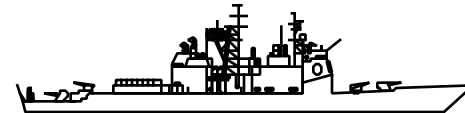
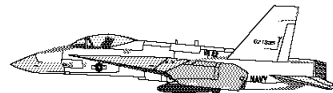
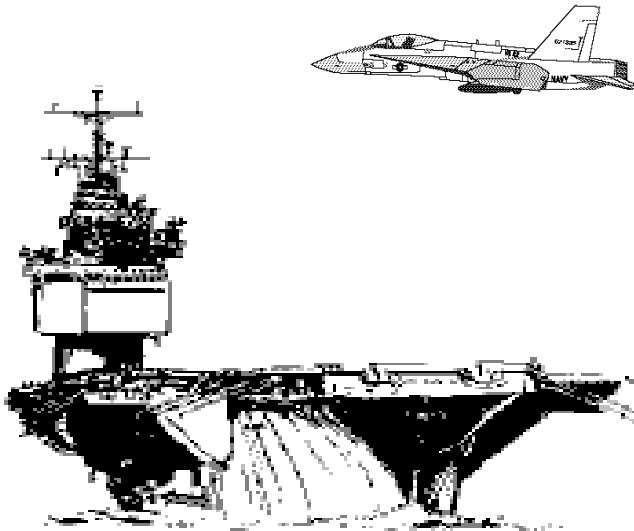




OPNAV HIGH SPEED STRIKE INITIATIVE (HiSS) ROADMAP

N880C/D Capt. Nash; N872 Capt Donahue; N864F Capt Army; N85 F. Shoop

16 July 1997



Prepared for OPNAV by NAWCWPNS-
S. Lyda 473240D 760-939-7395



HiSS Vision



“Reducing current INFRASTRUCTURE & INVENTORIES of weapon systems to provide an AFFORDABLE, COMMON FAMILY of STRIKE WEAPONS which allow an EFFECTIVE, SUPPORTABLE solution to the THREATS of the future (2010)”



MISSION NEED STATEMENT



- **Mission:** Attack, Destroy, & Hold at Risk Short Dwell and/or Time-Critical Targets at Long Standoff Ranges
- **Performance:** Range up to 600 nmi
Average speed M3.5-M7
High weapon survivability
Penetration of 18-36 feet of concrete
Reactive SEAD
- **Constraints:** Treaty
- **Goal:** Family of Hypersonic Cruise Missiles
Neckdown to 1 type of Weapon vice 6 currently
Minimize cost of ownership
2010 IOC
- **Compatibility:** Day, night, adverse weather operation
Navy/Shipboard compatible
F/A-18 E/F, JSF, F-22, F-16, F-15E, B52, B-2, B-1, MLRS,
Surface ships, & submarines

Source: MNS draft,
received 5/22/97

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MEMORANDUM OF AGREEMENT FOR HIGH SPEED STRIKE CAPABILITY



- **PARTIES:**
 - N880C/D CAPT NASH
 - N872 CAPT DONAHUE
 - N864F CAPT ARMY
 - N85 MR. F. SHOOP
- **OBJECTIVE:**
 - LEVERAGE LIMITED RESEARCH AND DEVELOPMENT DOLLARS
 - ESTABLISH A JOINT EFFORT BETWEEN THE OPERATIONAL CODES TO SUPPORT COMMON REQUIREMENTS, TECHNOLOGY, AND ACQUISITION EFFORTS RELATING TO THE MNS.

- **LEAD NAVY EFFORTS:**

Mission Area

Requirements

Science and Technology

Weapon System

Acquisition

Activity

OPNAV N86, N87, and N88

Office of Naval Research

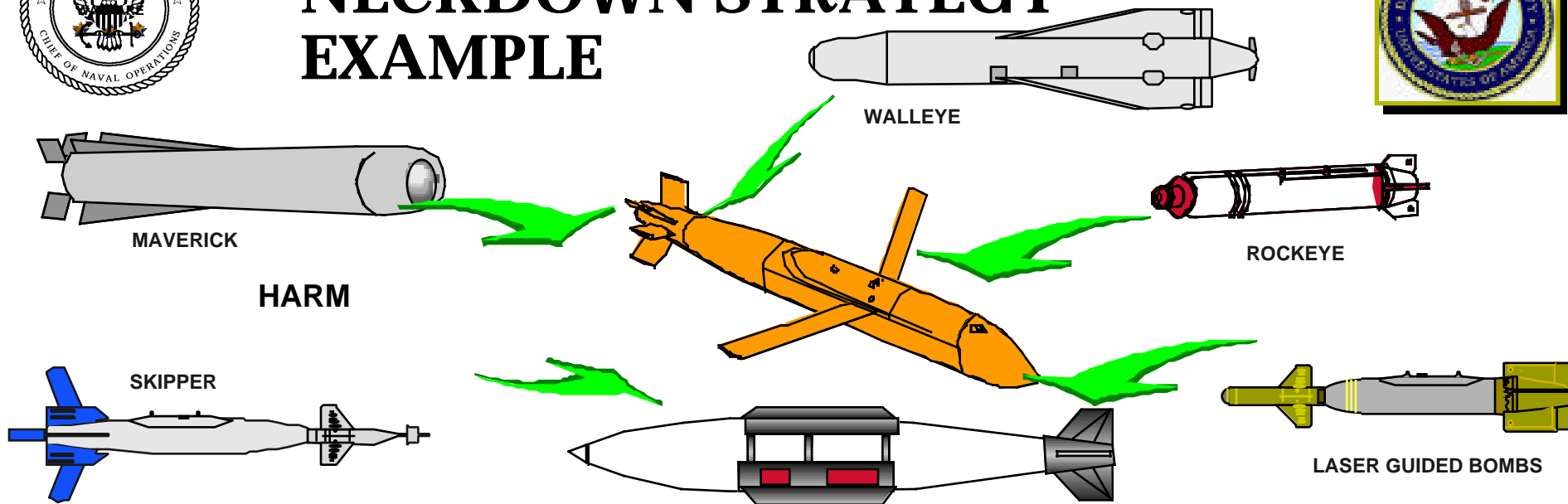
Weapon Department Code 470000D

NAVSEA & NAVAIR IPT

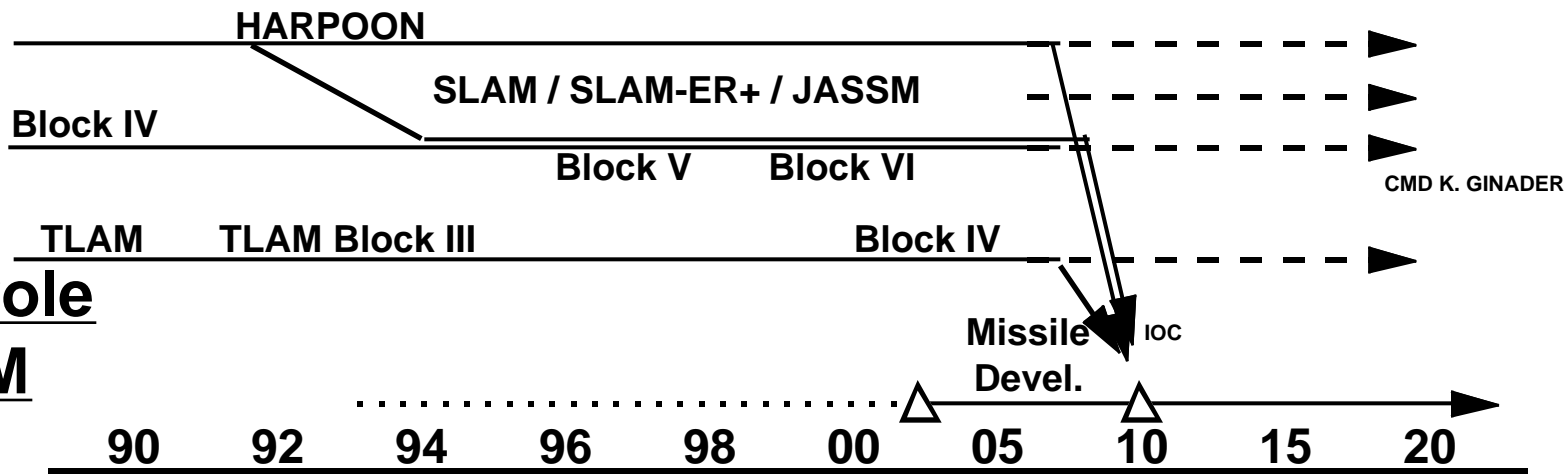
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NECKDOWN STRATEGY EXAMPLE



SOAD





EXISTING HIGH SPEED PROGRAMS



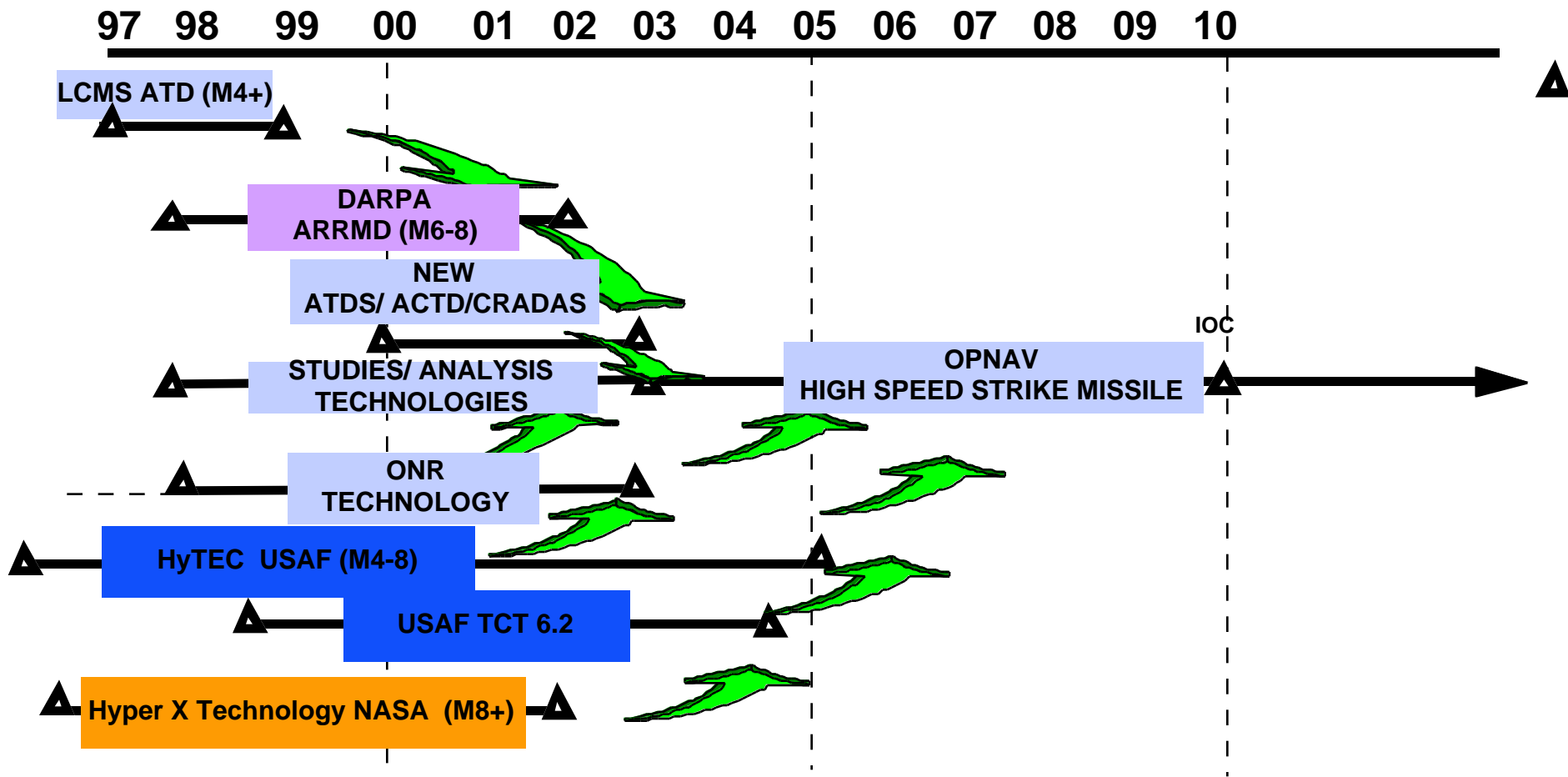
| <u>Program</u> | <u>Goal</u> | <u>Sponsor</u> | <u>Product</u> |
|--|-----------------|-----------------|--|
| Low Cost Missile | M4 Axi RJ Demo | Navy ATD | Flight Demo 99 |
| Hypersonic Weapons Tech. | M6 Tech Base | ONR | DCR Freejet 01-02 Low-Drag Airframe Subsystems Dev't |
| HyTech | M8 Engine | USAF | SCRJ Freejet 01-02 |
| Affordable Rapid Response Missile Demonstration | \$200K / M8 | DARPA | Flight Demo tbd |
| HyperX | Research & Demo | NASA | FY-97 START |
| HS Strike Mission Analy. | Needs Analysis | N880 | MNS Analysis |
| Time Critical Target Study | Techn'y Roadmap | USAF WL (Eglin) | Study/Demo Follow |
| Hard & Deeply Buried Target Study | MS 1 AOA (COEA) | USAF ACC | Study |

M. MUMFORD

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HiSS INITIATIVE TIMEFRAME





HiSS INITIATIVE STATEMENT OF OBJECTIVES (SOO)



- **INITIATE A COMMON HiSS WEAPONS FAMILY**
- **NECKDOWN CURRENT DIVERSE INVENTORIES TO INCREASE STRIKE WEAPONS AFFORDABILITY**
- **FOCUS ON SYSTEM LEVEL CONCEPTS**
 - **BATTLE SPACE INTEGRATION, PLATFORMS, WEAPONS**
- **DEVELOP AND DEMONSTRATE SYSTEMS, PROCESSES, AND COST MODELS TO ENSURE AFFORDABILITY**
 - **CONDUCT THE INITIATIVE WITHIN A JAST/JSF FRAMEWORK**
 - » **FORM IPT'S IN REQUIREMENTS, SYSTEMS, TECHNOLOGIES, AND PROGRAMS**
 - » **FLOW REQUIREMENTS FROM STRATEGY TO TASKS TO TECHNOLOGIES**
 - » **ALIGN EXISTING TECHNOLOGY EFFORTS WITH REQUIREMENTS**
 - » **CONDUCT SYSTEM UNIQUE DEMONSTRATIONS**
 - **IMPLEMENT STREAMLINED ACQUISITION PROCESSES**

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HISS SYSTEM NEEDS



● TARGETING

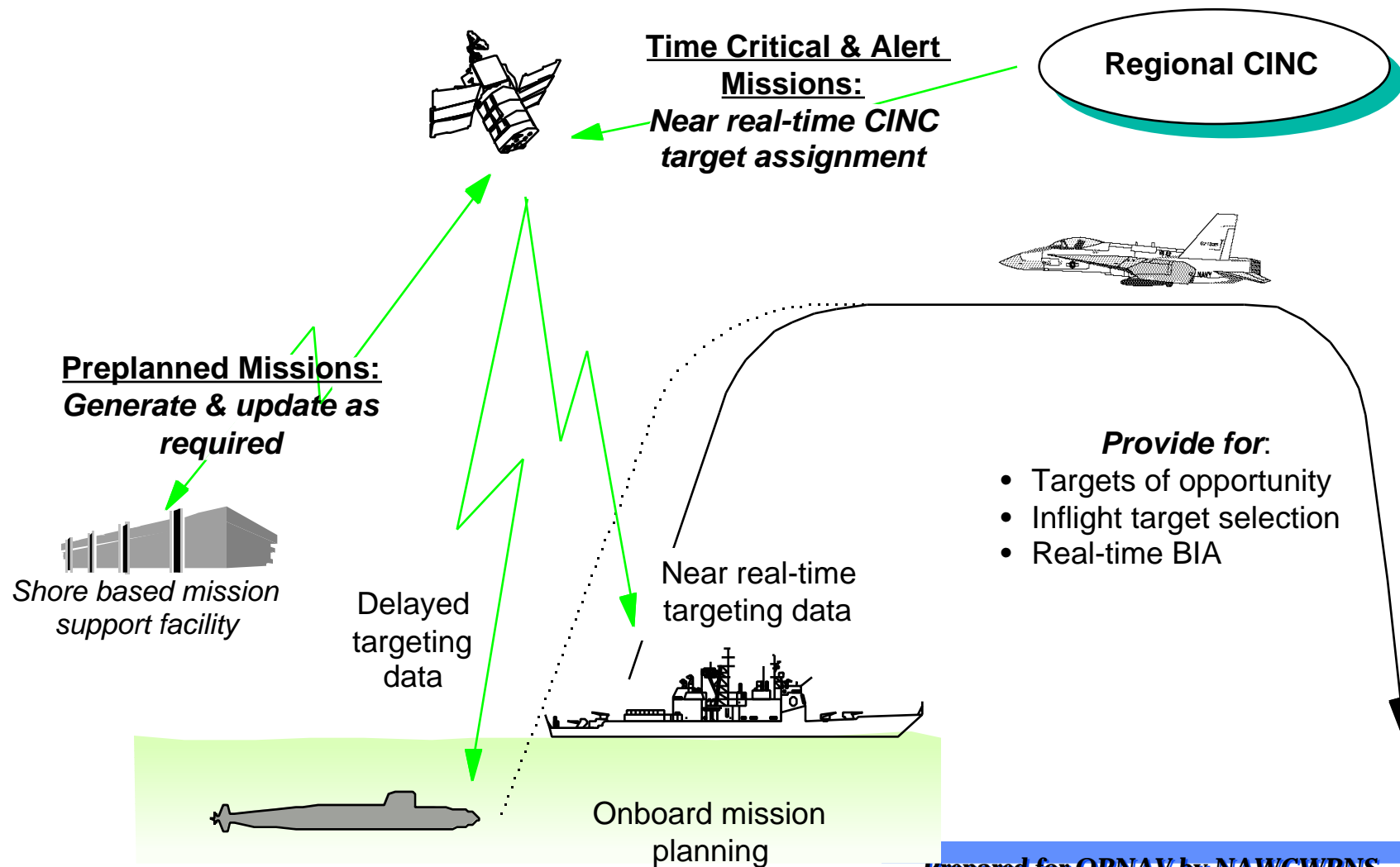
- ***“FIRST DAY, FIRST STRIKE” / INTERDICTION MISSIONS***
 - » **PLANNED TARGETING PACKAGES**
 - » **STATIC HIGH VALUE, HARDENED FIXED TARGETS**
- ***THEATER RESPONSE***
 - » **UNPLANNED TARGETING PACKAGES**
 - » **RAPID RESPONSE TO EVOLVING TARGETS, THREATS, OPERATIONAL REQUIREMENTS**
 - » **NEAR REAL-TIME TARGETING DATA ASSIGNMENT, MISSION PLANNING**

● EMPLOYMENT

- ***COMPATIBILITY WITH PORTIONS OF EVOLVING TLAM INFRASTRUCTURE***
 - » **SURFACE / SUBMARINE VERTICAL LAUNCH**
- ***REAL-TIME COMMUNICATIONS***
 - » **INTEGRATED THEATER LEVEL TARGET ASSIGNMENT / BDI NETWORK**



CONOPS IMPLEMENTED WITHIN FUTURE COMMAND STRUCTURE



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PROVIDE THEATER CINCS NEAR REAL-TIME CAPABILITY



Survive in the 2005-2010 threat environment

- *Highly integrated C3I network*
- *Improved anti-cruise missile capabilities*

Provide near real-time, long range targeting

- *C³I networks for targeting assignments*
- *INS/GPS navigation for rapid mission planning*

Expand target set and mission coverage

- *High value fixed / hardened targets*
- *Time Critical Targets (TCT's)*
- *Deep Strike / Interdiction*
- *First day / first strike capability*

Retain compatibility with portions of the existing cruise missile support infrastructure

- *Air / Surface / Sub vertical launch*
- *Mission planning, communication systems*



FAMILY OF WEAPONS VS. TARGET SET



P
R
I
M
A
R
Y

AIR LAUNCHED VERSION

Time Critical Targets
Mobile/Relocatable SAMS
Relocatable SS Missiles
Aircraft on the Ground
Relocatable Radars
Ships

SURFACE LAUNCHED VERSION

Ammunition/POL Logistics
C4 Facilities
Airfield Facilities
Port Facilities
Air Defense Command and Control Nodes
Industrial Buildings
Bridges
Deeply Buried Targets
Weapons of Mass Destruction (Production,
Assembly & Storage Facilities)

S
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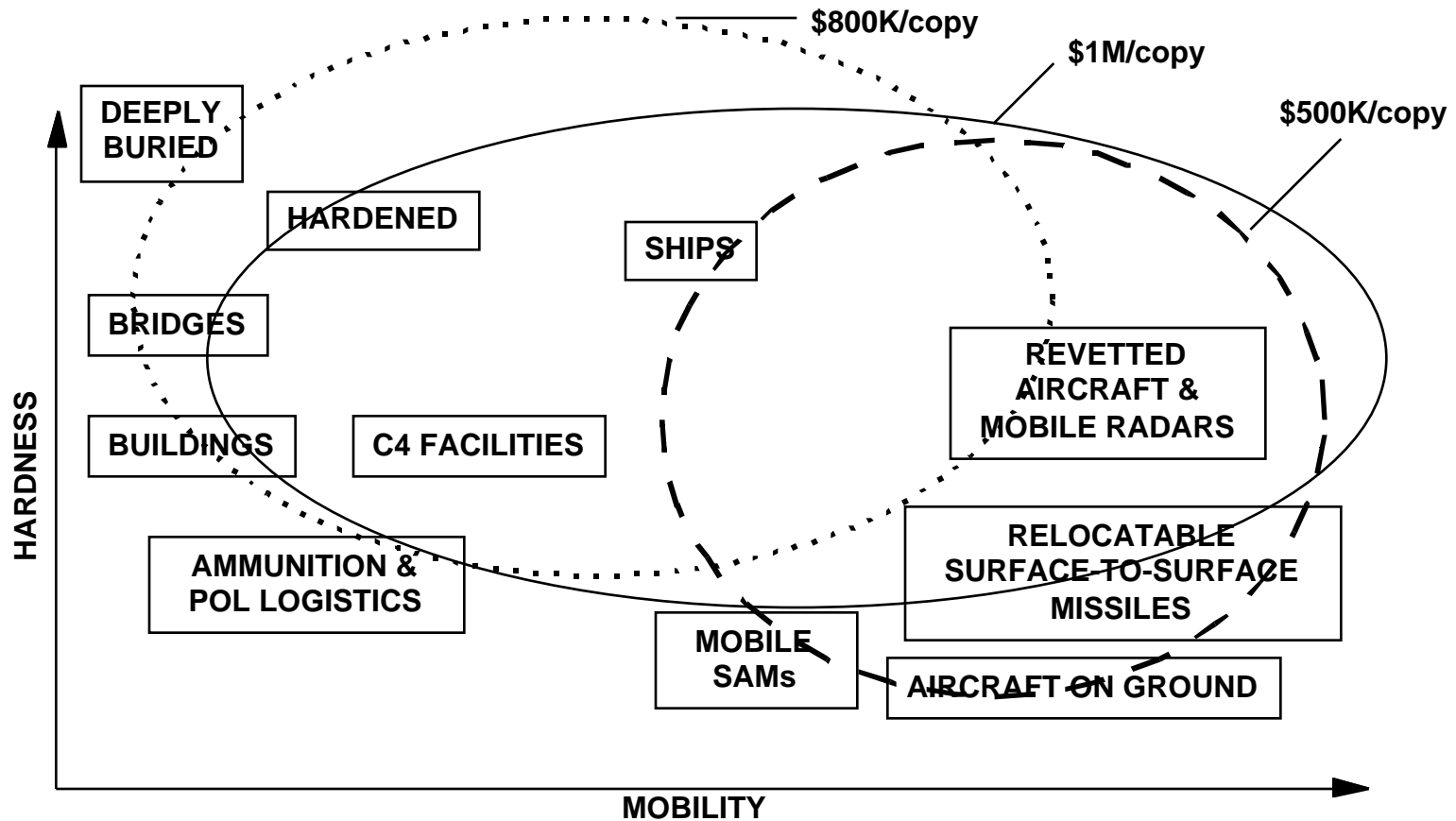
Ammunition/POL Logistics
C4 Facilities
Airfield Facilities
Port Facilities
Air Defense Command and Control
Nodes

Time Critical Targets
Mobile/Relocatable SAMS
Relocatable SS Missiles
Aircraft on the Ground
Relocatable Radars
Ships

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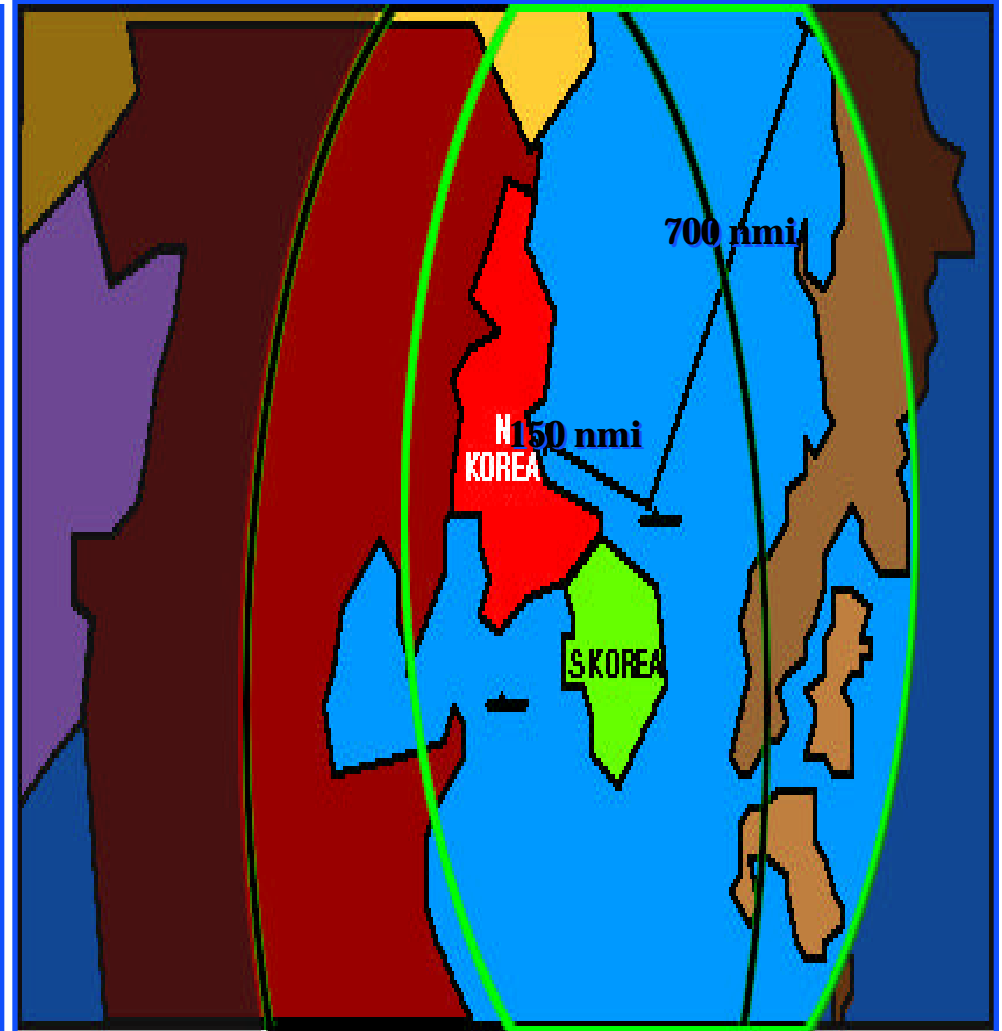
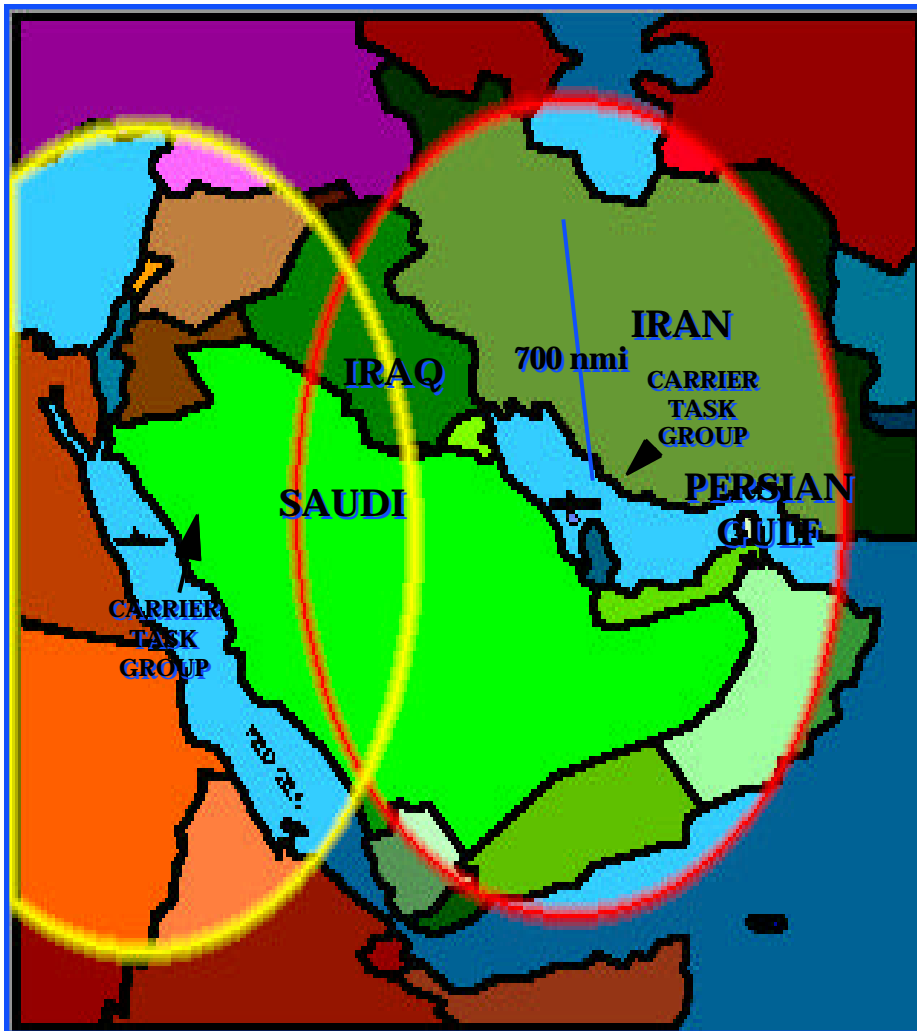


NOTIONAL COST VS. TARGET COVERAGE



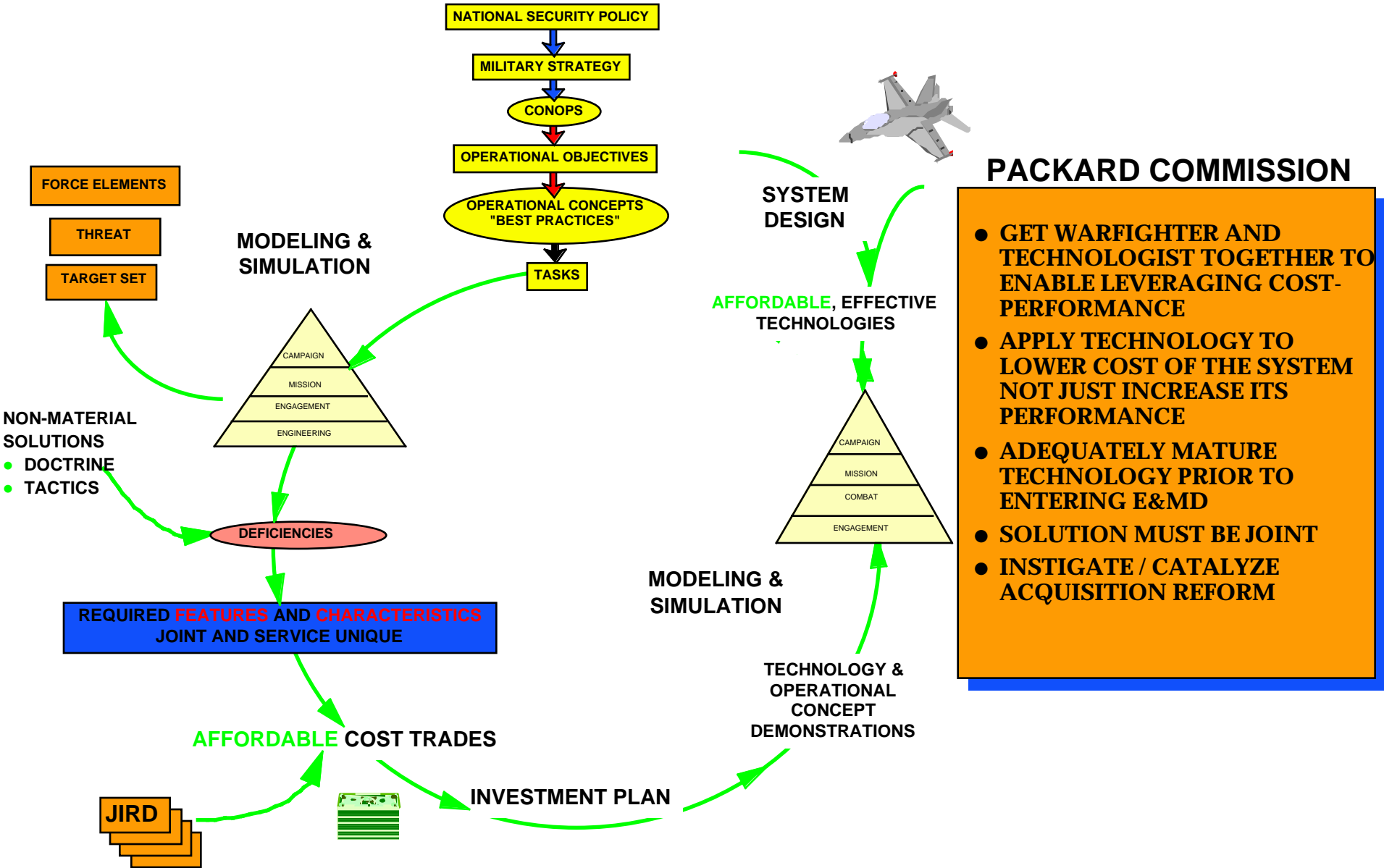


HiSSM FORCE PROJECTION



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STRATEGY-TASK-TECHNOLOGY



PACKARD COMMISSION

- GET WARFIGHTER AND TECHNOLOGIST TOGETHER TO ENABLE LEVERAGING COST-PERFORMANCE
- APPLY TECHNOLOGY TO LOWER COST OF THE SYSTEM NOT JUST INCREASE ITS PERFORMANCE
- ADEQUATELY MATURE TECHNOLOGY PRIOR TO ENTERING E&MD
- SOLUTION MUST BE JOINT
- INSTIGATE / CATALYZE ACQUISITION REFORM



ACQUISITION STREAMLINING INITIATIVES



- **STRATEGY-TASK-TECHNOLOGY**
- **USE OF INTEGRATED GOVERNMENT & INDUSTRY PRODUCT TEAMS**
- **CONTRACTOR PROPOSED SOW IN RESPONSE TO JOINTLY DEVELOPED SOO (4 PAGES)**
 - **CONTRACTOR PROPOSED CDRLs**
 - **PAGE LIMITED, CONTRACTOR FORMAT**
- **ON LINE ACCESS TO CONTRACTOR MANAGEMENT INFORMATIONS SYSTEM AND DATA BASES**
 - **ELIMINATES MOST DELIVERABLES**
 - **INSIGHT VS OVERSIGHT**
 - **EARNED VALUE APPROACH TO COST/PERFORMANCE**
- **COMMERCIAL STANDARDS, BEST COMMERCIAL/INDUSTRY PRACTICES**



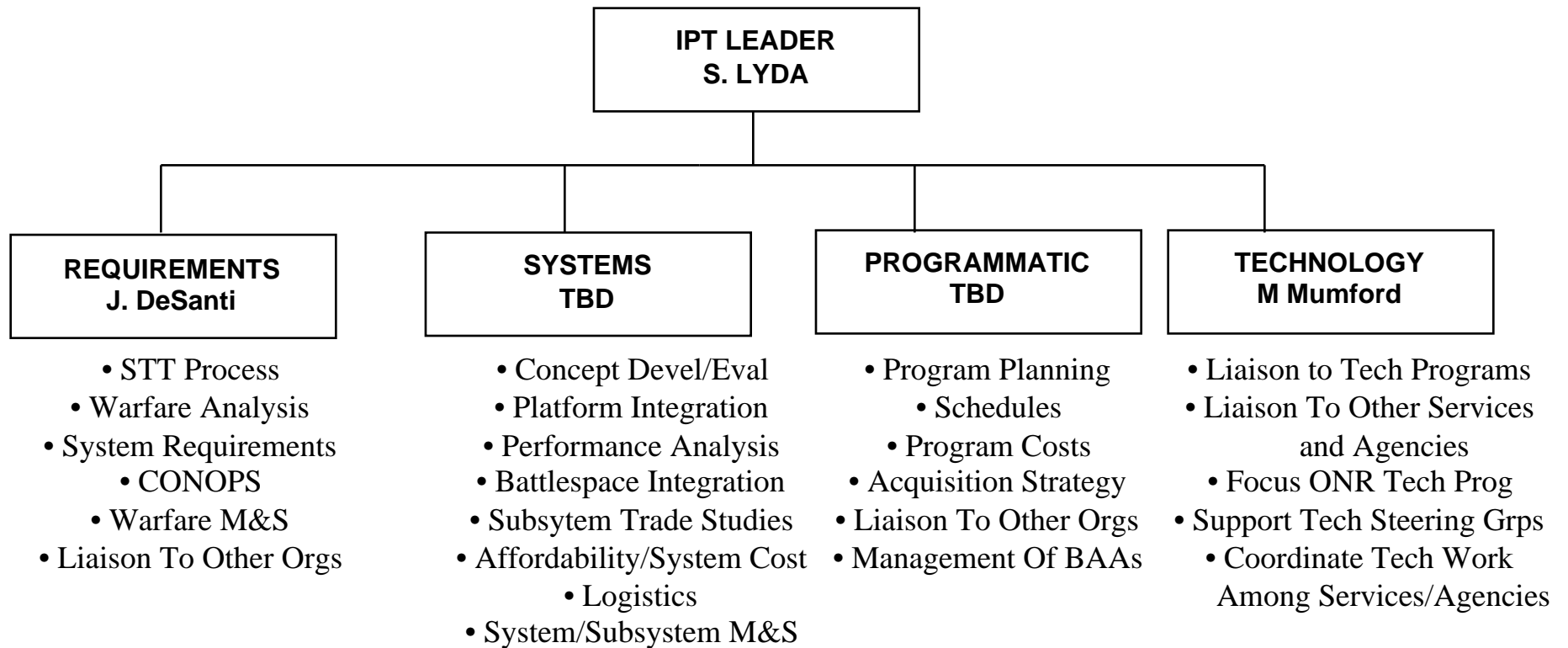
ACQUISITION STREAMLINING INITIATIVES (CONT)



- **COST AS INDEPENDENT VARIABLE**
- **SUCCINCT RFP**
 - **SHARED EVALUATION STANDARDS**
 - **“DESIGN GUIDELINES” VS “HOW TO” SPECIFICATIONS**
 - **MULTI-YEAR PROCUREMENT**
 - **DISCUSSIONS UP TO SOURCE SELECTION**
 - **DETAILED CR/DR**
 - **PAPERLESS / ELECTRONIC RFP**
 - **PAPERLESS SOURCE SELECTION, CONTRACT, DE-BRIEF**



HiSS IPT STRUCTURE





REQUIREMENTS IPT (R-IPT) CHARTER



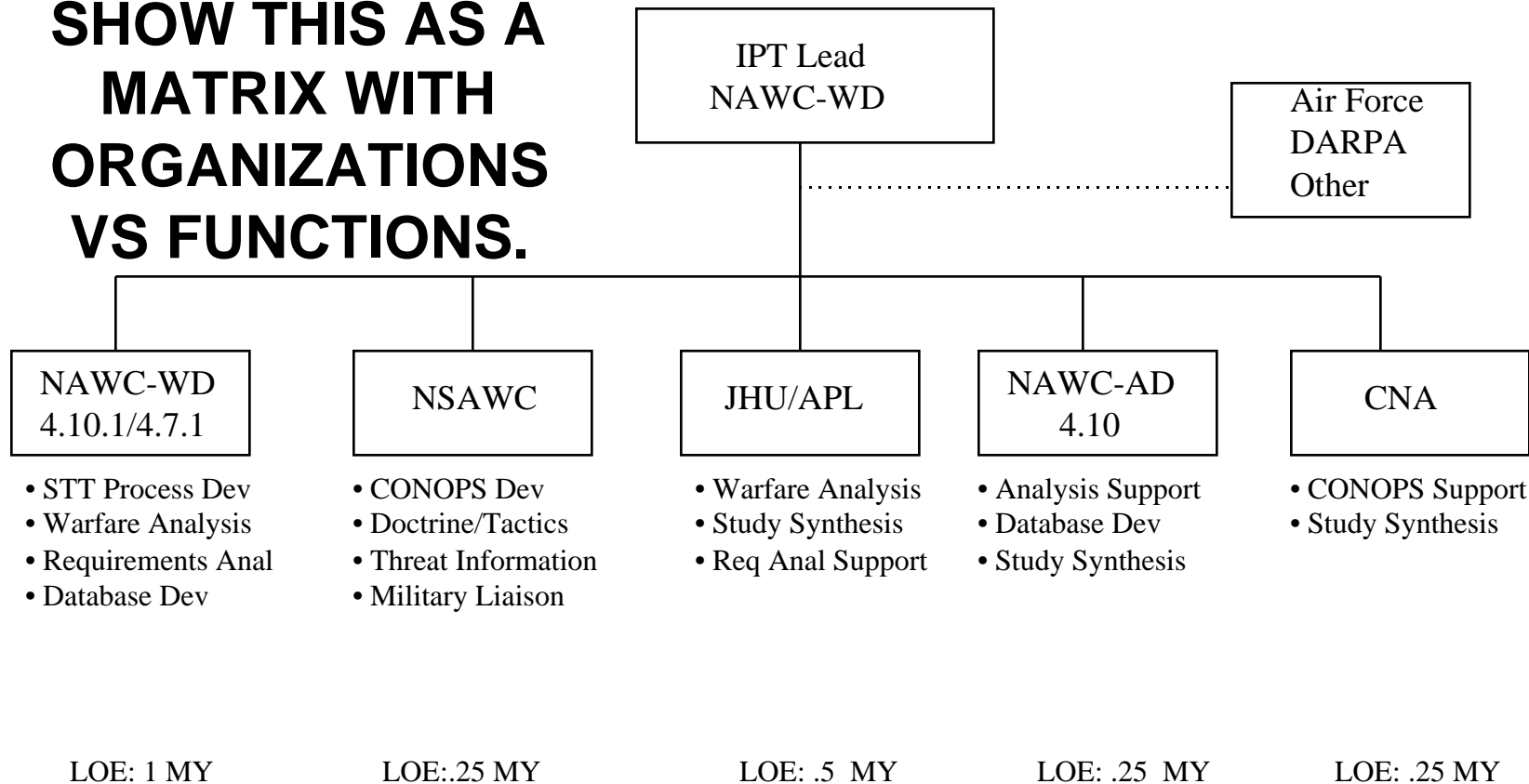
- **Develop Top-Down Strategy-to-Task (STT) Requirements Analysis Process Based On JAST/JSF Model**
- **Identify System-Level High Speed Strike Requirements Through Implementation Of STT Process**
- **Develop Concept Of Operations For High Speed Strike, Including Mission Selection, Mission Planning, BMC4I, and Tactical Employment**
- **Review, Integrate, and Synthesize Existing and Ongoing High Speed Strike Studies To Support Requirements Development**
- **Foster A Joint-Service Analysis Culture Which Supports The Evolution Of Common Requirements**
- **Develop A Common, Well-Documented, and Validated Modeling And Simulation Environment For High Speed Strike Analyses**



R-IPT ORGANIZATIONAL RELATIONSHIPS



SHOW THIS AS A MATRIX WITH ORGANIZATIONS VS FUNCTIONS.

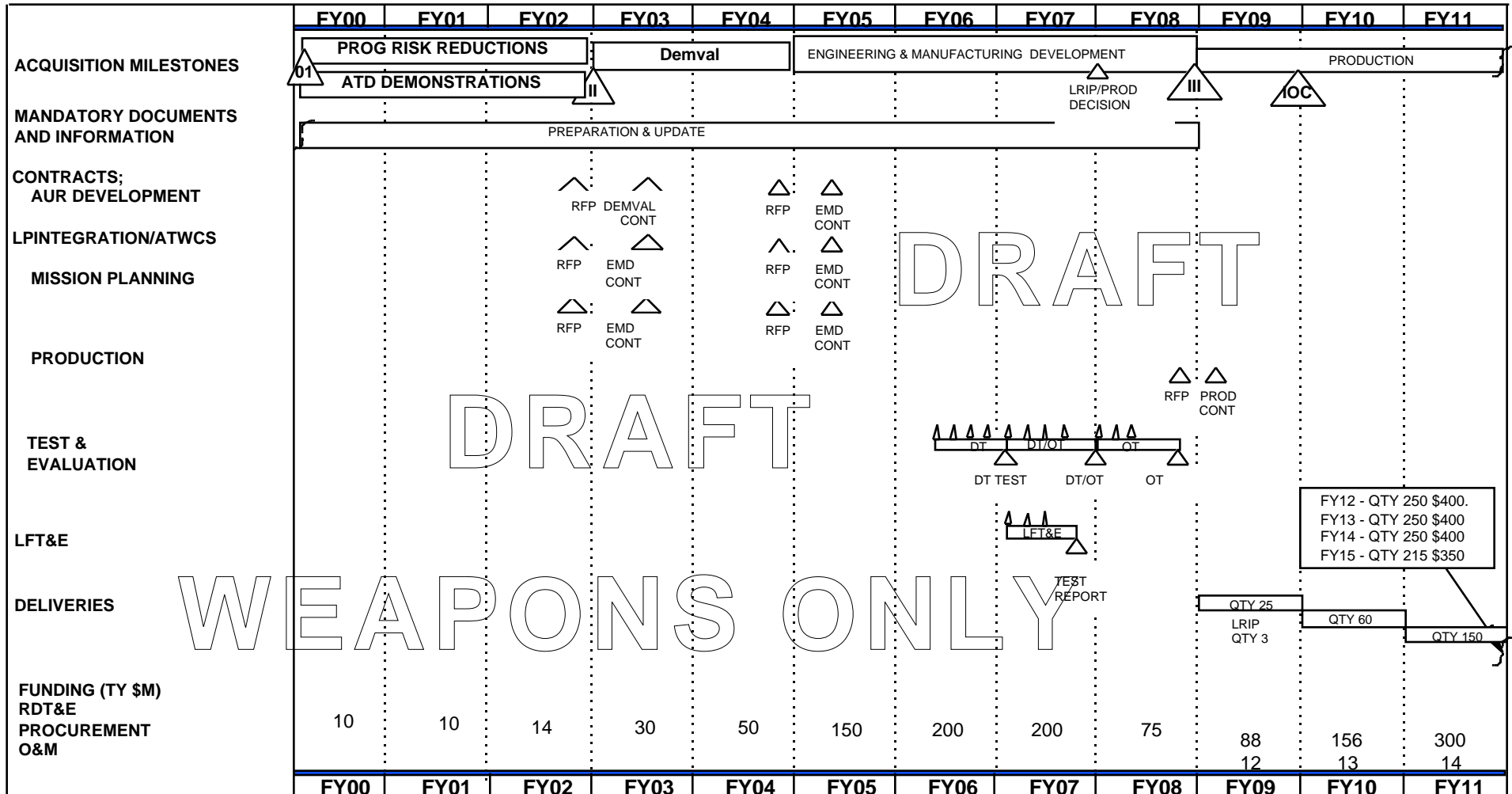




HiSS DEVELOPMENT CYCLE (NOTIONAL)



DRAFT 17 JULY 97



g:\peocul\fasthawk\structure\fsthkt4.ppt

▲ FLIGHT TEST

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SUMMARY



- **THE HiSSM INITIATIVE IS BASED UPON THE 'HIGH SPEED STRIKE' MNS #**
- **THE HiSSM INITIATIVE IS JOINTLY SUPPORTED BY OPNAV N85/86/87/88**
- **HiSSM PROGRAM WILL PROVIDE SUBSTANTIAL COST SAVING THROUGH A NECKDOWN STRATEGY FROM MULTIPLE WEAPONS TO A COMMON WEAPON FAMILY**
- **THE HiSSM INITIATIVE WILL BE PATTERNED AFTER THE JSF PROGRAM STRUCTURE**



STATUS



● CURRENT EFFORTS

- WORKING OPNAV MOA
- OVERLAYING JSF APPROACH ON HiSS INITIATIVE
- FORMING IPT'S (REQUIREMENTS, SYSTEMS, TECHNOLOGY, ETC)
- DEVELOPING VIDEO
- MERGING MISSION ANALYSIS STUDIES
- MERGING RELATED TECHNOLOGY & PROGRAM EFFORTS
 - » MEETING AT WP/AFB 28 AUG
- DEVELOPING SCHEDULE AND ROM COSTS

● NEAR TERM GOALS

- POM FOR 00 REQUIRED BY 1 SEPT
- INFORMATION DAY SCHEDULED SEPT 16TH

● FUTURE EFFORTS

- CALL FOR FY 00 ATD CONCEPTS



NAVY INVENTORY PROJECTION

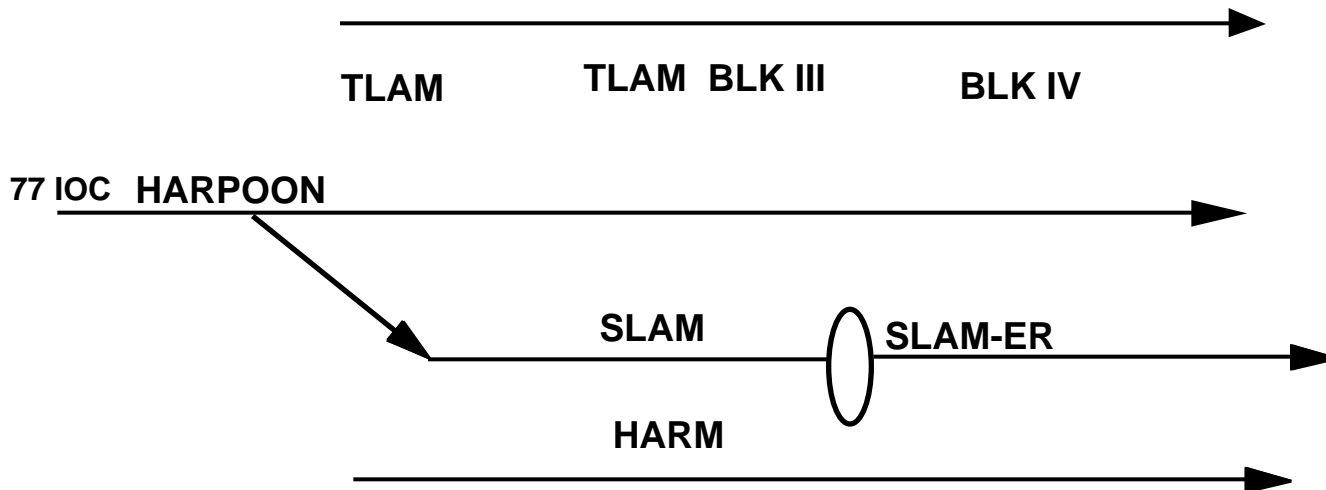


75 80 85 92 94 96 98 00 05 10

SOPD



SOAD



CMD K. GINADER

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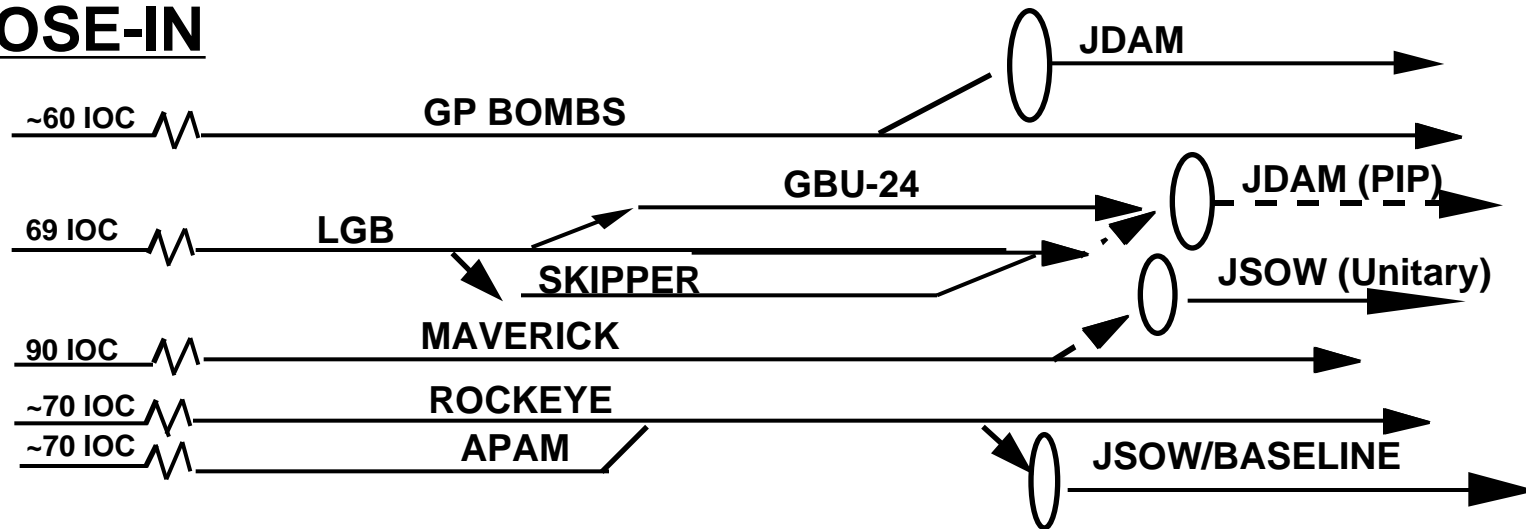


NAVY INVENTORY PROJECTION

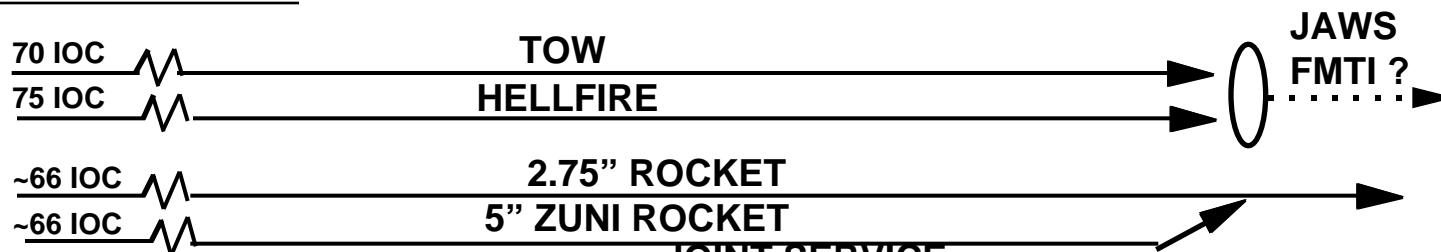


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CLOSE-IN



AMPHIBIOUS



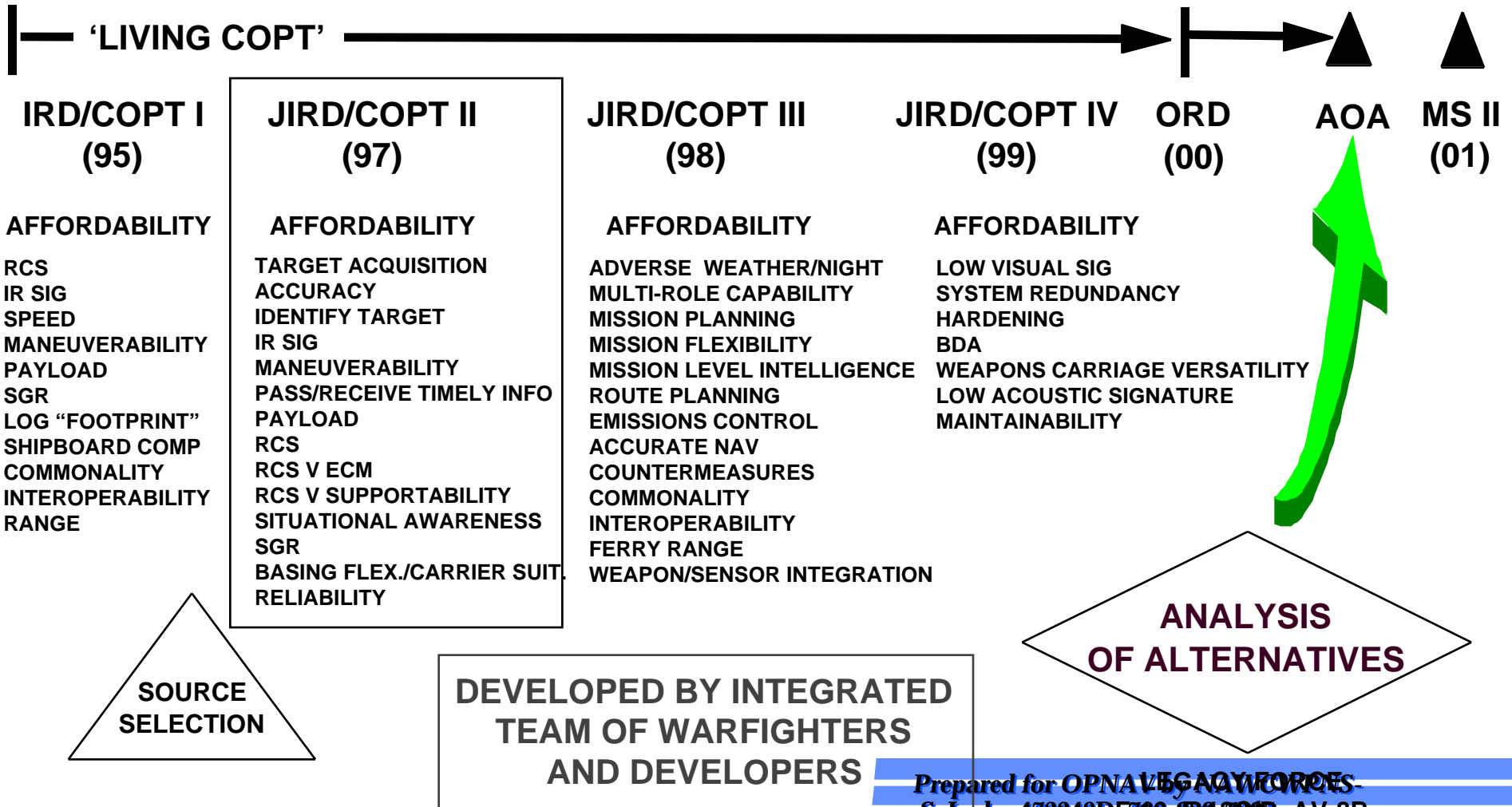
JOINT SERVICE
IMPROVEMENT PROGRAM

CMD K. GINADER

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ROADMAP TO THE ORD WEAPON SYSTEM ATTRIBUTES EVALUATED OVER TIME



Prepared for OPNAV by AAW/OPNES-
S. Lyda 473240DF760, 39-8395, AV-8B



JSF ACQUISITION STREAMLINING



- **STRATEGY-TASK-TECHNOLOGY**
- **USE OF INTEGRATED PRODUCT TEAMS**
 - **INDUSTRY PARTICIPATION**
- **CONTRACTOR PROPOSED SOW IN RESPONSE TO JOINTLY DEVELOPED SOO**
 - **LIMITED, HIGHLY FOCUSED OBJECTIVES**
 - **CONTRACTOR PROPOSED CDRLs BASED ON GENERAL GUIDANCE IN RFI**
- **ON LINE ACCESS TO CONTRACTOR MANAGEMENT INFORMATIONS SYSTEM AND DATA BASES**
 - **ELIMINATES NEED FOR MOST DELIVERABLES**
 - **INSIGHT VS OVERSIGHT**
 - **EARNED VALUE APPROACH TO COST/PERFORMANCE**
- **COMMERCIAL STANDARDS, BEST COMMERCIAL/INDUSTRY PRACTICES**
- **PROPULSION MANAGEMENT IPT**



ACQUISITION REFORM



- **JIRD PROCESS W / INDUSTRY AND WARFIGHTERS**
- **OPEN ATMOSPHERE**
- **COST-PERFORMANCE TRADES**
- **COST AS INDEPENDENT VARIABLE**
- **COMMON COST MODEL**
 - **JOINT COMMON COST MODEL DEVELOPED**
 - **COST ESTIMATES DEVELOPED BY JOINT INDUSTRY/GOV'T TEAM**
 - **KEY GOV'T STAKEHOLDERS PARTICIPATE ON COST ESTIMATING TEAM**
- **AVIONICS ARCHITECTURE DOCUMENT**
- **VIRTUAL STRIKE WARFARE ENVIRONMENT**
- **WORLD WIDE WEB**
- **CDP PHILOSOPHY - DEMO ONLY WHAT'S NEEDED**
- **MIRFS**
 - **COMPETITION AT SUBLEVEL AVAILABLE TO ALL PRIMES**
 - **DELAYED CONFIGURATION DECISIONS**