

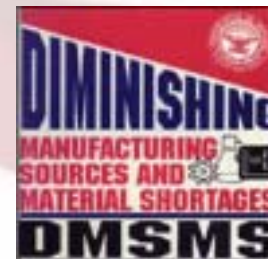


U.S. Army Materiel Command

LTC Alan Lee

DoD DMSMS Materiel Subgroup Lead

*DoD Diminishing
Manufacturing
Sources & Material
Shortages (DMSMS)
Programs*





Industrial Base Vision

A Responsive, Innovative, Lean Cost/ Process with an Efficient Manufacturing Base Capable of...

- ❖ Meeting National Security Missions
- ❖ Integrating Lean/Agile Manufacturing Concepts
- ❖ Satisfying Defense Future Systems Requirements
- ❖ Migrating to Public-Private Partnerships

*Assure Warfighter
Readiness!*

*Commercialize
When Economically
Feasible at Minimum Cost
& Risk*

ESSENTIAL IN PEACE, INDISPENSABLE IN WAR



The 21st Century Defense Industrial Base

- Capability & Capacity Based -

*A New Millennium...New Definitions...New Culture...New Sustainment Philosophy...
Requires New Technologies...New Products...Innovative Business Arrangements!*

Maintenance &
Renovation

Virtual parts
supplier

Integrated
Nano &
Biomechanical
Technologies

Chip Foundry

**INTEGRATED-
MATRIXED
CAPABILITIES**

Virtual Prototyping

Production of Flat
Panel Displays

Electronic Product
Data Management

Demilitarization

Flexible for small
quantity production

EMP Hardening
Technologies

Storage & Out-
loading

Source of supply
for Obsolete items
or Single point
items

Goal ...Joint Pull Production...Reconfigurable & Responsive Manufacturing . . . Rapid Acquisition

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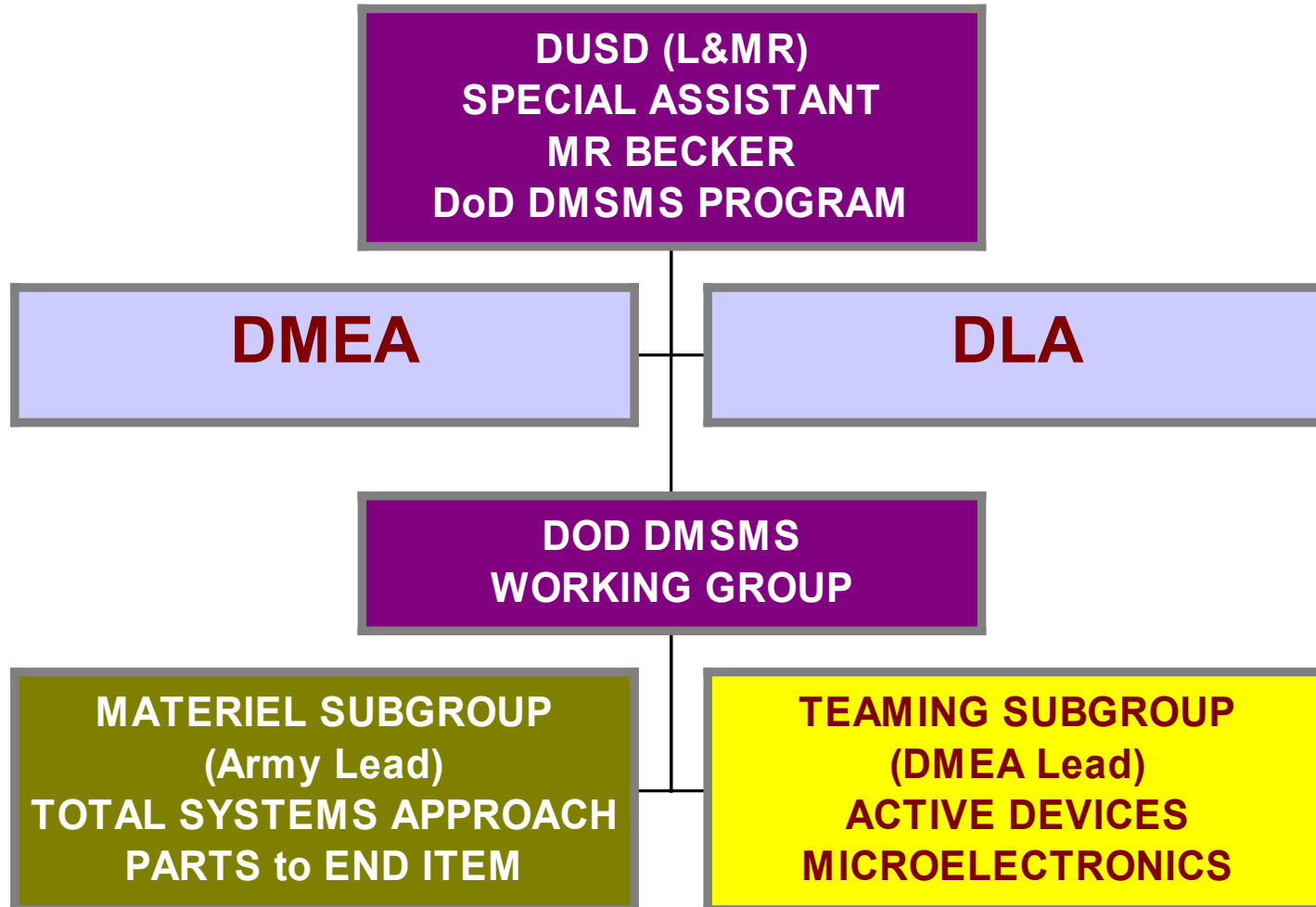
Diminishing Manufacturing Sources & Material Shortages (DMSMS): What Is It?

- ❖ **Industrial Capability.** ...Actions shall address product technology obsolescence, replacement of limited-life items, regeneration options for unique manufacturing processes, and conversion to performance requirements at the subsystems, component, and spares levels. Contained in Interim Defense Acquisition Handbook, 30 Oct 02, Section C2.9 (Business Strategy).
- ❖ DMSMS is the loss or impending loss of manufacturing or production sources, or suppliers of components, end items, and/or raw materials. DMSMS can occur at any point in the life cycle of an acquisition program. It occurs when a known manufacturer or producer ceases manufacture or production on an item required for procurement and/or required to sustain, repair or build a system. Obsolescence is the reactive mode of DMSMS management. OSD policies on DMSMS are contained in DOD 4140.1-R, Chapter 3. Army policy on DMSMS is contained in AR 700-90, Chapter 3.
- ❖ **Army Diminishing Manufacturing Sources and Material Shortages (DMSMS).** The goal of the Army DMSMS program is to provide a comprehensive and coordinated program that supports efficient and effective resolutions of obsolescence/non-availability/single source issues. The industrial base program will implement DMSMS procedures relative to non-availability and obsolescence of specialty chemicals, materials, parts and end items. These procedures will be in accordance with DoD4140.1-R and will be integrated with the industrial base planning and analysis effort. AR700-9, Charter 3-9.

TRANSLATION: DMSMS IS A SINGLE POINT FAILURE THAT INTERRUPTS THE MANUFACTURE, FABRICATION, PRODUCTION, OR REPAIR OF ANYTHING!



DoD DMSMS Structure

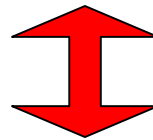
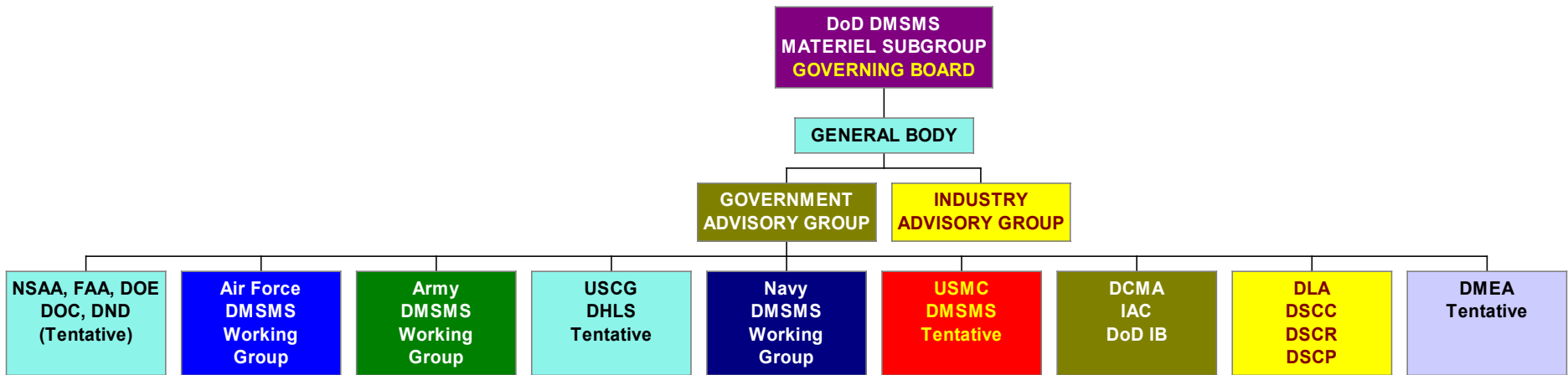


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DMSMS Materiel Subgroup

Under Development



JOCG
(Conventional AMMO)

- DoD Fuze WG
- Explosives & Propellants SG
- IB SG:
 - DMSMS SG
 - Energetic & Munitions SG

JCAA

- Aging Aircraft Obsolescence & DMSMS SG

NASA

JS CBRN Defense



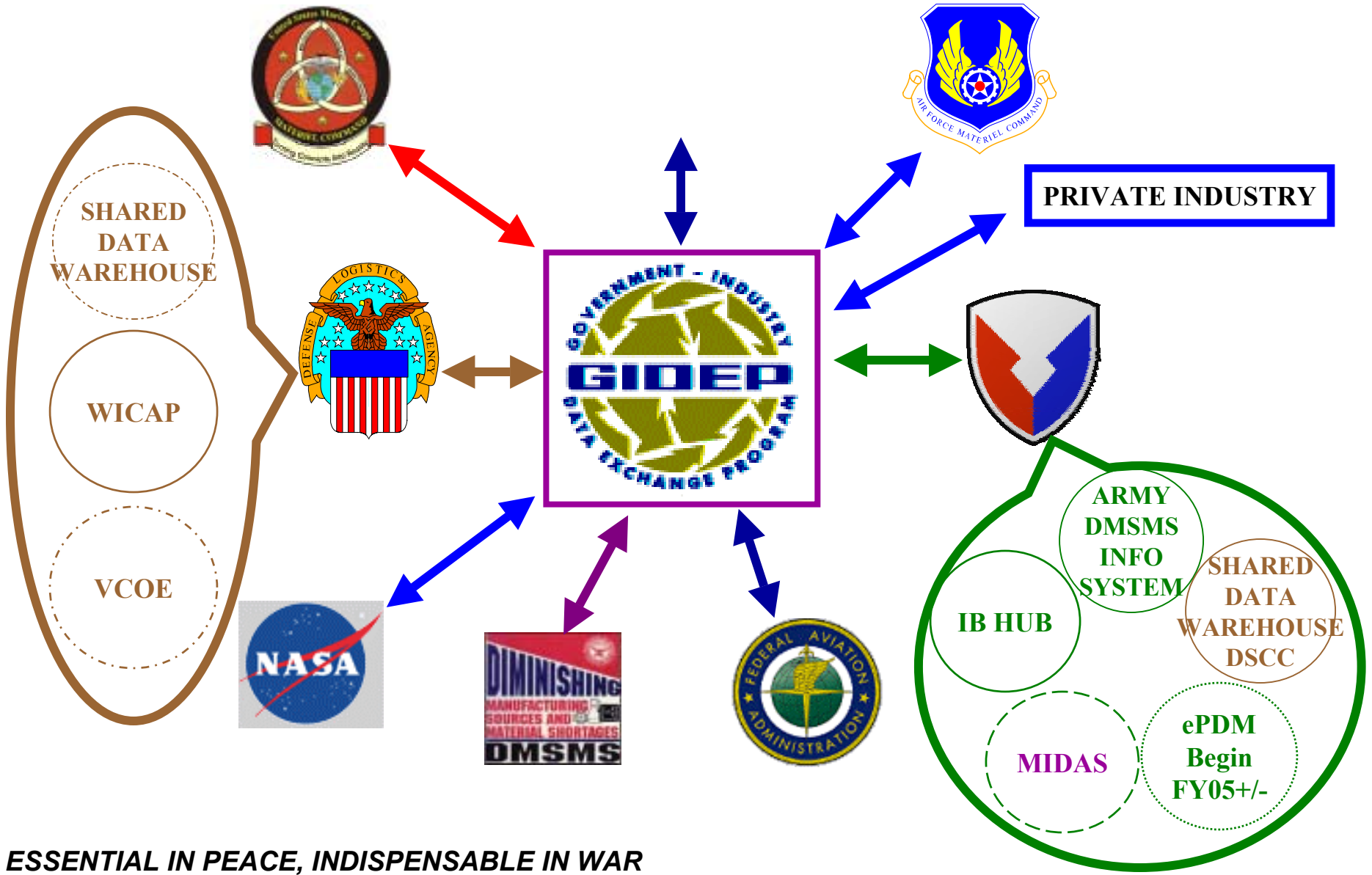
= PEO/PM MATRIX SUPPORT FOCUS

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DOD DMSMS VISION

A Virtual GIDEP Concept



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U.S. Army Portal to GIDEP

Developing an Army DMSMS Center of Excellence (COE)...

- ❖ **ARMY DMSMS INFO SYSTEM** - The Portal, with Army DMSMS Mission Library & Tools.
- ❖ **SHARED DATA WAREHOUSE** - Link To Defense Logistics Agency (DLA).
- ❖ **Munitions Disposition Action System (MIDAS)** - Joint Ordnance Commander's Group Ammunition Configuration/Bill-of-Material (BOM) Database.
- ❖ **Industrial Base (IB) HUB** - IB Information Portal, Library & Tools.
- ❖ **Enterprise Product Data Management (ePDM)** - Standardized Future Configuration Management/BOM.



A DMSMS Materiel Approach...

FACTORS...

- ❖ **Industrial Base Capabilities Assessments**
- ❖ **Systems Engineering - Design/Configuration**
- ❖ **Logistics - Sustainment and Readiness**

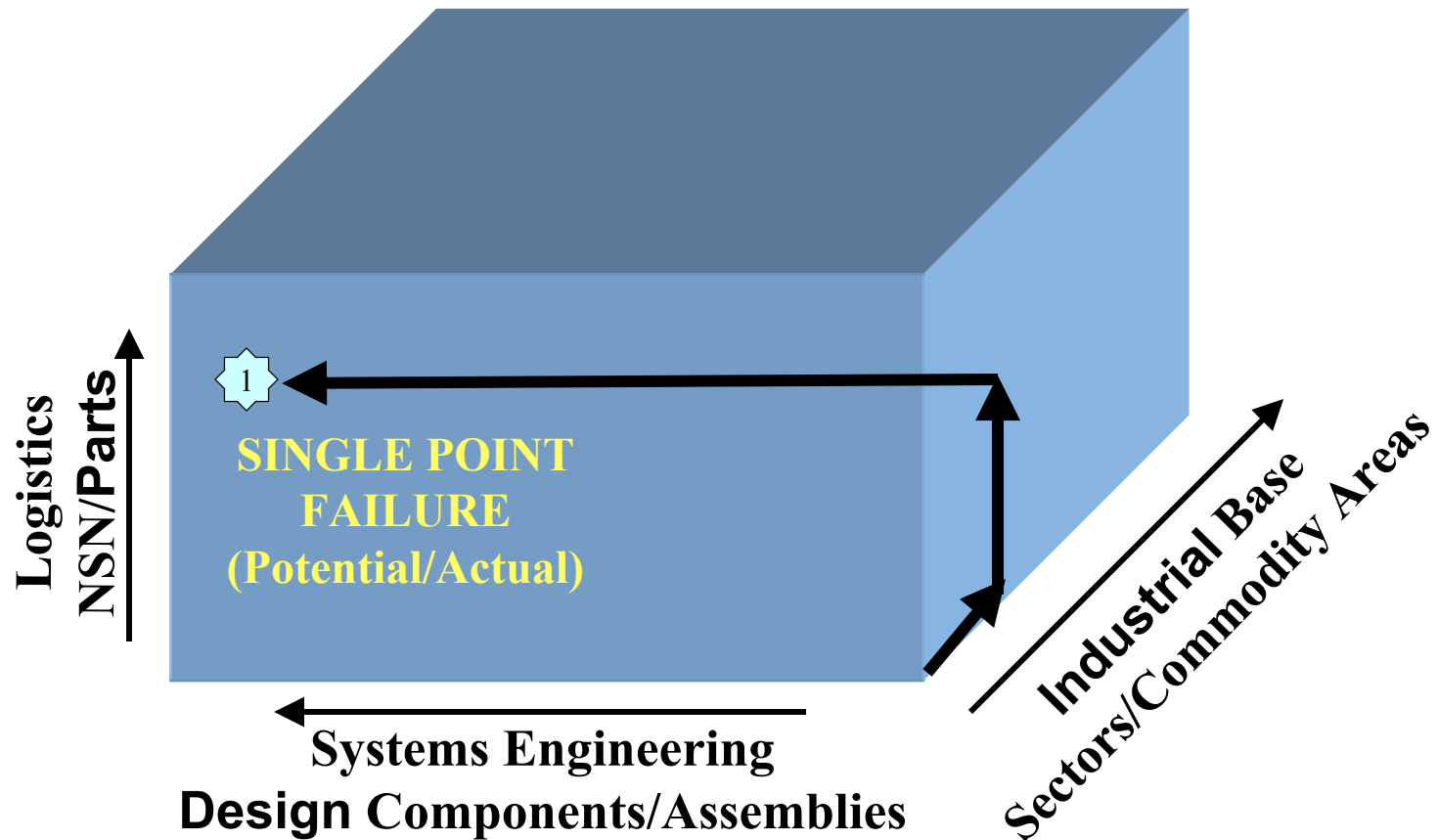
***A TOTAL
SYSTEMS
APPROACH!***

***End Items
Assemblies
Black Box/LRUs
Components
Piece Parts
Raw Materials
Chemicals***

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IDENTIFYING DSMSMS or SINGLE POINT FAILURE "POINTS"



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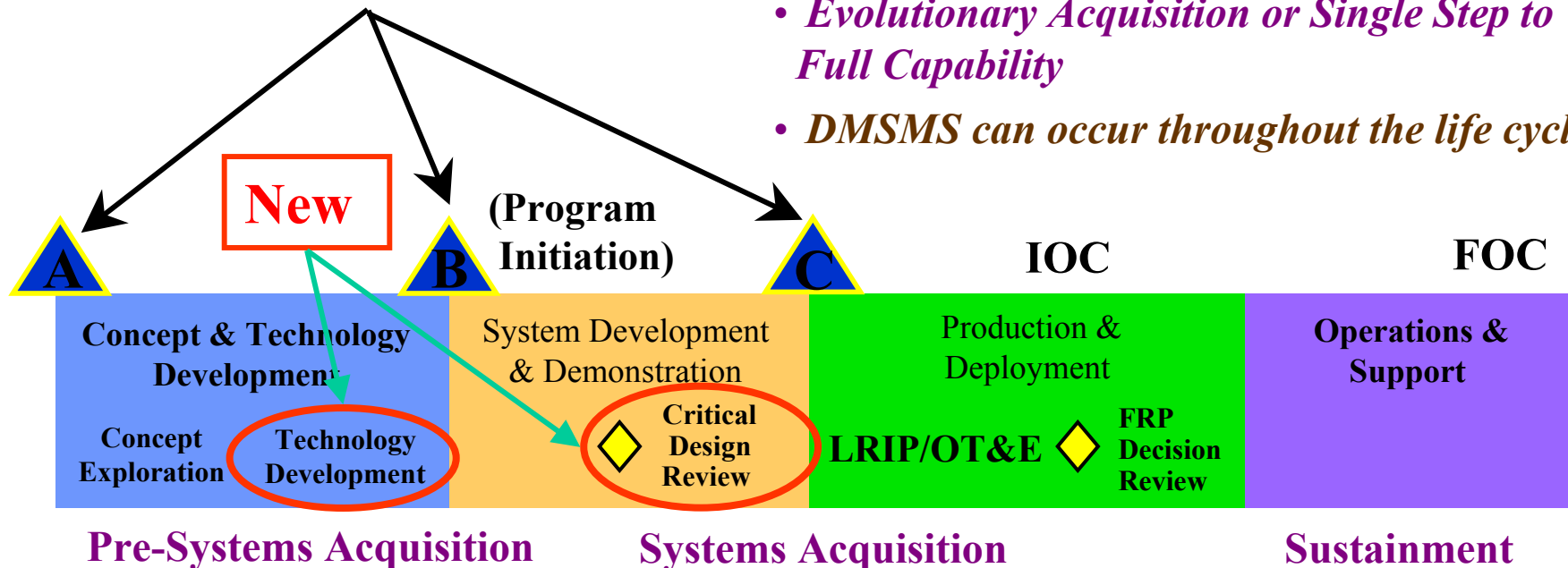


5000 MODEL

AS OF 30 OCT 02

User Needs &
Technology Opportunities

- *Process entry at Milestones A, B, or C*
- *Entrance criteria met before entering phase*
- *Evolutionary Acquisition or Single Step to Full Capability*
- *DMSMS can occur throughout the life cycle.*



DEVELOPING DMSMS COURSES OF ACTION:

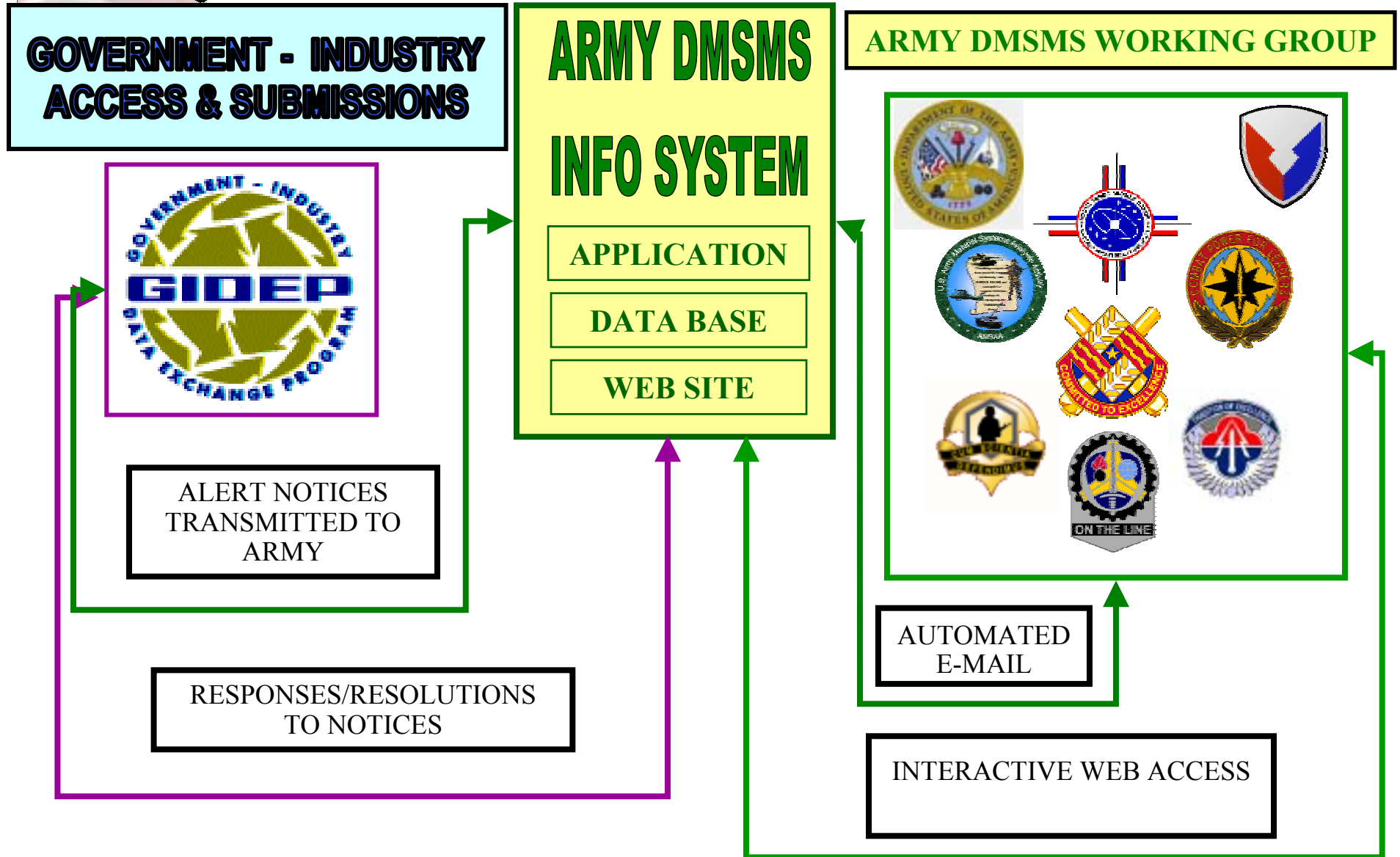
- BUSINESS STRATEGY
- COST-SCHEDULE-PERFORMANCE
- SYSTEMS ENGINEERING - INTEGRATED LOGISTICS SYSTEM (ILS)
- PRODUCTION

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U.S. Army DMSMS INFO System

A DMSMS Process



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U.S. Army DMSMS INFO System

A DMSMS Process

ARMY DMSMS WORKING GROUP

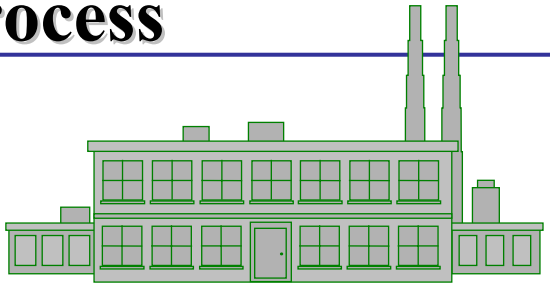


**ARMY DMSMS
INFO SYSTEM**

APPLICATION

DATA BASE

WEB SITE



↓ PEOs & PMs

- ↓ IMMCs
- ↓ DEPOTS
- ↓ ARSENALS
- ↓ AMMUNITION PLANTS
- ↓ DEMILITARIZATION FACILITIES

AUTOMATED
E-MAIL
ALERT NOTICE

INTERACTIVE WEB ACCESS



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SUPPORTING GOVERNMENT

Model for Non-Electronics Obsolescence



BRINGING DMSMS TO THE PEO/PMs, IMMCs, DEPOTs, ARSENALs, AMMUNITION PLANTs, DEMILITARIZATION FACILITIES AND TO INDUSTRY.

ADDRESSING NON-ELECTRONIC DMSMS ISSUES, SUCH AS:

- JOCG - AMMO/ENERGETICS
- JCAA - AGING AIRCRAFT
- JS CBRN DEFENSE
- NASA MISSION SUPPORT

SUPPORT DoD & ARMY TRANSFORMATION.



SUMMARY

Support to Industry

Why should this concern Industry...

- ❖ **As the DoD continues downsizing - PEOs and PMs will rely more on their Contractors to manage DMSMS/Obsolescence as part of the systems' business strategy and life cycle management plan.**
- ❖ **Proactive DMSMS Management makes good business sense and returns dollars back on investment over life of a system.**

- ❖ ***F-22 (F-22 SPO & Lockheed Martin/Boeing Team)***
 - DMSMS amounts to a \$1B program throughout production
 - Parts availability life is approximately 2 to 5 years
 - Traditional "Build to Print" programs are no longer feasible
- ❖ ***AEGIS (AEGIS SPM & TEAM AEGIS)***
 - Actively working DMSMS since 1992
 - Over 1000 DMSMS cases
 - Cost avoidance approaching \$230M
- ❖ ***Patriot Missile (PM Patriot & Lockheed Martin)***
 - Single microcircuit: \$2.1 million redesign, 24 months schedule slip
 - Unpackaged part was found
 - Cost and schedule impacts avoided

**Cost
Sharing**

**Value
Engineering**

**Profit
Margin**



QUESTIONS ???

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