



Life Cycle Management

Diminishing Manufacturing Sources and Material Shortages (DMSMS) Conference

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AMCOM G-3

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The Situation

- **Problem: Average Age of Army's Aviation and Missile Systems Continues to Increase**

- **What's Being Done**
 - **New Procurement**
 - **Recapitalization**
 - **Modernization Through Spares**

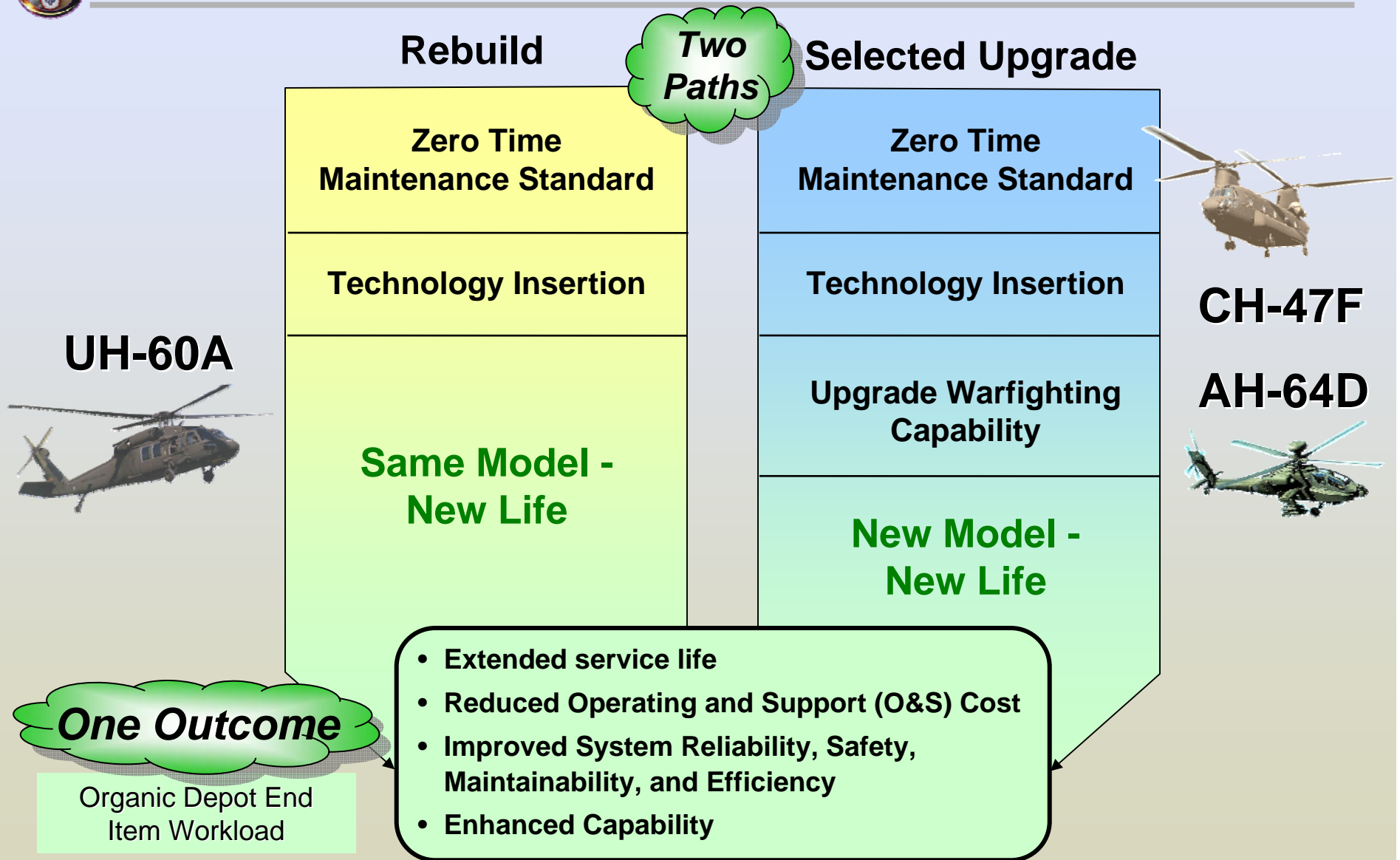


UH-60 Modernization

<p><u>UH-60A/L</u> <u>Baseline</u></p> <p>Entered Army Service 1979</p> 	<p><u>UH-60M</u> <u>Block I</u></p> 	<p><u>UH-60M</u> <u>P3I Spiral Dev</u></p> 	<p><u>UH-60M</u> <u>Block II</u></p>  <p>FUTURE FORCE</p>
<ul style="list-style-type: none"> ▪ Analog Cockpit ▪ STD Transmission ▪ 700 Series Engine 	<ul style="list-style-type: none"> ▪ Digital Cockpit ▪ Dual Digital Flight Controls ▪ Fully-Coupled Flt Director ▪ Wide Chord Blades ▪ Rotor Brake Provisions ▪ Folding Composite Stabilator ▪ Improved Durability Gearbox ▪ 701D Engine 	<ul style="list-style-type: none"> ▪ Fly-by-Wire (FBW) ▪ Advanced Flight Controls ▪ Full-Authority Digital Engine Control (FADEC) ▪ Common Cockpit - Common Avionics Architecture Sys (CAAS) ▪ Composite Tailcone – <i>As Ready</i> ▪ JTRS – <i>As Ready</i> ▪ IVMS / HUMS – <i>As Ready</i> ▪ CMWS / IMCD – <i>As Ready</i> 	<ul style="list-style-type: none"> ▪ Improved Turbine Engine Program (ITEP) ▪ Improved Transmission ▪ FLIR/MMR ▪ Large Fuel Cell ▪ Improved ASE ▪ Composite Airframe
<p><i>Performance Attributes (4K Ft/95°F):</i></p>			
<p><i>Today</i></p>	<p>External Lift (lbs @135km): 4500 Air Assault Radius(km): 225</p> <p><i>2007</i></p>	<p>External Lift (lbs @135km): 4500 Air Assault Radius (km): 225</p> <p><i>2009</i></p>	<p>External Lift (lbs @135km): 9000 Air Assault Radius (km): 275</p> <p><i>2013</i></p>



Recapitalization





Modernization Through Spares (MTS) T700 Engine Series Example

Today



• Army Working Capital Fund

DEPOT OVERHAUL

- Reduce O&S Cost up to \$100M/yr
- Improve Readiness Thru Commonality and + 30% TOW
- 60 – 75 Day Depot Overhaul

Tomorrow

701D Without Power Upgrade – Run With C Controls

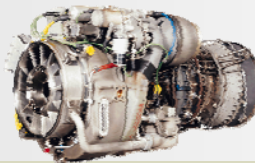


• Increased Power = Increased Payload

Field Upgradeable Power With New DECU/FADEC & HMU

Future Force

701D



701D in UH-60A Control Integration



Barriers to Recap & MTS

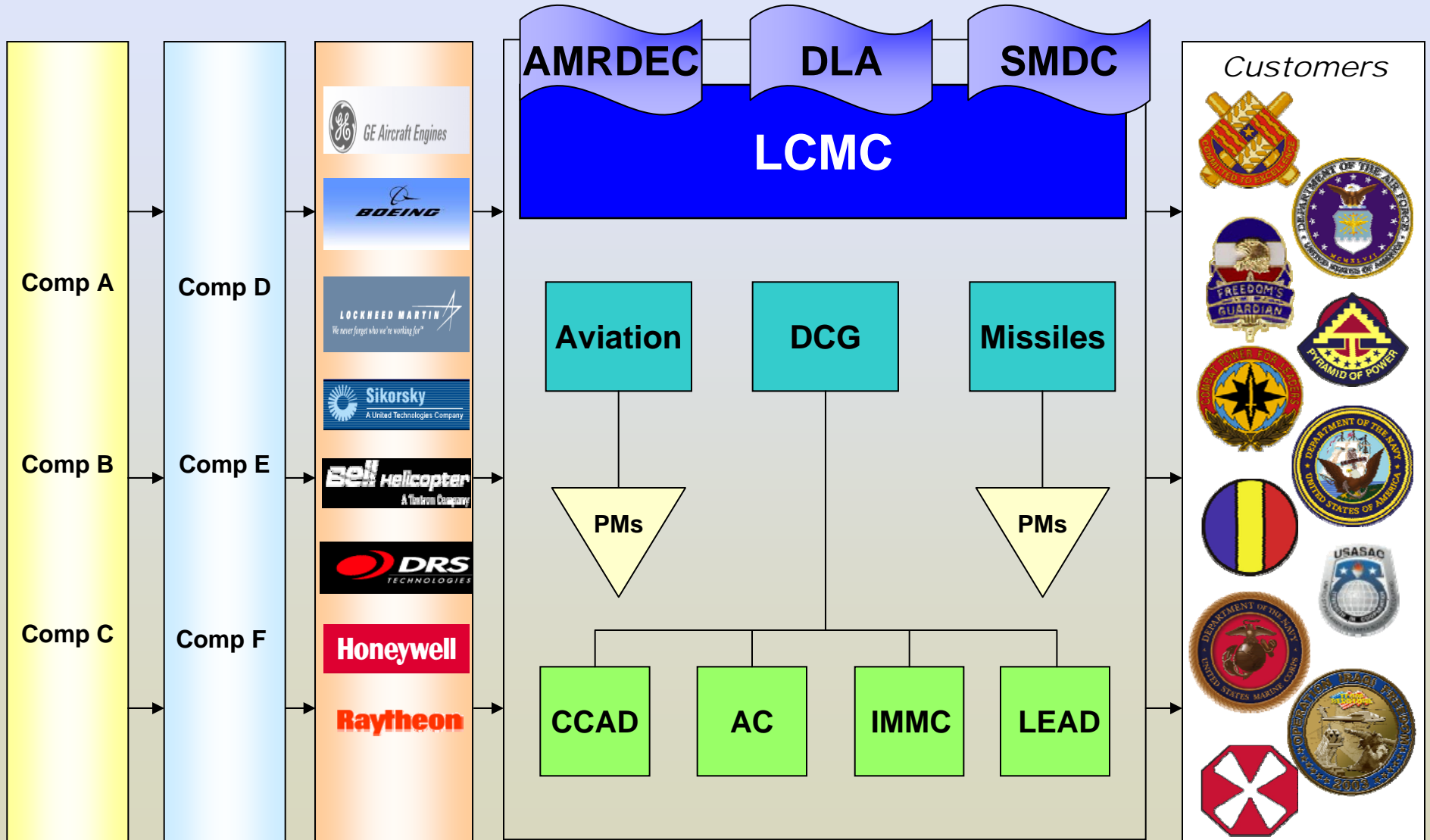
- **Obsolescence**
- **Non Availability from Original Vendor**

**Lack of Data Rights / TDP
Inhibits Reprocurement /
Competition**

*Up Front Funding Required To Reengineer Obsolete /
Unprocurable Components*



AMCOM Enterprise & Supply Chain





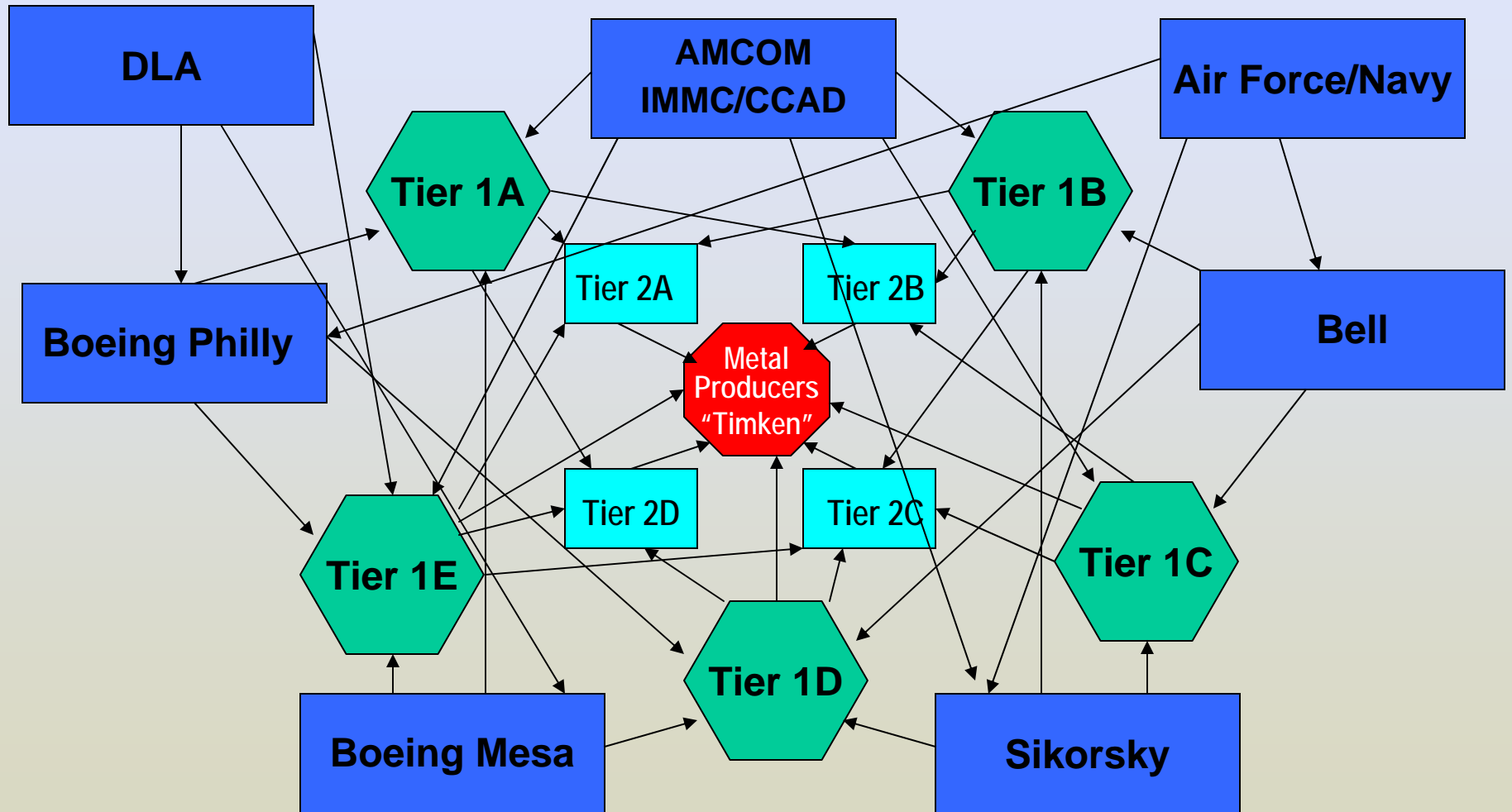
Supply Chain Initiative

- **Develop Factory-to-Foxhole View**
- **Identify Network of Multi-tiered Suppliers for Selected Dynamic Components**
- **Identify Critical Vulnerabilities in Enterprise Supply Chain**
- **Identify Opportunities for Lean and Process Improvement Efforts Within Overall AMCOM Supply Chain**
- **Develop Recommendations for Supply Chain Improvements**
- **Focus:**
 - **Increase Throughput Throughout Supply Chain**
 - **Decrease Production Lead Time**
 - **Increase Serviceable Inventory**
 - **Reduce Backorders and Procurement Due-in's**
 - **Increase Induction of Unserviceable Onhand**
 - **Increase Flow of Overhaul**



Aviation Supply Chain/Web

Heightened Demand on Limited Capacity



All Roads Lead To Timken Latrobe



Supply Chain Initial Findings

- **Lead Times Too Long**
- **Better Inventory Management Needed**
- **Labor Vulnerability at Vendor Factories**
- **Limited Communication or Visibility of Information in Supply Chain**
- **Sole Source Restraints/Constrained Capacity for Specialty Metals**

**Line-of-Balance Reviews
of Aviation Items – Intensive
Management Required**

**Berry Amendment
Impacting Specialty Metals
Availability**

Opportunities For Improvement Exist & Are Being Pursued



Path Ahead

- **Intensively Manage Supply Chain**
- **Pursue Joint Contracting Initiatives**
- **Avoid “Boom or Bust” Procurement Cycles**
- **Consider Bringing Single Source / Foreign Source Items In-house (Eliminate Industry Capitalization Issue – Biggest Barrier to Market Entry)**