# NDIA Industrial Base Panel Briefing Munitions Executive Summit 5-8 February 2007

### The Panel

- Mr. Steve Dart
- Ms. Patti Felth
- Mr. James Flaherty
- Mr. Kevin Knotts
  - Mr. Jerry LaCamera Jr.
- Mr. Thomas Rockne
- Mr. Rob Shenton
- Mr. Andrew Wilson

- President of MECAR USA
- Deputy Project Manager Close Combat Systems
- VP and General Manager GD-OTS (Scranton Operations)
- Principal, CSC, Federal Consulting Practice (Defense Logistics)
- **Technical Operations Manager, NSWC** Indian Head Division
  - **VP** Mission Assurance ATK
    - VP and Chief Operating Officer, Aerojet
      - VP Marketing and R&D, BAE Systems, Ordnance Systems

#### **Panel's Objective**

Highlight some of the key Industrial Base (IB) drivers for change

Address how requirements/needs impact a robust and modern manufacturing base

Identify the goals & responsibilities of the Government and industry

Discuss options on achieving a balance as we transition from traditional/legacy to emerging munitions

Answer questions resulting from this briefing

### Manufacturing Technology –Meeting the Evolving Needs of the U.S. Armed Forces

War Fighter's Needs & Theoretical R&D

Ammunition Requirements

Systematic . . .

<u>Networked, Precision, New and Old Ammunition</u> e.g. IM, Thermobaric, Excalibur, Intelligent Munitions System

> Applied R&D & New Manufacturing Requirements e.g. Melt Pour, Press, Electronics, MS 1916, Flexible Manufacturing

> > Suppliers of the Ammunition Requirements COCO, GOCO, GOGO

> > > **Acquisition Strategies**

### **Drivers for Change**

#### Military/USG:

- Changing face of the enemy
- Worldwide trend toward lighter more mobile forces
- Maintenance of the NTIB

#### Political:

- Buy American Act
- Elections

Social:

- Defense expenditures
- Export license approval

Security/Terrorist threat

Local Skills/Jobs

 Local Congressional support, plus-ups, ear marks etc

#### Economic:

- Consolidation of defense contractors
- Industry Shakeups Reduction in competitors
- Reduction in suppliers
- BRAC

#### Technical:

- Insensitive munitions
- Thermobaric
- High strength materials
- Performance propellants
- Non-lethal
- Higher more stringent quality requirements
- Precision Guidance
- Critical Materials

#### Environment:

- Green munitions
- Eventual demil (life cycle management)
- Security requirements in view of terrorist threats

### NTIB = Commercial & Government = COCO, GOCO, GOGO

#### Maintaining a Balance; While Executing a Transition



### **Goals of Government and Manufacturers/Industry**

- Goal of Government Sustain Industrial Readiness
  - Timely, high quality products to the Warfighters
  - Innovative products & rapid technology insertion
  - Continuous product and process improvement
  - Healthy, modern, responsive industrial base, capable of meeting wartime and peacetime demands – (Surge based on the 2<sup>nd</sup> shift)
- Goal of Manufacturers/Industry
  - Ability to compete; to provide quality munitions at a reasonable cost
  - Long term investments need reasonable assurance investments are recovered
  - Support the Warfighter and the National Defense of our Country
  - Bottom line
    - Must satisfy the stakeholders
    - Must survive the peaks and troughs

# **Government's Responsibilities**

Customer/Government should:

- Pursue best value acquisition strategies that reward/encourage
  - Improving production process, quality, technical & technical insertion over price
  - Providing for innovation and rapid technology insertion
  - Maintain needed capability and capacity
- Structure long term contracts with resources for modernization
- Effectively manage change through:
  - Providing current, production proven Technical Data Packages (TDPs)
  - Expediting and funding the qualification process
  - Accommodating the manufacturers recommendations for technology insertion
- Leverage WW technology insertion though smart NTIB procurement restrictions
- Invest in basic (6.1) and Advanced (6.2) RDT&E and transition technology into:
  - Legacy product developments
  - Emerging products
  - Manufacturing processes
- Maintain the capability and capacity (Surge based on the 2<sup>nd</sup> shift)

### **Manufacturers Responsibilities**

#### Manufacturers should:

- Maintain awareness of product/process and technological advances world wide
- Propose technological insertion to the customer
- Maintain customer awareness of supply chain and facility vulnerabilities
- Provide quality, munitions on time and at a reasonable cost
- Conduct Applied R&D
- Maintain flexibility and responsiveness

# **Challenges We Face –**

# Merging the Drivers, Goals, and Responsibilities

- How do we incentivize & fund modernization of IB capabilities?
  - Facilities
  - Equipment
  - Processes
- What key capabilities need to be retained and where should they be?
- How do you strike the right "Capability" and "Capacity" balance that is flexible to dynamic changes in needs – Peacetime and Wartime?
- What are the right Acquisition Policies/Strategies to promote a "Right-sized" Industrial Base (IB)?
- What key ingredients/materials, technologies, and capabilities are critical to sustaining IB readiness?
  - TNT, Nitroguandine, Binders
  - High Energy Nitramines
  - Nano-energetics
  - Melt-Pour, Cast Cure, TSE Continuous Processing
  - Chemical Scale up

How do we ensure continuity of supply and industrial base viability?

# **Selected Topics for Discussion**

- Roles and responsibilities of Government Acquisition Managers
  - How to Integrate acquisition approaches with industrial base management
  - How acquisition strategies can promote modernization
- Roles and Responsibilities of Ammunition Producers
  - Ammunition manufacturing
  - Modernization
- Flexible Manufacturing
  - Metal Parts
  - LAP Melt Pour and Cast Cure
  - Energetics
- Research and Development
  - Energetics
  - LAP
- Insensitive Munitions





#### GENERAL DYNAMICS

# AEROJET









