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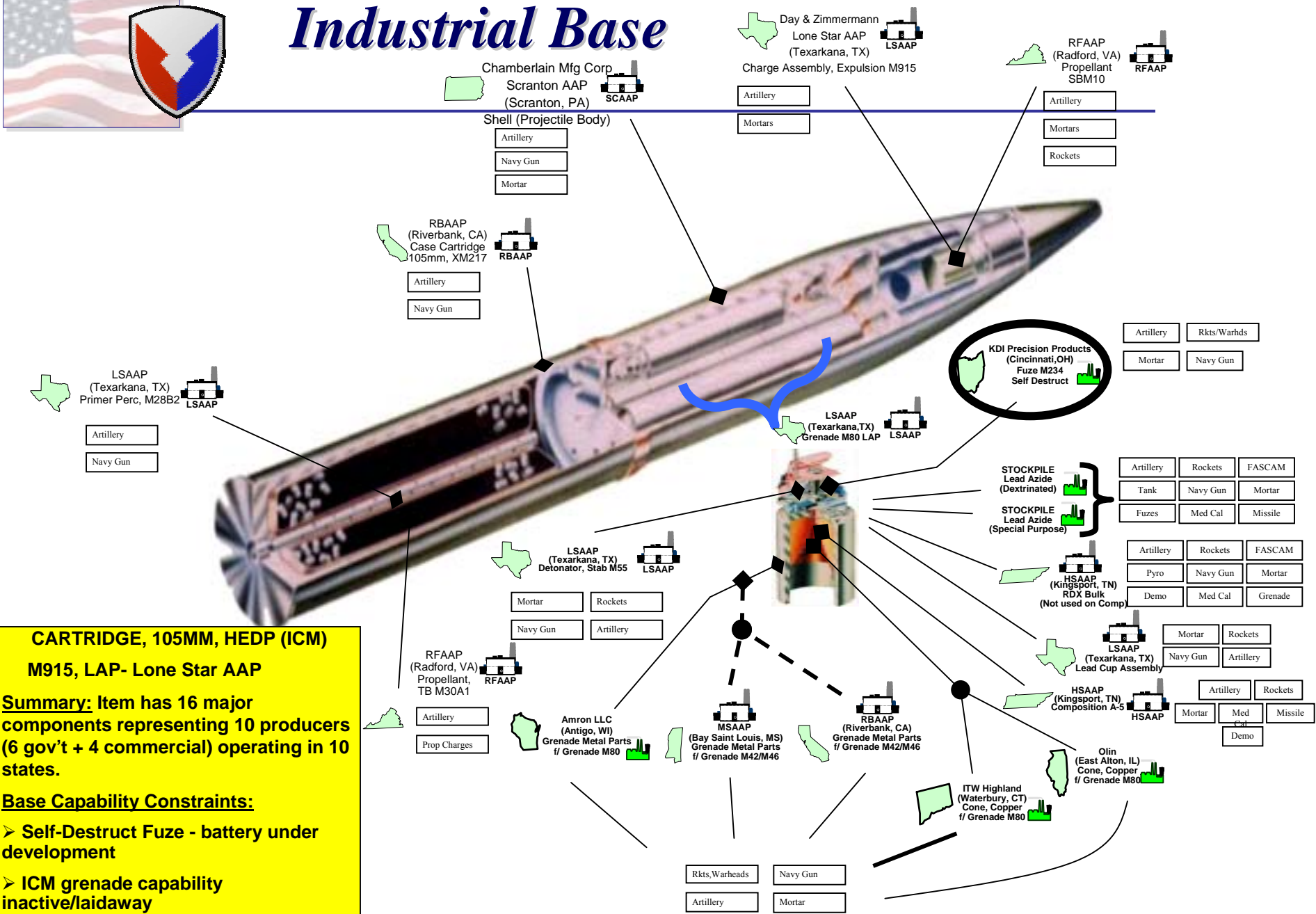
**U.S. Army
Joint
Munitions
Command**

***Atlanta XXIX Conference
Industrial Base: Front and Center
28-30 April 2003***





Industrial Base



**CARTRIDGE, 105MM, HEDP (ICM)
M915, LAP- Lone Star AAP**

Summary: Item has 16 major components representing 10 producers (6 gov't + 4 commercial) operating in 10 states.

Base Capability Constraints:

- Self-Destruct Fuze - battery under development
- ICM grenade capability inactive/laidaway
- No US source for Lead Azide; stockpile is dwindling

UNCLASSIFIED



Transforming the Industrial Base

- Capabilities-based -

❖ 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...
Future Combat Systems, Navy DDX, Joint Strike Fighter
- ✓ Migrating to Public-Private Partnerships

*Commercialize
When Economically
Feasible at Minimum
Cost & Risk*

Rightsizing the Base

Joint Capabilities

Ammunition Plants

- ❖ Implement SecArmy approved way ahead
 - ✓ Long Term Leasing
 - ✓ Integration
 - ✓ Consolidation
 - ✓ Divestiture
- ❖ Strategy builds on & complements PBD 407

Most Desirable!

- ❖ Implement Lean
- ❖ Pursue Public-Private Partnerships
- ❖ Champion legislative and financial reform

Assure Warfighter Readiness!



Defense Industrial Base Transformation

24 Mar 03...SecArmy Direction... AMC...

❖ **GOGOs & GOCO Ammunition Facilities...**

- ✓ Write concept to Consolidate, Divest, or Lease... As Appropriate!
- ✓ Include mission realignment...Improve utilization & operating efficiencies!
- ✓ No implementation activity...Unless under BRAC '05 process

❖ **GOGO Manufacturing Arsenals...**

- ✓ Continue reduction of plant capacity...Institute internal efficiency initiatives
- ✓ Facilitate business base at all Ground Systems Industrial Enterprise installations
- ✓ Continue to leverage full capability of defense industrial base...Reduce products & services cost to level comparable with industry with out need for subsidies

GSIE

❖ **GOGO Maintenance Depots...**

- ✓ Continue to form & maintain public-private partnerships
- ✓ Continue implementation of LEAN Philosophy & other initiatives...Improve efficiencies, optimize utilization, & upgrade core capabilities

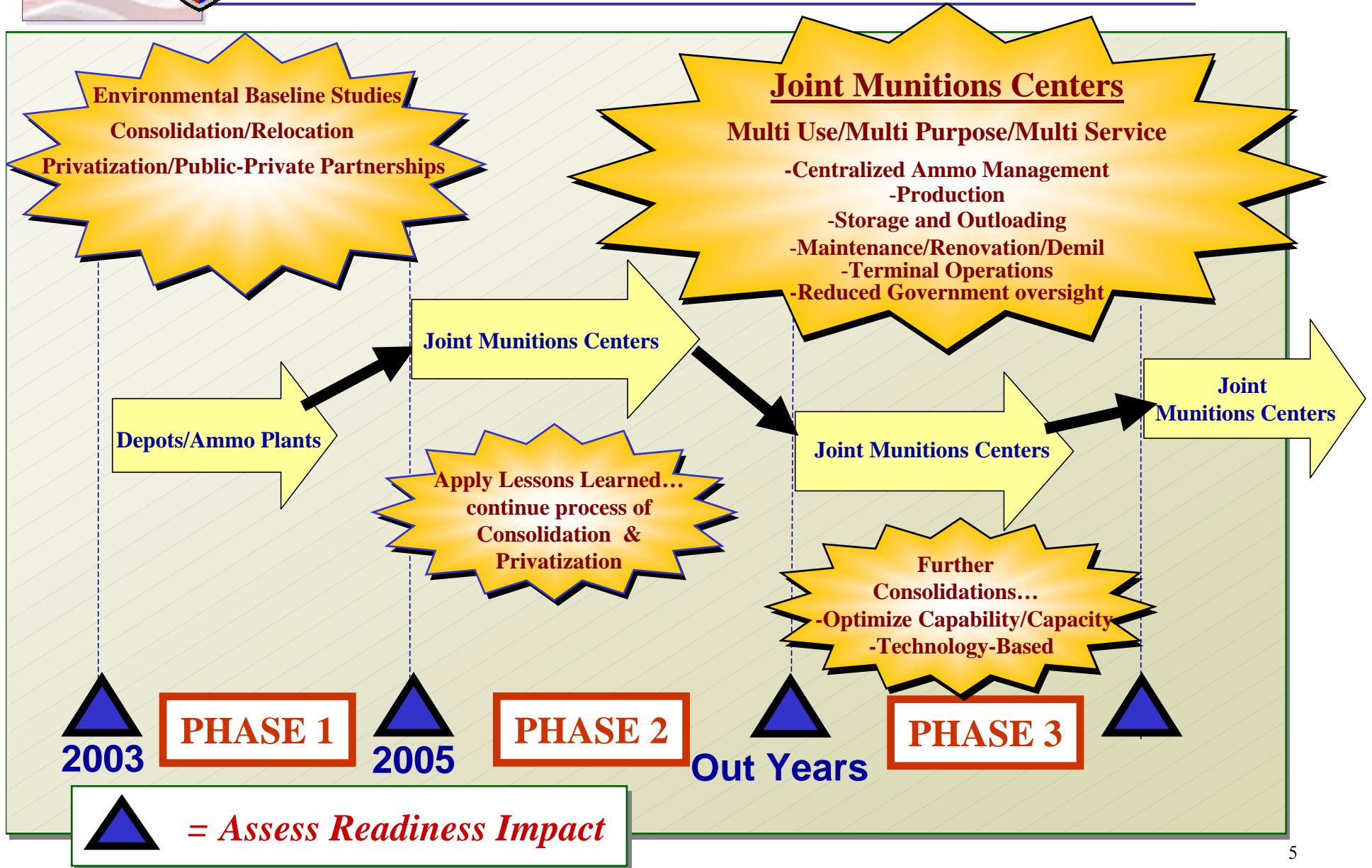
Meet current & future requirements!

All activities related to realignment and/or closure...

Conform with SecDef's BRAC '05 policy!

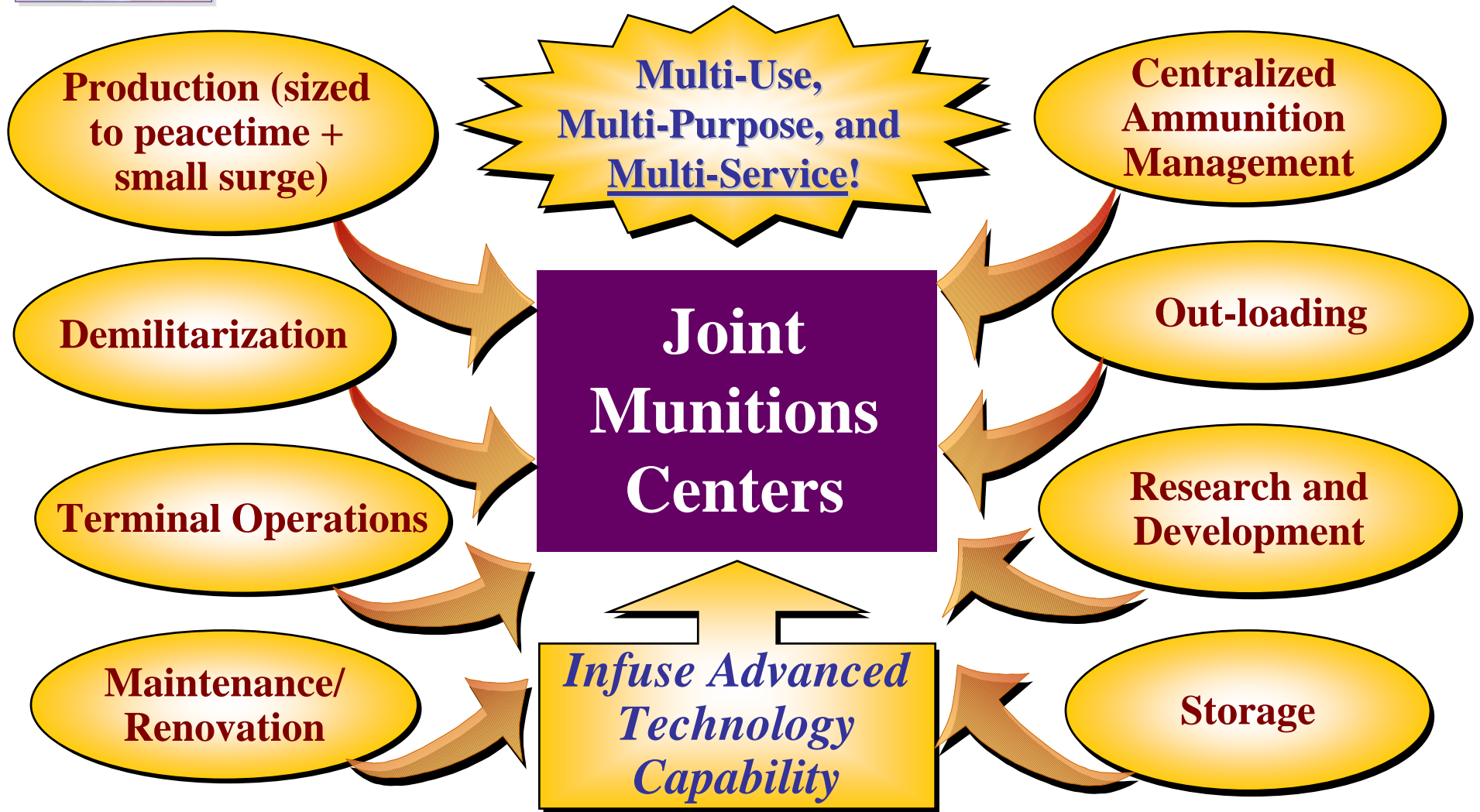


Transforming Joint Munitions Base





What does a Joint Munitions Center Look Like in the 21st Century?



Focus is Requirements & Capability vs. Infrastructure



Transforming the Manufacturing Base

Rationalization, Relocation / Consolidation, Reduction

- ❖ **Ground Systems Industrial Enterprise (GSIE) Goal...Continuous improvement of soldier support while realizing cost reduction of products / services to a level comparable to private industry without Army subsidies**

Formation of GSIE:

- ✓ Anniston Army Depot (ANAD)
- ✓ Red River Army Depot (RRAD)
- ✓ Sierra Army Depot (SIAD)
- ✓ Watervliet Arsenal (WVA)
- ✓ Rock Island Arsenal (RIA)
- ✓ Lima Army Tank Plant (LATP)

What we have done:

- ✓ **Reduced infrastructure (WVA)**
 - 290,000 sq. ft. of floor space
 - 527 pieces of IPE
- ✓ **Reduced infrastructure (RIA)**
 - 600,000 sq. ft. of floor space
 - 357 pieces of IPE

What we are doing:

- ✓ Leveraging Industrial Base's full capability
- ✓ Expanding existing capabilities' utilization
- ✓ Getting more efficient
- ✓ Divesting unneeded plant facilities
- ✓ Reducing plant capacity

How we're doing it:

- ✓ Implementing lean philosophy & other quality programs
- ✓ Further reducing infrastructure (RIA example)
 - 100,000 sq. ft. of floor space
 - 357 pieces of IPE
- ✓ **Infusing new workload**
 - Diminishing Manufacturing Sources & Materiel Shortages (DMSMS)
- ✓ **Legislative & financial reform**

Prior

2003

Future

Transition to Technology and Manufacturing Centers for the 21st Century



Summary

- ❖ **Transforming and Sustaining Simultaneously**
- ❖ **Implementing Lean Philosophy**
- ❖ **Restructuring Based on Jointness and Capabilities**
- ❖ **Methodology**
 - ✓ Rationalization
 - ✓ Relocation/Consolidation
 - ✓ Reduction

Via BRAC '05

*CHALLENGES... Retain flexibility to increase
production output to meet contingency requirements...
Not compromise Warfighter readiness!*



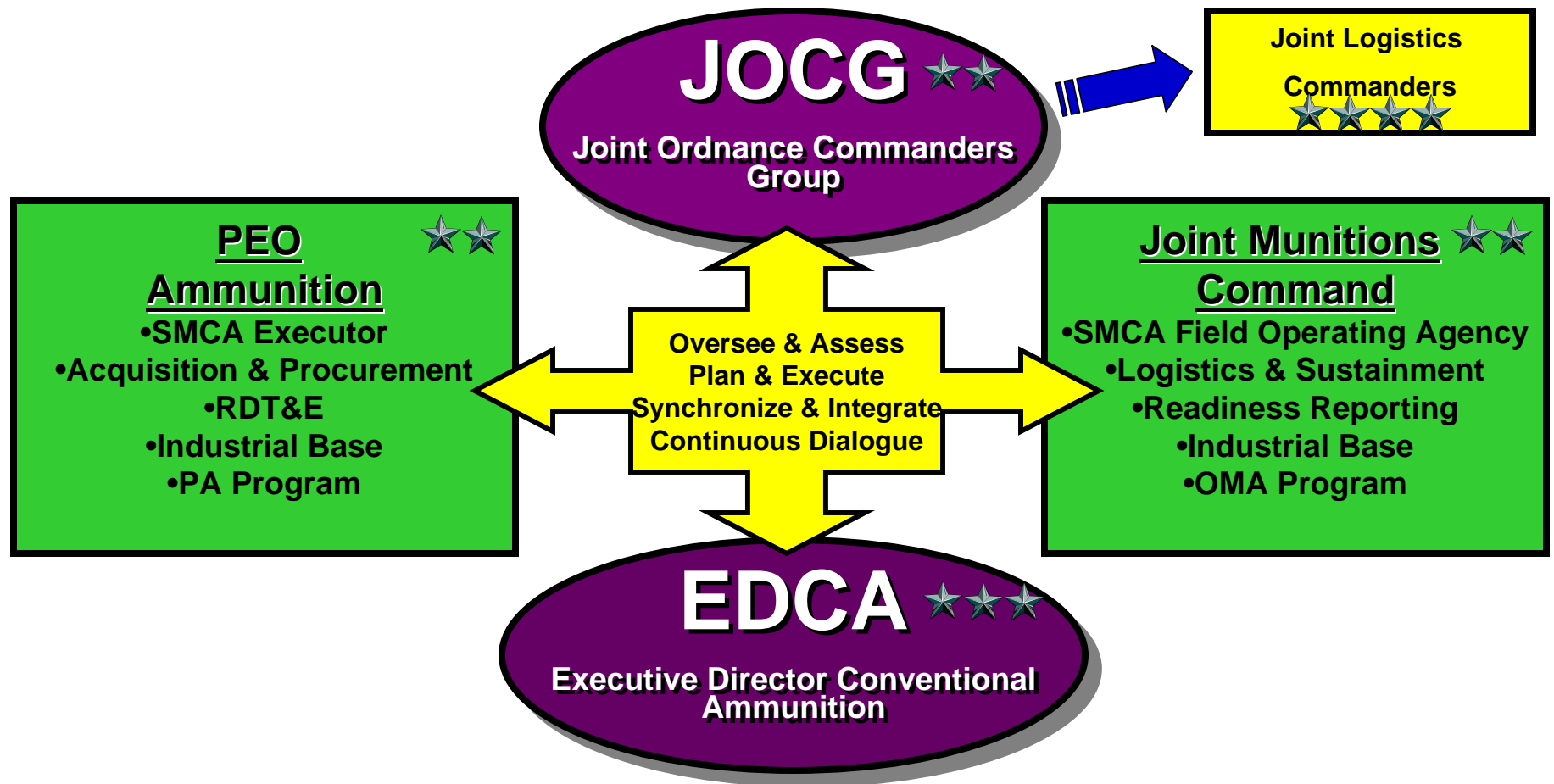


Back Up



Enterprise Operations

Not Just Army...A Joint Collaborative Endeavor

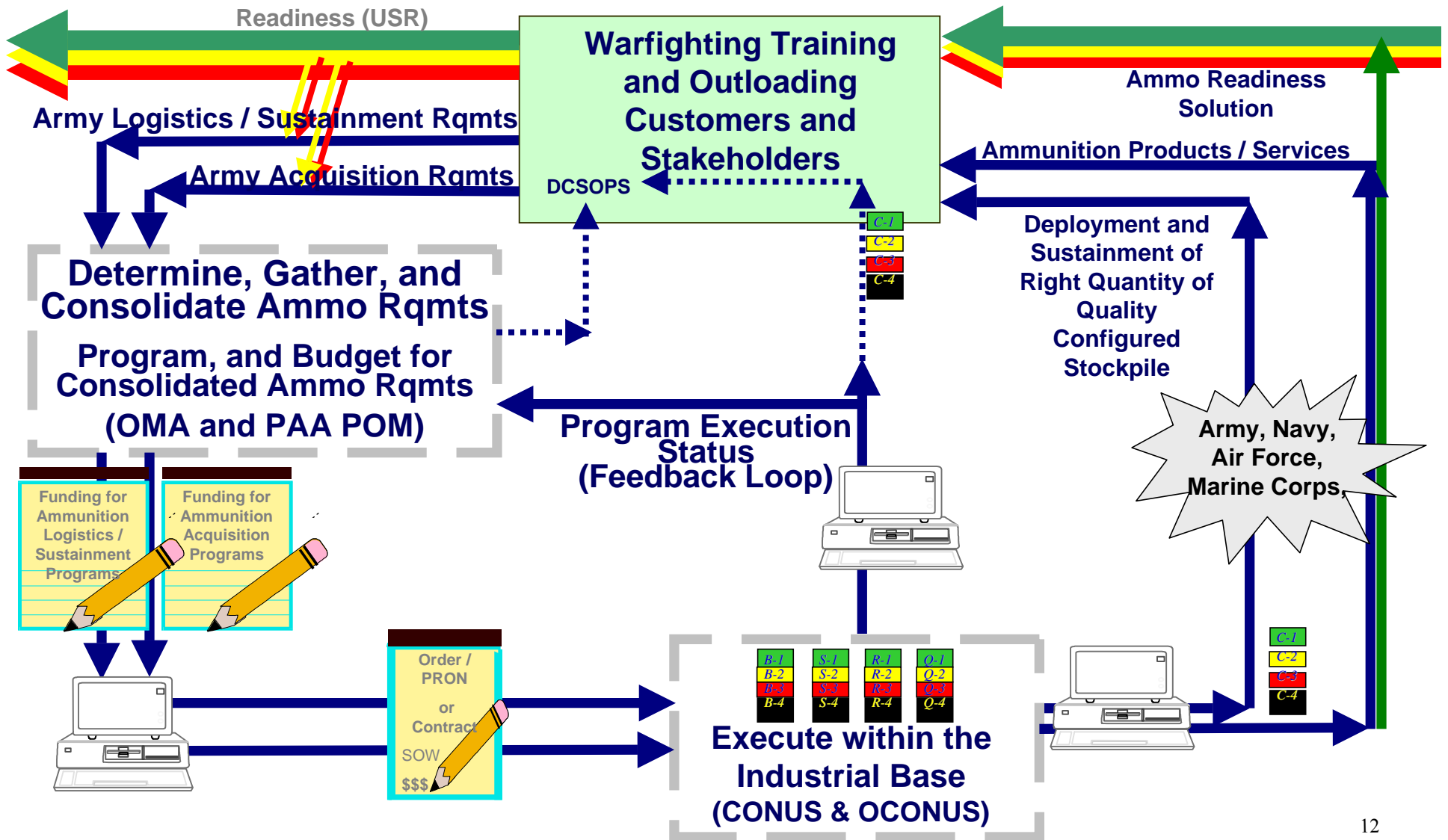


Army....The Single Manager for Conventional Ammunition



Ammunition Enterprise

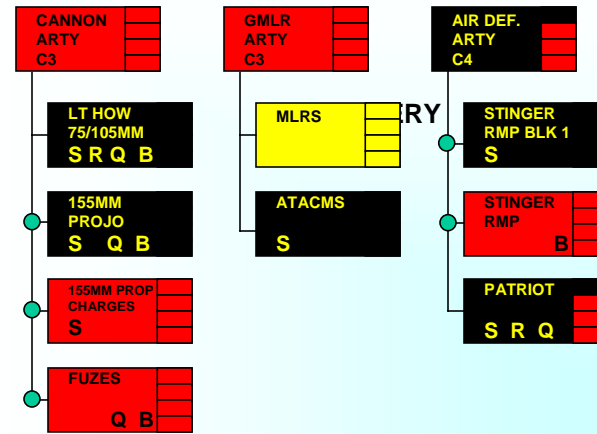
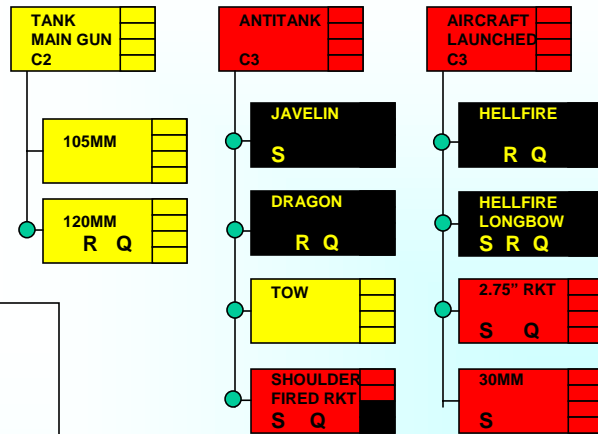
(A complex process requiring an Enterprise solution)





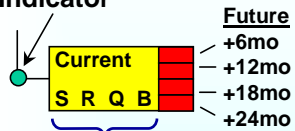
Army Munitions Readiness Worldwide View

TANK/AT/ACFT



Legend

Joint Base Indicator



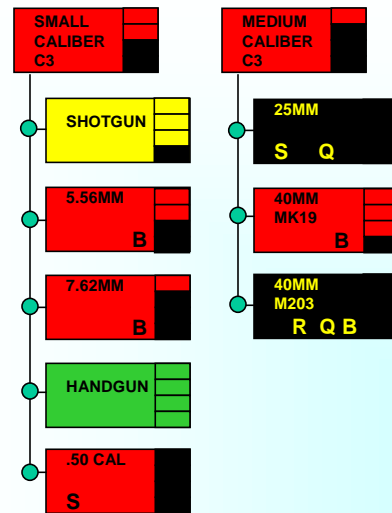
Drivers

S=On Hand
R=Serviceability
Q=Quality
B=Production Base

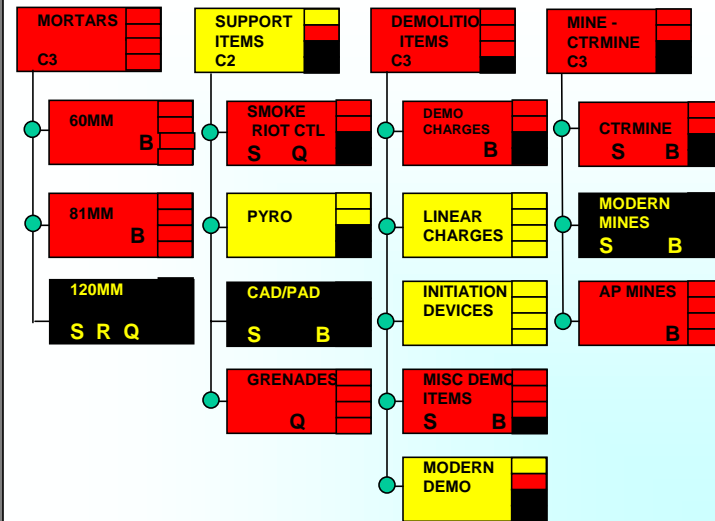
Levels



SMALL/MEDIUM CAL



SUPPORT ITEMS

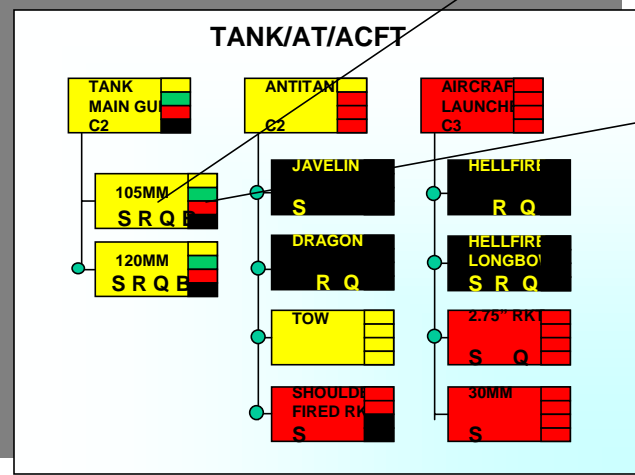
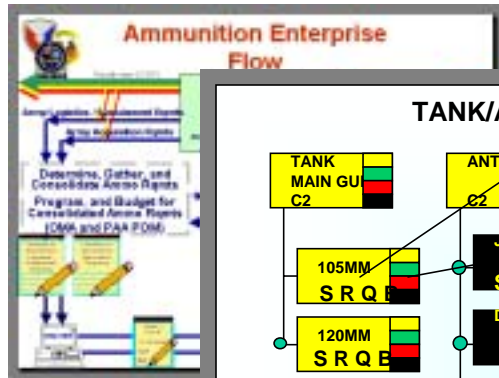




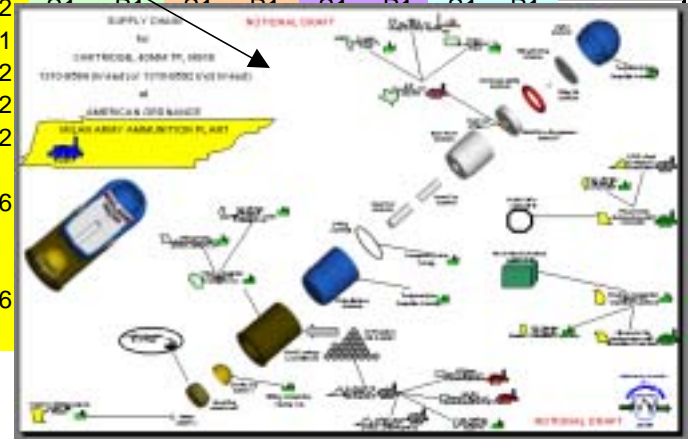
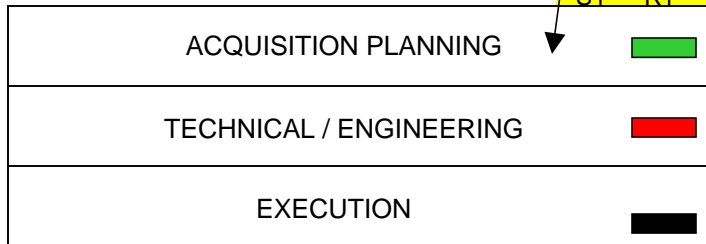
Army Munitions Readiness Report (Drill Down Capability)

- ❖ *Asset vs Requirements*
- ❖ *On-Hand Supply, Quality, Serviceability, and Production Base Ratings.*
- ❖ *Drill-Down to Acquisition Details and Industrial Base Mapping.*

CURRENT ASSETS				REQUIREMENTS		
SERV	E&N	UNSERV	TOTAL	WR+OP REQ	PIPELINE	TTCOR
120,500	0	200	120,700	0	36,488	91,496
179,800	0	98,700	278,500	0	77,548	191,942
62,300	0	0	62,300	76,327	0	0
134,800	0	0	134,800	149,433	0	0
16,452	0	0	16,452	15,305	0	60



CURRENT RATING				+ 6 MO RATING	+ 12 MO RATING	+ 18 MO RATING	+ 24 MO RATING
S1	R1	Q1	B2	S1 R1	S1 R1	S1 R1	S1 R1
S1	R3	Q3	B2	S1 R3	S1 R3	S1 R3	S1 R3
S2	R1	Q1	B2	S2 R1	S2 R1	S2 R1	S2 R1
S1	R1	Q2	B2	S1 R1	S1 R1	S1 R1	S1 R1
S1	R1	Q1	B1	S1 R1	S1 R1	S1 R1	S1 R1
S2	R2	Q2	B2	S2 R2	S2 R2	S2 R2	S2 R2
S1	R3	Q3	B2	S1 R3	S1 R3	S1 R3	S1 R3
S2	R3	Q3	B2	S2 R3	S2 R3	S2 R3	S2 R3
S1	R1	Q1	B6	S1 R1	S1 R1	S1 R1	S1 R1
S1	R1	Q2	B6	S1 R1	S1 R1	S1 R1	S1 R1





State of the World

- ❖ Market & Defense Globalization Program
- ❖ Increased Joint operations
- ❖ Financial & Budgetary instability
- ❖ Global War on Terrorism

Critical Global Industrial Base for the 21st Century



Organic Industrial Base Evolution





Production Base Realities

- ✓ ***Example Critical End Items/Components at High Risk***
 - Links – redeveloped single producer (17 small/medium caliber items)
 - Fuze Base – Down from 31 to 7 at-risk producers
 - Black Powder – Only producer in financial difficulty (used in 94 items)
 - Electronics – commercial markets more lucrative
- ✓ ***Example Items Without Domestic Sources***
 - Nitroguanidine – essential to Modular Artillery Charge System
 - Lead Azide – approximately 85% of the munitions families
 - Baled Cotton Linters – HYDRA, 120 tank, & MACS
 - Vinyl Alcohol Acetate Resin – Binder used in pyrotechnic items
 - M234 Self-destruct Fuze – Artillery/Navy Gun/Missile Programs
- ✓ ***Surge capability virtually non-existent ...can only affect 10% of the “go to war” shortfalls***
- ✓ ***Marginal capability for preferred and precision munitions***
- ✓ ***Policy changes diminish capabilities, e.g., Mobilization***
 - Surge → Resupply → Replenish in 24 months →
 - Replenish in 36 months → 1 versus 2 MTWs →



Ramifications of Industrial Base Readiness to the Warfighter

- + Recent walk-in order for 8 million additional pounds of CXM-7 explosive for Navy bombs being provided by Holston AAP – no where else in world could timeframes and US military requirements be met.**
- + Demands for small arms ammunition increased from 800 million to 1.2 billion rounds per year. Lake City AAP only location that can meet these demands.**
- No peacetime buys for M67 Grenade resulted in contractor divestiture of equipment and critical shortage in supply for Operation Enduring Freedom while capacity later re-established at new location.**
- No production source currently exists for Lead Azide used in 9 of 14 ammunition families. Government divestiture of capability occurred based on commercial source reliance. Commercial producer later exited the business resulting in current at-risk situation as existing aging stockpile is drawn down.**

Industrial base issues cause the Munitions Readiness Rating to be reduced for 32 percent of ammunition items.



What is the Ammunition Industrial Base?

	<u>1991</u>	<u>Today</u>
Government-owned Facilities	28	13
- Acres	526K	351K
- Equipment	483K	302K
- Production Lines	270	73
- Production Personnel	19K	7K
Contractor Facilities	163	69
Contractor Facilities with Government-owned Equipment	36	10

Combination of Government-owned and private sector facilities required - supports production demands for all Services

Significant downsizing has occurred – 68% reduction in capacity since 1991



Supports all Services

BREAKOUT BY SERVICE

- 17 Unique to AIR FORCE
- 67 Unique to NAVY
- 5 Unique to MARINE CORP
- 50 Unique to ARMY
- 61 Common to Multiple Services

200 TOTAL ITEMS (& 355 components)

