DoD – Finance of the Future
Creating a Data-driven Ecosystem
Michael Conlin, Chief Data Officer
US Department of Defense
The new normal

✓ Audits
✓ Evidence-based policy making
✓ Data-centered decision making
✓ Citizen data scientists
✓ Improving affordability & performance
✓ Department-wide oversight & management
the challenge: NDAA + NDS + PMA + H.R. 4174 = OMG!

Use **Common Enterprise Data** to enhance Department-wide oversight and management...

and achieve commercial sector levels of efficiency and productivity.

H.R. 4174 – Evidence-based policy-making

to improve affordability and performance...
DoD Data – seeing the bigger picture

- Command & Control
- Battlespace Awareness
- Electronic Warfare
- Naval Integrated Fire Control
- Logistics & Supply Chain
- T&E
- Cybersecurity
- GFM DI

Readiness & Safety

Warfighting Mission

Common Enterprise Data

- Financial Management
- Medical
- Service Contracts
- Information Technology
- Community Services
- Real Property Management
- Communication & Collaboration
- Human Capital Management

Business Mission
CFO of the Future – the “what”

CFO Role: Decision Analytics on Financial Performance

**Analytics Performed:**
- Perform cost management analysis
- Provide reporting on risk and performance of transaction processing (e.g., improper payments, prompt pay, debt collection)

**Time:** ~ Monthly or Better

**Data Architecture:**
Centralized, Standard

**Role of UoT:**
- UoT central host system
- UoT leverages existing data and accesses key data extracts from source systems for cost and audit

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CFO Role: Decision Analytics on Mission Performance

**Analytics Performed:**
- Link cost performance data to related priority mission objectives
- Strategic partner on cost and mission analytics

**Time:** ~ Daily/Real Time

**Data Architecture:**
Centralized, Standard, Automated

**Role of UoT:**
- UoT central host system
- Automated feeds for cost & audit
- Shared service provider for analytics on financial performance, audit, and cost
CFO of the Future – “the why”

**Improving FM Data Accuracy & Timeliness**
- Do we have any variances in our financial statement recons? ✓
- Do we have any incorrect general ledger posting? ✓
- Do we have any abnormal balances? ✓
- Are we compliant with our FM data standards? ✓
- Are we paying vendors on time?
- Are we posting receivables and disbursements timely?

**Reform/Cost Management**
- Are we using our resources correctly? (e.g., budget vs. actuals, expired and cancelled funds analysis)
- What are the inefficiencies in DoD’s real property costs? (e.g., electricity costs, comparing bases operating costs)
- What is the utilization of DoD’s real property to help reduce lease costs?
- Where are the primary savings potential in the Military health system?
- What is the most cost effective way to develop physicians for MHS?
- Are there opportunities to strategically source IT?

**Readiness**
- Is there the right mix and number of medical staff to provide good care to the warfighter?
- Is there the right amount of investment in real property to support mission?
CFO of Today - Complex process and IT systems lead to lower data quality, higher cost

- No overall IT business system **strategy**
- **Agency-specific, redundant** processes, data, and systems
- **Complex crosswalks** are **required** to link source business events to summary statements and reports
- **Out-dated, non-supported** technologies
- **Lack of standardization** across systems, technologies, and processes
- **Difficulty identifying costs, risks, and value** of all investments and assessing the tradeoffs among investments
- **Failure to meet** IT and business performance goals and objectives

Roughly 73% of DoD systems material to audit and cost are not in the FM portfolio
CFO of today – culture matters
“Culture eats strategy for breakfast.” Peter Drucker

✓ data fratricide
✓ experience-centered decision making
✓ limited data literacy
✓ macro-level consensus building
✓ perfection > progress
Cost management effort has identified and analyzed ~75% of DoD spend.

75% of spend accounted for in cost baselines to date.

Figures represent FY17. Baselines currently exist for FY15-17.
Transportation - Significant potential opportunity of $\lambda$mm across 8 top AMC Cargo routes

Cost per ton per route compared to IATA commercial benchmarks

Potential opportunity

Tool allows decision-makers to quickly focus efforts on large top routes where average price per ton is above benchmarks

Example: ~300,000 individual transactions across 8 routes; 20% of these records could achieve over $\lambda$mm in savings if brought down to the commercial benchmark
Potential savings of $\lambda M$ on facility-a where operating costs significantly exceed local-area benchmarks

Cost per SqFt compared to CBRE benchmarks

Potential opportunity

Tool focuses reform efforts on locations with elevated operating costs

Site-specific context may drive operating costs to exceed benchmark

But only re-baselining operating cost to no more than 50% above benchmark would yield $\lambda M$ savings
Significant potential opportunity: $\lambda M$ savings potential from re-baselining spend that saw 3%+ YoY price increases

Year-Over-Year Price Change Summary

Potential opportunity

Tool allows decision-makers to quickly focus efforts on YoY price increases in and across FSGs

Example: found tail of ~4,000 individual NIINs across top FSGs, with YoY price increases in excess of 3%
  - 3% 'inflation' conservative: many markets see general and part-specific cost declines from manufacturing experience

Refining auto-buy logic to re-baseline the go-forward YoY price increases across these NIINs to 3% is a $\lambda M+$ opportunity
  - Excludes ‘commodity’ categories with known market volatility (fuel, food)
  - Opportunity is illustrative – Category management reform effort underway to capitalize on the opportunity unmasked by Supply Chain LOB
Opportunity to drill down to specific item purchase history to test savings hypotheses and ID decisions driving cost and performance

Example: cost and purchase history for **NIIN**

Potential opportunity

**Tool allows users to surface detailed item-level data underlying price opportunities exposed by triage-level visualizations**

Example: Across three separate contracts for **shrimp** – two were floating-price, considered best-in-class when sourcing food distribution. A third was fixed – which typically requires price premium, and did not benefit from deflation seen in the market FY15-16
Aligning Org-X IT personnel spend w/ CORE ~$\lambda M$ opportunity

**Org-X IT personnel ($M$ opportunity):**

- **Org-X**: We would expect to see high personnel or external services depending on the insourcing model, but not both.

- **Org-Y**: While, personnel costs are low in Org-Y indicative of heavily outsourced model.

Org-X’s delta with CORE\(^1\) for external services is in line with Org-Y, however, their personnel delta is ~60% greater than Org-Y’s.
Achieving lowest defensible prices w/ MSFT is a $\sim$\$\lambda$M opportunity

**Key Considerations**

- **Spend**: 774 million dollars of annual MSFT SW spend
- **Impact**: 15% of DoD IT SW spend can be attributed to MSFT products
- **Dept. Reliance**: 2600 distinct orders are placed for MSFT products annually across all Services and 4th Estate
- **Fragmentation**: 10 active contracts with a separate ELA for each Service leaves clear path for consolidation
- **Savings**: 218-259 million potential savings achievable by leveraging purchasing power to pursue lowest defensible prices

**Top 10 Products & Benchmarks**

- **Spend $M**
  - Army Desktop (Windows, Office, CALs): 160
  - Air Force/Disa Desktop (Windows, Office, CALs): 131
  - Office Pro Plus: 104
  - SQL: 94
  - SQL Server SA: 70
  - WL License: 70
  - Core CAL: 67
  - SQL Server License & SA: 44
  - 4E Desktop (Windows, Office, CALs): 38
  - Windows: 37
  - Windows Server: 29
  - System Center: 20
  - 4E Server: 19

- **Total**
  - Total MSFT DoD Spend: 1,200
  - Total MSFT DoD SW Spend: 774
  - Potential Savings: 259
  - Benchmarks: 515

**Spend by Contract & Component**

- Army ELA: 237
- Navy/USMC ELA: 157
- Air Force/Disa ELA: 161
- Dell: 86
- Minburn: 57
- Insight: 3
- Shi: 2
- Cdw-G: 2
- Softchoice: 1
- GovConn: 0

Legend:
- Blue: Air Force
- Green: Army
- Black: Navy
- Dark Blue: DISA
- Red: USMC
Opportunity to save up to $λM by outsourcing training

Total cost of 4-year *abc* education (per student)

- **$1,587**
- **$326**
- **$276**
- **$200**

# Annual Graduates
- ~170
- ~900
- ~25
- ~40

Opportunity to outsource *ABC* training

Raw cost of sponsoring scholarships is substantially cheaper (~$λM per student) than sending students to *xxxxx*

Even when amortizing full cost over required years of service after graduation, *xxxxx* is still $λK—approximately 2x—more expensive per year

Benchmarks for annual cost per student for civilian institutions, triangulated through multiple methodologies, also suggest that *xxxxx* represents 50-100% premium, driven largely by labor costs
- Potential for savings of up to $λM on UHUHS' $λM outlays
Opportunity to save $\lambda M$ by outsourcing specialty care

MTFs captured in blue on left side appear to have market capability to absorb care currently provided in direct care system in purchased care network
- 95% of the procedures performed within the direct system had also been performed in purchased care network in previous year

For MTFs that showed sufficiently capability to absorb specialty care, estimated what it would have cost to outsource care currently performed in direct care system
- Total estimated savings in OBGYN: $\lambda M$
- Total estimated savings in Hem. Onc: $\lambda M$

Total OBGYN care "substitutable" in purchased care

Cost savings from outsourcing ($\lambda M$)

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<tr>
<th>MTFs</th>
<th>Cost Savings</th>
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<td>NMC San Diego</td>
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<td>AMC Madigan-Lewis</td>
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Not available in Purchased Care

Available in Purchased Care
Data Insights Shared Services

leveraging OCFO & Defense Digital Services resources as virtual team

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<tr>
<th>Program/Product Management</th>
<th>Data Platform Manager</th>
<th>Acquisition</th>
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Loosely Coupled But Tightly Aligned Portfolio Teams
Data Insights Shared Services
hub-and-spoke model for data science
Thanks for your time and attention

Don’t miss the opportunity to attend my other workshops:
• #134: The Price of a Data Breach, May 30, 1545-1700
• #69 New Frontiers in DoD Financial Management
• #85 Finance of the Future meets the promise and perils of machine learning.