



Defense Industrial Base Analysis

Body Armor Case Study



Enhanced Small Arms
Protective Inset (E-SAPI)



Enhanced Side Ballistic
Insert (E-SBI)



X-Threat Small Arms
Protective Inset (X-SAPI)



X-Threat Side Ballistic
Insert (X-SBI)



Hard Armor

Soft Armor



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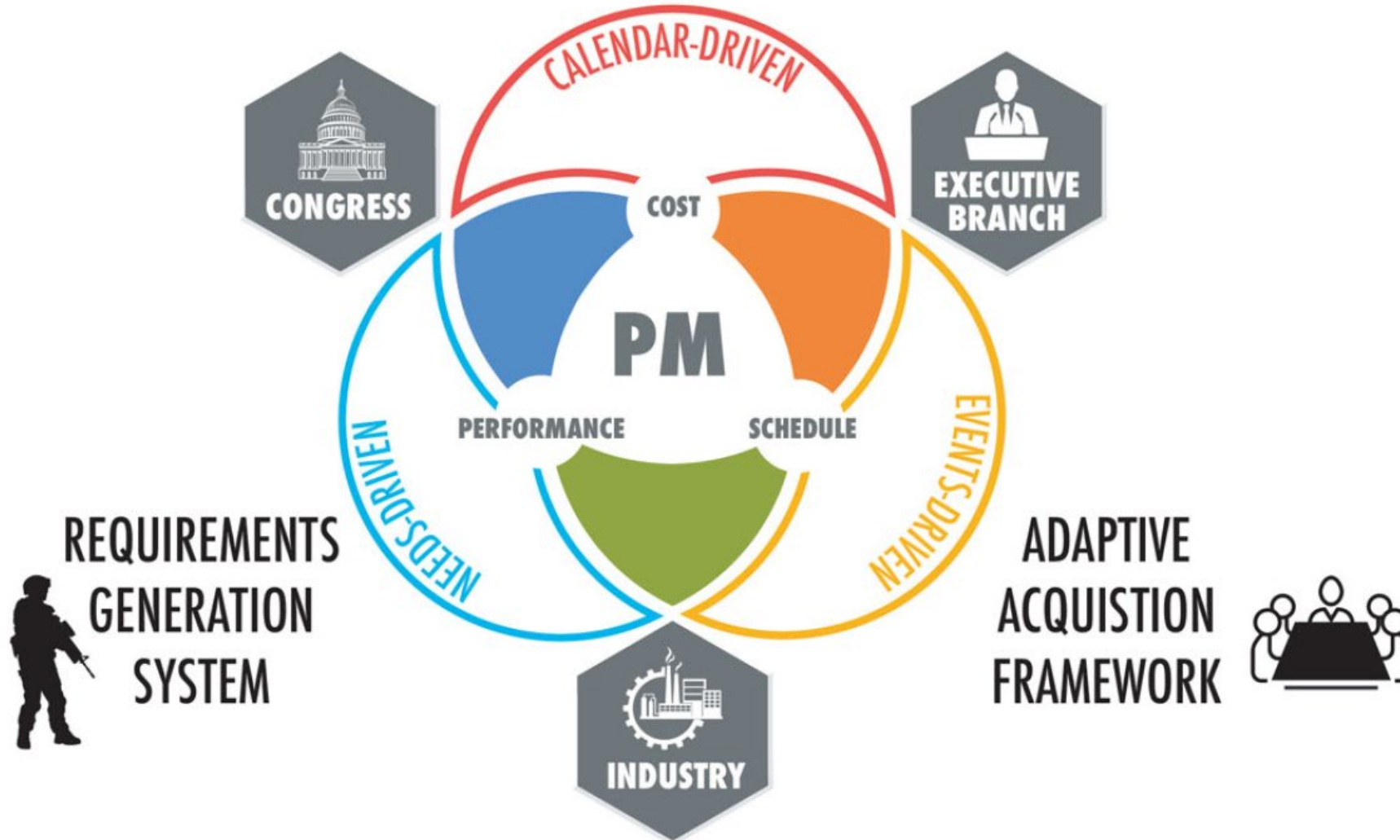


Defense Industrial Base Analysis

- **General Approach:** Use the Army hard body armor program to enhance critical thinking, decision making, and document lessons learned
- **Applicability:** Defense Acquisition professionals
- **Overall Learning Objectives:**
 - Develop the ability to critical analyze a project at key decision points—*critical thinking*.
 - Identify and engage key stakeholders—*stakeholder engagement*.
 - Develop and compare alternative recommended strategies—*decision making*.
 - Identify second-order considerations of the recommended strategies—*strategic leadership*.



RESOURCE ALLOCATION





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Congressional Language – Fiscal Year 2013 (FY13) and FY14 National Defense Authorization Act (NDAA)

FY13 NDAA HASC Committee Report 112-479:

Directed the Secretary of the Army to provide a briefing to the congressional defense committees that provides an assessment of the long-term sustainment requirements for the body armor industrial base in the United States, to include supply chains for both hard and soft body armor.

FY14 NDAA Section 253:

Requires the Secretary of Defense to provide a report on the comprehensive Research and Development strategy of the Army Secretary to achieve significant reductions in the weight of body armor. The report shall include the following:

Congressional Language

Senate Report 113-176 accompanying the Carl Levin and Howard “Buck” McKeon National Defense Authorization Act (NDAA) for Fiscal Year 2015 (FY15).

The Secretary of the Army shall conduct a technical study and business case analysis on the requirements, cost, benefit, feasibility, and advisability of the replacement and refurbishment of the various body armor plates used in personal protective equipment. The technical study will

FY15 NDAA



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*Secretary of the Army's Response to
Congressional Defense Committees on Body
Armor Research & Development and Sustainment
Strategies*

28 March 2014

- Sustainment of current body armor systems
 - Leveraging residual wartime procurement stocks of armor to fulfill near term training needs
 - Decreased demand for body armor and helmets will likely result in an inability to maintain multiple armor manufacturers and materials suppliers per product
 - No easy answer – requires analysis of options and likely some difficult decisions



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*Secretary of the Army's Response to
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28 March 2014

➤ Short Term Risk Assessment (FY 2014-2015)

– Hard armor industrial base risk is **significant** (considerable drop in demand)

➤ Long Term Risk Assessment (FY 2016 and on)

– Hard armor industrial base risk is significant (low demand, dependence on the Department of Defense)

➤ As the demand for body armor significantly decreases, the risk to industrial base will increase

➤ Once a capability disappears (e.g., production lines are dismantled), it will take approximately 18 months to reconstitute that capability to the point where a manufacturer can regularly deliver product



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NATIONAL DEFENSE RESEARCH INSTITUTE

MANUF

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Assessing the U.S. Industrial Base for Personal Protective Equipment for the U.S. Military

Competition and Innovation

Obaid Younossi, Ellen M. Pint, Guy Weichenberg, Semira Ahdiyyih,
Sean Critelli, Kenneth Horn, Jerry M. Sollinger

February 2015

Prepared for the Office of the Secretary of Defense



Defense Industrial Base Analysis

Department of Defense Report to Congress on Personal Protection Equipment



Office of the Under Secretary of Defense
(Acquisition, Technology and Logistics)

February 2015

REPORT TO CONGRESS

Technical Study and Business Case Analysis of
Body Armor Plates – Interim Report



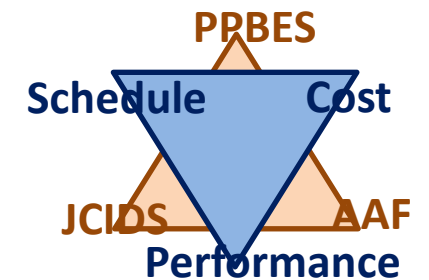
Headquarters, Department of the Army

February 2015



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- **Issue:** Industry complaining to Congress about the Army planned buys of hard armor plates during the FY16 PB request hearings
- **Case Study Questions:**
 - Stakeholders?
 - DoD/Army and industries' assessments of the hard armor IB?
 - What did the DoD/Army do with the FY15 \$80 million funding?
 - What was the hard armor IB plan moving forward?
 - Should the Army buy new or old plates?
 - Inventory of plates?
 - Operational requirement or to maintain the industrial base?
 - Advantages and disadvantages of various options?
 - Recommended hard armor IB actions for Congress?





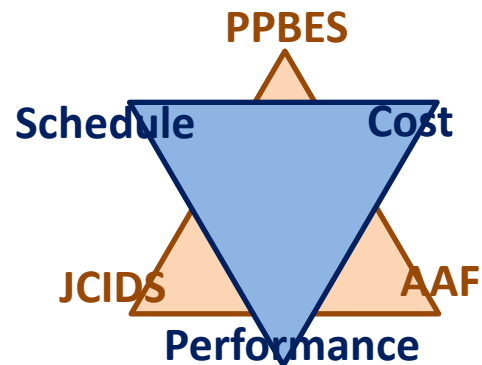
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Background

- FY13, FY14 and F15 NDAA Guidance
- Reports to Congress
- PM IBA
- S2T2 FAC, RAND and IDA Report
- Industry complaining about buys

Stakeholders

- PM
- Army Leaders
- Warfighters/Soldiers
- Congress
- Industry





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Background

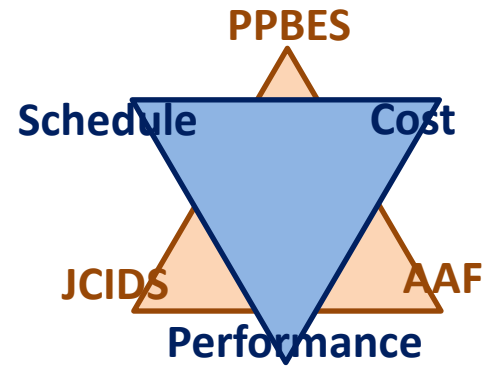
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Stakeholders

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Constraints/Considerations

- DoD/Army and industries' IBA
- FY15 \$80 million funding from Congress
- Current inventory projections
- Operational requirement or maintain IB
- Preserve one or two vendors
- Cost Effectiveness Analysis



Pressures:

- Schedule
- Cost
- Performance
- Industrial Base



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Lessons Learned:

- Understand options (new versus old versus IB) and criteria (cost, performance and IB) – ***critical thinking and decision making***
- Analyze options (comparison or decision matrix or cost effectiveness analysis) – ***critical thinking and decision making***
- Recommendations to Congress (potential NDAA language and potential marks to the PB request in the Appropriations Act) – ***stakeholder engagement and strategic leadership***
 - Recommendation that satisfies DoD (Army), Industry, and Congress.
 - Recommendation has general guidance/language (provides DoD flexibility, doesn't tie Congress' hands, and show it's important to industry).
 - Encourage the examination of all possible options (R&D/next generation plates, MSRs, IBMCs, FMS of legacy plates, stockpiling, etc.)