Overview

• OSD CAPE is part think tank, part consulting firm, and part investigative agency
  – Advises the Secretary of Defense but has no direct decision authority
  – Develops alternatives with unbiased analysis
  – Builds the Future Years Defense Program (FYDP)
  – Consists of 160 personnel including civilians, military, and contractors

• Aligning resources to readiness is a long standing DoD challenge
  – Services often argue for increased resources by citing readiness concerns
  – Arguments highlight readiness symptoms but don’t outline root causes or mission risks
  – Results in generic programming that has no clear return on investment

Defense Annual Report FY79 – “We have not yet developed the methodological tools to show the precise sensitivity of readiness to change in our commitment of resources. But loss of readiness is a cumulative process that takes time as well as money to reverse.”
Readiness Analytic Challenges

• Traditional data did not identify root causes for resourcing
  - Unit-level metrics aren’t granular enough (e.g., 30% of Brigade Combat Teams are ready)
  - Long term trend analysis is complicated by business rule changes
  - Difficult to target funding to specific issues with people, equipment, or training

• Readiness goals weren’t linked to warfight timelines and mission risk
  - Results in arbitrary goals tied to a “more readiness the better” mindset
  - Difficult to prioritize across mission area and platform

• Alternative data was not designed for analytics; results in “The Data is Bad”
  - Data spread across over 20 sources and 4 Services
  - Inconsistent definitions across the Services
  - Requires brute force integration of data
  - Data not previously approved by leadership
Lessons Learned

• Expect your project to take some time
  – Will need to overcome data sharing issues with partners
  – Data won’t be “shovel-ready” for analysis (e.g., regression)
  – Use descriptive data and visualization to uncover data issues and build trust with teammates
  – As data allows, use long term trends to put insights into context

• Robust sets of descriptive data will allow your community to:
  – Work together to improve data quality (e.g., F/A-18 supply vs. maintenance data)
  – Generate hypotheses to analyze in more detail (e.g., ship maintenance data)
  – Develop tools to explore policy and resourcing changes (e.g., enlisted infantry data)

• New approaches will fall under attack if insights challenge core beliefs
  – Anecdotes at the Senior level are hard to overcome without support at the action officer level