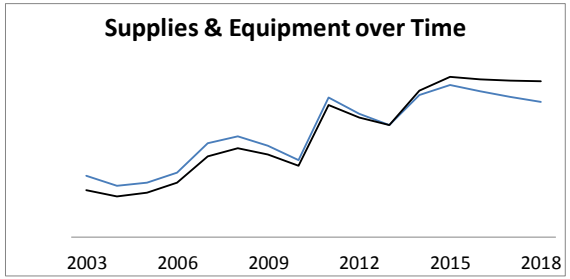


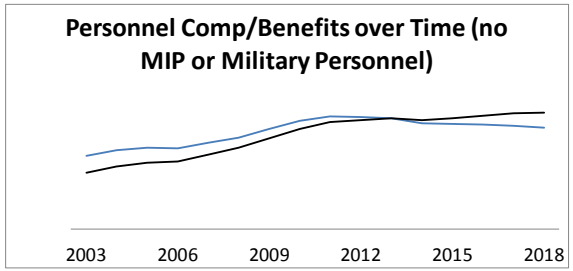


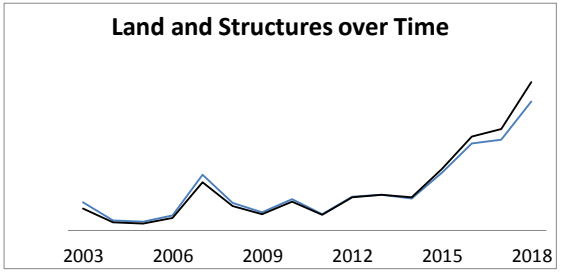


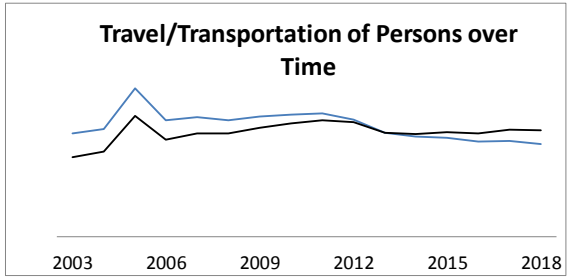












NRO Optimization

- Develop a Standard Structure to capture the total cost of NRO products (in terms of dollars) to enable enterprise-wide resource analysis

- Objectives…
  - Visibility into how resources are being utilized
    - Gain a common understanding of what it takes to produce a product or provide a service
  - Enable inter-program and inter-organizational analysis (ramp management, trending)
  - Enable cross-program and cross-organizational comparative analysis (variations)
  - Enable data driven analysis to enhance forecasting/estimating capabilities

- We're not alone in this effort…
  - USNAVY, Agencies all Pursuing Similar analysis ….. all seek Data Driven analysis

Consistent Product Cost Visibility Enables Informed Resource Decision Making

Approach

Thread	Phase 1 "Manual, 4-Months"	Phase 2 "Real-Time, 12-Months"	Phase 3 "Integrate Value, 12-Months"
Data Definition Standard Structure	✓ Develop draft standard structure maximizing use of enterprise efforts (budget hierarchy, PMWG, SWBS, CAMT) ❑ Work through PMWG to define function sub-categories (i.e. IT, Security, Systems Eng.) M ❑ Solicit organizational input/feedback on standard structure via TIER action once sub-categories are finalized, complete structure M	❑ Align MIP & NIP budget structure in FIRsT M ❑ Align budget structure coding to standard structure in FIRsT H ❑ Review Government civilian occupational categories alignment with PMWG categories L	❑ Link with SE developed Value Measures "Strategic Metrics"
Data Collection	✓ Gather data (FY15IPBS budget data, FY12 services framework and government personnel) ✓ Map budget structure coding to standard structure (MIP & NIP) at lowest level possible ✓ Identify gaps & assess data limitations with budget structure ❑ Gather data (FY15CBJB data, FY13 services framework and government personnel) L	❑ Map centrally managed government civilian data to area of responsibility M ❑ Integrate government personnel (OSHC) & contractor data (OC) for FTE information M ❑ Gather civilian non-count and military personnel data and funds from others (FFO) and integrate M	❑ Gather cost data ❑ Gather value measures ❑ Align value measures and cost data
Data Reporting & Analysis	✓ Created sample budgetary executive views ✓ Develop notional comparative analysis ❑ Assess, acquire, & utilize data visualization tools (i.e. Tableau, Honeycomb, etc.) L ❑ Develop analysis in support of FY16 IPBS M	❑ Develop reports & dashboards – executive & analyst level M	❑ Develop reports

Complete Phase 1, Assess Value, and Recommend Phase 2 Scope

Level of Effort

High (H)

Medium (M)

Low (L)

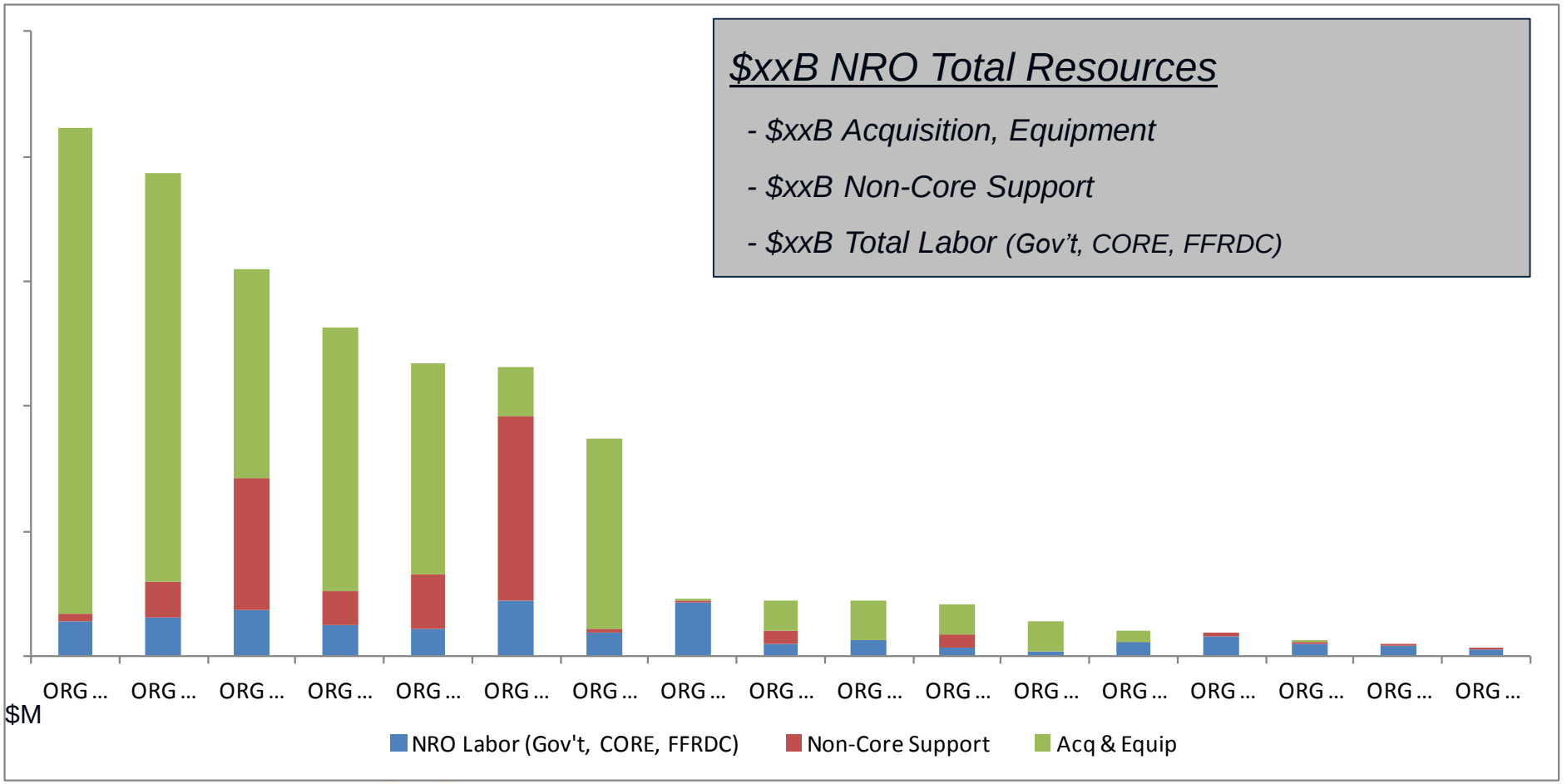
CAAG

Data Definition

Data Collection

Reporting & Analysis

NRO Optimization: Sample Analysis
Total Resources Executive View



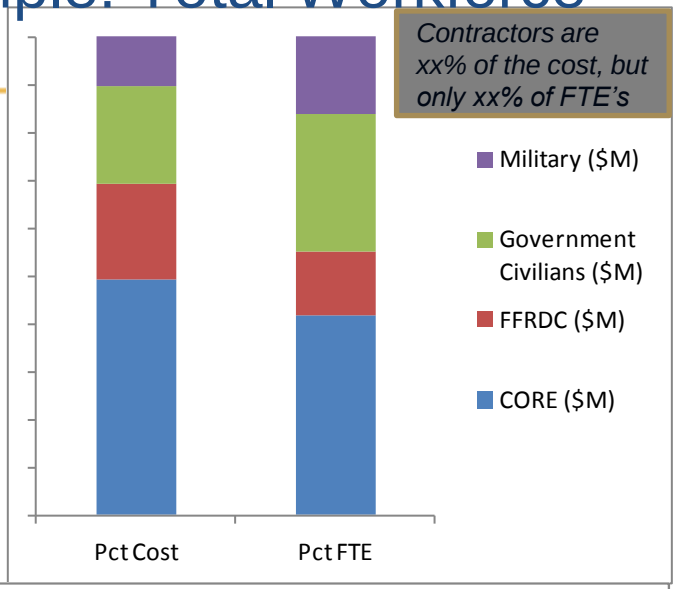
ISSUES:

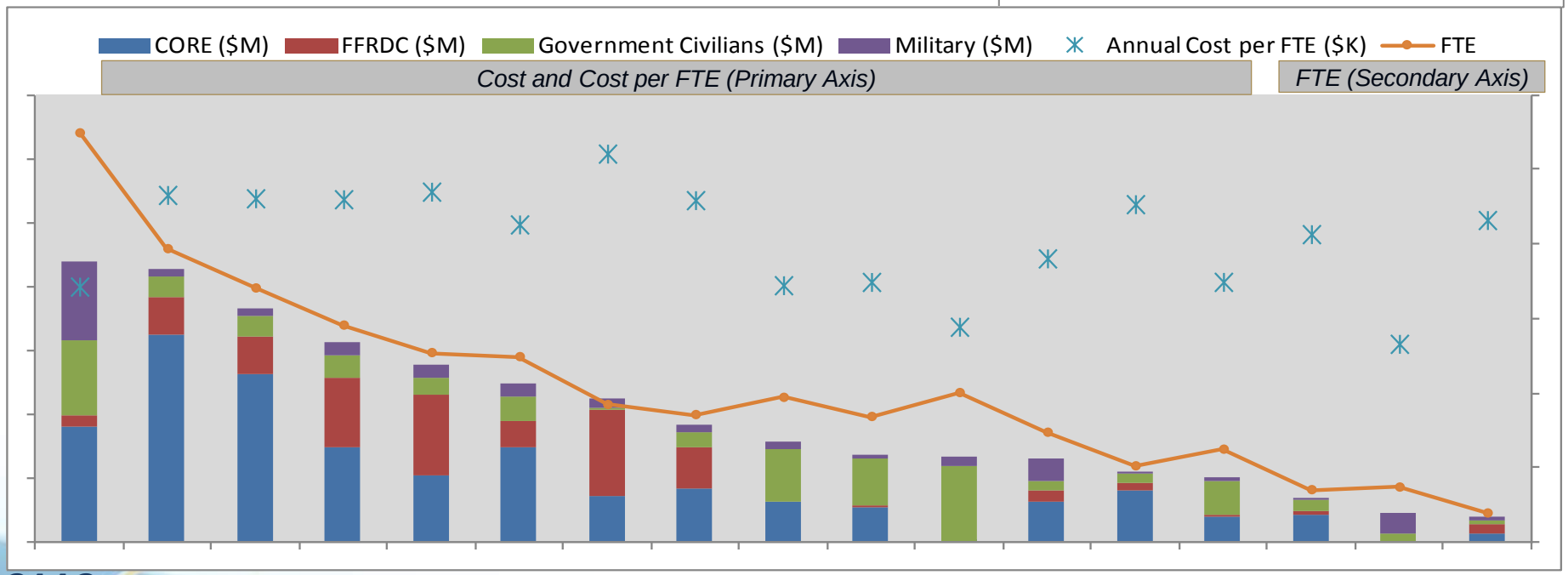
-Methodology (allocations, business rules) for integrating data: Services Framework, OSHC, and Budget Data

Comparative Analysis Example: Total Workforce

(Excludes non-Core)

- $xxB = Total Annual Cost (~$xxB non-count)
- xx = Total FTE (~xx non-count)
- $xxK = Ave cost / FTE
- Savings Opportunity: xx% equates to $xxM/YR
  - Lower average cost per FTE by $xxK (ie. set limits, competition)
  - Reduce FTE's by ~xx
  - Change Gov't / Ctr. cost mix from xx%/xx% to xx%/xx%

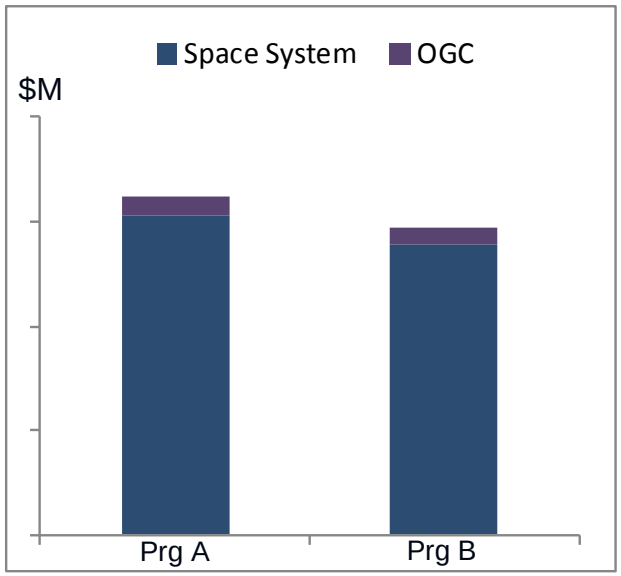


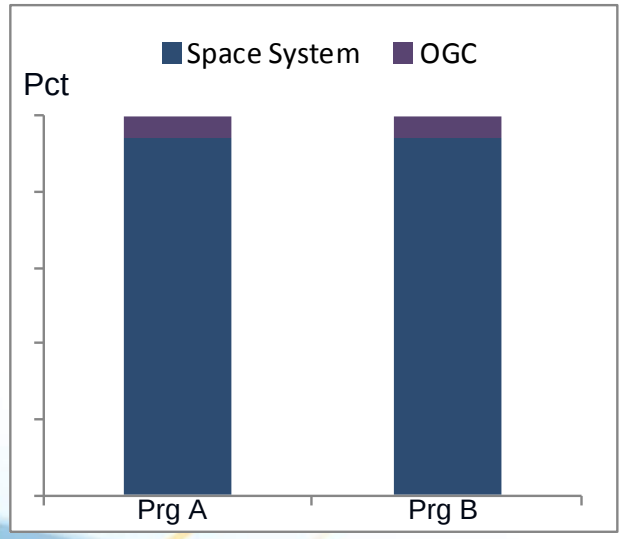


Deeper Dives into Programs, Products, & Functions Needed

Data Definition
Data Collection
Reporting & Analysis

NRO Optimization: Sample Analysis
Program / Function View



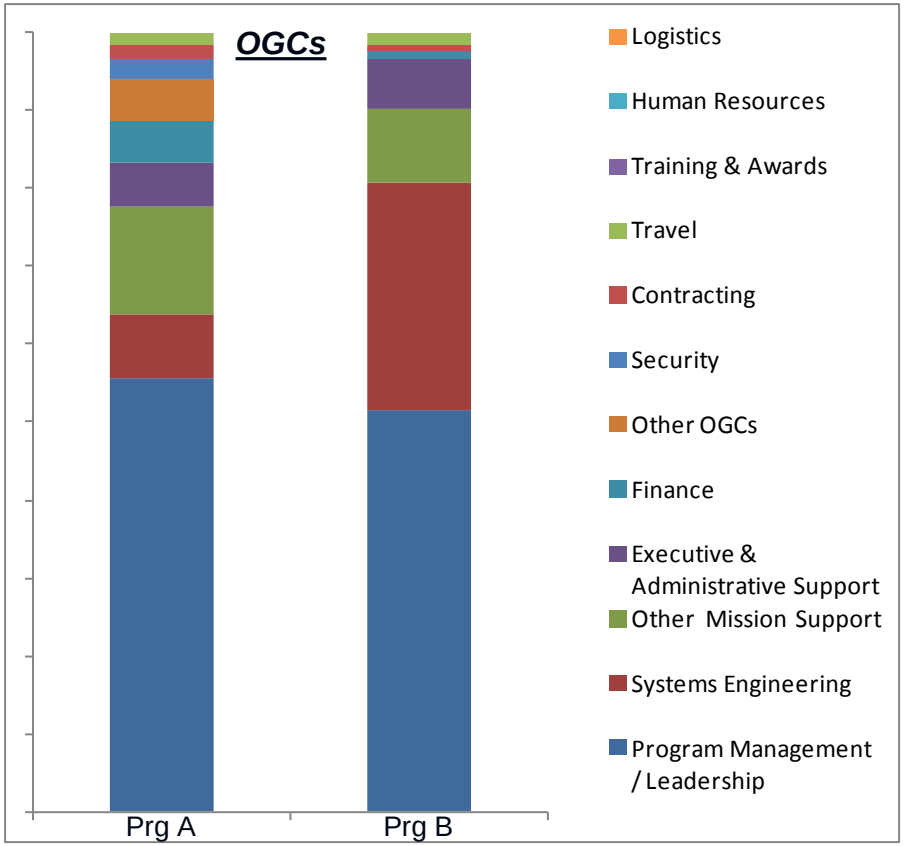


xx% of NRO Resources are for Dir X & Dir Y

xx% of Dir X&Y are for Program A & B

xx% is for Acquisition Contract x% is for OGCs

xx%-xx% of OGCs is for Program Management & Systems Engineering



CAAG

(U) Next Steps

- Solicit organizational input/feedback on standard structure via TIER action (submitted 8 Jan ‘14, suspense 24 Jan ‘14)
- Complete Phase 1 and support FY16 IPBS budget build
- Gather FY16IPBS support lessons learned and determine Phase 2 way ahead – inform budget structure, enable real-time reporting

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