



# PM Tactical Vehicles



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## PRODUCT MANAGERS

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- ◆ **Medium Tactical Vehicles**
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- ◆ **Armored Security Vehicle**
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- ◆ **Heavy Tactical Vehicles**
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## MISSION

The lifecycle management of light, medium and heavy tactical vehicles & trailers enabling the Expeditionary Ground Force

## OTHER SIGNIFICANT PROCUREMENT EFFORTS

- ◆ OEF Recovery Systems
- ◆ Add-on-Armor/GPK





# 4CSL PMs – Approximately 240K Systems Fielded



## Light Tactical Vehicles

- 30 variants
- 150K systems fielded
  - HMMWV Family of Vehicles
  - UAH Safety Enhancements
- Light Tactical Trailer (LTT) – 1600/month

ACAT IC



## Medium Tactical Vehicles

- 17 truck variants (3 Trailers)
- Over 41,606 trucks / 9,168 trailers fielded
  - Family Medium Tactical Vehicles (FMTV)
  - High-Mobility Artillery Rocket System (HIMARS)
  - Load Handling System (LHS)

ACAT IC

825 max Sys/Month



## Heavy Tactical Vehicles

- 33 variants (8 Trailers)
- Over 33K systems fielded
  - Heavy Expanded Mobility Tactical Truck (HEMTT)
  - Palletized Load System (PLS)
  - M915 Family of Vehicles & Trailers
  - Trailer (HEMAT)
  - Heavy Equipment Transport (HETS)
  - Container Handling Unit (CHU)

2 X ACAT IC 1,409 Sys/Month



## Armored Security Vehicle

- Over 1721 systems fielded
- FMS case management for ANA/ANP
- 1166 Fielded to OCONUS Units
- AAO: 2863
- ASV Knight Chassis
  - AAO: 570

48 Sys/Month



# Agenda

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- ***Fleet Management – Executing the Strategy***
- ***Opportunities for Competition***
- ***Quality***







# We have a TWV Strategy!

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## ● **Key Metrics:**

- % Requirement Filled
  - Average Fleet Age
  - % Armor Capable
  - % B-kits procured
- ## ● **10-15% improvement in fuel economy by 2025**





# Fleet Management Goals

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- ***Inform Army investment decisions with facts and data about the fleet as we balance:***
  - *Affordability*
  - *Modernization*
  - *Sustainment*
  - *Fleet Age and Condition*
- ***Maximize value to the Army from sustainment funding***
  - *Guide decisions regarding maintenance expenditure limits (MEL)*
  - *Improve predictability for depot RESET/RECAP efforts*
  - *Reduce cost through volume buys*
- ***Inform Army distribution decisions regarding ACOM and COMPO distribution***
- ***Metrics:***
  - *Average Fleet Age (Compared to Economic Useful Life)*
  - *% Armor Capable*
  - *% B-kits on Hand*

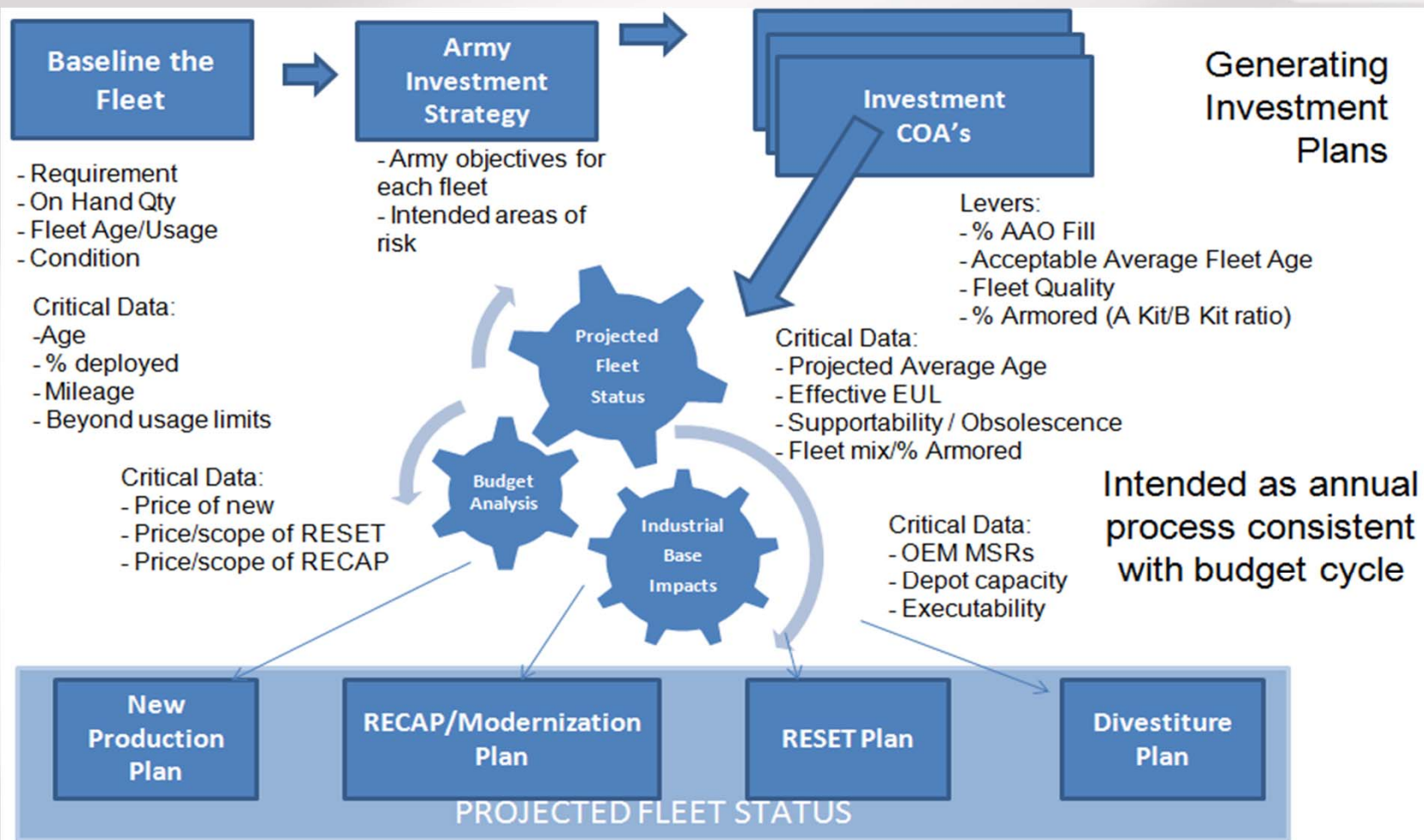
Align Requirements, Technology, Acquisition, Sustainment and Budget





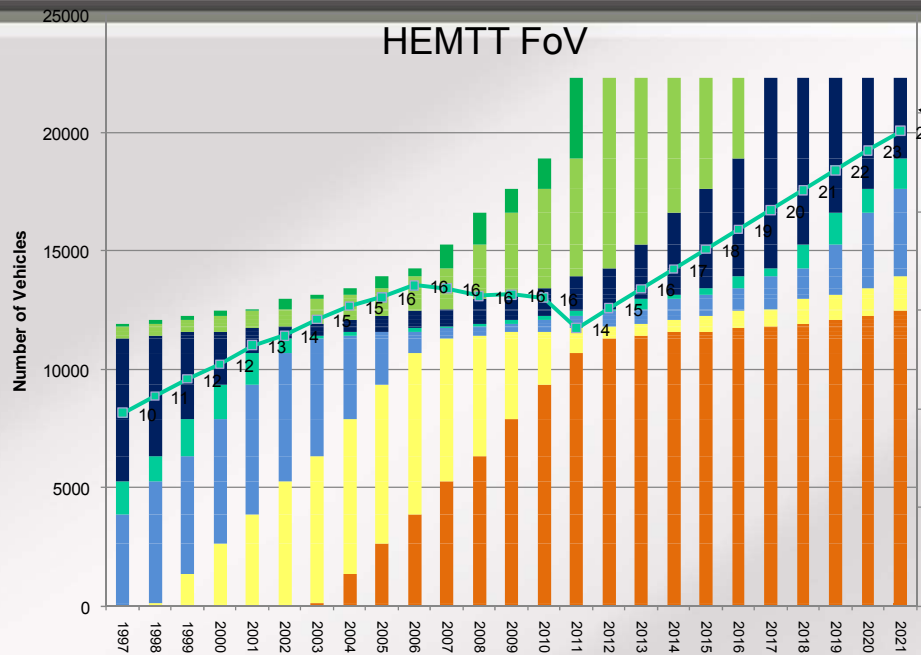
# Fleet Management Process

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# Executing "What if" Scenarios



Fleet age Climbs to 25 years

Significant Fraction of fleet beyond EUL

Aggressive Investment to Pure Fleet

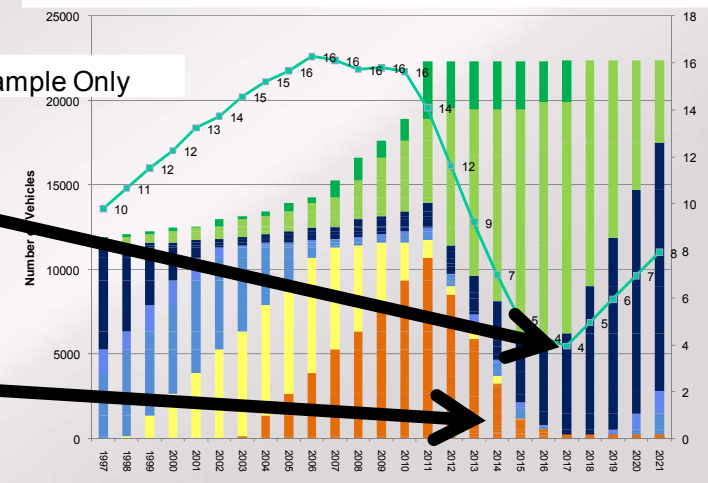
Example Investment COA is to Migrate HEMTT Fleet to 100% A4

Accept Risk – No investment

Fleet age bought down to 4 years

Rapidly divests all vehicles > 20 years

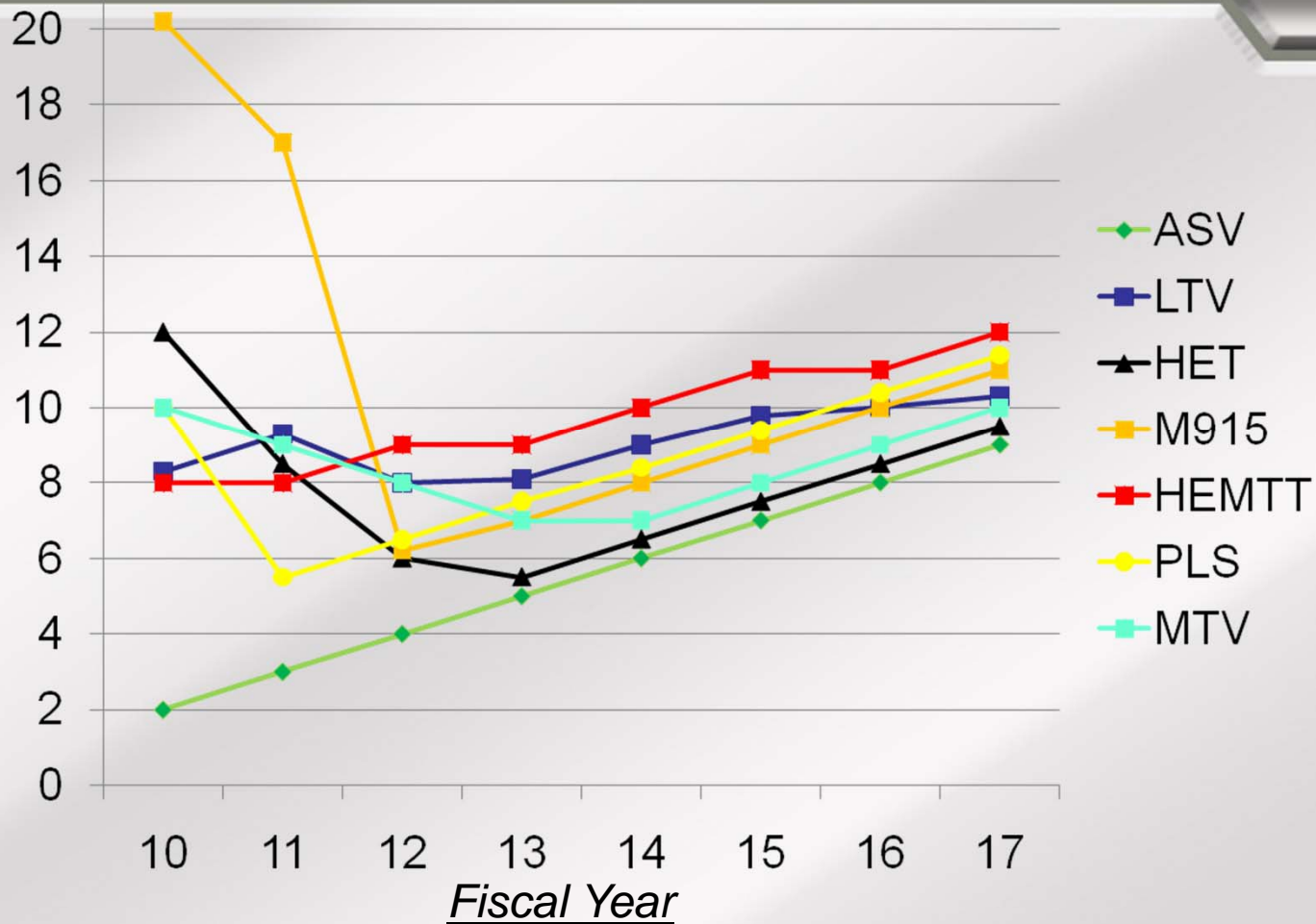
Example Only





# TWV Average Fleet Age by Fiscal Year

AVG FLEET AGE (YRS)



Clear Picture of the Fleet – Driven by Strategy Metrics





# TWV Strategy – Focus on Competition

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- ***HMMWV Competitive RECAP***
- ***Recurring armor evaluation / procurement***
- ***Importance of efficiency at low production rates***
- ***Component-level competition***



# Where TV is Going with Quality

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- Past Government efforts to inspect Quality into trucks have seen limited success
- PM TV has seen vast improvements in product Quality when PM TV has teamed with the contractor and concentrated on Production Process improvements.
- Planning is critical to success:
  - Production Parts Approval Process (PPAP)/Supplier Quality Audits
  - Control Plans
  - Customer Satisfaction Surveys / After Action Reviews
  - Process Capability Studies (Statistical Process Control)
  - Measurement Systems Analysis (MSA)
- ***Building in quality is cheaper than fixing it later!***





# METRICS – What's Going to be Measured?

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Two month old Defects per Unit (DPU) data provides no useful information. Manufacturing process trends, systemic faults and COST information enable us to predict and prevent defects. Provide the PM information instead of just DATA! **What we want to know!**

- **Statistical Process Control (SPC) trends instead of vintage historical data**
  - Control Charts - X-Bar and Range Charts (Processes, operations, & Suppliers!)
    - ◆ Production trends instead of spot reports of isolated Problems
- **Meaningful customer surveys (It's all about the SOLDIER in the Field)**
  - Survey the Soldier in the field – **What does the Soldier think of our systems?**
- **Return on Quality . . . . . Cost of Quality**
  - Activity Based Costing (ABC) - What is the additional cost for my Quality Problems?



# Quality Path Forward

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Planning, predictions and prevention is the future of PM TV Quality requirements. Whether your Quality Management System is ISO 9001 or ISO/TS 16949, PM TV Quality contract requirements will be centered around finding and fixing problems early and quantifying the cost.

- ***Production Parts Approval Process (PPAP)***
  - *Supplier Quality Audits*
  - *Component First Article Testing (CFAT)*
- ***Control Plans/Statistical Process Control***
- ***Customer Satisfaction Surveys***
- ***COST OF QUALITY***



***PM TV has seen positive Quality results when we've implemented these contract Req'ts.***





# Take Aways

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- ***We've got a strategy – time to execute it supported by ongoing fleet management and analysis***
- ***Competition still the default***
  - *Quantities must support cost of competition and test*
  - *Business case analysis supporting decisions to compete now or bridge to future competition*
  - *Evaluate production and sustainment*
  - *Depot partnerships increasingly important*
- ***Know the process (Sustain, Evolve, Transform / Replace) that applies to your capability/product***



# Every Soldier Counts

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**THE ARMY TRUCK TEAM ~ "You Call, We Haul"**

8 February 2011