34th Atlanta Executive Seminar

“Supporting the Warfighter in an Era of New Challenges”

Atlanta, Georgia

21 - 23 April 2009

Wednesday, April 22, 2009

“A Wall Street Perspective on Defense”
- Dr. Myles Walton, Ph.D., CFA, Executive Director, Senior Aerospace/Defense Analyst Oppenheimer & Company

“Looking Into the Crystal Ball - An Outside View of Possible Defense Budget & Program Priorities”
- Mr. James McAleese, Esq., Principal, McAleese & Associates, P.C.

Panel - “Warfighter’s Perspective”
- BG James M. McDonald, USA, Deputy Commanding General, III Corps and Ft Hood

“Army Contracting Command”
- Mr. Jeffrey P. Parsons, Executive Director, U.S. Army Contracting Command

“Global Business: Challenges, Trends and Future Outlook”
- Mr. Stephen J. Rohleder, Chief Operating Officer, Accenture

“Air Transportation Support of Ground Combat Operations in Southwest Asia”
- General Arthur J. Lichte, USAF, Commander, Air Mobility Command, Scott Air Force Base, IL

Thursday, April 23, 2009

“Foreign Military Sales: Army Perspective”
- BG Michael J. Terry, USA, Commanding General, U.S. Army Security Assistance Command

“Foreign Military Sales: Industry Perspective”
- Mr. Jeffrey L. Johnson, Vice President, International Business Development, Middle East & Africa Region, The Boeing Company

Panel - “Government-Industry Partnering : Challenges & Opportunities”
- Mr. James R. Myles, USA, Commanding General, U.S. Army Aviation and Missile Command, Life Cycle Management Command
- BG R. David Ogg, Jr., USA, Program Executive Officer, Ground Combat Systems
- Mr. R. Andrew Hove, Executive Vice President and President Defense Oshkosh Corporation
- Mr. Vince Trim, President, Honeywell Technology Solutions, Inc.

Special Guest Presentation
- Honorable Jack Bell, Deputy Under Secretary of Defense, Logistics and Materiel Readiness
EARLY OEF TRANSPORTATION NETWORK

Source: Various Unclassified OSD, USTRANSCOM, SDDC Products

V1.5 ~ 6 FEB 09
CURRENT OEF TRANSPORTATION NETWORK

Source: Various Unclassified OSD, USTRANSCOM, SDDC Products
“Government-Industry Partnering: Challenges & Opportunities”

Andy Hove
Executive Vice President and President, Oshkosh Defense
Government – Industry Partnering
Major Tenants

- Center on the Warfighter
- Partner across the entire lifecycle
  - Demonstration/Definition
  - Development
  - Production
  - Sustainment
- Adjust to major muscle movements via the partnering model.
  - Business transformation
  - Enterprise management
Government – Industry Partnering Challenges

“What makes it difficult to work with the Army?”

- Production lead time management and risk mitigation
- Requirements definition and development pipeline
- Rules and behaviors to protect intellectual property
- Governance mechanisms for Government/Industry “partnering”
- Balance of funding across the lifecycle
- Balance of RDT&E across products and needs
Government – Industry Partnering Opportunities

“What can we do to work together and serve the soldier better?”

– Communicate early and often
– Bring all of these “best” practices from both government and industry together
– Foster a truly collaborative environment
– Training with Industry programs/Training with government programs
– Cooperative Research and Development Agreements
– Expand and reinforce Public Private Partnerships
Industry Overview

Jeff Johnson
Boeing Company

23 April 09
## International Environment

### Integrated Defense Systems

<table>
<thead>
<tr>
<th>Environment</th>
<th>Customer Reaction</th>
<th>Implications to Industry</th>
</tr>
</thead>
</table>
| • Global Financial Crisis | • Program delays/cancellations  
• Purchase of ‘pre-owned’ systems  
• More risk averse | • Increased opportunities for legacy platforms  
• Opportunities delayed |
| • Rise of Hybrid Warfare | • Increased special Ops, UAS and border security | • Need for intelligent security solutions  
• ISR opportunities |
| • Struggle for natural resources; use of energy as a ‘weapon’ | • Increased regional conflicts  
• Emphasis on energy security, efficiency, and alternative sources | • Increase customer demand for multi-mission maritime aircraft  
• Opportunity for energy services |
| • Greater US reliance on allies & coalition partners | • Need for increased interoperable systems | • Training and Support opportunities |
| • Increased Global Competition | • Growing commercial and security relations with China and Russia  
• Purchase from countries that don’t have US technology release restrictions | • Need to work releasability issues to ensure a level playing field |
## Competitor Landscape

### Integrated Defense Systems

<table>
<thead>
<tr>
<th>Company</th>
<th>Products/Services</th>
<th>Activities</th>
<th>Presence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Airbus</strong></td>
<td>Commercial airplanes and services</td>
<td>A320, A330, A350, A380</td>
<td>UAE (ME HQ), KSA, Qatar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mkt share - 47% current fleet; 62% backlog</td>
<td></td>
</tr>
<tr>
<td><strong>Thales</strong></td>
<td>Aircraft and land systems, warships, Control &amp; Communications’ and ISR, security, IT services</td>
<td>C4I</td>
<td>KSA, UAE, Qatar</td>
</tr>
<tr>
<td><strong>EADS</strong></td>
<td>Space, satellite communications</td>
<td>Eurocopter (maintenance center - UAE)</td>
<td>A330 Tanker; Derivative Aircraft</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Presence – High level relationships – EADS International (UAE, KSA, Qatar)</td>
<td></td>
</tr>
<tr>
<td><strong>BAE Systems</strong></td>
<td>Design and manufacture of aircraft, warships, integrated system technologies, support services</td>
<td>3rd largest global defense company</td>
<td>Typhoon</td>
</tr>
<tr>
<td><strong>Finmeccanica</strong></td>
<td>Design and manufacture of helicopters, sensors, airborne systems, communications systems</td>
<td>C27J</td>
<td></td>
</tr>
</tbody>
</table>

### Emerging

<table>
<thead>
<tr>
<th>Company</th>
<th>Products/Services</th>
<th>Activities</th>
<th>Presence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KAI</strong></td>
<td>Fighters; Trainers; Upgrades; Mods; R&amp;D</td>
<td>No offices but developing strong industry cooperation within the region; 10 10 (Top ten aircraft maker)</td>
<td></td>
</tr>
<tr>
<td><strong>Russia (Almaz-Antei; MiG)</strong></td>
<td>Anti aircraft Missiles; Fighters; Rotorcraft; Weapons</td>
<td>No offices internationally but becoming a strong competitor.</td>
<td></td>
</tr>
</tbody>
</table>
FMS Process Achievements

Integrated Defense Systems

- **Total Package Approach**
  - Material Fielding, Maintenance and Training

- **Government to Government Support**
  - Military and Operational Planning
  - Deployment Concepts

- **Contract Administration**
  - USG to Industry

- **Access to Depot Level Repair Facilities**

*Full Support of U.S. Government*
FMS Process Challenges

- Adapting to Ever-Changing Customer Requirements

- Meeting Customer Expectations
  - Processing Time of Request
  - Schedule Flexibility
  - Customization

- Cooperative Strategy for Hybrid Cases
  - Industry and Government Alignment

Timeliness of Completion
Working Together

Integrated Defense Systems

- “One Team” Approach Critical
  - Common Messaging

- Relationships Key to Success
  - Industry-U.S. Government IPTs

- U.S. Government Advocacy Key
  - Technology Release
  - US Advocacy & Hill Support

- Industrial Participation
  - Industry-U.S. Government Cooperation
  - Use of US supply base “Team Approach”

- Support of Existing International Customer Fleets

Working Together to Achieve Customer Satisfaction
Headquarters Air Mobility Command

General Arthur J. Lichte
Commander, Air Mobility Command
When I say “Ground Power” …
• There is more than patrols, artillery and tanks
When I say “Air Power” …
• There is more than fighters, bombers and drones
Total Force Integration
The Total Force Team

Active Duty AMC (Host)
Active Duty Associate
Guard Host
Guard Associate
Reserve Host
Reserve Associate

132,171 Total Force Partners
AMC Charged to Certify Regulatory Compliance
Commercial Charters Carry the Majority of Servicemen
  • 90% by Chartered Airlift
  • 10% by Organic Airlift
AMC Snapshot

Airlift Since OEF
12.03M Passengers
4.46M Tons of Cargo

Air Refueling Since OEF
10.09B Lbs of Fuel
(1.51B Gallons of Fuel)

Aeromedical Evacuation
Since OIF
26,473 Sorties
121,377 Patient Movements

237,347 Sorties
Year 2008
Every Day - 365 Days a Year!

NORTHCOM AOR
89,010 Sorties
252,609 Hours
862,974 Passengers
129,653 Tons
301.66M Lbs of Fuel

CENTCOM AOR
96,863 Sorties
245,093 Hours
1,68M Passengers
491,580 Tons
1.04B Lbs of Fuel

EUCOM AOR
26,668 Sorties
128,419 Hours
103,362 Passengers
95,611 Tons
1.29M Lbs of Fuel
The Last Tactical Mile … Moving Soldiers in the AOR

Theater Direct Delivery

- Convoys off of the Road Since OEF:
  - 79,000 Trucks
  - 38,000 Busses
Joint Expeditionary Tasking (JET)
- 8,100 AMC Airmen in Last Deployment Cycle
- 14% of them Fill JETs

Mail Call
- All US Mail Spends Time on AMC Aircraft
- 50,000 Lbs Per Month ... 600,000 Lbs Per Year
Tankers are Global

- Global Reach, Vigilance, and Power
- Persistent Support to Coalition War Fighters
- Over the Horizon Communications
  - Roll On/Off Beyond Line-of-Sight Enhancement
#1 Acquisition Priority

Current Tanker Fleet (474)
- 59 KC-10s
- 415 KC-135s
  - 88% of Tanker Fleet
  - 32% of MAF Fleet

Nuclear Deterrence
Risks for Aging Aircraft

- Demonstrated grounding of entire fleet (C-130E and F-15C)

Average age 46 years

Average age 27 years
- Demonstrated grounding of entire fleet (C-130E and F-15C)
- MAF operates 415 KC-135’s (military variant of Boeing 707)
- US Air Force operates the oldest “heavy” airframes in the US

<table>
<thead>
<tr>
<th>Operator</th>
<th>Avg Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southwest</td>
<td>10.6</td>
</tr>
<tr>
<td>Continental</td>
<td>10.8</td>
</tr>
<tr>
<td>United</td>
<td>14.3</td>
</tr>
<tr>
<td>Delta</td>
<td>14.9</td>
</tr>
<tr>
<td>American</td>
<td>16.5</td>
</tr>
<tr>
<td>UPS</td>
<td>18.0</td>
</tr>
<tr>
<td>Atlas Air</td>
<td>22.5</td>
</tr>
<tr>
<td>FedEx</td>
<td>23.8</td>
</tr>
<tr>
<td>MAF KC-135s</td>
<td>49</td>
</tr>
</tbody>
</table>

...and projected for 40+ more years!
Mobility lends itself to Irregular Warfare
Supplying Strategic Counter-Insurgencies
3 of 4 CENTCOM Sorties are Mobility Missions
Provide Rapid Response and Mobility
Enable Kinetic and Soft Operations
New Delivery Systems

- Adapt to Insure US Power Projection
- Improved Container Delivery System
  - 15M Pounds in Last 3 Years
- Joint Precision Aerial Delivery System
  - 500K Pounds in Last 3 Years
Aeromedical Evacuation

From 10 Days

- Desert Storm – 10 days to CONUS
- Robust Theater Footprint
  - Large Bed/Holding Capability
  - Heavy Lift Requirement
- Stable Patient Care
- Scheduled Stable Patients
- Dedicated Airlift
- “TAC/STRAT” Crews
- Separate AE Routes

To 3 Days

- OIF/OEF – 3 days to CONUS
- Light, Capable, Lifesaving
  - Limited Hospital Beds
  - First in for Early Casualties
- Critical Patient Care—CCATTs (Critical Care Air Transport Teams)
- Stabilized Rapid Evacuation
- Designated/Multi-mission Airlift
- Universal AE Crews
- AE Tied To “Best Fit” Airlift

Survival Rate from Wounds (%)

- 90%
- 75%
Dignified Transfer for Fallen Warriors
Dover is DoD’s Port of Mortuary Affairs
Transport From Front Line to Home Town
Full Joint Partners

- From Home to the Frontline…and Back Again!
Increasing Challenges to DoD Funding & Program Priorities, under both 2010 base budget & pending 2009 Supplemental

By:  
James McAleese, Esq.  
Principal  
McAleese & Associates, P.C.

To:  
NDIA  
Atlanta Executive Seminar

April 22, 2009  
Atlanta, GA
Primary Conclusions

• Secretary Gates targeted “Over-programmed” RDT&E Accounts, driven by modest 2% real-growth in 2010 DoD Funding; with primary exception of USAF.

• Secretary Gates’ proposed “cuts” to Army were limited to FCS’ MGV, while OSD adopted majority of Navy’s Shipbuilding Plan. Proposed “cuts” to USAF were the most severe; coupled with shifting of “DoD-wide” funding to SOF-expansion, “Human Capital” & “Soft Power” Initiatives.

• Emerging Themes from New Administration, strongly suggest that: (1) Army is not receiving sufficient Procurement Funding; and (2) that OSD will also evaluate additional “changes” to USAF & Navy Programs during QDR.

• Administration proposed major funding reductions in 2009 Supplemental Request, targeted at both Army “Tracked Combat Vehicles” & “Communications”; plus both Navy & USAF “Aircraft” Procurement.

• Contrary to “OIF Draw-down” expectations, Service Contractors are fully funded for CENTCOM Operations through 2009, and presumably 2010.

• Administration is generating Savings in 2009 Supplemental, by effectively extending “O&M” Funding on “flat-line” basis, while disproportionately cutting “Procurement”, to even well-below 2007 OPTEMPO Requirements.

• Vast majority of the ~$42B in 2009 Supplemental “Draw-down”, is driven by: (1) natural reduction of ~$10B in “Force Protection”; plus (2) additional $27B targeted cuts in Procurement, (primarily Army, and secondarily Navy & USAF).

Back-up Chart

• Severe “Draw-down” in “OIF Funding” in 2009 Supplemental is primarily driven by contraction in Procurement, and not O&M; which directly threatens Army & USMC “Reconstitution” requirements for both immediate Readiness & OEF Campaign.
Secretary Gates targeted “Over-programmed” RDT&E Accounts, driven by modest 2% real-growth in 2010 DoD Funding; with primary exception of USAF.  
(Excerpts from Secretary Gates’ Briefing at the Pentagon on April 6, 2009).

• “First, we will increase intelligence, surveillance and reconnaissance support for the warfighter in the base budget by some $2 billion. This will include fielding and sustaining 50 Predator and Reaper class unmanned aerial vehicle orbits by FY ’11 and maximizing their production.”

• “Second, we will also spend $500 million more in the base budget than last year to increase our capacity to field and sustain more helicopters, a capability that is in urgent demand in Afghanistan. Today the primary limitation on helicopter capacity is not airframes but shortages of maintenance crews and pilots, so our focus will be on recruiting and training more Army helicopter crews.”

• “Third, to boost global-partnership-capacity efforts, we will increase funding by $500 million. These initiatives include training and equipping foreign militaries to undertake counterterrorism and stability operations.”

• “Fourth, to grow our special operations capabilities, we will increase personnel by more than 2,800, or 5 percent, and will buy more special-forces-optimized lift, mobility and refueling aircraft.”

• “Fifth, we will increase the buy of littoral combat ships -- a key capability for presence, stability and counterinsurgency operations in coastal regions -- from two to three ships in FY ’10. Our goal is eventually to acquire 55 of these ships.”

• “Seventh, we will stop the growth of Army brigade combat teams, BCTs, at 45 versus 48, while maintaining the planned increase in end strength of 547,000. This will ensure that we have better-manned units ready to deploy, and help put an end to the routine use of stop-loss.”

• “[T]o sustain U.S. air superiority, I am committed to building a fifth-generation tactical fighter capability that can be produced in quantity at sustainable cost. Therefore, I will recommend increasing the buy of the F-35 Joint Strike Fighter from the 14 aircraft bought in ’09, to 30 in FY ’10, with a corresponding funding increase from $6.8 billion to $11.2 billion. We would plan to buy 513 F-35s over the five-year defense plan, and ultimately plan to buy 2,443. For naval aviation, we will buy 31 F/A-18s in FY ‘10.”
“[W]e will end production of the F-22 fighter at 187, representing 183 planes in the current program, plus four recommended for inclusion in the FY 2009 supplemental.”

“Fourth, to better protect our forces and those of our allies in theater from ballistic missile attack, we will add $700 million to field more of our most capable theater missile defense systems; specifically, the Terminal High Altitude Area Defense, THAAD, and the Standard Missile-3 programs.”

“Fifth, we will add $200 million to fund the conversion of six additional Aegis ships to provide ballistic-missile-defense capabilities.”

“Seventh, to replace the Air Force’s aging tanker fleet, we will maintain the KC-X aerial refueling tanker schedule and funding, with the intent to solicit bids this summer.”

“Eighth, with regard to our nuclear and strategic forces, in FY ’10 we will begin the replacement program for the Ohio-class ballistic-missile submarine program.”

“We will not pursue a development program for a follow-on Air Force bomber until we have a better understanding of the need, the requirement and the technology. We will examine all of our strategic requirements during the Quadrennial Defense Review, the Nuclear Posture Review, and in light of post-START arms control negotiations.”

“Ninth, the healthy margin of dominance at sea provided by America’s existing battle fleet makes it prudent to slow production of several major surface combatants and other maritime programs. We will shift the Navy aircraft carrier program to a five-year build cycle, placing it on a more fiscally sustainable path. This will result in 10 carriers after 2040.”

“We will delay the Navy’s CG(X) next-generation cruiser program to revisit both the requirements and acquisition strategy. We will delay amphibious-ship and sea-basing programs, such as the 11th landing platform dock ship and the mobile landing platform ship, to FY ’11…”

“Tenth, with regard to airlift, we will complete the production of the C-17 airlifter program this fiscal year. Our analysis concludes that we have enough C-17s, with the 205 already in the force and currently in production.”

“This budget will support these goals by increasing the size of defense acquisition workforce, converting 11,000 contractors to full-time government employees and hiring 9,000 more government acquisition professionals by 2015, beginning with 4,100 -- in FY ’10.”

“I recommend that we terminate the VH-71 presidential helicopter…. Today, the program is estimated to cost over $13 billion, has fallen six years behind schedule and runs the risk of not delivering the requested capability. Some have suggested that we should adjust the program by buying only the lower-capability Increment 1 option…. We will promptly develop options for an FY ’11 follow-on program.”
• “[W]e will terminate the Air Force Combat Search and Rescue X helicopter program. This program has a troubled acquisition history and raises the fundamental question of whether this important mission can only be accomplished by yet another single-service solution with a single-purpose aircraft. We will take a fresh look at the requirement behind this program and develop a more sustainable approach.”

• “Third, we will terminate the $26 billion transformational satellite program, TSAT, and instead will purchase two more advanced-extremely-high-frequency satellites as alternatives.”

• “Fourth, in the area of missile defense, we will restructure the program to focus on the rogue state and theater missile threat. We will not increase the number of current ground-based interceptors in Alaska..., but we will continue to robustly fund research and development to improve the capability we already have to defend against long-range rogue missile threats, a threat North Korea’s missile launch this past weekend reminds us is real.”

• “We will cancel the second Airborne Laser Prototype Aircraft. We’ll keep the existing aircraft and shift the program to an R&D effort. The ABL program has significant affordability and technology problems, and the program’s proposed operational role is highly questionable.”

• “[W]e will include funds to complete the buy of two Navy destroyers in FY ’10. These plans depend on being able to work out contracts to allow the Navy to efficiently build all three DDG-1000 class ships at the Bath Iron Works in Maine and to smoothly restart the DDG-51 Aegis destroyer program at Northrop Grumman’s Ingalls shipyard in Mississippi.”

• “Sixth and finally, we will significantly restructure the Army’s Future Combat Systems program. We will retain and accelerate the initial increment of the program to spin out technology enhancements to all combat brigades. However, I have concluded that there are significant unanswered questions concerning the FCS vehicle design strategy. I’m also concerned that, despite some adjustments, the FCS vehicles -- where lower weight, higher fuel efficiency and greater information awareness are expected to compensate for less armor -- do not adequately reflect the lessons of counterinsurgency and close-quarters combat in Iraq and Afghanistan. The current vehicle program developed nine years ago does not include a role for our recent $25-billion investment in the MRAP vehicles being used to good effect in today’s conflicts... Accordingly, I will recommend that we cancel the vehicle component of the current FCS program, reevaluate the requirements, technology and approach and then re-launch the Army’s vehicle modernization program, including a competitive bidding process.”

• “Under this budget request, we will reduce the number of support-service contractors from our current 39 percent of the Pentagon workforce, to the pre-2001 level of 26 percent, and replace them with full-time government employees. Our goal is to hire as many as 13,000 new civil servants in FY ’10 to replace contractors, and up to 30,000 new civil servants in place of contractors over the next five years.”
Secretary Gates’ proposed “cuts” to Army were limited to FCS’ MGV, and OSD adopted majority of Navy’s Shipbuilding Plan. Proposed “cuts” to USAF were the most severe; coupled with shifting of “DoD-wide” funding to SOF expansion, “Human Capital” & “Soft Power” Initiatives.

(Paraphrased from Secretary Gates’ April 6, 2009 announcement. Only includes Primary Programs).

<table>
<thead>
<tr>
<th>Army</th>
<th>Navy</th>
<th>USAF</th>
<th>“DoD-wide”/Other</th>
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<tbody>
<tr>
<td>• Proceed with funding of FCS Network, and accelerate “Spin-outs” of Sensors &amp; Munitions to Infantry Brigades. But cancel FCS Manned Ground Vehicles, re-evaluate Requirements, and recompete (MGV). (MGV only receives ~$750M/year of $3.5B FCS funding. Expect Congress to seek to support Army, by adding funding for Abrams Upgrades (GD); Bradley Upgrades (BAE); and mixture of Stryker/Bradley fresh production to begin replacing Vietnam-era M113. Also expect Congress to prioritize NLOS-C for accelerated production). (GD/BAE, BA/SAIC).</td>
<td>• Fund remainder of 3rd DDG-1000 order from 2009. Order initial DDG-51 Ship in 2010 as well. (Agreement-in-principle among Navy/GD/NOC, for GD to build all 3 DDG-1000 orders, while NOC will “re-start” DDG-51 production. Also benefit to RTN as “CSI” for DDG-1000, and benefit to LMT as CSI for DDG-51).</td>
<td>• Cancel F-22 production in 2009, plus 4 final orders in pending Supplemental. Instead, proceed with procurement of 513 F-35 orders by USAF/Navy/USMC from 2010-2015, with planned “doubling of production orders” in 2010. (Be alert to strong Congressional reaction). ($11.2B expected in 2010, should include current $6.8B funding; plus ~$500M RDT&amp;E acceleration; plus ~$3.2B for 16 more orders; plus ~$700M for additional test aircraft &amp; Management Reserve). (LMT).</td>
<td>• Reduction of $1.4B from ~$9.6B annual MDA Account. (Primarily BA).</td>
</tr>
<tr>
<td>• Freezing “stand-up” of Brigade Combat Teams at 45 (48 planned), to fully-man immediate BCTs. Intended to minimize “Stop-loss”. (Could defer Procurement of both Trucks &amp; Communications. Impact TBD).</td>
<td>• Purchase at least 31 F/A-18 E/F in 2010. (Be alert to potential for separate Growler orders in 2010 base request. Plus, watch for potential Congressional Super Hornet “plus-up” &amp; MYP. OSD also eliminated expected 8-9 Super Hornet/Growler orders from pending Supplemental Request). (BA).</td>
<td>• Abstain from re-adding C-17 into base USAF “Airlift Procurement Account”. (Expect Congress to fund ~15 C-17 aircraft at ~$3.6B in imminent Supplemental as “plus-up”). (BA). (Be alert that adding C-17 back into USAF Airlift Procurement Account would become “zero-sum” competitor to KC-X Program).</td>
<td>• Deferral of ~14 additional GMD Interceptors in Alaska (~26-30 now), but increase or continue of RDT&amp;E to improve capability. (BA).</td>
</tr>
<tr>
<td>• $500M to expand Training of Army Helicopter Pilots/Air Crews/Ground Crews. (Not targeted at expansion of Army Aviation Procurement Account).</td>
<td>• Order CVN-79 in 2013, instead of current plan of 2012. (Should drive need to protect $3.8B “RCOH Overhauls in 2009 &amp; 2013). (NOC).</td>
<td>• Re-assessment of NGS/Bomber Program. (Requirements/Schedule/Funding during QDR). (NOC v. LMT/BA).</td>
<td>• Cancellation of eventual ABL production aircraft, with focus on continued Technology Development (BA).</td>
</tr>
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<td>USAF</td>
<td>“DoD-wide”/Other</td>
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<tr>
<td><em>Expand &amp; accelerate training of Cyber-Security Experts to guard against “Hybrid Warfare” threats of peer competitors (e.g. China, Russia, Iran).</em></td>
<td><em>Cancel VH-71 at end of current “Increment I”. (Presumably recompete of 18 Aircraft in “Increment II”; with potential parallel Upgrades to legacy VH-3/VH-60 Fleet).</em></td>
<td><em>$2B/year increase in ISR, particularly Predator/Reaper Orbits. (Also expect expansion of experimental ISR sensors, as well as ground-fusion capabilities).</em></td>
<td><em>Expand SOF end-strength by 2.8K (5%). (Will increase “DoD-wide” Procurement to equip. Will also increase USAF Aircraft Procurement Account, because USAF buys Airframes for SOCOM).</em></td>
</tr>
<tr>
<td><em>Proposed delay in funding the remainder of LPD-17 order already funded in 2009, out until 2011. (Congress likely to fund unilaterally).</em></td>
<td><em>$200M for Upgrade of 6 additional Aegis (DDG-51/CG-47) to BMD capability. (Also strong indication of continued annual funding of Aegis Sea-based MD from MDA. Also see separate OSD endorsement of “restart” of DDG-51 fresh-production).</em></td>
<td><em>$2B/year increase in ISR, particularly Predator/Reaper Orbits. (Also expect expansion of experimental ISR sensors, as well as ground-fusion capabilities).</em></td>
<td><em>Proposed retirement of 250 F-16/A-10/F-15 in 2010; while adopting Armed-UAS as formal part of future USAF TACAIR Force Structure. (Be alert to potential Congressional concerns).</em></td>
</tr>
<tr>
<td><em>Initial 2010 funding for SSBN “follow-on” for Sea-based Strategic Deterrent (SSBN(X)). (GD).</em></td>
<td><em>Proposed delay of MLP order to 2011, from 2010 plan. (Congress likely to fund unilaterally).</em></td>
<td><em>Proposed retirement of 250 F-16/A-10/F-15 in 2010; while adopting Armed-UAS as formal part of future USAF TACAIR Force Structure. (Be alert to potential Congressional concerns).</em></td>
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<td><em>Adopts planned LCS production ramp-up. (55 Ship-class). (LMT, GD, plus NOC for Mission Modules).</em></td>
<td><em>Expand and accelerate training of Cyber-Security Experts to guard against “Hybrid Warfare” threats of peer competitors (e.g. China, Russia, Iran).</em></td>
<td><em>Proposed retirement of 250 F-16/A-10/F-15 in 2010; while adopting Armed-UAS as formal part of future USAF TACAIR Force Structure. (Be alert to potential Congressional concerns).</em></td>
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</tr>
<tr>
<td><em>Proposed delay of MLP order to 2011, from 2010 plan. (Congress likely to fund unilaterally).</em></td>
<td><em>$700M increase to Army for THAAD &amp; Navy for SM-3 Programs. (LMT &amp; RTN).</em></td>
<td><em>Proposed retirement of 250 F-16/A-10/F-15 in 2010; while adopting Armed-UAS as formal part of future USAF TACAIR Force Structure. (Be alert to potential Congressional concerns).</em></td>
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</tr>
<tr>
<td><em>$700M increase for “Nuclear Surety”. (Presumably USAF is primary beneficiary).</em></td>
<td><em>Propose $500M increase in “Global Partnership” Stability Operations.</em></td>
<td><em>Propose $500M increase in “Global Partnership” Stability Operations.</em></td>
<td><em>Propose $500M increase in “Global Partnership” Stability Operations.</em></td>
</tr>
<tr>
<td><em>$500M increase for “Nuclear Surety”. (Presumably USAF is primary beneficiary).</em></td>
<td><em>Increase charter of JHSV Ships to 4. (Navy/Army).</em></td>
<td><em>$500M increase in “Global Partnership” Stability Operations.</em></td>
<td><em>$500M increase in “Global Partnership” Stability Operations.</em></td>
</tr>
</tbody>
</table>
Emerging Themes from New Administration, strongly suggest that: (1) Army is not receiving sufficient Procurement Funding; and (2) that OSD will also evaluate additional “changes” to USAF & Navy Programs during QDR.

- Administration is already contracting Supplemental funding, by:
  (1) “Flat-lining” O&M, (from 2008 into 2009);
  (2) Benefiting from falling “Force Protection” funding, (primarily MRAP-driven); and
  (3) Delaying/reducing “Equipment Reconstitution”, (primarily targeted at Procurement). This directly-threatens Army’s clear need for 2 full-years of Reset/Upgrade Funding, after eventual OIF/OEF re-deployment occurs.

- Immediate trends in pending 2009 Supplemental, suggest that contraction in OIF funding will likely fall at significantly greater rate & magnitude, than OEF funding increases, even though short-term end-strength deployment remains constant at ~185K Troops. (Immediate Supplemental Request suggests eventual contraction of up to ~$5 in OIF funding, for each ~$1 growth in OEF funding). **Limited duration of remainder of FY2009 masks “full Resourcing” that will be required for Army & USMC in OEF Campaign during 2010-2011, (particularly O&M and Procurement).**

- “Mini-surge” in Afghanistan will require major expansion of agricultural, infrastructure & economic aid as well. (Driven by mountainous-topography; lack of transportation infrastructure; severe poverty; massive illiteracy; lack of public communications infrastructure; “narco-terrorism”; lack of unbiased law enforcement & courts; and tribal perception of endemic corruption in National Government).

- Recent OSD “cuts” to 2010 base budget were primarily targeted at DoD’s RDT&E Account (not Procurement), because of “over-programmed” result under ~2% real-growth funding increase, (~4% total 2010 base growth, from $515B in 2009, to $534B in 2010). (Primary exception was USAF, where OSD also targeted F-22 “hot production”).

- While DoD is still committed to “two-nearly-simultaneous-Major-Regional-Conflicts”, evolving Force Structure construct anticipates that only one of those conflicts will be a platform-intensive “Major Combat Operation”, while the other conflict will be a “long-duration-Irregular-Warfare-Campaign”. This distinction between “Capability” (for Major-Combat-Operations), versus “Capacity” (to provide “rotational-forward-presence”), has direct impact of:
  - For Army, “Capacity” requirement drives end-strength, with “must-pay-bills” for Operations & Support, which inherently-competes against future Army Procurement. (OMB/OSD must provide Army with both adequate Top-line funding growth in 2010-2012 base budgets; plus sufficient Supplemental Procurement funding for vital “OPA” and “W&TCV” Accounts, particularly given OSD-directed delay in FCS-MGV).
For Navy, this weakens requirement for “high-end” Surface Combatants (DDG-1000); favoring Littoral Combat Ships, expansion of DDG-51 fleet, plus Virginia-Class Submarines (NSSN) & MMA/P-8 Programs to counter China diesel-electric Submarine threat.

For USAF, this increases both Airlift & Aerial Refueling requirements, while directly-reducing significant portion of previous “high-end” TACAIR requirements, (due to reduction to only one “Major Combat Operation”, against regional or near-peer competitor).

- Recapitalization is now directly constrained by “Affordability” limitations. New Administration is focused on:
  - “Cost Predictability”;
  - “Program Affordability”, (targeting of “Exquisite Programs”);
  - “Multi-Mission Platforms”, (“Portfolio Mix” review will now continue in QDR);
  - Compressed-Development-Schedule for “Minimalist Platforms”;
  - “Elimination of Duplicative Programs”;
  - There appears to be strong potential of second round of “additional cuts” during QDR, which will then appear in 2011 Budget.
  - Services should take pro-active measures now, to propose “Alternate Options” for Requirements, Schedule, Acquisition Strategy, and Cost, to demonstrate “Affordability”, with equal priority as Lethality, Combat Capability, and Survivability.

- OSD-directed recompetition of FCS’ Manned Ground Vehicles will likely trigger additional/interim Abrams & Bradley Upgrades; plus increasing potential of Congressional direction for replacement of Vietnam-era M113 fleet, (e.g., through potential mixture of Stryker/Bradley fresh-production, driven by specific mission requirements). Direction for MGV recompetition creates potential for ~2-5 year slip in Recapitalization of Army’s Tracked Combat Vehicle Fleet. (“W&TCV” Account).

- Separately, Wheeled Tactical Vehicle orders (“OPA” funded), should peak by 2010, as Army completes growth of the 6 new Infantry Brigade Combat Teams. (Be alert to potential impact from OSD direction to delay “stand-up” of all 48 planned BCTs). Expected contraction in DoD Supplementals by 2011-2012, will impact fresh production of HMMWV; FMTV; and FHTV. But “Reset” requirements should also surge over next two-years, as degraded-vehicles return from OIF; coupled with “fresh production” & “Reset” for Troop-strength surge in Afghanistan.

- Regarding Army/USMC Joint Light Tactical Vehicle (JLTV) Program, new Administration will likely scrutinize both “Capability v. Capacity”, and “Affordability-constraints”. (Two variables of “Unit-Cost”, plus technical maturity to commence initial production by 2011-2012, could decide eventual outcome). Anticipate “MGV-like” review of JLTV Program by OMB/OSD, focusing on competing “Payload/Protection/Performance”; Procurement Unit-Cost; and “Affordability” of large-volume eventual production of ~144K vehicles.
Administration proposed major funding reductions in 2009 Supplemental Request, targeted at both Army “Tracked Combat Vehicles” & “Communications”; plus both Navy & USAF “Aircraft” Procurement.
(Only Primary Programs have been included).

<table>
<thead>
<tr>
<th>Service</th>
<th>Program (only Primary Programs are shown below).</th>
<th>Total FY2009 Funding (in thousands)</th>
<th>FY2009 Bridge Funding (in thousands)</th>
<th>Pending FY2009 Funding Request (in thousands) (April 2009)</th>
<th>OSD-proposed Reprogramming of 2008-2009 Funding for “Milper”</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Army Procurement</td>
<td></td>
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<tr>
<td>(1) Aircraft</td>
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<td>(4) Ammunition</td>
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<td>• Ammunition Production Base Support</td>
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<td>(5) Other Procurement (~$16.3B in 2008 GWOT)</td>
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<td>(a) Tactical &amp; Support Vehicles</td>
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<tr>
<td>Service</td>
<td>Program (only Primary Programs are shown below).</td>
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<td>FY2009 Bridge Funding (in thousands)</td>
<td>Pending FY2009 Funding Request (in thousands) (April 2009)</td>
<td>OSD-proposed Reprogramming of 2008-2009 Funding for “Milper”</td>
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<td><strong>Army Procurement</strong></td>
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<td>(1918) $574,121</td>
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<td>• FHTV</td>
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<td>(797) $90,000</td>
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<td>• Mine Protection Vehicle Family</td>
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<td>(268) $704,956</td>
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<td>• HVY Expanded Mobile Tactical Truck</td>
<td>(1206) $366,296</td>
<td>(49) $15,000</td>
<td>(1157) $351,296</td>
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<td>• HMMWV Recapitalization Program</td>
<td>(7083) $510,000</td>
<td>(5420) $390,219</td>
<td>(1663) $119,781</td>
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<td><strong>Total Tactical &amp; Support Vehicles</strong></td>
<td><strong>$5,067,348</strong></td>
<td><strong>$745,174</strong></td>
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<td></td>
<td><strong>(b) Communications &amp; Electronics Equipment</strong></td>
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<td>• WIN-T</td>
<td>(19) $400,590</td>
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<td>(19) $400,590</td>
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<td>• SINCGARS-Ground</td>
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<td>• Radio, Improved HF (COTS) Family</td>
<td>$175,555</td>
<td>$4,855</td>
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<td>• Warlock</td>
<td>$354,500</td>
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<td></td>
<td>• Night Vision Devices</td>
<td>$122,500</td>
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<td><strong>Total Communications &amp; Electronics</strong></td>
<td><strong>$3,046,239</strong></td>
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<td><strong>$2,967,363</strong></td>
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<td></td>
<td><strong>Total Other Procurement</strong></td>
<td><strong>$9,130,622</strong></td>
<td><strong>$1,009,050</strong></td>
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<td><strong>-$224,300</strong></td>
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<td><strong>(6) Joint Improvised Explosive Dev Defeat Fund</strong></td>
<td><strong>$3,466,746</strong></td>
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<td><strong>$1,466,746</strong></td>
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<td><strong>Total Army Procurement</strong></td>
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<td><strong>$13,031,509</strong></td>
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<td><strong>II. Navy Procurement</strong></td>
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<tr>
<td></td>
<td><strong>(1) Aircraft</strong> (Missing 8-9 expected Super Hornet/Growler orders. (~$3.6B in 2008 GWOT))</td>
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<td>• UH-1Y/AH-1Z</td>
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<td>• MH-60S (MYP)</td>
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<td>(2) $46,100</td>
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</tr>
<tr>
<td>Service</td>
<td>Program (only Primary Programs are shown below)</td>
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<td>Navy Procurement (continued)</td>
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<td>• Common ECM Equipment</td>
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<td>(2) Procurement, Marine Corps</td>
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<td>Total Procurement, Marine Corps</td>
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<td>Total Navy Procurement</td>
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<td>III. USAF Procurement</td>
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<td>(1) Aircraft (~$7.1B in 2008 GWOT, with C-130J &amp; C-17 “plus-ups”)</td>
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<td>• F-22</td>
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<td>• MQ-9 UAV</td>
<td>(15) $283,500</td>
<td>(5) $87,642</td>
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<td>• C-5 Mods</td>
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<td>• C-17A Mods</td>
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<td>(1) Mine Resistant Ambush Protected Vehicle Fund</td>
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</table>
Contrary to “OIF Draw-down” expectations, Service Contractors are fully funded for CENTCOM Operations through 2009, and presumably 2010.
(Only Primary Accounts or Programs have been included)

<table>
<thead>
<tr>
<th>Service</th>
<th>Program</th>
<th>Total FY2009 Funding (in thousands)</th>
<th>FY2009 Bridge Funding (in thousands)</th>
<th>Pending FY2009 Funding Request (in thousands) (April 2009)</th>
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<tbody>
<tr>
<td>I. Army Operation &amp; Maintenance, Total</td>
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<td>-Reset</td>
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<td>(b) “Afghanistan Forces Fund” (usually “DoD-wide”)</td>
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<td>(d) “Pakistan Counterinsurgency Capability Fund”</td>
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<td>II. Navy/USMC Operation &amp; Maintenance, Total</td>
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<td>III. USAF Operation &amp; Maintenance, Total</td>
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<td>-Defense Security Cooperation Agency</td>
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<td>“Other Programs”</td>
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<td>$2,113,032</td>
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<td>-Army: Bagram Air Base, OEF</td>
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<td>$82,300</td>
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<tr>
<td>-Army: Kandahar, OEF</td>
<td></td>
<td>$126,150</td>
<td>$0</td>
<td>$126,150</td>
</tr>
<tr>
<td>-Army: Sharana, OEF</td>
<td></td>
<td>$79,200</td>
<td>$0</td>
<td>$79,200</td>
</tr>
<tr>
<td>-Army: Tombstone/Bastion, OEF</td>
<td></td>
<td>$94,100</td>
<td>$0</td>
<td>$94,100</td>
</tr>
<tr>
<td>-USAF: Kandahar, OEF</td>
<td></td>
<td>$84,000</td>
<td>$0</td>
<td>$84,000</td>
</tr>
<tr>
<td>-USAF: Tombstone/Bastion, OEF</td>
<td></td>
<td>$96,250</td>
<td>$0</td>
<td>$96,250</td>
</tr>
</tbody>
</table>
Administration is generating Savings in Supplementals, by effectively extending “O&M” Funding on “flat-line” basis, while disproportionately cutting “Procurement”, to even well-below 2007 OPTEMPO Requirements.

<table>
<thead>
<tr>
<th>Funding by Appropriation Title</th>
<th>FY2007 Enacted</th>
<th>FY2008 Enacted</th>
<th>FY2009 Supplemental</th>
<th>[Growth or Contraction of 2009 v. 2008]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bridge Enacted</td>
<td>Request</td>
</tr>
<tr>
<td>Military Personnel</td>
<td>17.7</td>
<td>19.1</td>
<td>1.2</td>
<td>16.7</td>
</tr>
<tr>
<td>Operation and Maintenance</td>
<td>87.3</td>
<td>89.3</td>
<td>55.2</td>
<td>34.2</td>
</tr>
<tr>
<td>Procurement</td>
<td>46.7</td>
<td>64.2</td>
<td>6.6</td>
<td>21.8</td>
</tr>
<tr>
<td>RDT&amp;E</td>
<td>0.6</td>
<td>0.9</td>
<td>&lt;0.1</td>
<td>0.4</td>
</tr>
<tr>
<td>Military Construction</td>
<td>1.7</td>
<td>4.2</td>
<td>---</td>
<td>2.1</td>
</tr>
<tr>
<td>Revolving and Management Funds</td>
<td>1.1</td>
<td>2.7</td>
<td>---</td>
<td>0.8</td>
</tr>
<tr>
<td>Subtotal</td>
<td>155.3</td>
<td>180.5</td>
<td>63.0</td>
<td>76</td>
</tr>
<tr>
<td>Additional Request and Non-DoD Classified(^1)</td>
<td>14.2</td>
<td>6.6</td>
<td>2.9</td>
<td>3.1</td>
</tr>
<tr>
<td>Total</td>
<td>169.5</td>
<td>187.1</td>
<td>65.9</td>
<td>79.2</td>
</tr>
</tbody>
</table>

\(^1\) FY2007 enacted total includes $5.9B of Non-DoD Classified appropriations and $8.4B of Additional Request (e.g. BCTs/RCTs, Grow the Force, Wounded Warrior); FY 2008 and FY2009 columns include Non-DoD classified funding only.

Vast majority of the ~$42B in 2009 Supplemental “Draw-down”, is driven by: (1) natural reduction of ~$10B in “Force Protection”; plus (2) additional $27B targeted cuts in Procurement, (primarily Army, and secondarily Navy & USAF).

<table>
<thead>
<tr>
<th>Total DoD Funding by Functional Category</th>
<th>FY2007 Enacted</th>
<th>FY2008 Enacted</th>
<th>FY 2009 Supplemental</th>
<th>[Growth or Contraction of 2009 v. 2008]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bridge Enacted</td>
<td>Request</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>“Continuing the Fight”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Operations”</td>
<td>76.6</td>
<td>77.5</td>
<td>38.2</td>
<td>38.0</td>
</tr>
<tr>
<td>“Force Protection” (MRAP-driven)</td>
<td>12.4</td>
<td>23.9</td>
<td>4.5</td>
<td>9.8</td>
</tr>
<tr>
<td>“IED Defeat”</td>
<td>4.4</td>
<td>4.2</td>
<td>2.0</td>
<td>1.5</td>
</tr>
<tr>
<td>“Military Intelligence Program”</td>
<td>3.4</td>
<td>4.9</td>
<td>1.4</td>
<td>3.8</td>
</tr>
<tr>
<td>“Iraq Security Forces”</td>
<td>5.5</td>
<td>3.0</td>
<td>1.0</td>
<td>0</td>
</tr>
<tr>
<td>“Afghan National Security Forces”</td>
<td>7.4</td>
<td>2.7</td>
<td>2.0</td>
<td>3.6</td>
</tr>
<tr>
<td>“Pakistan Counterinsurgency Capability”</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>0.4</td>
</tr>
<tr>
<td>“Coalition Support”</td>
<td>1.4</td>
<td>1.4</td>
<td>0.3</td>
<td>1.4</td>
</tr>
<tr>
<td>“CERP”</td>
<td>1.0</td>
<td>1.7</td>
<td>1.0</td>
<td>0.5</td>
</tr>
<tr>
<td>“Military Construction” (Only includes OEF/Europe. Excludes remaining $1.2B Milcon elsewhere).</td>
<td>0.9</td>
<td>1.3</td>
<td>---</td>
<td>0.9</td>
</tr>
<tr>
<td>“Reconstitution” (Reset/Procurement)</td>
<td>36.3</td>
<td>50.5</td>
<td>11.6</td>
<td>11.6</td>
</tr>
<tr>
<td>Additional Requests (Secondary Accounts)</td>
<td>20.2</td>
<td>16.1</td>
<td>3.9</td>
<td>7.8</td>
</tr>
<tr>
<td>Total</td>
<td>169.5</td>
<td>187.1</td>
<td>65.9</td>
<td>79.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>“Reconstitution” ($ in billions)</th>
<th>FY2007 Enacted</th>
<th>FY2008 Enacted</th>
<th>FY 2009 Supplemental</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bridge Enacted</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Request</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>I. Replenishment/Consumables (largely Procurement)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Army</td>
<td>1.0</td>
<td>1.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Navy</td>
<td>0.5</td>
<td>0.4</td>
<td>---</td>
</tr>
<tr>
<td>Marine Corps</td>
<td>0.4</td>
<td>0.4</td>
<td>---</td>
</tr>
<tr>
<td>Air Force</td>
<td>0.1</td>
<td>0.3</td>
<td>---</td>
</tr>
<tr>
<td><strong>Total Replenishment</strong></td>
<td><strong>2.0</strong></td>
<td><strong>2.2</strong></td>
<td><strong>0.1</strong></td>
</tr>
<tr>
<td>II. Repair (O&amp;M-driven/Depots)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Army</td>
<td>8.5</td>
<td>8.5</td>
<td>7.9</td>
</tr>
<tr>
<td>Navy</td>
<td>0.6</td>
<td>0.8</td>
<td>0.4</td>
</tr>
<tr>
<td>Marine Corps</td>
<td>0.6</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Air Force</td>
<td>0.6</td>
<td>1.4</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Total Repair</strong></td>
<td><strong>10.3</strong></td>
<td><strong>11.2</strong></td>
<td><strong>9.5</strong></td>
</tr>
<tr>
<td>III. Replacement (Procurement/Combat Losses)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Army</td>
<td>15.0</td>
<td>19.4</td>
<td>1.6</td>
</tr>
<tr>
<td>Navy</td>
<td>1.1</td>
<td>5.7</td>
<td>---</td>
</tr>
<tr>
<td>Marine Corps</td>
<td>5.9</td>
<td>2.9</td>
<td>0.2</td>
</tr>
<tr>
<td>Air Force</td>
<td>1.4</td>
<td>7.6</td>
<td>0.2</td>
</tr>
<tr>
<td>Defense-wide</td>
<td>0.6</td>
<td>1.5</td>
<td>---</td>
</tr>
<tr>
<td><strong>Total Replacement</strong></td>
<td><strong>24.0</strong></td>
<td><strong>37.1</strong></td>
<td><strong>2.0</strong></td>
</tr>
<tr>
<td><strong>Total Reconstitution</strong></td>
<td><strong>36.3</strong></td>
<td><strong>50.5</strong></td>
<td><strong>11.6</strong></td>
</tr>
</tbody>
</table>

“Reconstitution” encompasses maintenance and procurement activities to restore and enhance combat capability to units and pre-positioned equipment that were destroyed, damaged, stressed, or worn beyond economic repair due to combat operations. Reconstitution is funded through a variety of appropriations, and includes the replenishment, replacement, and repair of equipment:

(1) “Replenishment” includes conventional ammunition items for all services, such as bombs, artillery rounds, small and medium caliber mortars, shoulder-launched rockets, aircraft launched rockets and flares, demolition materials, grenades, propellant charges, simulators, cartridges and non-lethal munitions. The request also funds precision guided ammunition items such as the Army's Excalibur artillery round and the Air Force’s Joint Direct Attack Munition (JDAM). The request also funds tactical missiles to replace those expended in combat, such as Hellfire, Javelin, Tube-Launched Optically Tracked Wire Guided (TOW), and Guided Multiple Launched Rockets.

(2) “Repair” activities involve the necessary depot and intermediate level maintenance required to restore equipment returning from Iraq and Afghanistan to pre-deployment conditions.

(3) “Replacement” is equipment lost in battle or stressed beyond economic repair. This ranges from major platforms such as four F-22A Air Force aircraft and various Army helicopters (e.g., 12 AH-64 and 4 CH-47) to support equipment such as radios, power equipment, and construction equipment.

Severe “Draw-down” in “OIF Funding” in 2009 Supplemental is primarily driven by contraction in Procurement, and not O&M; which directly threatens Army & USMC “Reconstitution” requirements for both immediate Readiness & OEF Campaign.

<table>
<thead>
<tr>
<th>Funding by Military Operation ($ in billions)</th>
<th>FY2007 Enacted</th>
<th>FY2008 Enacted</th>
<th>FY 2009 Supplemental</th>
<th>[Percentage Change (’08-’09)]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bridge Enacted</td>
<td>Request</td>
</tr>
<tr>
<td>Operation Iraqi Freedom (OIF)</td>
<td>122.7</td>
<td>135.1</td>
<td>46.2</td>
<td>40.4</td>
</tr>
<tr>
<td>Operation Enduring Freedom (OEF)</td>
<td>32.6</td>
<td>35.9</td>
<td>15.8</td>
<td>31.1</td>
</tr>
<tr>
<td>Additional Requests²</td>
<td>8.4</td>
<td>9.5</td>
<td>1.0</td>
<td>4.7</td>
</tr>
<tr>
<td>Non-DoD Classified</td>
<td>5.9</td>
<td>6.6</td>
<td>2.9</td>
<td>3.1</td>
</tr>
<tr>
<td>Total</td>
<td>169.5</td>
<td>187.1</td>
<td>65.9</td>
<td>79.2</td>
</tr>
</tbody>
</table>

² Additional Request amounts include $3.4B of funds to be cancelled from the Base budget to offset the cost of Additional Requests in the FY2009 Supplemental Request ($2.2B for Accelerate/Grow the Force; $0.4B for Family Support; $0.3B for NCR Acceleration; $0.5B for Military Personnel).

NDIA Executive Seminar
“Warfighter’s Perspective”
22 April 2009
• **SUSTAIN** – our Soldiers, Civilians and Families

• **PREPARE** – Soldiers for success

• **RESET** – to restore readiness and depth for future operations

• **TRANSFORM** – to become the Army the Nation needs today and in the future
DID YOU KNOW?
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National Defense Industry Association Conference

III Corps and FT Hood
Deputy Commanding General

Brigadier General Mark McDonald

April 22nd, 2009
Outline

• Example of how industry answered our urgent needs: C-RAM
• Examples of what is still needed
  – Autonomous Robots
  – Capacity Building Training Tools
III Corps Robotics Initiative

III Corps CG Intent

Establish a Robotic Systems Center of Excellence at Fort Hood, Texas by merging industry, DOD, and Fort Hood capabilities and resources to develop and employ autonomous robotic systems using spiral development – ultimately increasing the combat capability of deployed forces while saving Soldiers’ lives.
Top Four
(Autonomous) Robotic Priorities

- **Route Clearance** – To detect, defeat, and neutralize the effect of roadside Improvised Explosive Devices (IEDs).
- **Robotic Logistic Convoys** – To move classes of supply from point A to point B using a vehicle set consisting of autonomous robots.
- **Persistent Stare** – To enable long duration monitoring of a targeted area from a point of observation with a various array of sensors.
- **Robotic Wingman** – To add a combat system that autonomously follows, maneuvers parallel, and can lead a manned wingman at a prescribed distance and position while detecting and avoiding obstacles.
Movement & Maneuver Applications

Route Clearance

- 4 times a day mission
- High Risk/Labor intensive
- Maintain manned security elements and mechanical integration capabilities

Robot Capabilities Required:
- Autonomous Route navigation
- Autonomous Leader / Follower
- Reacts to changes in road conditions, obstacles
- Obey traffic rules
- Does not increase risk to humans

Current Assessment:
Can be done with technology demonstrated in Demo 3 and the DARPA Urban Challenge (November 2007)
- Autonomous Navigation
- Obstacle Avoidance
- Leader-Follower
- Aided Target Recognition (ATR) not ready (need human in loop to enable target recognition)
Sustainment Applications
Robotic Logistic Convoys

- Movement of supplies and equipment
- Enhances Brigade Support Battalion or Regiment Support Squadron in the performance of Resupply Operations
- Recovery Operations

<table>
<thead>
<tr>
<th>Robot Capabilities Required:</th>
<th>Current Assessment:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Autonomous Route navigation</td>
<td>Can be done with technology demonstrated in Demo 3 and the DARPA Urban Challenge (November 2007)</td>
</tr>
<tr>
<td>• Leader / Follower</td>
<td>✓ Autonomous Navigation</td>
</tr>
<tr>
<td>• Reacts to changes in road conditions, obstacles</td>
<td>✓ Obstacle Avoidance</td>
</tr>
<tr>
<td>• Obey traffic rules</td>
<td>✓ Leader-Follower</td>
</tr>
<tr>
<td>• Does not increase risk to humans</td>
<td>• Numerous products/program/prototypes in this area</td>
</tr>
<tr>
<td></td>
<td>- Current Safety release requires:</td>
</tr>
<tr>
<td></td>
<td>- constant manual monitoring</td>
</tr>
<tr>
<td></td>
<td>- immediate override capability</td>
</tr>
</tbody>
</table>
# Surveillance

## Persistent Stare

- Persistent Stare - Sensors don’t get bored/fall asleep
- High risk to Soldiers
- Sustainment = Power Source (battery)

<table>
<thead>
<tr>
<th>Robot Capabilities Required:</th>
<th>Current Assessment:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Autonomous Route navigation to observation posts</td>
<td>✓ Autonomous Navigation</td>
</tr>
<tr>
<td>• Ride in or keep up with current vehicles</td>
<td>✓ Obstacle Avoidance</td>
</tr>
<tr>
<td>• Tele-operation (sensors and/or weapons) within range of Bradley 25mm</td>
<td>✓ Requires varying degrees of sensor integration, but most are attainable</td>
</tr>
<tr>
<td>• Sufficient mobility to get to key terrain</td>
<td>✓ Tele-operation sensors/weapons out to 3000 meters demonstrated @ Fort Benning, GA</td>
</tr>
</tbody>
</table>

– Still need the ability to detect classify and identify human beings, vehicles, etc
Movement & Maneuver Applications

Robotic Wingman

Combat Multiplier
- Removes unnecessary Soldiers from battlefield
- Additional firepower/force protection without additional personnel

Robot Capabilities Required:
- Autonomous Route navigation/obstacle avoidance (environmental awareness)
- Leader-Follower relative sensory awareness
- Automatic Target Recognition/IFF
- Comparable mobility to support manned system

Current Assessment:
- ✓ Autonomous Navigation
- ✓ Obstacle Avoidance
- ✓ Requires varying degrees of sensor integration, but most are attainable
- ✓ Requires Automatic Target Recognition/IFF
III Corps Capacity Building

Defining the Problem

In a period of global persistent conflict and Full Spectrum Operations (FSO), the Department of Defense (specifically the U.S. Army and U.S. Marine Corps) lacks a holistic training strategy, knowledge base, and individual - collective skill sets to execute Capacity Building to transition to civil authorities.
Capacity Building Training Strategy

A holistic approach to educating, training and sustaining individual Soldiers, leaders, staffs, and units from platoon through Corps to effectively support non-lethal “Capacity Building” operations in an austere environment.

- **Education**
  - Tools:
    - Urban Interactive Development Simulations
    - "Sim City"
    - S.E.N.S.E.
    - WFX
  - Lead: CAC/TRADOC

- **Simulations/Gaming**
  - Tools:
    - Corporate and Government Integration
    - Exchange Programs
    - Government Partnerships
  - Lead: Units, Agencies, and Institutions

- **Embed**
  - Key leaders work closely with the equivalent level of governance (City, State, Regional, National) at (or near) home station that they will most likely partner with during deployment to enable key leaders to gain a better understanding of the complexities of building and sustaining capabilities in support of a given size population.
  - Lead: Units, Agencies, and Institutions

This program should be directly linked to the Provincial Reconstruction Team (PRT), Government (GOVT) and Non-Government Organization (NGO) training processes to develop teams and ensure unity of effort during deployment.
Supporting the Warfighter
End-to-End
Experiences from SWA and Stateside

MG Jim Hodge
Commanding General
Class VII Retrograde

MRAP Fielding

End-to-End Support Afghanistan/Pakistan GLOC
Class VII Retrograde

MRAP Fielding

End-to-End Support

Afghanistan/Pakistan GLOC
Class VII Retrograde

End-to-End Support

MRAP Fielding

Afghanistan/Pakistan GLOC
Class VII Retrograde

End-to-End Support Afghanistan/Pakistan GLOC

MRAP Fielding
National Defense Industrial Association 2009

“Human Capital”

United States Army
Accessions Command
The Facts

Did you know annually,

• The Army Enlists 80,000+ Active Duty Soldiers
• The Army Enlists 26,000+ Reserve Soldiers
• Army ROTC has 30,000+ Cadets and commissions 5,000+ Lieutenants at 273 Host and 1,100 Partnership Universities
• Army OCS commissions nearly 2,000 Lieutenants
• USMA commissions nearly 1,000 Lieutenants
• Junior ROTC has 288,000+ Cadets at 1,645 high school and will expand to 265 more schools
Strategic Partnership for America’s Success

1. US Army Recruits the Talented and Fully Qualified

2. 21st Century Training

3. Partnership for Youth Success

Human Capital “Flywheel”

Agile Adaptive Smart Energetic Talented Tech Savvy

By The Way…

National Defense Cadet Corps … A Way To Give Back
National Defense Industrial Association 2009

“Human Capital”

United States Army Accessions Command
QUESTIONS?
NDIA Executive Seminar

“Warfighter’s Perspective”

22 April 2009
Army Imperatives

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  – Capacity Building Training Tools
C-RAM System of Systems

FOR OFFICIAL USE ONLY

FOB SENSORS
- Lightweight Counter-Mortar Radar (LCMR)
- Firefinder (Q36, 37) and Giraffe AMB radars
- Sentinel

Land-Based Phalanx (LPWS) (Number scalable for size of defended area)

C2
- FAAD EO
- AMDWS
- eTass

C-RAM can connects with Integrated Base Defense System of Systems (IBDSS) Cameras

TOC CLEARANCE OF FIRES
- Airspace
- Positive Identification of enemy at Point of Origin/Point of Impact
- Friendly Force location
- Collateral Damage Estimate

FAAD = Forward Area Air Defense System
AMDWS = Air and Missile Defense Work Station
AFATDS = Army Field Artillery Tactical Data System
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- Leader-Follower

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- **Obstacle Avoidance**
- **Leader-Follower**

- Numerous products/program/prototypes in this area
  - Current Safety release requires:
    - constant manual monitoring
    - immediate override capability
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• Sustainment = Power Source (battery)

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✓ Obstacle Avoidance
✓ Requires varying degrees of sensor integration, but most are attainable
✓ Tele-operation sensors/weapons out to 3000 meters demonstrated @ Fort Benning, GA
– Still need the ability to detect classify and identify human beings, vehicles, etc
Movement & Maneuver Applications

Robotic Wingman

Combat Multiplier
- Removes unnecessary Soldiers from battlefield
- Additional firepower/force protection without additional personnel

Robot Capabilities Required:
- Autonomous Route navigation/obstacle avoidance (environmental awareness)
- Leader-Follower relative sensory awareness
- Automatic Target Recognition/IFF
- Comparable mobility to support manned system

Current Assessment:
- ✓ Autonomous Navigation
- ✓ Obstacle Avoidance
- ✓ Requires varying degrees of sensor integration, but most are attainable
- ✓ Requires Automatic Target Recognition/IFF
III Corps Capacity Building

Defining the Problem

In a period of global persistent conflict and Full Spectrum Operations (FSO), the Department of Defense (specifically the U.S. Army and U.S. Marine Corps) lacks a holistic training strategy, knowledge base, and individual - collective skill sets to execute Capacity Building to transition to civil authorities.
**Capacity Building Training Strategy**

A holistic approach to educating, training and sustaining individual Soldiers, leaders, staffs, and units from platoon through Corps to effectively support non-lethal “Capacity Building” operations in an austere environment.

**Tools:**
- Urban Interactive Development Simulations
- "Sim City"
- S.E.N.S.E.*
- WFX

**Education**

- Partnerships
- Distance learning/distance learning courses
- LAPs/RAPs
- Correspondence courses
- Site visits
- Formal/Assessment training

A continual process intended to increase knowledge and expertise at the individual and collective levels from platoon through Corps levels to capitalize on a holistic leader development approach based on DMETL availability of leaders/staffs and focus their timeline on validation during their MRE.

**Simulations/Gaming**

To address the outcome of an individual’s chosen non-lethal effects decision(s). The adaptability of the program can include multiple players working to achieve a common endstate based on the intensity (difficulty) level, theme, and environment selected at the opening of the game.

**Embed**

Key leaders work closely with the equivalent level of governance (City, State, Regional, National) at (or near) home station that they will most likely partner with during deployment to enable key leaders to gain a better understanding of the complexities of building and sustaining capabilities in support of a given size population.

**Crawl-Walk-Run**

**Walk-Run**

**Run**

This program should be directly linked to the Provincial Reconstruction Team (PRT), Government (GOVT) and Non-Government Organization (NGO) training processes to develop teams and ensure unity of effort during deployment.
Supporting the Warfighter
End-to-End
Experiences from SWA and Stateside

MG Jim Hodge
Commanding General
Class VII Retrograde

End-to-End Support

MRAP Fielding

Afghanistan/Pakistan
Class VII Retrograde

MRAP Fielding

End-to-End Support Afghanistan/Pakistan GLOC
Class VII Retrograde

End-to-End Support

MRAP Fielding

Afghanistan/Pakistan GLOC
Class VII Retrograde

End-to-End Support

MRAP Fielding

Afghanistan/Pakistan GLOC
Class VII Retrograde

MRAP Fielding

End-to-End Support Afghanistan/Pakistan GLOC
National Defense Industrial Association 2009

“Human Capital”

United States Army Accessions Command
The Facts

Did you know annually, .......

• The Army Enlists 80,000+ Active Duty Soldiers
• The Army Enlists 26,000+ Reserve Soldiers
• Army ROTC has 30,000+ Cadets and commissions 5,000+ Lieutenants at 273 Host and 1,100 Partnership Universities
• Army OCS commissions nearly 2,000 Lieutenants
• USMA commissions nearly 1,000 Lieutenants
• Junior ROTC has 288,000+ Cadets at 1,645 high school and will expand to 265 more schools
Strategic Partnership for America’s Success

1. US Army Recruits the Talented and Fully Qualified

2. 21st Century Training

3. Partnership for Youth Success

Human Capital “Flywheel”

Agile Adaptive Smart Energetic Talented Tech Savvy

By The Way…

National Defense Cadet Corps … A Way To Give Back
National Defense Industrial Association 2009

“Human Capital”

United States Army
Accessions Command
QUESTIONS?
Partnerships
Benefits/Opportunities/Challenges

BENEFITS

- 4 Partnerships, Sikorsky, Boeing, GE, Honeywell – Performance Based comprised of Materials and Services (Technical Engineering & Logistics Support Services (TELSS))
- Technical Engineering & Logistics Support Services (TELSS)
  - Contract vehicle to purchase needed parts from OEM directly
  - CDRL provides written input / suggestions on process improvements and changes
  - On the ground OEM engineers actively supporting work in process and planning
  - Receives/stores and Issues OEM parts on hand at the depot
  - Generates basis for efficiencies/cost savings as described below

  - Efficiencies achieved
    - Repair Turn Around Time (RTAT) Reductions – FY 2003 - 2008
      - Sikorsky – 34%
      - Boeing – 45%
      - Honeywell – 45%
      - GE – 70%
    - Component Output
      - Sikorsky – Increased by 70% (03 – 08)
      - Boeing – Increased by 25% increase (03-08)
    - Cost Savings
Partnerships
Benefits/Opportunities/Challenges

BENEFITS (continued)

- Boeing
  » CCAD Manhours - $17M since Nov 2005
  » Parts - $59.3M since Nov 2006
  » Storage, Analysis Failure Evaluation & Reclamation (SAFR) - $24.9M in parts
  » Cost Savings - $56M
- Sikorsky
  » A to L Recap RTAT reduction from 426 to 299 days
  » A to A airframe RTAT reduction – 34.1%
  » Cost Savings - $56M
- Honeywell – Unit Funded Cost reduced by 50% in FY 08
  • Reliability Improvements
    » GE – increased time on wing between overhaul from avg 300 to 1,450 hours
    » Review of 23 parts indicates that a minimum of 15 reflect increase in reliability – projecting an approximately 50% improvement for all NSNs. Projects to ~$53M cost avoidance over 10 year period
Partnerships
Benefits/Opportunities/Challenges

OPPORTUNITIES

- **Cost Reduction Initiatives**
  - **Boeing**
    - Follow-On Contract plan to reduce parts costs by an estimated $95M over 5 year contract
    - Follow-On Contract plan to reduce Engineering/Logistics costs by 37%
  - **Sikorsky**
    - Current contract has goal to reduced RTAT by 27% and decrease material costs by a minimum of 10% over life of contract
Partnerships
Benefits/Opportunities/Challenges

CHALLENGES

- AMC/DA G-8 – notes from Ms Gerton’s visit to CCAD
  - Not convinced we’re as fiscally responsible as we can be
  - Perception is Partnerships very expensive
  - Where is the tradeoff between readiness and cost
  - What are we (LCMC) doing to drive down costs
  - Should be financial input into contracts – current contracts drive high ULO / inventory accountability challenges, don’t interface with standard financial systems
  - Very concerned about LMP transition of Partnerships

AMCOM is working on all of these
NDIA Atlanta Symposium

Government – Industry Partnering

PEO PERSPECTIVE

BG David Ogg
Program Executive Officer,
Ground Combat Systems
23 April 2009
# GCS Programs

<table>
<thead>
<tr>
<th>Program Executive Office</th>
<th>Stryker Brigade Combat Team</th>
<th>Heavy Brigade Combat Team</th>
<th>Joint Robotic Systems (Army &amp; Marine)</th>
<th>Joint Lightweight Howitzer 155mm (Army &amp; Marine)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9 Infantry Carrier Vehicle Configurations</strong></td>
<td>Abrams Tank M88 Recovery Vehicle Bradley Fighting Vehicle Paladin / FAASV M113 Knight</td>
<td>MULE TALON SUGV</td>
<td>M119A2 M777A2</td>
<td></td>
</tr>
<tr>
<td><strong>Mobile Gun System</strong></td>
<td></td>
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</tbody>
</table>

**PEO GCS MISSION:**

"Lead the Army's Ground Combat System Programs by providing the Joint Warfighter with mission capable systems as part of a full-spectrum force, through sound life cycle management"
PM Heavy Brigade Combat Team

6,118 Abrams FoV

3,962 Fire Support Platforms

13,441 M113
6,452 Bradley

29,400 in Active Use

NDIA Atlanta Symposium – 23Apr09 – BG Ogg
HBCT Public - Private Partnerships

**PROS**

- Meet intent of “50/50” Statute while leveraging best-of-class improvements in quality, Lean-Six Sigma, & Material procurement from OEMs
- Streamlines process, improves efficiency, provides economic stability to our vital National industrial base
- Incorporates ‘Just-in-Time’ (JIT) inventories – reduces o/h inventory costs
- Leverages OEM to enforce cost management over Depots

**CONS**

- Managing cost, schedule and performance is a challenge.
- Potential for OEM to over reach when directing Depots
- Risk to OEMs for Depot - provided assemblies – priced as risk in contracts
- Impeded USG from doing a complete FFP contract with OEMs
PM Stryker Brigade Combat Team

Program Executive Office
Ground Combat Systems

GSA
Auburn
National
Warehouse

BAE Systems
Kollmorgen
Electro-Optical

Raytheon

Anniston Army Depot

Air Methods

Rexroth
Bosch Group

Meggitt

VMW

General Dynamics
Land Systems

Borisch
Psalm 116:1

Hutchinson

General Dynamics
Robotics Systems

Curtiss Wright
Controls
Embedded Computing

Caterpillar

Michelin

Northrop Grumman
Defining the Future

Drs
Technologies

ArcelorMittal

Peterson

Metalcastello

Kidde

Advanced EO Systems, Inc.
PVP

Our Mission is Our Warfighters’ Future

NDIA Atlanta Symposium – 23Apr09 – BG Ogg
SBCT Public - Private Partnerships

**PROS**
- Labor Force Is Flexible And Adapting- Adjust Easily To Ramp Ups
- Incorporates Earned Value Management Implementation
- Technologically Advanced Software Systems Available
- Responsive To High Priorities
- Allow Use Of Contract Incentives
- Increase Program Knowledge By Pooling Resources
- Savings In Capital Investments

**CONS**
- Overpromise Of Performance/Schedule
- Partnering Process Can Be Time Consuming
- Communication Among Multiple Partners Adds Complexity
- Balancing Of Workload (Share Ratio) Between The Partners
- Dealing With Intellectual Property
- Identification Of The Ultimate Responsible Party
PM Joint Lightweight 155

Towed Artillery for the 21st Century

M119

M198

M777

OUR MISSION IS OUR WARFIGHTERS' FUTURE

NDIA Atlanta Symposium – 23Apr09 – BG Ogg
PM Joint Lightweight 155

Watervliet Arsenal

Towed Artillery for the 21st Century

BAE SYSTEMS

OUR MISSION IS OUR WARFIGHTERS' FUTURE
**JLW 155 Public - Private Partnerships**

**PROS**

- Incorporate best business practices into Defense Depot operations
- Increase Depot throughput
  - Work share
  - Sub-system/component overhaul
- Maintain critical skill sets in Public and Private sectors

**CONS**

- Depot Infrastructure (Facilities & Equipment) Investments Limited - Risk For ROI Too High
- Partnerships could be affected by competitive procurement requirements
- Small Inventory May Not Lend To A Partnering Program
**PROS**

- Relatively Small Community That Allows For Open And Frequent Communication
- OEMs Have Proven To Be Able To Quickly React To ONS And JUONS
- Have Successfully Integrated Subsystems And technologies From Government Labs And Other Contractors Into Fieldable, Sustainable Solutions
- Working Together Through Quality and Acceptance Testing Has Made Significant Improvements

**CONS**

- Partnerships need to be deliberately investigated when supporting COTS products when supporting OCOs.
- COTS Equipment Room For Improvement – Configuration Management, Interoperability And Commonality
- Time Consuming Process For Both USG and Industry
Government – Industry Partnerships

Leveraging the Best of the Best
NDIA Atlanta Symposium
Government – Industry Partnering

PEO PERSPECTIVE

BG David Ogg
Program Executive Officer,
Ground Combat Systems
23 April 2009
Army Contracting Command

Mission & Vision Statement

**Mission**
Provide global contracting support to warfighters through the full spectrum of military operations.

**Vision**
A professional workforce providing quality contracting solutions in support of our warfighters.
How much the ACC Obligates

**Dollars**

- ECC, 2.1B
- MICC, 13.5B
- AMCOM, 20.5B
- ASC, 11.2B
- CECOM, 16.8B
- TACOM, 30.6B
- SDDC, 37M
- RDECOM, 5.8B
- LOPM-SANG, 72.7M

**Actions**

- AMCOM, 21,665
- ASC, 7,103
- CECOM, 29,823
- ECC, 31,113
- MICC, 110,364
- TACOM, 26,371
- OPM-SANG, 270
- RDECOM, 14,398
- SDDC, 1,060

FY 08 246,000 Actions $104 B
18% > in $ from FY 07

4700+ Personnel
What the ACC Procures

- Systems: 41%
- Other [IT/Base Ops/SVCS]: 22%
- Spares: 14%
- LOGCAP: 6%
- Chem Demil/Ammo: 6%
- R&D: 11%

Major Customers:
- PEO's/PM's
- ASCC's
- IMCOM
- NETCOM
- AMC
- USAR
- ATEC
- TRADOC
- FORSCOM
ACC Support to OIF/OEF

$13.23B
1,592 Actions

8% Total Dollars in Direct Support to OIF/OEF

EXAMPLES:
- Rock Island Arsenal Contracting Center - LOGCAP ($5.5B/Year)
- TACOM Contracting Center - Afghanistan Security Assistance Program, $1.7B
  - 27,000 vehicles & 104,000 weapons delivered
ACC Trends & Impacts

- **Increased Dollars**: Up 463% since '95
- **Increased Actions**: Up 359% since '95
- **Decreased Workforce**: Down 53% since '95

### Process Efficiencies Used to the Max!
- Partnering
- Credit Cards
- E-Commerce/Paperless Contracting
- ALPHA Contracting
- Alternative Disputes Resolution
- Use of Ordering Officers
- Long Term IDIQ Contracts
- Best Value
ACC Strategic Priorities

- Grow and develop a professional civilian and military workforce
- Establish & develop an expeditionary contracting capability
- Maintain superior customer focus
- Standardize, improve and assure quality business processes and policies across the organization
- Obtain and maintain needed resources
Questions
Global Economic Challenges Continue – But Forces of Recovery are at Work

- World GDP expected to contract by over 2% in 2009.
- Global synchronized recession in advanced economies.
- Emerging markets not immune but affected in different ways.

- Forces supporting recovery:
  - Lower commodity prices
  - Fiscal stimulus programs
  - Low or near zero interest rates
  - Bail-out of troubled banks
  - Pent-up demand

- US and China likely to lead recovery
Economic Trends and Challenges are Impacting Business Priorities

- Shortened outlook and timescales
- Cutting costs beyond the normal
- Focus on customer impact
- Retaining and motivating employees
- Marketplace opportunities and competitive advantage
Four Key Imperatives Today

1. Rapid and Sustained Cost Management
2. Operational Excellence
3. Customer Acquisition and Retention
4. Effective Merger and Acquisition
Accenture Technology Vision: Four Trends Will Define Technology Landscape

Data & Decisions

Influencers
- Millennials
- Security
- Sustainability

Internet Computing

Mobility

Collaboration
34th NDIA Executive Seminar
“Supporting the War Fighter In An Era Of New Changes”

Army Security Assistance Overview
21-23 April 2009

Presented by BG Michael Terry the Commanding General, USASAC
AMC Security Cooperation
USASAC-Army’s Face To The World

Managing 4362 cases valued at $96B with an undelivered value of $29.3B

FY 94-04 $3.6B average annual sales; FY 05/06 >$5B; FY 07 >$9B;
FY 08 sales >$14.5B ($5.4 in support of Iraq/Afghanistan)

• FY09 Sales $15.7B (as of 1 Apr 09)
• Interface with 119 Security Assistance Offices World Wide
• USASAC LNOs embedded with COCOM HQs

Army FMS is a link to 140 different Armies, 47 Air Forces, 26 Navies and 26 other country entities.
ARMY Security Assistance

4362 ACTIVE FMS CASES

(WHAT’S IN THE $96B ?)

Total Cases and Values Constantly Changing

88% New Procurement

AMC BREAKOUT $84B
FMS Case Execution

Implement FMS Case

Item Avail From DoD Stock

NO

Cut Procurement Work Directive

Acquisition Center Issue Solicitation

Contract Award

Fill Requisition and Ship

YES

88% of FMS Is New Procurement

$15.7B FY09 To Date

.88 = $13.8B To Procurement

.12 = $ 1.9B From Stock

Fed Biz Opps
www.fbo.gov

AMCOM
TACOM
CECOM
JMC
USASAC-SPO
USAMMA
TRADOC
PEO-STRI

NDIA.ppt  042009  UNCLASSIFIED
Simplified Nonstandard Item Acquisition Program (SNAP)

• SNAP is the US ARMY FMS program that provides logistics support for items not available in the standard US supply system.

• SNAP is administered by TACOM in Warren Michigan.

• Requirements are posted for open bid on the World Wide Web (SNAP Database).

• Potential bidders must have a USG Cage Code and must register with SNAP.

• For more information contact Jane Elliott at 586 574-7098 or Jane.elliott@us.army.mil.
USASAC - PACOM Regional Operations

PACOM ACTIVITIES

Taiwan: Politically High Visibility
- PAC-3 – 4 Firing Units and 245 Missiles
- 30 - AH-64, Apache
- UH-60M Blackhawk-Congressional Notification

Singapore:
- HIMARS – 16 Firing Units
- 8 - CH-47 stateside basing
- 20 - AH-64 Apache

India:
- 12 - FF Radar and Mini-Depot
- 224 – M4 Carbine Rifles

Philippines: Coalition Support
- 2,200 - Harris radios

Australia: Coalition Support
- 59 - M1 Abrams Tank
- CH-47F - Congressional Notification
- M777A2 - Congressional Notification
- 54 - Excalibur and AFATDS

PACOM AREA OF OPERATIONS

- 33 Countries (18 with active Cases)
- 907 open cases
- $11.2B total program value
- $5B undelivered value (M&S)
- 24,500+ requisitions proc. 1Q-2Q FY09
USASAC – SOUTHCOM Regional Operations

SOUTHCOM AREA OF OPERATIONS

- 38 Countries (28 with active Cases)
- 496 open cases
- $2.1B total program value
- $1.1B undelivered value

SOUTHCOM ACTIVITIES

Brazil:
- 30 - UH-60L, Blackhawk

Colombia:
- 15 - UH-60L, Blackhawks
- 360 - Assorted small arms (Numerous Cases)
- 39 – Armored Security Vehicles
- 214 - NVDs

Chile:
- Avenger
- M109A5 Howitzers
- Firefinder radar
- Cases are in development and require Congressional Notification

Mexico: (Merida Initiative)
- Bell 412 Helicopters
USASAC – EUCOM Regional Operations

EUCOM REGIONAL ACTIVITIES

Netherlands: Coalition Support
240 - Hellfire Missiles
30 – AH-64D Apache
11 - CH-47D
32 Fire Units - Patriot

United Kingdom: Coalition Support
423 – Javelin

Canada: Coalition Support
6 – CH-47D

Israel:
29 – AH-64A Apache
10 – Ah-64D Apache
500 - Hellfire Missiles

Greece:
20 – AH-64A Apache
15 - CH-47D
36 - MLRS
6 Fire Units - Patriot
750 - Hellfire Missiles

Germany:
19 Fire Units - Patriot
2429 – Stinger (Block I)

EUCOM AREA OF OPERATIONS

• 52 Countries (40 with Active Cases)
• 6 International Organizations
• 1439 Active Cases
• $12.71B Total Program Value
• $3.4B Undeliverable Value
• 54K Requisitions Processed FY08
AFRICOM ACTIVITIES

Morocco:
  60 - M109A5 Howitzers
  Track Vehicle Rebuild Facility

Tunisia:
  10 – UH-1H HUEY

Djibouti:
  45 - HMMWVs

Kenya:
  22 - HMMWVs
  6964 – M4A1 Carbine Rifles

AFRICOM AREA OF OPERATIONS

- 56 Countries (33 with Active Cases)
- 183 Active Cases
- $390.72M Total Program Value
- $181.1M Undelivered Value
- 2K Requisitions Processed in FY08
USASAC – CENTCOM Regional Operations

CENTCOM AREA OF OPERATIONS

- 17 Countries (All with Active Cases)
- 905 Open Cases
- $50.8B Total Program Value
- $18.2B Undelivered Value
- 48K Requisitions Processed FY08

CENTCOM ACTIVITIES

Lebanon:
- FY09 FMF Supplemental

Saudi Arabia:
- OPM FSF
- LAV
- 22 – UH-60 Blackhawk
- 12 - AH-64D
- 315 - M1A2S Upgrade

Egypt:
- AH-64D Apache
- 250 - M1A1- CoPro (Increments 11 & 12)

Kuwait:
- 16 - AH-64D Apache
- 6 - Patriot Configuration III Radar Upgrade
- Patriot Live Fire Exercise

UAE:
- SOC Aviation Deployment
- THAAD
- 30 - AH-64A (A to D) Upgrade
- 20 Launchers - HIMARS/ATACMS
- 40 - UH-60M
- 9 Fire Units – Patriot

Kazakhstan:
- HUEY II – New procurement and sustainment
USASAC - Intensive Management Office

DIRECTORATE ACTIVITIES

• Regional Assessment: Program Fielding, Force Modernization and Sustainment

• Actual/Projected FMS: FY08 $6.4B/FY09 Projected $7B - $2.835B Mid year.

• Iraq: Force Generation, Force Modernization, Sustainment and Logistics Capacity Building for both Ministry of Defense and Ministry of Interior

• Afghanistan: Force Generation for expansion of Army and Police Forces, Force Modernization of Army Air Corps; training and logistical support


• 3 Countries

• 489 Active Cases

• $14.149B Total Program Value

• 109 Cases Under Development ($4.7B)

• 1,326± New Requisitions Monthly (Avg)
Major Programs

**Major Weapons Systems**
- M1A1 Abrams Tank: 140 Active; 140 Proposed: $667M - $2.5B
- Armed Scout Helicopter (Bell 407): 27 Active; 26 proposed: $450M - $1B
- Stryker Infantry Carriers: 244 Active; 166 Proposed: $605M - $1B
- Armored Security Vehicle: 80: $115M
- M16A4: 140K
- Mi-17 Helicopters: 22
- M1114 HMMWV: 8500

**Major Weapons Systems**
- M109A5 Howitzers: 115
- AH-1F Attack Helicopters: 8
- M113A2 Armored Personnel Carriers: 550
- Frontier Corps Equipment; $100M
  - Command & Control: $48M
  - Troop Equipment: $35M
  - Support Vehicles: $17M
- TOW II Missiles: 121

**Major FMS Support**
- M1151/M1152 HMMWV: 6500
- Small Arms: 15K Machine Guns, 50 Mortars, 3K Grenade Launchers (Former Eastern Bloc), 33K M16A2
- 23K Ford Ranger Pick Ups, 4K Medium Tactical Vehicles (Navistar 5T), 1,200 Heavy Trucks
- Training Support Contract: $800M over 5 years
- Mi-17 Helicopters: 10
USASAC Weapons Division
Mr. Doug Leach
e-mail: douglas.leach@us.army.mil
Phone: 703.806.2291

INDUSTRY ENTRY POINT FOR:

• Industry Dialogue – Meetings With USASAC
• Pre-LOR Engagement with Industry & Acquisition Communities
• LCMC/PEO Interface on Weapons Systems
• Interface with Army International Affairs
• Coproduction Programs
• Air and Trade Shows
Contact Us

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Mr. Douglas Leach  Chief, Weapons Division  703-806-2291
BACK UPs
ARMY SECURITY ASSISTANCE ENTERPRISE

AMCOM $38.6B
% of Total Package Case Value

HELICOPTERS $7.7B

- BLACKHAWK: 13%
- APACHE: 0.5%
- CHINOOK: 0.5%
- COBRA: 15%
- HUEY: 70%
- MISC EQUIP/SVCS: 1%

MISSILES $30.9B

- JAVELIN: 5%
- TOW: 2%
- PATRIOT: 4%
- STINGER: 0.5%
- HELLFIRE: 1%
- HAWK: 2%
- MISC: 85%

Quantity of End Items On Open Cases:
- BLACKHAWK: 92 ea
- APACHE: 180 ea
- CHINOOK: 75 ea
- COBRA: 14 ea
- HUEY: 92 ea
- MISC: 2968 ea

Quantity of End Items On Open Cases (Does Not Include Launchers):
- JAVELIN: 2968 ea
- TOW: 10,459 ea
- PATRIOT: 1,545 ea
- STINGER: 683 ea
- HELLFIRE: 2,339 ea
- HAWK: 200 ea

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ARMY SECURITY ASSISTANCE ENTERPRISE

CECOM $4.1B

% of Total Package Case Value

- RADARS: 28%
- COMMO: 27%
- NVD: 17%
- Misc Equip/SVCS: 28%

Quantity of End Items On Open Cases:
- RADARS: 167 ea
- COMMO: 13,851 ea
- NVD: 31,732 ea
- Misc Equip/SVCS: 31,732 ea
ARMY SECURITY ASSISTANCE ENTERPRISE

TACOM $22.7B

% of Total Package Case Value

- HMMWVS: 48%
- VEHICLES: 34%
- TANKS: 10%
- SMALL ARMS: 3%
- ARTILLERY: 3%
- MISC EQUIP/SVCS: 2%

Quantity of End Items On Open Cases:
- HMMWVS: 13,485 ea
- VEHICLES: 5,972 ea
- TANKS: 1,685 ea
- SMALL ARMS: 158,503 ea
- ARTILLERY: 536 ea
- MISC EQUIP/SVCS: 536 ea

M1A1/2s & M60s
ARMY SECURITY ASSISTANCE ENTERPRISE

JMC $2.2B

% of Total Package Case Value

- SMALL CALIBER: 14%
- LARGE CALIBER: 2%
- NON-STD: 1%
- ROCKETS: 1%
- MISC EQUIP/SVCS: 82%

Quantity of Ammo Items On Open Cases:
- SMALL CALIBER: 613,530,000 ea
- LARGE CALIBER: 437,952 ea
- NON-STD: 206,843,000 ea
- ROCKETS: 101,224 ea

35% Of The Army’s FY08 Ammo Buy Was For FMS
Regional Operations Directorate

Principal Director
COL Christopher Iskra

CENTCOM REGIONAL OPNS
Mr. Phil Roman

PACOM REGIONAL OPNS
Mr. Al Thomas

SOUTHCOM REGIONAL OPNS
Mr. Al Thomas
(Dual-hated)

EUCOM REGIONAL OPNS
Ms. Jacqueline Williams

AFRICOM REGIONAL OPNS
Ms. Jacqueline Williams
(Dual-hated)

Core Competency of USASAC executed here…
- Case Development
- Case Execution
- Case Closure
Overview

- Introduction to Honeywell
- Environment
- Honeywell’s Public-Private Partnerships
- Partnership Challenges
- Performance-Based Logistics Challenges
- Opportunities
Honeywell Technology Solutions Inc. Overview

**Space, Networks & Communications**

**PROFILE**

- Wholly-owned subsidiary headquartered in the Washington-Baltimore Corridor
- Approximately 5,000 employees
- Over 100 locations: 22 countries, 33 states, the District of Columbia
- More than 100 active contracts

**HERITAGE**

- Bendix Radio (1950)
- Bendix Field Engineering Corporation (1961)
- AlliedSignal Technical Services Corporation (1993)
- Honeywell Technology Solutions Inc. (2000)
- Dimensions International Acquired (2007)

**Logistics Services**

**Technical Services**

*Primarily Government Technology-Oriented Solutions*
Challenging Environment

Combat Operations
- Warfighting operation tempo 5 to 10 times greater than peacetime
- Deployed equipment “aging” faster than it can be replaced
- Continued combat and logistics mission in Iraq and Afghanistan

Budget
- Procurement programs appear at risk – deferred or cancelled
- Requirement to “sustain” legacy systems
- Defense budgets appear to be leveling off or declining

How do we do more with less?
Public Private Partnering

Leverage depot resources

Improve performance

Share best practices

Improve product reliability

Strengthen Industrial Base Core Capabilities

Best Value for Government

Building Winning Relationships
Army Total Integrated Engine Revitalization (TIGER)

**Army Maintenance Support**
- Partnership with Anniston AD – depot artisans provide touch labor
- Increased life of the M1 Abrams tank engine to 1,000 hours (2X over baseline)

**Logistics Management**
- Supply chain management and reclamation of repairable parts
- Condition-Based Maintenance
- Field Service Engineering and Support

**Exceeding Award Fee Requirements**
- 2006 SECARMY Award for Excellence in Contracting
- $32 million in cost avoidance at field repair locations
- First pass yield increased from 60% to 93%

**Proven Performance, Quantifiable Results**
Other Key Public-Private Partnerships

- **Army T-55 Engine at CCAD (Corpus Christi, Texas)**
  - Life-cycle management on CH-47 Chinook engine and improved component reliability
  - 90% availability and decreased maintenance interval by 50%

- **Navy Total Logistics Support (TLS) at Fleet Readiness Center – East (Cherry Point, NC) and Fleet Readiness Center – Southeast (Jacksonville, FL)**
  - Deliver repairables for auxiliary power units and main fuel controls
  - 99% acceptance rate; and $70M+ in savings over the contract period

- **Air Force Support Equipment Corporate Contract (Warner-Robins, Georgia)**
  - Integrated contract on F-15 Test Equipment to improve availability / obsolescence
  - 82% reduction in customer wait time (500 days to 90 days)
  - 93% reduction in acquisition lead time (417 days to 50 days)

- **Air Force Secondary Power Logistics Solutions at Ogden Air Logistics Center (Hill AFB, UT)**
  - Reliability improvements on C-130 and B-2 auxiliary power units; manage distribution center and supply chain
  - Started last year with 90% availability target

Proven Performance, Quantifiable Results
Partnering Challenges

Process Ambiguity Limits Partnerships

• Partnerships can take 2-4 years to establish – this needs to be cut in half
• Early collaboration between contracting, finance and maintenance enable partnership success
• No standard playbook and best practices/lessons learned for public-private partnerships
• Partnerships can leverage excess government capacity (labor, facilities, etc.) to provide best value – need to be able to quantify these savings in BCAs
• Lengthy approval process in inventory and component management slows durability and reliability improvements

Partnership Standardization is Critical
Performance-Based Contracting Challenges

- Lack of long-term agreements and Business Case Analyses (BCAs) that do not accurately reflect benefits are limiting factors in more widespread use of PBL contracts
- Allowing commercial, off-the-shelf items for component maintenance is an aspect of PBL contracting that can quickly incorporate reliability enhancements
  - Maintain form, fit and function of component
  - Army Product Improvement Program Pilot is tailor-made for Depot – Private PBL contracts
  - The requirement for subcontractors to comply with government cost accounting standards eliminates many preferred sources for parts

Focus on Outcome Metrics – Prove Success
Given continued combat operations and an uncertain procurement environment, Industry and Government can and should leverage our core capabilities using performance-based partnerships to:

- Improve reliability, durability and availability of legacy systems
- Leverage industry expertise and expand depot operations
- Drive performance by partnering for outcomes based on metrics
- Apply product improvement to insert technology during reset
- Rebuild our military for future missions
A Wall St Perspective on the Defense Industry
Defense Industry Investment Summary

2009 Defense Investing Themes

It’s Still Cyclical

“Defensive” Qualities/Under-performs in Market Rally

New Admin/Iraq Overhang

Budget Pressure

Valuation on Defense Stocks Reflects:

• Decelerating/declining growth environment
• Better than market EPS growth through 2009/10
• Long-term visibility from backlogs/budgets
• Free cash flow after dividends of ~$15B over 2009/10 leaves plenty to deploy in acquisitions, dividend increases and share repurchase
• Growth opportunities (acquisitions and organic) beyond typical weapons spending include homeland security, federal IT, and MRO
Defense Budget Dynamics

Supplemental Appropriations have protected baseline budgets, providing a boost to budget authority above and beyond those seen during past conflicts…

…while weapons spending has garnered an increasing share of them, in stark contrast with past history, when the focus was on Operations & Maintenance.

Supplementals protect baseline programs and bolster budgets of war-torn equipment.
Our Thinking on Defense Spending Cycles

Drivers to Defense Spending
1. Threat: Domestic Fears Take Center Stage
2. Available Funds: Scarcity Builds
3. Washington World View: Unknown

U.S. Defense Budget
Authority and Outlays (Constant FY09$)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Authority $B</th>
<th>Outlays $B</th>
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</thead>
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<tr>
<td>FY1967</td>
<td>$175B</td>
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<tr>
<td>FY1968</td>
<td>$170B</td>
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<tr>
<td>FY1975</td>
<td>$85B</td>
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<td>FY2006</td>
<td>$187B</td>
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<tr>
<td>FY2007</td>
<td>$176B</td>
<td></td>
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<tr>
<td>FY2008</td>
<td>$255B</td>
<td></td>
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<tr>
<td>FY2010</td>
<td>$182B</td>
<td>$186B</td>
</tr>
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</table>

Cycle Drivers Have Turned Negative
Diplomacy Through Arms

**Foreign Military Sales (FMS) Notifications**
by Region 1995-2008YTD

- Western Hemisphere
- Europe
- Near East and South Asia
- East Asia and Pacific

*Source: Department of State and Oppenheimer & Co. Inc.*

FY06 & FY07 FMS notifications exceeded the previous three years combined, doubled again in 2008.

**Oil Prices vs. FMS Notifications/Agreements**
Near East and South Asia (primarily Middle East)

*Source: DoD DSCA FY89-05 Fact Books, Congressional Notifications (FY06 estimate), and Oppenheimer & Co. Inc.*

Buoyed by surging oil revenue, Middle Eastern countries are leading the pack.

International acceleration should dampen downturn
Soft Power Flowing to State’s Empowerment

Increasing Role of The State Department In Both Policy and Budget

Source: FY09 President’s Budget
Budgets and Stocks

Defense Stock Performance vs. Defense Weapons Spending

Source: Department of Defense and Oppenheimer & Co. Inc.

Stocks include: NOC, GD, LMT, RTN, LLL, ATK, McDonnell Douglas, E-Systems, Martin Marietta, Grumman

Defense Stocks Poised to Be Source of Funds On Any Economic/Market Rebound

Def Index

Weapons Spending Appropriations


0 50 100 150 200 250 300

0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0


0 50 100 150 200 250 300
# Investment Positives: Multi-year Visibility

**Backlog Analysis**

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<tr>
<td>General Dynamics Total*</td>
<td>34,332</td>
<td>34,905</td>
<td>34,136</td>
<td>35,974</td>
<td>34,576</td>
<td>51,648</td>
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<tr>
<td>Lockheed Martin Total</td>
<td>76,899</td>
<td>73,986</td>
<td>84,188</td>
<td>75,900</td>
<td>76,700</td>
<td>80,900</td>
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<tr>
<td>Northrop Grumman Total</td>
<td>58,154</td>
<td>58,080</td>
<td>55,983</td>
<td>61,021</td>
<td>63,665</td>
<td>78,052</td>
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<tr>
<td>Raytheon Total*</td>
<td>25,087</td>
<td>29,611</td>
<td>31,248</td>
<td>33,595</td>
<td>36,614</td>
<td>38,884</td>
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<table>
<thead>
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</thead>
<tbody>
<tr>
<td>General Dynamics Total*</td>
<td>57%</td>
<td>2%</td>
<td>(2%)</td>
<td>5%</td>
<td>(4%)</td>
<td>49%</td>
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<tr>
<td>Lockheed Martin Total</td>
<td>9%</td>
<td>(4%)</td>
<td>14%</td>
<td>(10%)</td>
<td>1%</td>
<td>5%</td>
</tr>
<tr>
<td>Northrop Grumman Total</td>
<td>NA</td>
<td>(0%)</td>
<td>(4%)</td>
<td>9%</td>
<td>4%</td>
<td>23%</td>
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<tr>
<td>Raytheon Total*</td>
<td>19%</td>
<td>18%</td>
<td>6%</td>
<td>8%</td>
<td>9%</td>
<td>6%</td>
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<table>
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<tr>
<th>Yrs B/L on Next Year’s Sale</th>
<th>2003A</th>
<th>2004A</th>
<th>2005A</th>
<th>2006A</th>
<th>2007A</th>
<th>2008A</th>
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<tr>
<td>General Dynamics Total*</td>
<td>2.2</td>
<td>2.0</td>
<td>1.7</td>
<td>1.6</td>
<td>1.5</td>
<td>1.9</td>
</tr>
<tr>
<td>Lockheed Martin Total</td>
<td>2.2</td>
<td>2.0</td>
<td>2.1</td>
<td>1.8</td>
<td>1.8</td>
<td>1.8</td>
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<tr>
<td>Northrop Grumman Total</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>2.3</td>
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<tr>
<td>Raytheon Total</td>
<td>1.5</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
</tr>
</tbody>
</table>

* Defense Business Only

Source: Oppenheimer & Co. Inc. estimates and company reports.

---

**Solid and rising backlogs add to out-year visibility**

*Cash generation remains strong and deployment comes into focus*
### Long Tails of Defense Budget

<table>
<thead>
<tr>
<th>FY 07</th>
<th>FY 08</th>
<th>FY 09</th>
<th>FY 10</th>
<th>FY 11</th>
</tr>
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<tbody>
<tr>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
</tr>
<tr>
<td>FY07</td>
<td>FY08</td>
<td>FY09</td>
<td>FY10</td>
<td>FY11</td>
</tr>
</tbody>
</table>

**DoD Planning**
- FY09 (and FY10-13)
- FY10 (and FY11-15)
- FY11 (and FY12-15)
- FY12 (and FY13-17)

**Congress Budgeting**
- FY08
- FY09
- FY10
- FY11

**Budget Spending**
- FY07
- FY08
- FY09
- FY10
- FY11

- Obama submits FY10 Budget with Few Changes
- FY11 Budget Likely to Include Tougher Choices, Budgetary Realities
- Stretch of Backlogs Provides Some Relief From Near-Term Uncertainty

*FY11 Just Starts to Be Spent*
The Benefit Of Stable/Growing Budgets

**Large-Cap Defense Margin Picture**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>General Dynamics</td>
<td>13.4%</td>
<td>12.9%</td>
<td>12.3%</td>
<td>11.4%</td>
<td>8.8%</td>
<td>10.1%</td>
<td>10.3%</td>
<td>10.9%</td>
<td>11.4%</td>
<td>12.2%</td>
</tr>
<tr>
<td>Lockheed Martin</td>
<td>6.9%</td>
<td>7.0%</td>
<td>7.1%</td>
<td>7.6%</td>
<td>7.8%</td>
<td>8.4%</td>
<td>9.2%</td>
<td>10.2%</td>
<td>11.2%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Northrop Grumman</td>
<td>8.7%</td>
<td>8.9%</td>
<td>7.7%</td>
<td>6.0%</td>
<td>7.3%</td>
<td>7.7%</td>
<td>8.0%</td>
<td>9.3%</td>
<td>9.8%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Raytheon</td>
<td>10.0%</td>
<td>10.6%</td>
<td>7.8%</td>
<td>9.6%</td>
<td>8.5%</td>
<td>11.3%</td>
<td>11.4%</td>
<td>12.9%</td>
<td>13.2%</td>
<td>12.9%</td>
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</table>

**Change**

<table>
<thead>
<tr>
<th>1999-2008</th>
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<tbody>
<tr>
<td>(121) bps</td>
</tr>
<tr>
<td>458 bps</td>
</tr>
<tr>
<td>(10) bps</td>
</tr>
<tr>
<td>288 bps</td>
</tr>
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</table>

**Large-Cap Defense ROIC Picture**

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>General Dynamics</td>
<td>18.2%</td>
<td>19.9%</td>
<td>18.2%</td>
<td>16.1%</td>
<td>11.8%</td>
<td>12.7%</td>
<td>13.5%</td>
<td>14.8%</td>
<td>15.5%</td>
<td>16.6%</td>
</tr>
<tr>
<td>Lockheed Martin</td>
<td>11.5%</td>
<td>6.4%</td>
<td>7.5%</td>
<td>10.2%</td>
<td>12.8%</td>
<td>15.7%</td>
<td>19.3%</td>
<td>22.9%</td>
<td>25.1%</td>
<td>22.8%</td>
</tr>
<tr>
<td>Northrop Grumman</td>
<td>6.9%</td>
<td>7.4%</td>
<td>6.2%</td>
<td>2.7%</td>
<td>5.3%</td>
<td>6.4%</td>
<td>6.7%</td>
<td>8.3%</td>
<td>9.4%</td>
<td>8.1%</td>
</tr>
<tr>
<td>Raytheon</td>
<td>4.4%</td>
<td>4.3%</td>
<td>3.1%</td>
<td>5.9%</td>
<td>5.9%</td>
<td>8.0%</td>
<td>8.3%</td>
<td>10.1%</td>
<td>11.5%</td>
<td>12.3%</td>
</tr>
</tbody>
</table>

**Change**

<table>
<thead>
<tr>
<th>1999-2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>(162) bps</td>
</tr>
<tr>
<td>1,131 bps</td>
</tr>
<tr>
<td>117 bps</td>
</tr>
<tr>
<td>787 bps</td>
</tr>
</tbody>
</table>

*The key to success by defense contractors this cycle has not been a operating margin story as much as it has been a return on invested capital

*ROIC corrected for pension and unusual items
### Doth Protest?

<table>
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<tr>
<th></th>
<th>FY02</th>
<th>FY03</th>
<th>FY04</th>
<th>FY05</th>
<th>FY06</th>
<th>FY07</th>
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<tbody>
<tr>
<td>Cases filed</td>
<td>1204</td>
<td>1352</td>
<td>1485</td>
<td>1356</td>
<td>1327</td>
<td>1411</td>
</tr>
<tr>
<td>Cases closed</td>
<td>1133</td>
<td>1244</td>
<td>1405</td>
<td>1341</td>
<td>1274</td>
<td>1393</td>
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<tr>
<td>Merit</td>
<td>256</td>
<td>290</td>
<td>365</td>
<td>306</td>
<td>249</td>
<td>335</td>
</tr>
<tr>
<td>% Cases Closed</td>
<td>23%</td>
<td>23%</td>
<td>26%</td>
<td>23%</td>
<td>20%</td>
<td>24%</td>
</tr>
<tr>
<td>Sustains</td>
<td>41</td>
<td>50</td>
<td>75</td>
<td>71</td>
<td>72</td>
<td>91</td>
</tr>
<tr>
<td>% of Merit</td>
<td>16%</td>
<td>17%</td>
<td>21%</td>
<td>23%</td>
<td>29%</td>
<td>27%</td>
</tr>
<tr>
<td>% of Case Closed</td>
<td>4%</td>
<td>4%</td>
<td>5%</td>
<td>5%</td>
<td>6%</td>
<td>7%</td>
</tr>
</tbody>
</table>

- Protests are up 25%, but sustain decisions are up 120% since ‘02
- When there’s no downside to protest, why not?
- $1,000/hr lawyers likely have the upper hand poking holes
- If we can’t have it, no one can is sometimes the best strategy
How the Credit Crisis Will Affect Defense

Deficits vs. Defense Spending

Deficit % GDP vs. DoD Outlays (Billions, SFY09)

- 02/09 Deficits Projections
- DoD Spending

<table>
<thead>
<tr>
<th>Year</th>
<th>Deficit % GDP</th>
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<tbody>
<tr>
<td>1962</td>
<td>(2%)</td>
</tr>
<tr>
<td>1967</td>
<td>(4%)</td>
</tr>
<tr>
<td>1972</td>
<td>(6%)</td>
</tr>
<tr>
<td>1977</td>
<td>(8%)</td>
</tr>
<tr>
<td>1982</td>
<td>(10%)</td>
</tr>
<tr>
<td>1983</td>
<td>(12%)</td>
</tr>
<tr>
<td>1987</td>
<td>(14%)</td>
</tr>
</tbody>
</table>

2000, 2.4%
2008, (3.2%)
Potential 12.3% GDP Deficit in FY09

Source: OMB, Department of Defense and Oppenheimer & Co. Inc. estimates.

Deficits were the last defense upcycle killer – History looks like it could repeat itself
Case Against Higher Defense Spending

- **Social Security effect is cutting into overall discretionary spending**

- **Deficits are rising and could potentially go higher**

- **O&M costs from ongoing operations and aging equipment could funnel money away from weapons, ex-supplementals**

*Source: OMB, Department of Defense and Oppenheimer & Co. Inc.*
Case For Higher Defense Spending

- Defense spending is still near historical lows as % of GDP
- Defense down to around 50% of discretionary spending

Source: OMB, Department of Defense and Oppenheimer & Co. Inc.
Sacrificial Lambs, Tough Choices, or Peanut Butter

- **Sacrificial Lambs**: Programs are killed as examples often as a means to protect higher valued projects, generally targets the weak, lighter backlash...Think Comanche, Crusader, VXX

- **Tough Choices**: Strategic level reshuffling of priorities with resources available...Think DDG-1000 vs. DDG-51, TSAT vs. AHEF/WGS

- **Peanut Butter**: Inescapable mandatory cuts across the board; few, if any programs find sanctuary...Think Graham-Hart-Rudman

*Sacrificial Lambs are the Easiest, Tough Choices is the Best…. But Peanut Butter is the Most Likely*
Dealing with the Downside of a Budget Cycle: Follow the Customer or the Technology?

- Strong Balance Sheets And Declining Addressable Markets Will Test Discipline

- Adjacencies Are Likely to Be Better Forged Through Customer Than Technology Know-How

"Their death rays, they say, will treat cancer. Their electric rail guns will loft commercial payloads into space and enrich earthling entrepreneurs. Their nuclear reactors, originally meant for war in space, will instead hurl astronauts toward the moon and Mars."

— NYT, April 8, 1990 on the Military Industrial Base Repositioning
Dealing With the Downside of a Budget Cycle: Supply Chain and Consolidation

- The Bad News: Sharp Drops Will Be Felt the Hardest Down the Chain

<table>
<thead>
<tr>
<th>($USD, Millions)</th>
<th>DoD FY06</th>
<th>DoD FY07</th>
<th>DoD FY08E</th>
<th>DoD FY09E</th>
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<tr>
<td>Procurement, Marines</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base</td>
<td>6</td>
<td>25</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Supplemental</td>
<td>412</td>
<td>288</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Total Proc, Marines</td>
<td>330</td>
<td>418</td>
<td>313</td>
<td>58</td>
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<tr>
<td>Other Procurement, Army</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base</td>
<td>33</td>
<td>43</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Supplemental</td>
<td>266</td>
<td>359</td>
<td>176</td>
<td></td>
</tr>
<tr>
<td>Total Other Proc, Army</td>
<td>245</td>
<td>300</td>
<td>402</td>
<td>224</td>
</tr>
<tr>
<td>MRAP buys (units)</td>
<td>1,500</td>
<td>6,480</td>
<td>7,394</td>
<td>2,000</td>
</tr>
<tr>
<td>Est shipset content</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td>Tot Est Radios in MRAP Budget</td>
<td>45</td>
<td>194</td>
<td>222</td>
<td>60</td>
</tr>
</tbody>
</table>

| Est Company Radios in Budget | $620 | $912 | $937 | $342 |
| % Change                     | 47%  | 3%   | -64% |      |

- The Good News: Sellers and Buyers Will Be Motivated to Consolidate
Consolidating the supply base, plenty of deals are still being done …

…though consolidation is largely over at the top of the defense food chain.

U.S. Industrial Base

BA, GD, LMT, NOC, RTN
CSC, GE, HON, LLL, SAI, UTX
ATK, Booz, Bechtel, COL, GR, KBR, HRS, DCP, HRS, ITT, TXT, URS
ARINC, Battelle, CAI, CUB, EDS, MANT, OSK, TDY (and hundreds of others)

Deal Flow Has Dwindled, Likely Returns with a Vengeance As Top-lines Flatten

<table>
<thead>
<tr>
<th>Year</th>
<th>Transactions</th>
<th>Price/Sales</th>
</tr>
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<tr>
<td>1993</td>
<td>233</td>
<td>NA</td>
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<tr>
<td>1994</td>
<td>243</td>
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<tr>
<td>1995</td>
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<td>1996</td>
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<td>1997</td>
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<td>1999</td>
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<td>2001</td>
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<td>2002</td>
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<td>2006</td>
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<td>2007</td>
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<tr>
<td>2008*</td>
<td>273</td>
<td>1.05</td>
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Source: Infobase Publishers, Inc
*Through Aug 2008
Valuation

Defense Historical P/E Analysis

<table>
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<tr>
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<th>Current CY09E</th>
<th>5 yr Historical</th>
<th>10 yr Historical</th>
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<td><strong>GAAP P/E</strong></td>
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<td>General Dynamics</td>
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<td>14.5</td>
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<td>Raytheon</td>
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<td>Average GAAP P/E</td>
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<td><strong>Economic P/E</strong></td>
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<tr>
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<tr>
<td>Average Economic P/E</td>
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<td>18.2</td>
<td>NA</td>
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</tbody>
</table>

Multiples reasonable reflecting budget uncertainty

Post 9/11, the group began to move in line with the market

Defense multiples are reasonable on an historical basis and are now in line with the market despite a better growth profile

Source: Oppenheimer & Co. Inc. estimates and FactSet.

Source: FactSet and Oppenheimer & Co. Inc.