



***The Munitions Industrial Base
“Reshaping for Tomorrow”
An Industry Perspective***

18 February 2004

In the Past...



"I think that the proper size of the organic base is zero – nothing...I can see no argument for why we need an organic base."

Industrial Base Readiness?

A New Time – A New Vision



“The health of the defense industrial base is key to the Army’s ability to continue to provide innovative technology and technologically excellent systems...”

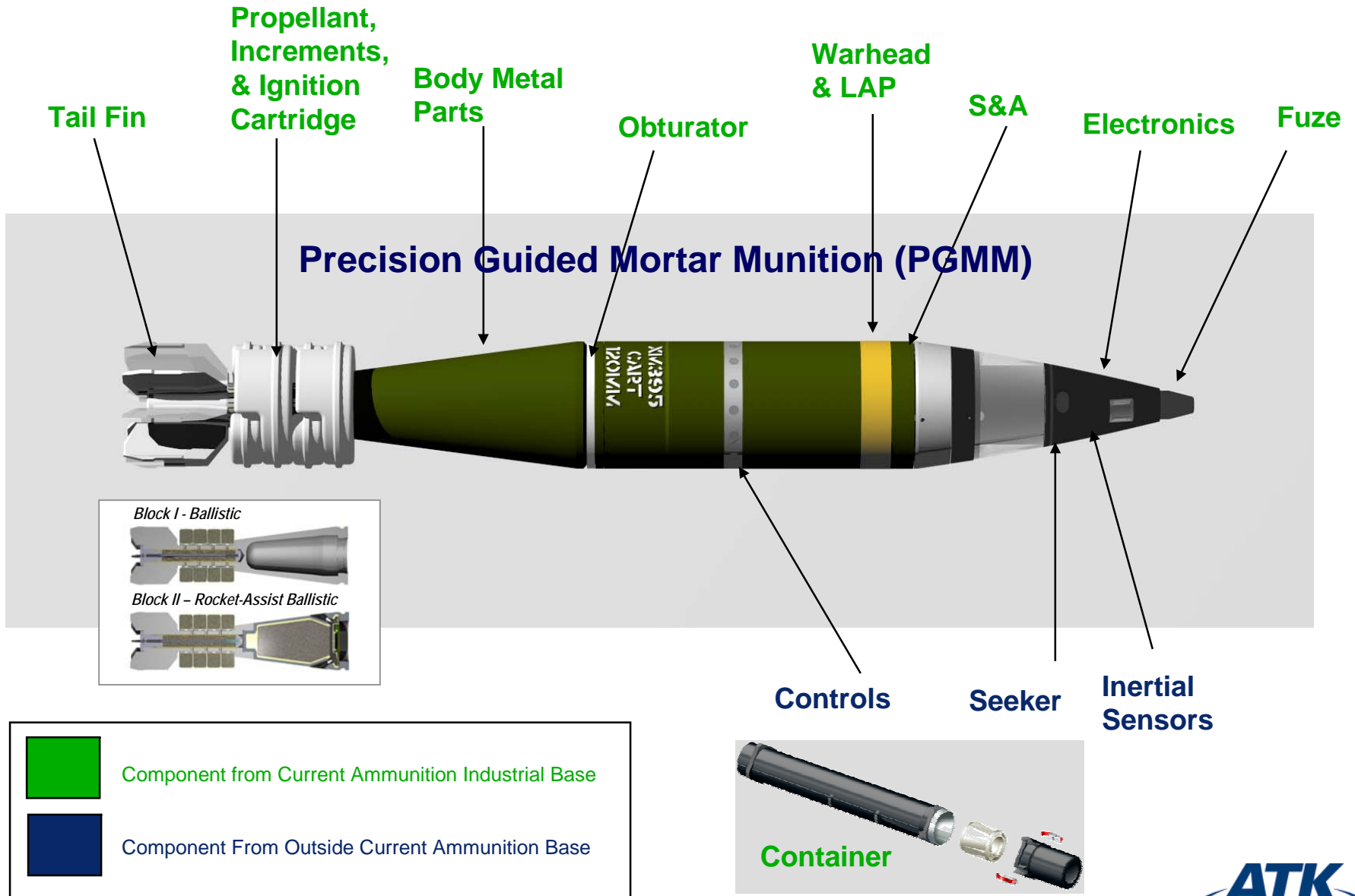
Claude Bolton, ASA for Acquisition

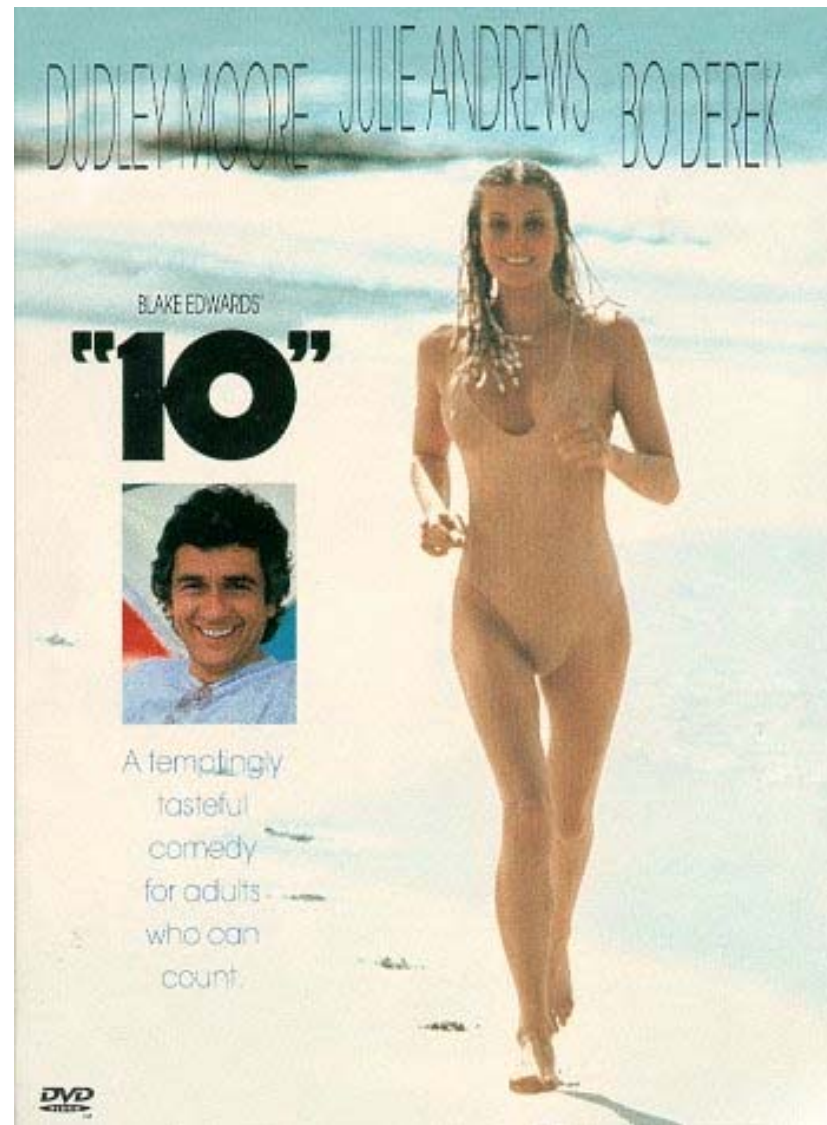
“America under funds its military. Strategically, our country's industry base is not geared to support Army's requirements...Active engagement with Congress to resource - Congress is open and willing.”

GEN Schoomaker, CSA



Demand for a Modernized Industrial Base





Preserving Critical Production Capabilities

- Number of remaining GOCO facilities with critical capabilities
- Recommended profit necessary to sustain and modernize critical capabilities
- Minimum number of years necessary to attract investment and achieve ROI

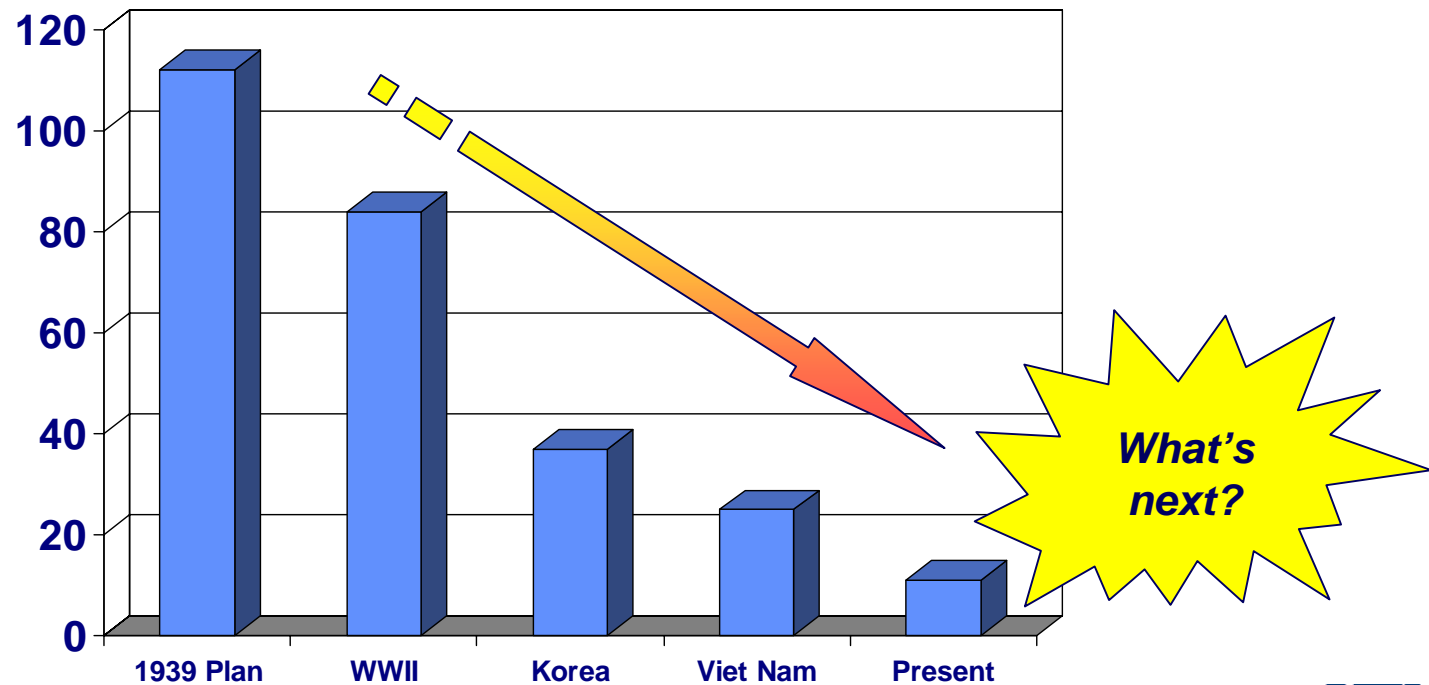
“10”

If You Do The Math. . .

- Profitability and Investment are linked
- A fine wine needs time and so does “Return on Investment” (ROI)
- The “Rule of Ten” is a good guideline

Evolution of the Munitions Industrial Base

- 1939 survey – 112 plants planned
- WW II – 84 plants operated
- Korea – 37 plants operated
- Viet Nam – 25 plants operated
- Present – 11 plants operated



Critical Manufacturing Capabilities Must Be Preserved

PRODUCT	GOCO FACILITY	AVAILABLE COMMERCIAL CAPACITY
Detonators, delays, primers	Lone Star AAP	US/Canada COCO peacetime capacity
HE melt pour - mortar	Milan AAP, Kansas AAP	US/Canada COCO peacetime capacity
Pressed warheads	Iowa AAP	US/Canada COCO peacetime capacity
Cargo grenade metal parts	Riverbank AAP, Mississippi AAP	US/Canada COCO peacetime capacity
Propellant, MCA LAP, TNT	Radford AAP	Insufficient US/Canada COCO peacetime capacity
SCA LAP	Lake City AAP	Insufficient US/Canada COCO peacetime capacity
40mm LAP, C4 extrusion	Milan AAP	Insufficient US/Canada COCO peacetime capacity
ICM LAP	Lone Star AAP, Kansas AAP	Insufficient US/Canada COCO peacetime capacity
HE melt pour - artillery	Milan AAP, Iowa AAP	Insufficient US/Canada COCO peacetime capacity
Projectile metal parts	Scranton AAP, Louisiana AAP	Insufficient US/Canada COCO peacetime capacity
Tank ammo LAP	Iowa AAP	No US/Canada COCO peacetime capability
Explosives	Holston AAP	No US/Canada COCO peacetime capability
Steel cartridge cases	Riverbank AAP	No US/Canada COCO peacetime capability
Pressed LAP	Kansas AAP, Lone Star AAP	No US/Canada COCO peacetime capability

Critical but lack modernization funding to meet transformation needs

Investment In Plant Infrastructure and Equipment – LCAAP



Lake City Army Ammunition Plant

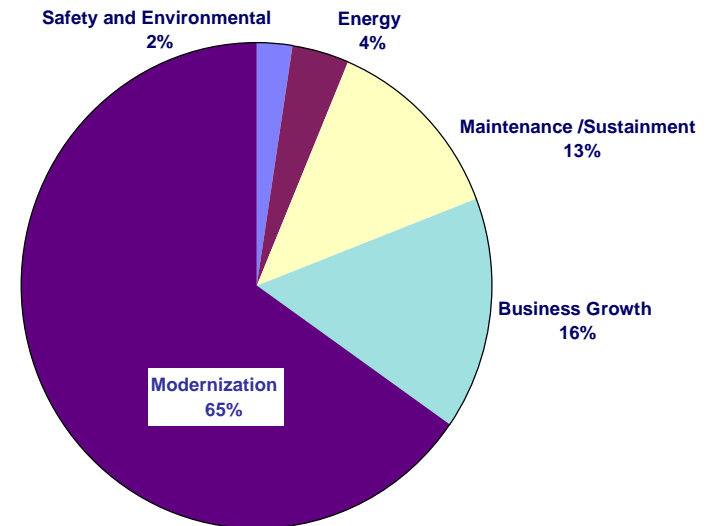
~\$32M Investment over 4 Years to Improve Infrastructure & Productivity

- 5.56mm Manufacturing Improvements (Case & Bullet)
- .50 cal Case Cell & 7.62mm Priming Improvements
- Ammunition Packaging & Inspection Equipment
- Small & Medium Caliber Links and Feed Systems
- Package Boilers & Steam System Upgrade

ATK committed to invest \$34M

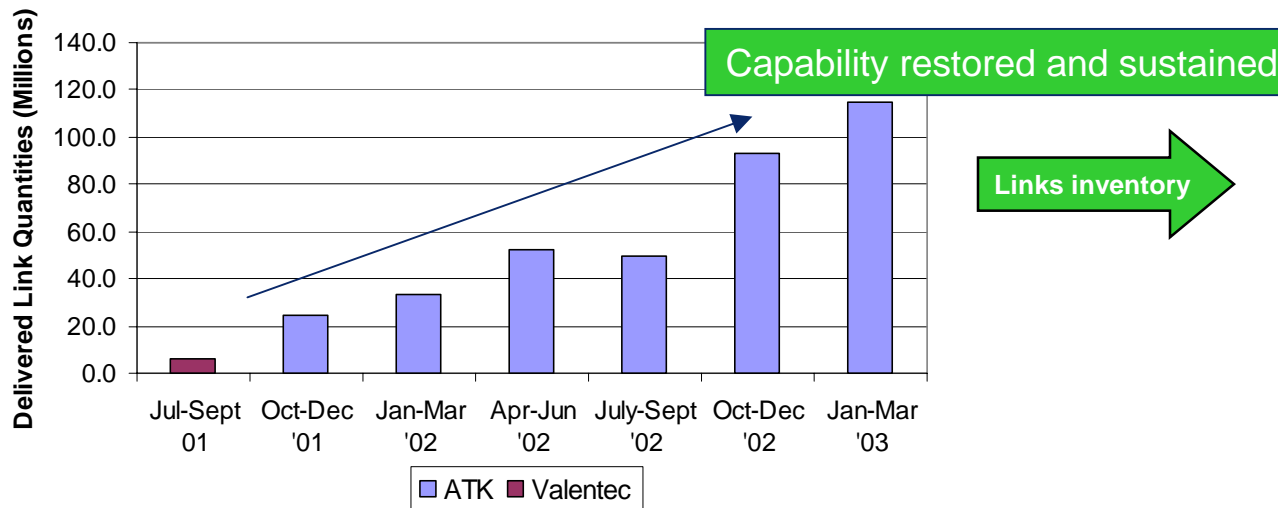
- \$23.5M in production modernization
- \$10.5M in infrastructure and environmental
- \$6M in link manufacturing

Breakout of Capital Investment to Date



Links - A Modernization Success Story

- Army and ATK have rebuilt and restored the U.S. link production capability



Link deliveries no longer pace ammo production

Investment In Plant Infrastructure and Equipment – RFAAP



Radford Army Ammunition Plant

>\$46M Equipment Investment over 10 Years
to Expand Capabilities & Improve Efficiency

- Commercial Propellants
- Nitrocellulose Line Modernization
- Medium Caliber LAP
- TNT Flexible Nitration Process

TNT Flexible Nitration Facility

- Leverage's ATK Energetics Expertise
- Mechanism for facility transformation
- Investment in state-of-the-art equipment
- Low cost, low risk, and environmentally sound manufacturing capability



Right Team, Right Facility, Right Solution!

The Three Amigos



C³ For Success!

Customers



Congress



Contractors

Investment In Plant Infrastructure and Equipment – ABL

Army is ABL's Largest Customer!

- Tank Ammo metal parts
- Javelin
- Maverick
- Hellfire
- TOW



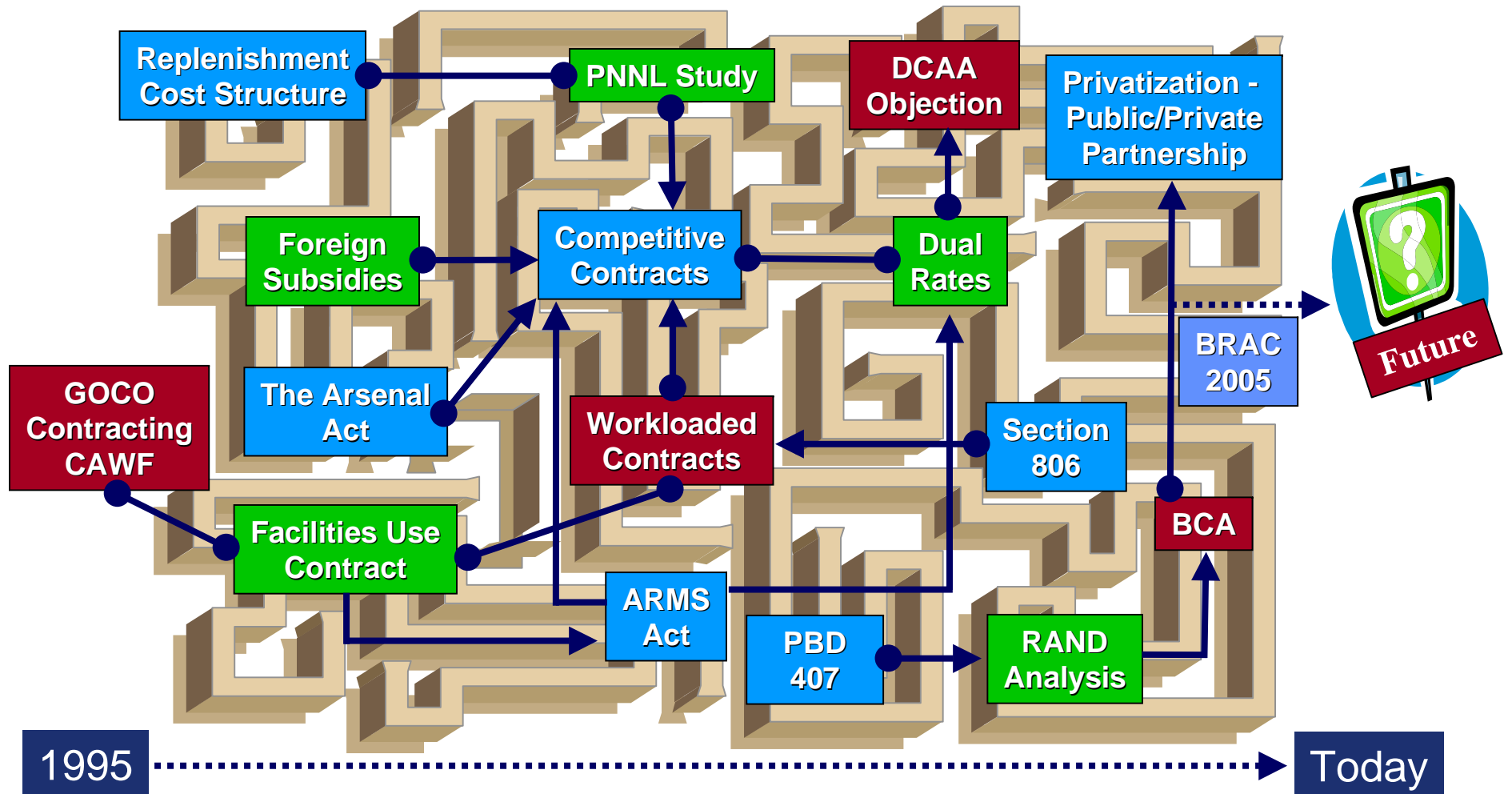
Allegany Ballistics Laboratory (ABL)

>\$35M Equipment Investment over 8 Years to Expand Capabilities & Improve Efficiency

- Energetic Operations Consolidation
- High Rate Composite Structures
- Ammunition Metal Parts
- Large Caliber Ammunition LAP

C³ In Action

What Should We Do?



We need a capabilities-based strategic plan

The Right Strategic Plan – *One size does not fit all...*



...flexibility is required!

The Path Forward – An Industry Perspective

- USG support of **facility specific** modernization and transformation objectives
 - Target facilities that offer greatest opportunity for cost reduction and modernization of core capabilities (e.g. RFAAP Cost Reduction and Modernization)
- USG must link industrial base and program acquisition strategies
 - Process and facility modernization investments should be incorporated
 - New products will require new process technology
 - Industry should invest in modernization and be allowed ROI through pricing
 - Source selection should allow under best value competition
 - Address single point failures across the base
- Long-term production contracts and predictable production base
 - Promotes business vitality and reinvestment with reasonable ROI
- Industry incentives to reinvest in capital equipment and processes
 - Cost of capital forecasted to be higher than other capital investments
- Increased use of ARMS revenue to reduce cost of ammunition
 - Industry should seek business relocation opportunities on modernized GOCO facilities
- Reset stockpile inventory to appropriate levels as buffer to surge requirements
 - Use DERF to ramp up operations when needed