

Gun and Missile Systems

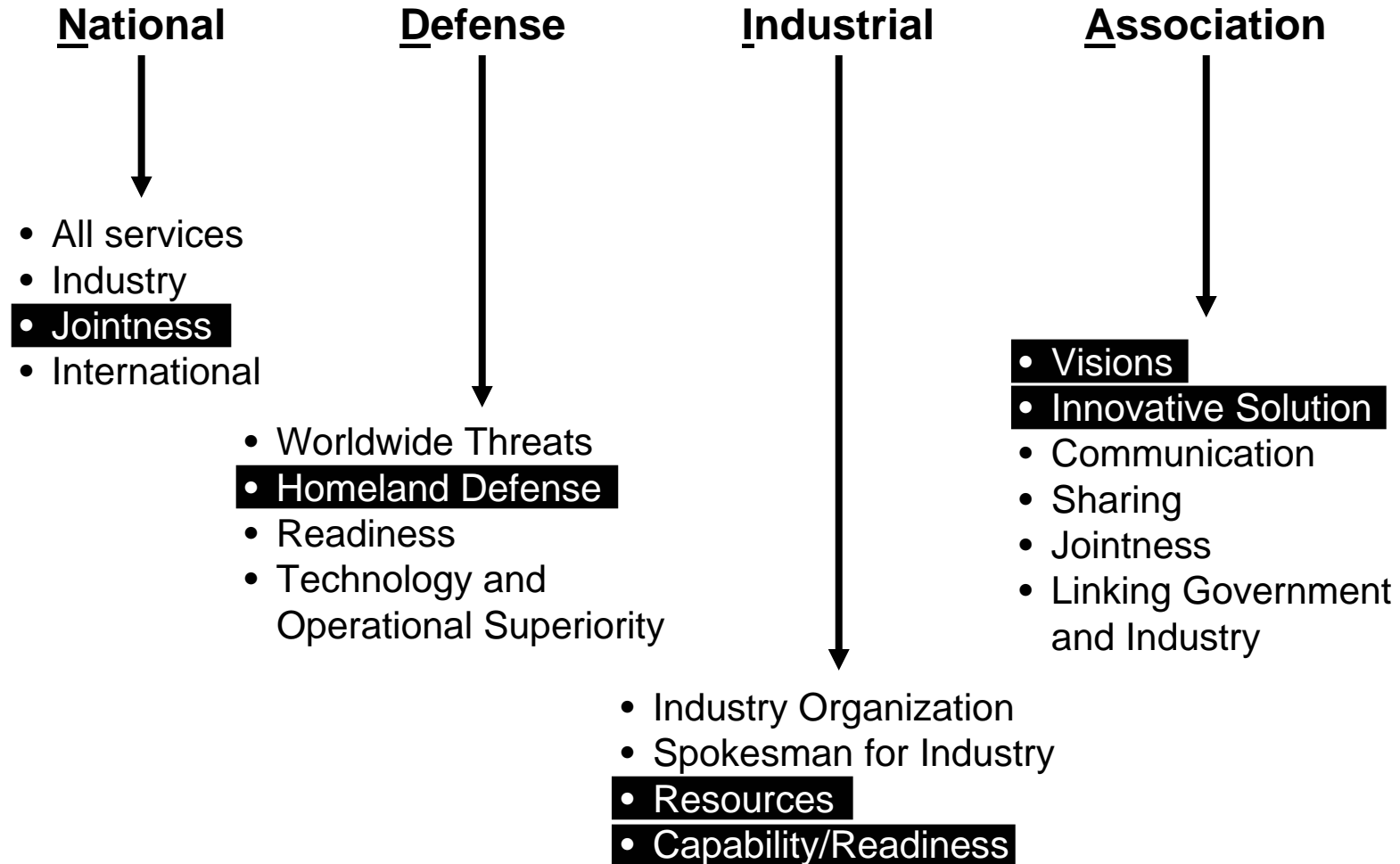
**National Defense Industrial Association
(NDIA)**

Armament Division

2007 Division Status

23-26 April 2007

The Links – Who, What, Why



An Organization Ensuring Strength Through Industry and Technology

- **Advocate**: Cutting Edge Technologies, Superior Weapons, Equipment, Training, and Support for America's 3 and First Responders
- **Promote**: Responsive and Vigorous Government-Industry National Security Team.
- **Provide**: Forums for the Exchange of Information between Government and Industry on Matters of National Security.

Organization Objective: *Provide "Value Added" Symposiums and Activities Ensuring Mission Objectives*

NDIA Focus → Responsive to Industry/DoD Community → Ensures Relevance

Addressing Issues Critical to Guns and Ammunition, Missiles and Rockets Systems

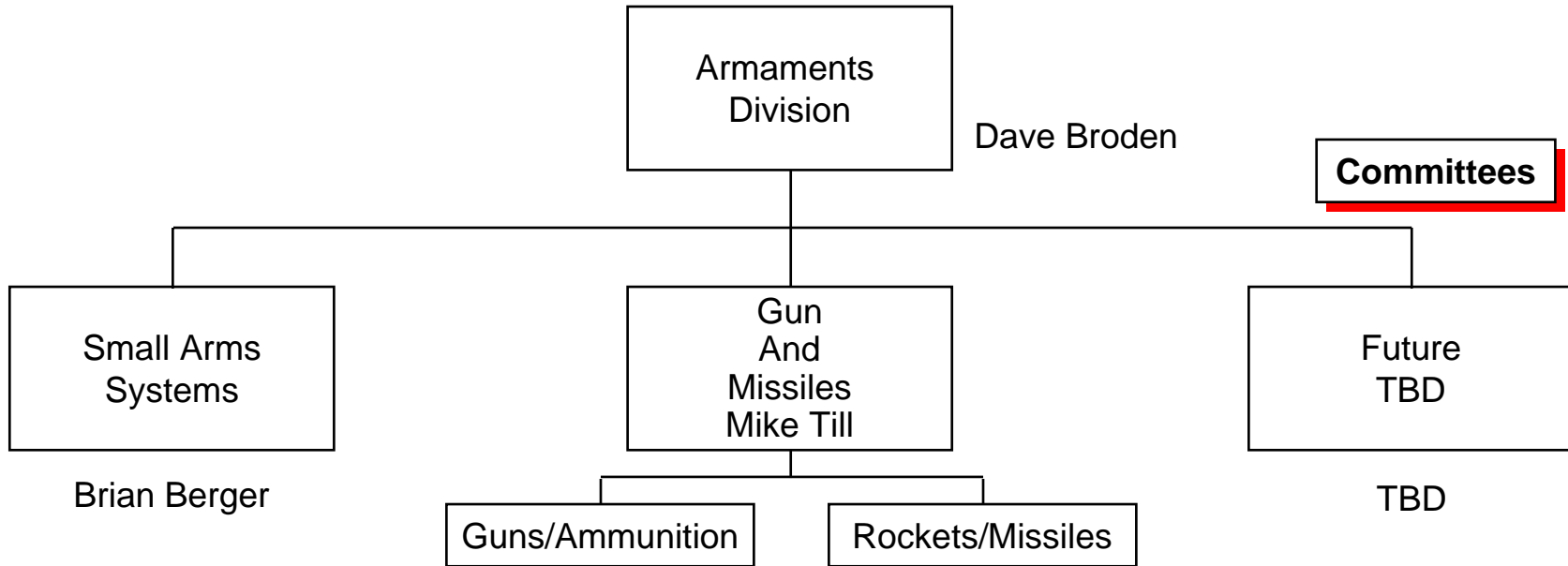
Armament Division Focus— “Value Added” Activity

- Expanded participation
- Resource for government and industry
- Linked to key DOD and service strategies
- Capture “lessons learned” → ensure readiness → shape future
- Encouraging leverage of complementary systems
- Effective use of exhibits, demonstrations, and tours

Establishing Vision for 21st Century Relevance

Addressing Transformation—Ensuring Readiness

Objective: Coordinated Focus and Vision for Armament Systems



Responsive Organization – Ensures Relevance

**Scope – Area of Interest – Responsibility
Definition Clarity**

Establishing and Ensuring Strategic Focus

Themes, areas
discussed; no
specific action

Symposium Attendance Realizing Growth



- **Gun and Missile Systems**

Attendance---350-500 in last 5 years

- **Small Arms Systems**

Attendance—400-550 in last 5 years

Expanded Participation

Strategic Focus

New Attendees and repeat attendees

Growth of Exhibits

Continued International participation

- **Interest and Activity Strategically Focused**
 - **Armament Division meets Needs of Government and Industry**

Committee Scope



Gun and Missile Systems

Small Arms Systems

- Individual weapon(s)
- Crew served weapon(s) (e.g., ≤ 40mm)
- Lightweight Systems
- Ammunition
 - Enhanced/lightweight
 - “Green”
- Full life cycle management
- Supportability
 - Training
 - Logistics
- Target Acquisition/Fire Control System (TA/FCS)
- Remote Stabilized Turret System
- System Integration
- Networked capabilities
- Non lethal
- Homeland Defense systems

Guns and Ammunition

- Medium caliber systems
- Tank systems
- Mortar systems
- Artillery systems
- Naval gun systems
- Aircraft/helicopter systems
- Precision systems
- Platform Integration
- Manned/robotic applications
- System integration
- TA/FCS
- Supportability
- Life cycle management
- Stabilized Turret System

Missiles and Rockets

- Tactical missiles and rockets
- Shoulder Fired Systems
- Ground launched
- Aircraft/helicopter launched
- Precision Systems
- System Integration
- Manned/robotic applications
- Life cycle management

Synergism



Commonality

Common Enabling Technologies, Modeling/Simulation, Man-Tech

Links to Other Committees

Guns and Ammunition

Rockets and Missiles

Meeting Warfighter Needs for the Asymmetric Threat

Addressing the Theme!

- **Joint Capability**
- **Joint Requirements**
- **Readiness Capability**

Applying Common Advanced Technologies and Integrated Systems

- Capability focused complementary integrated systems
- Strengthening Legacy Systems while evolving “new”
- Address key force multipliers
 - Precision
 - Mobility
 - Communication
 - Situation awareness
 - Lethality
- Planning and implementing Spiral Development
- Building on “lessons learned” for future readiness
 - Priority to supporting the Warfighter
- Ensuring responsive industrial base capability
- Attention to life cycle management

Enabling an Integrated and Responsive Joint Force Capability

Meeting Warfighter Needs for the Asymmetric Threat



- Understanding the Need
- Joint Requirement(s)
- Requirements Pull
- Technology Push
- Readiness/Capability/Responsiveness
- Direct Integration
- System Integration Adaptations
- Spiral Development
- Supportability



- Threat Specific Solutions vs. Capability Driven and Adaptable
- Operational Flexibility and Responsiveness
- Industrial Base Readiness
- Spiral Development

Response to Symposium Theme

– Adaptable, Innovative, Visionary, Capability Focused

Vision: Readiness for Today and the Future



Joint Services: Defining and Executing the Change
Industry: Ensuring Technology and Product Availability – Evolution

Asymmetric Threats

Joint Operations

Joint Requirements

Transformation Initiative

Readiness

Industry Responding to
Joint Force Needs

Simultaneously

Changing the Force

Responsiveness – Technology – Capability
and

Maintaining Readiness

of
Existing Forces

Meeting the Needs of Our Joint Ground Forces in the Fight Against Terrorism

Address and Focus on the Theme

DoD and Homeland Defense Capabilities

- Joint Force operations and capability
- Response to asymmetric threats
- Adapt systems and technology for operational flexibility — Jointness
 - Responsiveness
- Push technology envelope(s)
- Push integration efficiencies
- Add functional capabilities
- Introduce new systems
- Ensure readiness and capability

**“Lessons Learned” — Readiness/Capability —
Responsive Force — Jointness — Technology Change**

Shape the Future — Enable the Force

Armament Division Success



Guns and Ammunition/Missiles and Rockets

Small Arms Committee

Value Added Has Been Demonstrated

Leadership to Strengthen the Armament Community

Challenge: Applying Technology, Systems for Future Force

Ensuring Readiness . . . Responding to the Challenge Advancing Superior Capability

Symposium Benefits Confirmed

“Value Added” –Strategic Focus

2007 Armament Division Highlights



- **Symposium Attendance Strong and Growing**
- **Symposium Exhibits Effective and Quality Enhanced**
- **Attention to Strategic Focus Topics Enhances Effectiveness**
- **Executive Committee activity strengthened and increased**
- **Government and Industry Partnership in Division leadership demonstrated**

Armament Division leadership strength enables strategic focus to address current and future needs

Armament Division Strategic Focus



- **Strategic Focus Request from NDIA Board of Directors**
- **Strategic Focus Purpose---** Ensure NDIA Missions are Achieved
 - **Advocate**
 - **Promote**
 - **Provide**
- **Strategic Focus Armament Division Response ---**
 - **Input from each Committee**
 - **Topics Addressing Armament Division Effectiveness Submitted**
- **Strategic Focus Benefits—**
 - **Committee Action to Implement Changes –**
 - **Committee Mission Focused to Specific Actions for Armament Community**

- **NDIA Missions Shape the Strategic Actions of All Divisions**
- **Mission Statements**
 - **Advocate**:--Cutting Edge Technologies, superior weapons, equipment, training, and support for America’s Warfighter and First Responders.
 - **Promote**:--Responsive and Vigorous Government—Industry National Security Team
 - **Provide**:--Forums for Exchange of Information Between Government and Industry on Matters of National Security

- **Strategic Focus Topics Addressing Armament Division**
 - Relevance to Current and Future Capability
 - Strengthening the Industrial Base
 - Building a Team—Government and Industry
 - Promoting Communication with “Value Added”

- **Linked to NDIA Mission Statements**
 - Advocate
 - Promote
 - Provide

- **Focus Area/Objective:** **Establish a Mentor/Protégé relationship throughout the Armament Division** ---Industry and Government to ensure succession planning and technology/experience transfer in all aspects of defense business and in conduct of NDIA committee operations.

• **Narrative:** There has been much discussion regarding the decline of the workforce and the emerging shortage of technical staff. One component of this consideration is the mentoring of the new to ensure transfer of technology and experience thus supporting succession planning. The committees Executive Committees can be used as a resource for mentor/protégé of the NDIA--enabling an effective transition of the organization. This should be structured with the thought of moving the process into the industry members and later into the government agencies.

Strategic Focus Topics



1. Ensure Understanding of **NDIA Role, Mission, and Benefits**
2. Establish **Mentor Protégé** Relationships
3. Ensure **Symposium Theme** flows throughout the Program
4. Address Symposium Content which will **“Impact”** Programs, Technology, and Approaches
5. Increase **Industry Leadership** in Symposium Presentations
Increase Industry Communication of Innovation etc.
6. Enhance **Symposium Quality** Thru Innovation and Intra-Divisional
Teams—Sharing Ideas and Approach

Strategic Focus Topics (Continued)



7. Establish Executive Committee **Focus Subcommittees** for Selected Technologies/Systems or Priority Topics.
8. Address **Industrial Base Readiness** for Transition to Reduced Level of Activity—And Readiness for the Next Event
9. Expand **Emphasis of Platforms, Systems Integration and Enabling Technologies** in the Armament Division Programs
10. **Other Topics** to be Addressed by Executive Committee
 - Executive Committee Initiatives
 - Symposium Attendee Initiatives/Suggestions
 - Requests from NDIA
 - Requests from DOD/Agencies

Executive Committee Improvement Topics



1. Clarify **Caliber and System Responsibility** of Gun and Missile Committee vs. Small Arms Committee
2. Address **Integration of Precision Strike** Component of NDIA
3. Increase **User Community** Involvement
4. Address Symposium **Presentation Quality**
5. Address **Symposium Presentation Mix** –Industry vs. Government and type of Presentations—Requirements, Acquisition, Platforms, Systems, Technology, Industrial Base etc.
6. Improve “Value Added” of **Keynote Speakers**

Executive Committee Improvement Topics



7. Include **Requirements Segment** in All Symposium Programs
8. Capture and Address **Attendee Suggestions/Recommendations**
9. Expand Use of **Panel Discussions**
10. Utilize **New Formats** for Presentations and Consider “Kiosk” Approach for Additional Papers.
11. Link **Exhibits** to Theme – (If practical and Affordable)
12. **Executive Committee** Structure and Operation
13. Conduct **Special Studies**
14. Add **New Committee** (e.g. Integration Focus, Precision etc.)

Armament Division Strategic Initiatives



- 1. Armament Division— **Strategic Focus** based on Committee Input
- 2. Monthly **Division Chairman Telecoms**--Plan Improvement
- 3. **Executive Committees** Identifying and Addressing Focus Areas
 - Strategic Focus Topics
 - Committee Initiatives
 - Symposium Input and “Lessons Learned”
 - Response to DOD or Agency Requests
- 4. Requesting Symposium **Attendees Communicate/Share Ideas**, Suggestions, Concerns, Topics etc.
- 5. Goal to Not be Static Organization— **Change to Address Relevant Topics and Interests.**

1. **Ensuring Capability** for the Warfighter
 - Current Systems
 - Refurbishment/Repair– Industry and Depot Responsiveness
 - Expendables
2. Responding to **Urgent** Technology/System **Needs**
 - “Lesson Learned” Responses
 - Adapting to Asymmetric New Threats and Conditions
3. Maintaining and Adapting the **Industrial Base**
 - DOD Organic Base
 - Industrial Base
4. Establishing and Transitioning **New Technology and Systems**
 - Requirement Process Effectiveness
 - Program Decision Milestones
 - Schedules/Spiral development and Technology Insertion
 - Funding

Armament Division Focus Topics (continued)



5. **Understanding** Budgets and Funding

Shaping Development Plans leading to New Systems

Maintaining Production to ensure Readiness

6. Addressing **Acquisition Change** Considerations

7. Transitioning the Workforce

Attention to DOD Technical Manpower Study

Mentoring effectively

Enabling the entry Workforce

8. Evolving New Technology To Readiness for System Applications

Understanding the Need

Technology Insertion —Insertion Before the Next Technology

“Maintaining Innovation” thru effective Industry and Government investments

9. Maintaining Technical Data Packages (TDP's) vs. Performance Spec and consideration of **Intellectual Property etc.**

2007 Top Defense Issues



- **Issue 1: Maintain Integrity---Responsiveness of Acquisition Process**
- **Issue 2: Promote Defense Workforce Sustainability**
- **Issue 3: Invest in Defense Industrial Base Technology to Support Warfighter and Maintain Readiness**
- **Issue 4: Improve Small Business Utilization**
- **Issue 5: Preparing for Transformation**
- **Issue 6: Ensure International Competitiveness of US Industry**

***NDIA Board of Directors Approved Focus
NDIA Focus Issues to Congress***

NDIA International Symposium Links



Objective: International cooperation and integration of symposiums benefiting industry and Department of Defense to encourage partnerships for development, production, and interoperability

Approach:

- Coordination of NDIA Armament Division programs with “Symposium at Shrivenham” The Royal Military College of Science
- Common presentations and panel participants is a strong “open door” resource

European Small Arms and Cannon Symposium

August 2007

- National Defense Magazine
 - Emphasis on relevant and timely topics
 - Frequently source of media, DoD, and Congressional reference
- Website
 - Symposium presentations available — attendee access
 - Complementary information
 - Full list of activity
- Top public policy issues — prioritized — addressed to Congress — strengthen the community

NDIA Messages and Content Has Impact

and

Website Used Extensively as Resource

Armament Division 2007 Challenges



- Ensuring Focus on NDIA **Mission Statement**
- Addressing Armament Division Strategic Focus Topics
 - Enhancing Membership **“Value Added”**
- Capturing Symposium **Attendee and Membership Topics** of Interest in Programs and Activities
- Ensure Membership Awareness of **Top NDIA Congressional Issues** and Impact
- Seek Symposium and Related Activity which **Impact Capability and Responsiveness**

Take-Away Thoughts



- NDIA is strong and valuable
 - Resource use enables timely/responsive solutions
- Armament Division has Strategic Focus —Implementing Objectives
- Multi-discipline capability links NDIA Divisions
- Listen to “lessons learned” and jointly enable readiness capability
- Commitment to “value added” changes
 - Strategic Focus Initiatives
 - Understanding of Responsiveness Issues
 - Emerging Changes in Acquisition
 - Attention to Industrial Base Readiness Needs
- Attendee participation/input strengthens organization

**Executive Committees Impacting Activity
Strategic Focus Changes
Ensuring “Value Added”**

Strategic Focus Emphasis



- Effective **Communications and Links** Across Government and Industry
- Ensuring **Innovation** in Technology and Systems
- Strengthening the **Industrial Base** —Recognizing the Need
- Building an **Integrated Team** —Industry and Government
- Promoting Communication with **“Value Added”** Content

Leadership Vision



NDIA Armament Division Is:

- A relevant voice and forum
- Meeting NDIA Mission Statements with Strategic Focus
- Responsive to DoD community and industry challenges
- A forum for DoD/industry interaction discussion of “lessons learned” and needs
- Supporting national defense through people resources, networking, and symposiums
- Transforming to ensure relevance to changing military, geopolitical environments, technology, and industrial base resources

**The NDIA Community is the
Resource of Choice For Excellence in
National Defense Topics/Communications**

**NDIA Division Focus Areas
For 2007
Armament Division**

12 March 2007

Prepared by:

Dave Broden

Division Chairman

Contributors: Mike Till—Guns and Missiles

Brian Berger—Small Arms

Committees

- 1. Guns and Missiles ---Mike Till Chairman**
- 2. Small Arms Systems --- Brian Berger Chairman**

- **Focus Area/Objective:** NDIA Division Executive Committee understanding of NDIA Mission and Purpose

• **Narrative:** Division/Committee Executive Committee Members do not have a clear understanding of the mission, purpose and objectives of NDIA. As a result the committee activities are not consistent with the Advocate, Promote, Provide themes. As a result the committees provide programs only without the thought of impact to the industrial base and/or providing capability to the warfighter. Armament Division is seek to discuss this at each committee meeting. Executive Committee members must become more than meeting planners they must be ambassadors for the NDIA and its mission in all respects.

- **Focus Area/Objective: Ensure Symposium theme is reflected in the program content.**

• **Narrative:** Many Symposium reflect the mission of the Committee but not the theme established by the committee. This is often driven by the “call for papers” process which identifies papers which are very general. A more disciplined process linked to the theme and requiring that the executive committee members “force” the issue to the theme is under discussion. Committee must become leaders and trend setters not just planners.

- **Focus Area/Objective:** Include Symposium Content that will “Impact” Programs, Capability, Resources not only Report Status.

• **Narrative:** Symposium often focus on reporting what has been going on or what is going on rather than making statements or presentations which offer change or capability which will impact how programs or capability is achieved. NDIA is the key format to have this “open” dialogue of what is needed to “impact” program etc. We are discussing how to effectively include this element of program content.

- **Focus Area/Objective:** **Ensure Armament Division Symposium have a Strong Industry and Industrial Base content vs. focus on government activity**

• **Narrative:** Armament Division Symposium have seem a decrease in industry focus and presentation participation while government papers are increasing. As the “I” in NDIA states the organization is to promote the Industrial Base—a plan and thrust to return to communicating the innovative and resource readiness activity of industry is evolving.

- **Focus Area/Objective: Symposium Content and Quality Enhancement thru Intra-Divisional Innovation Teams**

• **Narrative:** The two committees of the Armament Division—Small Arms and Guns and Missiles have agreed to for cross committee working groups of 2-5 Executive Committee personnel to address topics with objectives to address improvement or changes in the format and content of the Division Symposiums. This is underway.

- **Focus Area/Objective: Executive Committee Focus Subcommittees to ensure in-depth presentations on priority topics**

• **Narrative:** There is a recognized need for the Executive Committees to seek and obtain presentations for symposiums on high priority topics and trends. To address this executive committee subcommittees of 3-5 members will focus on a particular technology, system, or topic and ensure in-depth symposium content.

- **Focus Area/Objective:** Armament Division Industrial Base Readiness for transition from war to peace capability—discussion of what should be the industry response.

• **Narrative:** The products, technology, and systems of the Armament Division are uniquely sensitive to volume capability. There is a need to provide a forum addressing the downturn and how Industry should prepare for it and when. This NDIA activity should reach across multiple divisions.

- **Focus Area/Objective: Including System Integration and Enabling Technologies in the Armament Division Symposiums is often overlooked—expanded emphasis is a focus need.**

- **Narrative: Armament Systems require attention to System Integration (platforms, fire control, feed and storage, logistics etc.) and also specific enabling technologies. Industry has significant technology and innovation to support this system focus. The Executive Committee is seeking to strengthen the links to these areas in Executive committee membership, presentations, and participation.**

- Focus Area/Objective:

- Narrative:

Linking NDIA and DoD Realized

- Improved links to DoD and service thrusts and initiatives
- Interest in “after action reports” — “lessons learned” → industry responsiveness → addressing challenges

Symposium Quality and Communication Demonstrated

- Presentation quality improvements and “So What” benefit messages have added value
- Focused interest in systems level presentation vs. technology unless technology offers payoff vision
- Industry adjusted to intellectual property concerns and expanded participation positively
 - Industry worked with vision

Ensuring Relevance

- Evolve executive committees
 - Integrate relevant organization(s) for future
 - Industry
 - Government
- Improve division charters to ensure relevance/clarity
- Symposium themes
 - Future “vision” focus
 - Emphasize Readiness topics
- Symposium content
 - Focus on “Value Added” for attendees
 - Emerging technology and capability
 - Panels
 - Interactive format
- Attendees
 - Participation is growing resource

Armament Division is Key to Current and Future Force Capability

Armament Division 20067 Highlights

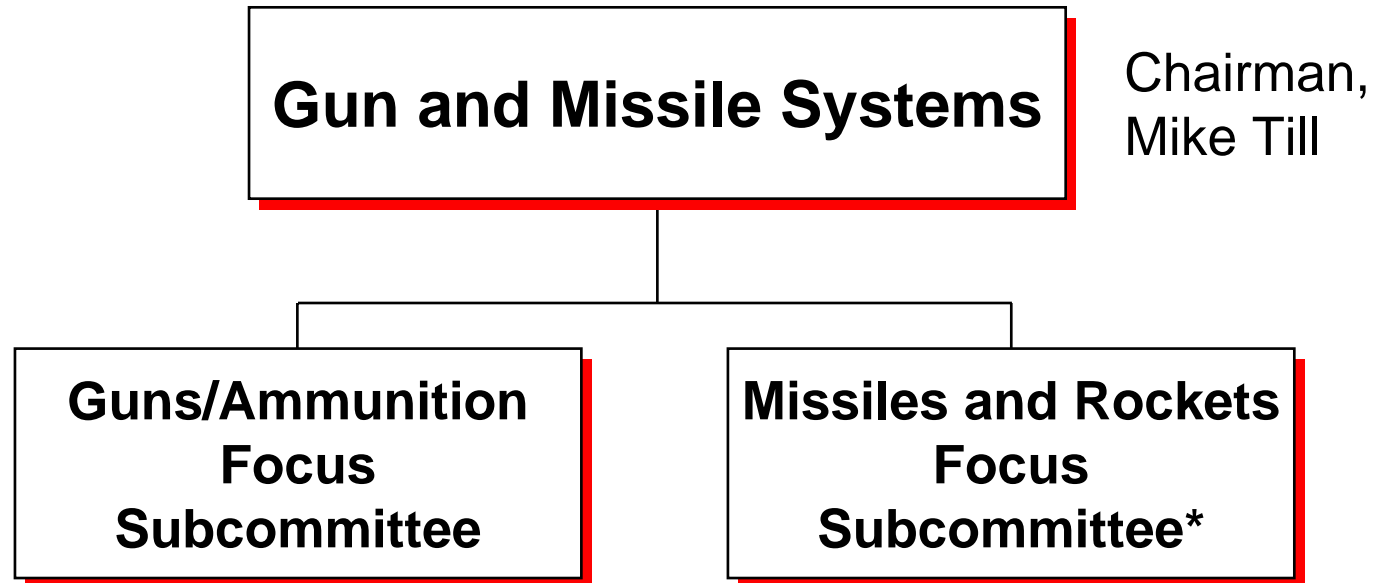


1. Focus on relevant and “value added” topics
2. Solid links to Transformation and future topics
3. “Lessons learned” and “after action reports” input shapes the future
4. Recognition of need to address industrial base readiness — capability — responsiveness---capability today and the future
5. Executive committees focused to objectives
6. National Small Arms Center established/operational
 - 50+ companies
 - Program planning addressing GAPs in-process
 - Procurement activity realizedBudget process moving forward effectively
7. Continued panel discussions focus to key interest topics
8. Recognized forum for business/technology “networking”

2007 Armament Division Highlights



- **Leadership for National Small Arms Consortium and Center Executive Committee**
Research Committee and Subcommittees
- **Participation in Industrial Base Status and Needs Briefings**
Communication of Situations, Changes and Actions
- **Armament Division Executive Committees demonstrated Leadership**
Multiple Meetings
Expanded Participation
Shaping the Future
- **NDIA Armament Division Contacted by Government and Industry for expertise to address specific needs---**
Talent and Experience benefited specific activity



*May be 1 or 2 subcommittees

Organization Focuses on Commonality and Synergism and Provides Links to the Two Components

Guns, Ammunition, Rockets, Missiles Section/Committee---Gun and Missile Systems



Committees were

Guns and Ammunition

Missiles and Rockets

Committee is

, Gun and Missile Systems

Benefits Realized

1. Commonality NDIA membership
2. Leverages convergency of technology and systems
3. Stimulates discussions — dialogue
4. Symposium attendance efficiency (one vs. two meetings)
5. Brings separate communities together for common purpose

Symposium Interest, Attendance, and Dynamics Enhanced

2006 Top Defense Issues



- Issue 1: Sustain the Defense Industrial Base
- Issue 2: Sustain Overall Military Readiness While Continuing the Global War on Terrorism and Preparing for Future Defense Transformation
- Issue 3: Improve the Integrity and Responsiveness of the Acquisition Base
- Issue 4: Improve Small Business Opportunities
- Issue 5: Strengthening the National Security Workforce

NDIA Board of Directors Approved Focus

Established by Government Policy Advisory Committee

Look to Web Site for Full Details

These Issues are NDIA Membership Voice to Congress





