Department of Defense
S&T Priorities

22 June 2011

The Honorable Zachary J. Lemnios
Assistant Secretary of Defense for Research and Engineering
### Report Documentation Page

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<th>22 JUN 2011</th>
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| 5a. CONTRACT NUMBER   |                                     |
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| 5e. TASK NUMBER       |                                     |
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<th>Department of Defense, Assistant Secretary of Defense for Research and Engineering, Washington, DC, 20301</th>
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<td>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</td>
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| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) |                                     |
| 10. SPONSOR/MONITOR'S ACRONYM(S) |                                     |
| 11. SPONSOR/MONITOR'S REPORT NUMBER(S) |                                     |

| 12. DISTRIBUTION/AVAILABILITY STATEMENT | Approved for public release; distribution unlimited |
| 14. ABSTRACT |                                     |

| 15. SUBJECT TERMS |                                     |
| 16. SECURITY CLASSIFICATION OF: |                                     |
| a. REPORT | unclassified |
| b. ABSTRACT | unclassified |
| c. THIS PAGE | unclassified |
| 17. LIMITATION OF ABSTRACT | Same as Report (SAR) |
| 18. NUMBER OF PAGES | 15 |
| 19a. NAME OF RESPONSIBLE PERSON |                                     |

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18
Secretary Gates’ Priorities

1. Take care of our people

2. Rebalancing the military

3. Reforming what and how we buy

4. Supporting our troops in the field

SECDEF Efficiency Initiative
9 August 2010
Global Challenges and Trends

- Shifting Global Demographics
- Globalization shifts
- Energy
- Climate change & natural disasters
- Cyber as a new domain
- Challenges to existing state structures
- WMD proliferation
Key Challenges to our Technical Base

- Shift in Technical Talent Base
- Global Access to Technology
- Increasing Pace of Innovation
- Shorter Research Horizon

DoD

Commercial

Time

Foreign

Tech Areas

Impact

Technical Talent

Time

Foreign

Technical Talent Base
Globalization of R&D

**WORLD TOTAL $1,192B**

- **North America**: $429 (36%)
- **Europe**: $277 (23.2%)
- **Asia**: $421 (35.3%)
- **South America**: $29 (2.4%)
- **Rest of the World**: $36 (3%)

Source: www.rdmag.com “2011 Global R&D Funding Forecast” - Battelle
World R&D Trends: A Global Shift

Source: Battelle, R&D Magazine OECD, IMF, CIA

Distribution Statement A: Approved for public release; distribution is unlimited.
Five Strategic Thrusts

Supporting Current Operations
Mandating Affordability Requirements
Improving Efficiency in Acquisition
Strengthening the Industrial Base
Strengthening the Acquisition Workforce
Better Buying Power

**Target Affordability and Control Cost Growth**
- Mandate affordability as a requirement
  - At Milestone A set affordability target as a Key Performance Parameter

**Improve Tradecraft in Services Acquisition**
- Create a senior manager for acquisition of services in each component, following the Air Force’s example
- Adopt uniform taxonomy for different types of services

**Incentivize Productivity & Innovation in Industry**
- Reexamine Defense Acquisition professional (DAP) competencies
- Increase dynamic small business role in defense marketplace competition

**Promote Real Competition**
- Promote use of government Supplemental Proposals (FPRRs) to
- Reduce Non-Productive Processes and Bureaucracy
  - Require open system architectures and set rules for acquisition of technical data rights
  - Increase dynamic small business role in defense marketplace competition
Strengthen the Defense Industrial Base

What we’ve done:

- Published a new management plan for FFRDCs
- Communicated our perspectives on the base publicly
- Conducted analysis of specific issues

What we are doing:

- Conducting Sector by Sector and Tier by Tier industry analysis (S2T2)
- Being vigilant for specific issues in the base
- Evaluating specific issues brought to our attention by industry and/or Congress

What needs to still be done:

- Develop a holistic mapping of the industrial landscape based on the S2T2 analysis
Strengthen the Acquisition Workforce

Appendix 1
DOD Strategic Human Capital Plan Update
The Defense Acquisition Workforce
April 2010

The Defense Acquisition Workforce Improvement Strategy

FY10 Strategy
- 4,060 growth hires
- ~1,580 new hires
- ~2,500 insourcing
- FY09-FY15 Strategy
- ~9,887 new hires
- ~10,000 insourcing
Quadrennial Defense Review

Missions Require New Capabilities

1. Defend the United States and Support Civil Authorities at Home

2. Succeed in Counterinsurgency, Stability, and Counterterrorist Operations

3. Build the Security Capacity of Partner States

4. Deter and Defeat Aggression in Anti-Access Environments

5. Prevent Proliferation and Counter Weapons of Mass Destruction

6. Operate Effectively in Cyberspace
Capability Priorities for FY13-17

Complex Threats

Electronic Warfare / Electronic Protection

Cyber Science and Technology

Counter Weapons of Mass Destruction

Force Multipliers

Data-to-Decisions

Autonomy

Engineered Resilient Systems

Human Systems
Integrated S&T Enterprise

Missions
• National Defense Strategy
• Quadrennial Defense Review
• Space Posture Review
• Nuclear Posture Review

Operational Challenge
JUONs, UONs, COCOM IPL

Objective Architectures

Critical Capabilities

Enabling Technologies

Laboratory Program

Basic Research Program

STEM Program

Industry IR&D
FY12 DoD R&E Budget Request

Total FY12 R&E Request = $25.88B

6.1 Basic Research
6.2 Applied Research
6.3 Advanced Technology Development
6.4 Advanced Component Development & Prototypes

$ in Millions

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Business Opportunities