

**Summary of  
Keynote Address  
by  
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November 14, 2007  
Orlando, Florida**

**Introduction:**

- Why are we here?
  - First, we're not doing well today . . .
    - *We are focused on the Warfighter*, but to what costs over time?
    - No one really knows what it “costs” to deliver availability today
    - We need to work better together – developing collective solutions from DOD to Industry; Acquisition to Tactical
    - Didn't upgrade HMMWV engines in 90s – why not?
    - How about AOAP; our first attempt at predictive maintenance – did it do what it was supposed to?
  - Our challenge this week – to discuss, and maybe develop, ideas on how we can *make better decisions and better investments to:*

**Deliver the availability the Warfighter needs at best value for the Nation**

**Maintenance:** *What is the purpose of Maintenance?*

- To deliver system availability to the Warfighter – “Readiness”
  - Platform Readiness: Murphy (and the enemy) have a vote – things break at the worst time. Not everything is equally important
  - System Readiness: Vehicle + radio + weapon
  - Fleet Readiness: Move from reactive to predictive
- Three fundamental tasks of maintainers . . .
  - Fix things when they break
  - Improve things so they doesn't break as often
  - Make things easier to “fix”
- Two key measures of effectiveness

- At the tip of the spear – Warfighter Availability
- At the enterprise – Cost per unit of availability

**Solutions:** *How can maintainers improve Readiness at Best Value?*

**Adopt Life Cycle Management; Elevate KPP & PBLs; Leverage Technology**

1. Adopt Life Cycle Management Approach to our systems . . .

***This is the Holy Grail***

- Program managers = fleet managers
  - Today: PMs focus on acquisition costs & schedules –
    - Even performance is rarely used as a metric
    - Life cycle costs are not considered, and as a result . . .
    - Inexpensive to buy, expensive to maintain
  - How could it be different?
    - M1 Tank fleet manager sees: M1 in Korea (\$230/hr) vs M1 in Germany (\$180/hr)
      - Why different operating rates?
      - Age, Training, TTPs, Environment, component reliability, etc.?

***Fleet manager will know!***

- Deliver weapons systems that meet objective requirements; use lifecycle costs to value acquisition decisions (e.g., trading off reliability); etc.
2. Elevate Sustainment Key Performance Parameters (sustainment KPP)

***Availability, Reliability, & Value: Availability and Reliability of weapon system for mission execution at best Value (Cost)***

- Availability:
  - Meet requirement of the warfighter at predictable rate
  - PBL for Sub-systems: Vehicle + radio + weapon
  - Increase Availability = Decreased footprint
  - Do we build a Tank Bn with 48 tanks to have 40 FMC?
  - Tail cost: Footprint, people, repair parts, transport, time, etc.

- Reliability:
  - Meet required mission duration at predictable rate
  - Increase Reliability also equals Decreased footprint
  - Reliability enables predictive down time for scheduled Maint
- Value (Total Ownership Cost):
  - Cost is A factor not THE factor . . . but for sure as we draw down OIF/OEF DoD log will be budget target
    - \$130 Billion (22% of DoD Budget before supplemental)
  - Key is knowing what “it” costs . . .
    - Fleet costs (what does it cost to “operate” the system for an hour, a mile, etc)
    - Readiness costs (what does it cost to deliver a defined level of availability, and what would it cost to deliver more?)
      - When is it enough? Incremental readiness at incremental cost
    - Costs are relational
      - An acquisition investment may reap significant lifecycle savings in O&M – Today we don’t know what it will really cost????
        - MRAP; Counter IEDs; UAVs; etc.
  - Cost / Benefit analysis over time (future focus)
  - Must Incentivize process:
  - Prove Return on Investment for buy in

### **Transition: So what should we invest in?**

#### 3. Leverage Technology – The Future of Maintenance

- Health monitoring systems & Predictive Maintenance
  - Allows scheduled maintenance & improved reliability
  - Machine to machine exchange of diagnostic data
  - Provide fleet managers the fidelity of information they need
  - Authoritative and accurate data for better/timely decisions
- Visibility for across the supply chain for better decisions.
  - Establish EDD (not ESD) with customer and meet it!

- Avoid information overload: Must Know versus Nice to Know

**Closure:**

- You play a critical role in aligning Maintenance and Sustainment to meet warfighter needs
  - You are the future & I'm optimistic
- I Look forward to tackling this challenge with you
- Thanks for your continued service.