Department of Defense

S&T Priorities

22 June 2011

The Honorable Zachary J. Lemnios

Assistant Secretary of Defense for Research and Engineering
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

Technical Talent

Foreign

Time

Impact

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

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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
  - At Milestone B establish engineering trades showing how each key design feature affects the target cost
- **Incentivize Productivity & Innovation in Industry**
  - Reward contractors for successful supply chain and indirect expense management
  - Increase the use of FPIF contract type where appropriate using a 50/50 share line and 120 percent ceiling as a point of departure
  - Limit the use of time and materials and award fee contracts for services
  - Require that services contracts exceeding $1B contain cost efficiency objectives
  - Increase small business participation in providing services
- **Promote Real Competition**
  - Present a competitive strategy at each program milestone
  - Remove obstacles to competition
    - Allow reasonable time to bid
    - Require non-certified cost and pricing data on single offers
  - Reduce non-value-added overhead imposed on industry
  - Align DCMA and DCAA processes to ensure work is complementary
  - Increase use of Forward Pricing Rate Recommendations (FPRRs) to reduce administrative costs
- **Improve Tradecraft in Service 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
  - Address causes of poor tradecraft in services acquisition
    - Assist users of services to define requirements and prevent creep via requirements templates
    - Assist users of services to conduct market research to support competition and pricing
    - Enhance competition by requiring more frequent re-compete of knowledge-based services
  - Address causes of poor tradecraft in services acquisition
    - Assist users of services to define requirements and prevent creep via requirements templates
    - Assist users of services to conduct market research to support competition and pricing
    - Enhance competition by requiring more frequent re-compete of knowledge-based services
- **Reduce Non-Productive Processes and Bureaucracy**
  - Reduce the number of OSD-level reviews to those necessary to support major investment decisions or to uncover and respond to significant program execution issues
  - Eliminate low-value-added statutory processes
  - Reduce by half the volume and cost of internal and congressional reports
  - 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
- 4,080 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