Suitability . . . at what cost?

"5-minute" warm-up act for the T&E Service Exec Panel

Talk about 3 things:

1. **New "Materiel Availability" KPP**
2. **DAU Suitability Research Project**
3. **Announce NDIA/DAU TST-301 2007 *All-Star Team !***

THE JOINT STAFF
WASHINGTON, D.C. 20318-9000

JOINT REQUIREMENTS
OVERSIGHT COUNCIL

JROCM 161-06
17 August 2006

MEMORANDUM FOR: Under Secretary of Defense for Acquisition, Technology, and Logistics
Commander, US Joint Forces Command
Vice Chief of Staff, US Army
Vice Chief of Naval Operations
Vice Chief of Staff, US Air Force
Assistant Commandant of the Marine Corps

Subject: Key Performance Parameter Study Recommendations and Implementation

1. The Joint Requirements Oversight Council (JROC) approved the Key Performance Parameter (KPP) Study recommendations. The JROC endorses the implementation of a mandated Materiel Availability KPP with supporting key system attributes of materiel reliability and ownership cost for all Major Defense Acquisition Programs (MDAPs) and select ACAT II and III programs. The JROC also endorsed selectively applying an Energy Efficiency KPP and a System Training KPP, as appropriate.

2. To better ensure the correct KPPs are selected, the JROC endorsed the use of KPP reference sheets produced as part of this study. The KPP reference sheets will be used as an aid in the process of identifying and validating potential KPPs for any acquisition program.

3. Implementation of the study recommendations will be concurrent with the publishing of the next revision of CJCS 3170-series documents. The revision will incorporate the details of the execution and will be coordinated for final release by 31 October 2006. Specific JROC implementation due backs and approved recommendations are enclosed.

E. P. GIAMBASTIANI
Admiral, US Navy
Vice Chairman
of the Joint Chiefs of Staff

Enclosure

JROC Memo: 17 Aug 2006

(Subj: Key Performance Parameters Study Recommendations and Implementation)

1. Endorsed Mandatory "MATERIEL AVAILABILITY" Key Performance Parameter (KPP) for all MDAPs and Select ACAT II and III

With 2 Supporting Key System Attributes (KSAs):

A. Materiel Reliability KSA

B. Ownership Costs KSA

2. Endorsed ENERGY EFFICIENCY KPP for selected programs, as appropriate

3. Endorsed TRAINING KPP for selected programs, as appropriate

4. Did not endorse requirement for mandatory KPPs for these criteria:

COST

TIME and/or SCHEDULE

SUSTAINMENT

COALITION INTEROPERABILITY

FORCE PROTECTION AND SURVIVABILITY

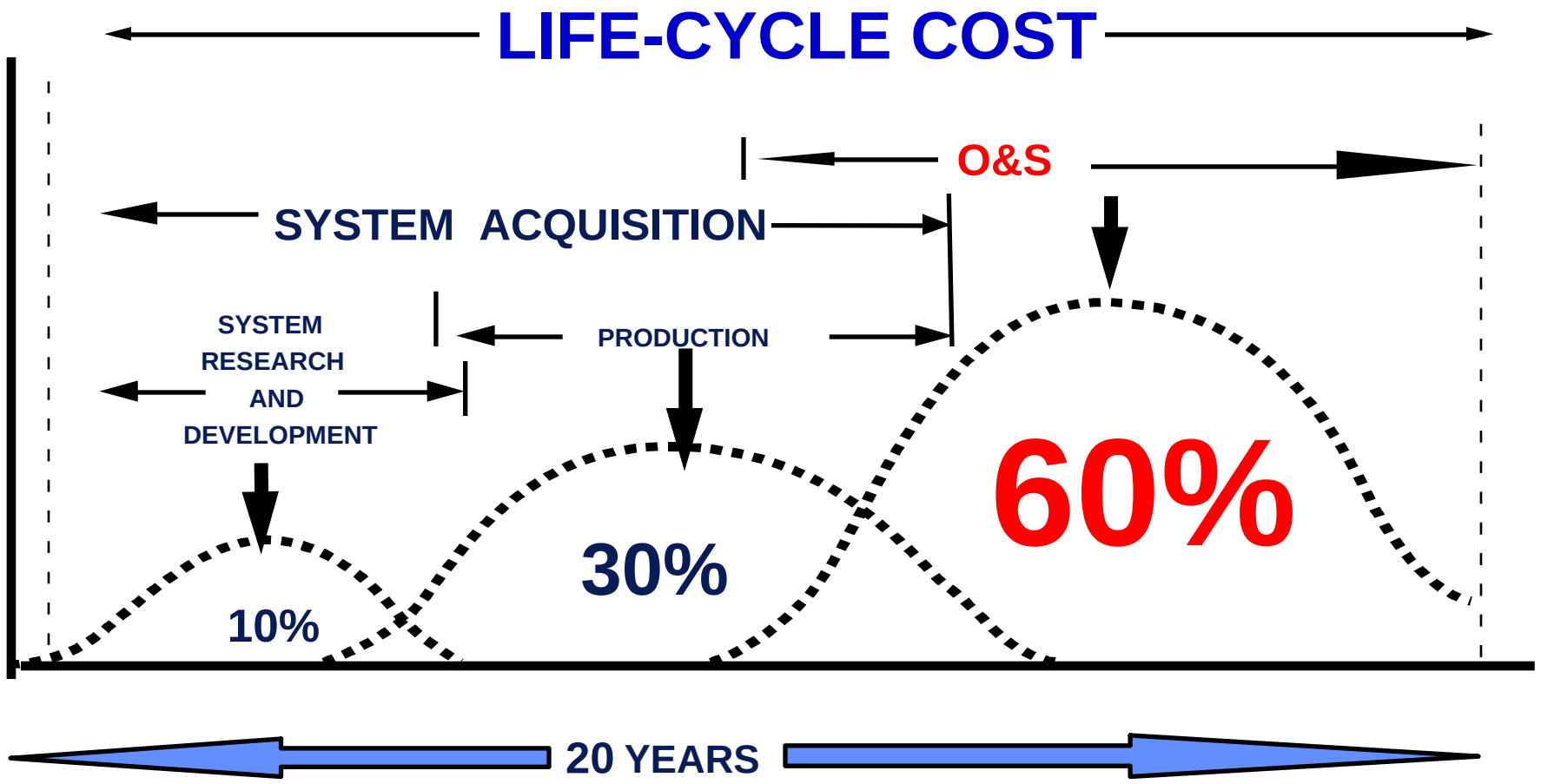
JROC Approved Mandatory Sustainment KPP and KSAs*

- **Single KPP:**
  - **Materiel Availability** $(= \frac{\text{Number of End Items Operational}}{\text{Total Population of End Items}})$
- **Mandatory KSAs:**
  - **Materiel Reliability** (MTBF)$(= \frac{\text{Total Operating Hours}}{\text{Total Number of Failures}})$
  - **Ownership Cost** (O&S costs associated w/materiel readiness)

- **For mission success, Combatant Commanders need:**
  - Correct number of operational end items capable of performing the mission when needed
  - Confidence that systems will perform the mission and return home safely without failure
- **Ownership Cost provides balance; solutions cannot be availability and reliability "at any cost."**

JROC Approval Letter JROCM 161-06 Signed 17 Aug 06; Revised CJCS 3170 will put into Policy

LCC Distribution

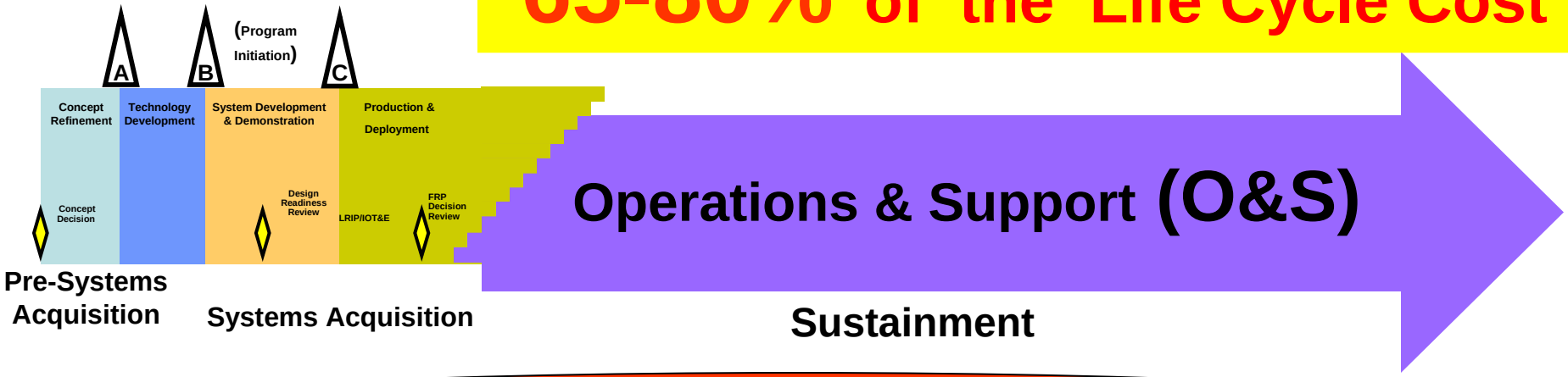


Life Cycle Management

Design For Sustainment

Sustain The Design

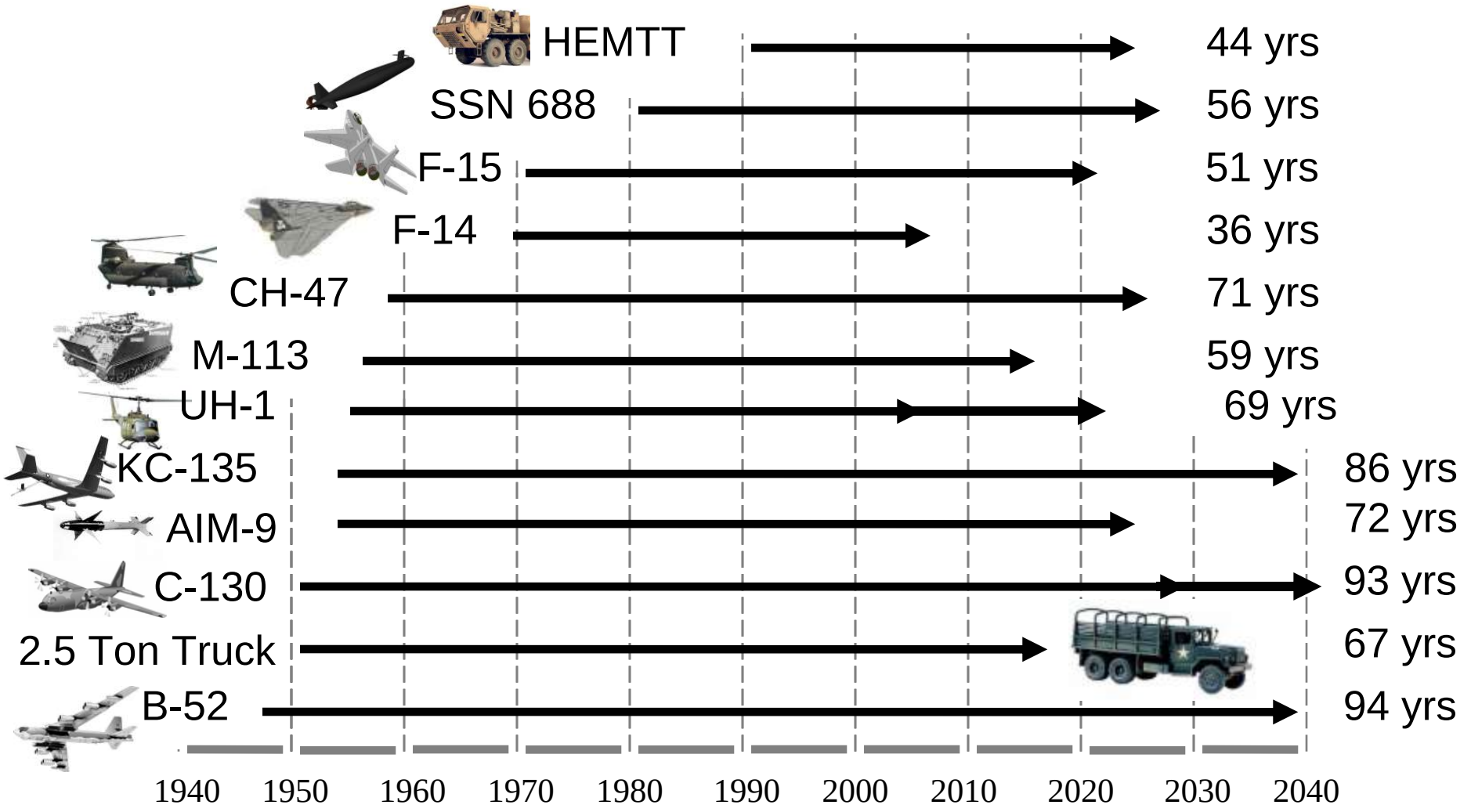
65-80% of the Life Cycle Cost



O&S Costs Are Determined Early In The Acquisition Phase

USD(AT&L) FY 07 Strategic Goals (#4) Emphasize Sustainment Outcomes Throughout The Life Cycle Management Process

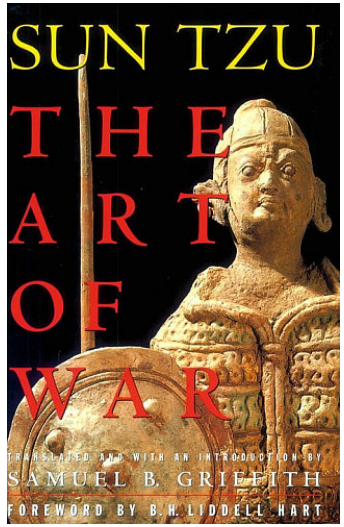
Defense System Life Cycles



SOURCE: John F. Phillips DUSD (L)

Life Cycle Costing Considerations

"As Government expenditures, those due to broken down chariots, worn-out horses, armor and helmets, arrows, and crossbows, lances, hand and body shields, draft animals and supply wagons will amount to 60% of the total."



Sun Tzu (The Art of War, 6th Century B.C.)

Suitability . . . at what cost?

DAU Research Project:

"STRYKER Suitability Analysis"

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Suitability . . . at what cost?

Typical IOT&E Evaluation Results:

- **EFFECTIVENESS: approximately 90% success rate**
- **SUITABILITY: approximately 60 - 75% success rate**

Typical Decision after IOT&E: Begin fielding ASAP, even before . . . .

- **Suitability problems are addressed**
- **Reliability is improved**
- **Maintenance procedures are mature**
- **Training is complete**
- **. . . . . .**
- **. . . . . .**

Why field before addressing these problems? Urgent Combat Need

The QUESTION: How much does it cost us to do business this way?

Suitability . . . at what cost?

DAU Research Study Proposal

- **Investigate various types of systems**
- **Total of 5 or 6, several from each service**
- **Criteria:**
  - **Recently fielded**
  - **Evaluated to be Effective but not "fully" Suitable**
- **Examine performance of systems wrt suitability**
- **Determine suitability cost drivers**
- **Evaluate suitability trends**

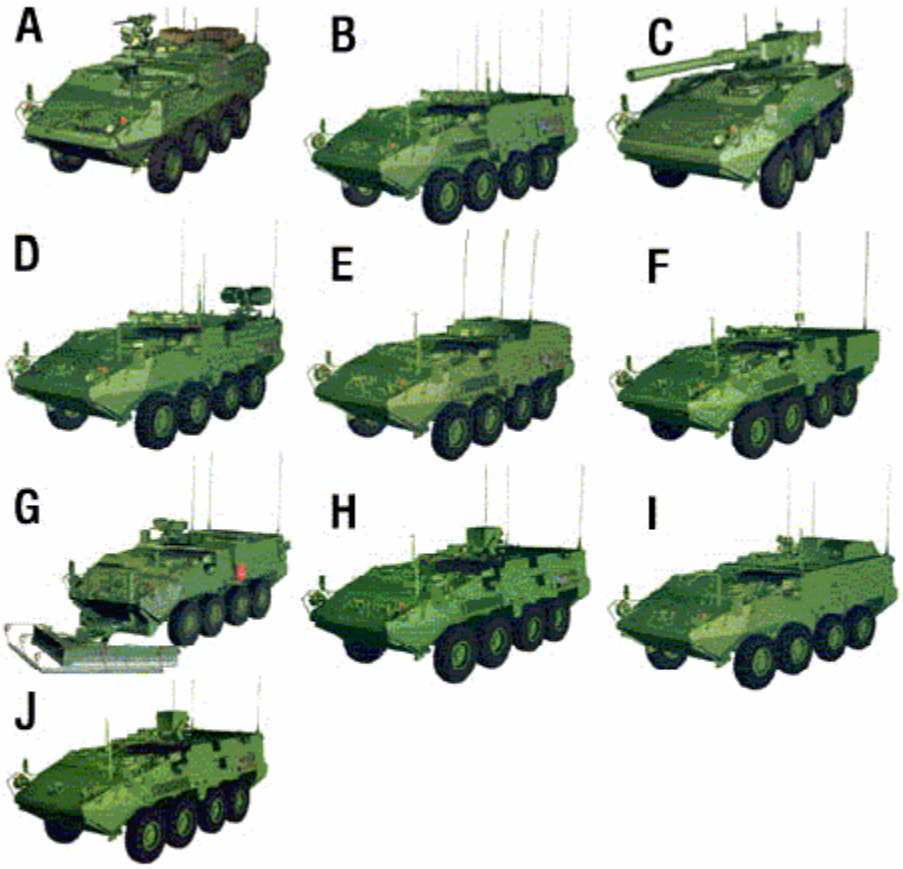
Sponsor Decision: Start with one program, work from there . . . . .

First Program Selected: STRYKER Family of Vehicles

Additional Study Candidates: TBD

STRYKER FAMILY OF VEHICLES

In service with the US Army



Legend

A. Infantry Carrier Vehicle B. Command Vehicle C. Mobile Gun System

D. Fire Support Vehicle E. Medical Evacuation F. Mortar Carrier

G. Engineer Squad Vehicle H. Anti-tank Guided Missle I. NBC Reconnaissance

J. Reconnaissance Vehicle

Results to date:

- Analysis of CDRL data ongoing
- Established process and methodology
- Developed parametric models

- **GOAL: independent CPM determination**

Cost Per Mile (CPM) Estimates

- **CPM estimate - $17.19 (GAO 04-925, including labor, parts & repair)**
- **CPM estimate - $18.78 (Stryker R-TOC Brief)**
- **CPM estimate - $18.23 (based on M113 methodology w/Stryker adjustments)**
- **CPM estimate - $14.53 (based on initial 4 month deployment data)**

Current:

- **CPM estimate (GDLS) - $13.52 garrison**
  $ 8.88 deployed

- **DAU CPM estimate – $ 13.30 garrison**
  $ 7.95 deployed

Recommendations

- **Continue Research**
  - **Complete Stryker analysis**
- **Feedback from sponsor**
- **Feedback from community**
- **Determine path ahead**
- **Develop methodology for conducting suitability studies on other systems**
- **Look at other programs for comparison**
  - **Other services, other types of systems**

NDIA/DAU TST-301 2007 All Stars

1B – Mr. Steve Whitehead, (COMOPTEVFOR)

2B – Col Mike Bohn, USMC (MCOTEA)

3B – Joe Wascavage, (NAVAIR)

SS – Brian Simmons, (ATEC)

LF – Rick Lockhart, (DTRMC)

CF – Dave Duma, (DOT&E)

RF – Steve Zink, (OSHKOSH TRUCKS)

C – Dr. Ernest Seglie, (DOT&E)

P – Jim O'Bryon, CIVLANT (NDIA)

Pinch Hitters: **COL Sam Kyle, USAF (AFOTEC)**

CAPT Rick Scudder, USN (formerly OP-091)

Mr. Pete Nolte, (AT&L)

Mr. Larry Leiby, (TEMA)

Mr. Fred Myers, (AT&L)