



Department of Defense Laboratories and Centers

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19 August 2009**



DDR&E Imperative 4



Develop world class science, technology, engineering, and mathematics capabilities for the DoD and the Nation

- **Revitalize the DoD Laboratories with world class talent and facilities.**
- **Identify compelling technical challenges to drive the research agenda and attract the very best technical talent across the Department.**
- **Reconnect academia, private sector and DoD laboratories to drive innovation and transition paths.**
- **Inspire young people to pursue studies and careers in science, technology, engineering and mathematics to address future national security challenges.**



Attributes of a High Quality & Effective Laboratory



- **Clear and substantive mission**
- **Critical mass of assigned work**
- **A highly competent and dedicated work force**
- **Inspired, empowered, highly qualified leadership**
- **State-of-the-art facilities and equipment**
- **Effective two-way relationship with customers**
- **Strong foundation in research**
- **Management authority and flexibility**
- **Strong linkage to universities, industry, and other Government laboratories**



Functions of the Defense Laboratory Enterprise

- Infuse the art of the possible into military planning
- Act as principal agents in maintaining the technology base
- Avoid technological surprise and ensure technological innovation
- Support the acquisition process
- Provide special purpose facilities not practical for the private sector
- Respond rapidly in time of urgent need or national crisis
- Be a constructive advisor for Department directions and programs based on technical expertise
- Support the user in the application of emerging technology and introduction of new systems
- Translate user needs into technology requirements for industry
- Serve as an S&T training ground for civilian and military acquisition personnel



Laboratory Office



- **The ODDR&E/Research Directorate/Laboratory Office is responsible for:**
 - **Laboratory Strategic Planning**
 - **Understanding the capabilities of FFRDCs, UARCs, Institutes and DoE labs**
 - Utilize existing capabilities at these organizations
 - Minimize duplication of infrastructure and capability within DoD labs
 - **Oversight of the DoD's Science & Technology Reinvention Labs (STRL)**
 - Increased flexibilities for lab directors
 - Innovative personnel practices
 - **Oversight of FY09 NDAA Sec. 219**
 - Legislation based upon the DoE LDRD program
 - Lab directors may use up to 3% of all available funds for establishment of a discretionary S&T program



Elements of a Lab Strategic Plan



- **Establishment of Laboratory Centers of Excellence**
 - Identify technology areas which are of importance in the near, mid, and far term
 - Baseline capabilities
 - What's needed and why is it needed?
- **Laboratories develop/expand prototyping capability**
 - Cost reduction
 - Improved technical products
 - Attract, retain, strengthen scientific workforce
 - Improved support to acquisition programs



Elements of a Lab Strategic Plan



- **Develop an S&T Corps similar to the Acquisition Corps**
- **Develop formal relationships with DoE Labs, FFRDCs, and UARCs**
 - Define roles and responsibilities
 - Improve relationships
 - Reduce non-productive competition
- **Maintain awareness of NSF Science of Science Policy research program**
 - Potential quality metrics and method to measure ROI of lab investments



Example of DoD Lab Quality



National Academy Membership as of July '08

	ANL	BNL	JPL	LANL	LLNL	IBM	NIST	NRL
NAE	3	2	6	4	3	17	10	5
NAS	3	9	0	5	0	11	5	3

Dr. Tim Coffey, NDU (Source: National Academies Website)