A DoD View on Defense Research & Engineering

Blueprint for the Future

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9/11 Changed Everything

From working to provide overmatching capability against any nation-state on the sea, in the air and on the land … to a global war on terrorism against an enemy who fights in the shadows…

"The concept of a virtual organization is essential to understanding how 21st Century business will work. Al Qaeda represents a new and dangerous kind of virtual organization and the rise of the virtual state. We are entering into an era in which a small number of people, operating without state sponsorship, but using the enormous power of modern computers, biogenetic pathogens, air transport, suitcase bombs, and even small nuclear weapons will be able to penetrate the tremendous vulnerabilities of contemporary open societies." - *Time,* 9 Sept. 2002

"Today the Department of Defense again is in need of change and adjustment. Current arrangements pretty much designed for the Cold War must give way to the new demands of war against extremists and other evolving 21st century challenges" - Secretary Rumsfeld

The Research & Engineering community must develop and deliver systems which provide **strategic resilience**. Our systems must be flexible enough to respond to the many means terrorists or hostile forces might employ. We must also reinvent ourselves, our processes, and our thinking continuously-- not just when there is a new crisis or new foes threatening our national security.
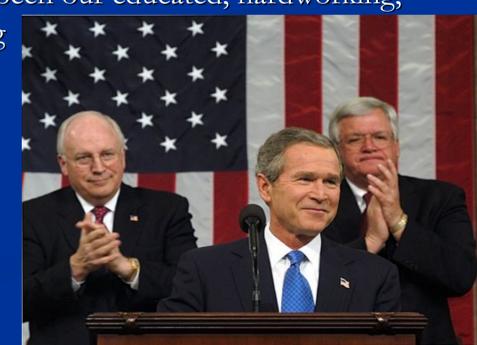
Today and Tomorrow

"On September 11, 2001, we found that problems originating in a failed and oppressive state 7,000 miles away could bring murder and destruction to our country."

"To keep America competitive, one commitment is necessary above all: We must lead the world in human talent and creativity. Our greatest advantage in the world has always been our educated, hardworking, ambitious people, and we are going to keep that edge."

President George W. Bush
2006 State of the Union

DDR&E Vision: *Develop Technology to Defeat Any Adversary on Any Battlefield.*

We recognize that to achieve this, we need to create an Inspired, High Performing, Boundary-less Organization that Delivers.

To achieve this vision, we need:

- An inspired, high-performing organization where each person makes a difference.
- To collaborate effectively across traditional boundaries.
- To see the value of an informal organization.
- To see ourselves as part of a community that comes together as stakeholders around joint projects.

The Defense Research & Engineering Team must use insight and collaboration to anticipate, develop and deliver the technologies necessary for the joint warfighter.

- Understand the warfighter's operational concepts and needs
- Invest in programs that can transition and meet critical warfighter needs
- Apply the unique skills and enterprise insights afforded Team Members to identify research investment areas
- Integrate combatant commander needs and Service requirements to define development priorities
- Coordinate and prioritize requirements, remaining constantly conscious of jointness and interoperability imperatives
- Lead the revitalization of technology intelligence to minimize the probability of technology surprise from adversaries

The Defense Research & Engineering Team must LEAD THE DEFENSE, RESEARCH & ENGINEERING ENTERPRISE TO STRATEGIC BUSINESS SUCCESS.

- Drive the DoD research and development program to be a coherent, coordinated investment in the future

- Use data to drive S&T investment levels

- Use management tools to run the business

- Manage programs with metrics and execute like a lean business

- Promote innovation and accept risk to attain results

- Instill a culture which is open-minded and constantly conscious of jointness and interoperability

- Ensure that value and competition are foremost considerations in every program

I ask you to be a difference maker.

My request to all members of the science and engineering team is . . .

- Understand warfighter operating concepts
- Prioritize efforts to fill CoCom gaps
- Make jointness and interoperability fundamental considerations in every program
- Challenge excessive requirements
- Evaluate openly all new technology opportunities
- Engage the programming and budgeting process fully
- Actively pursue collaboration and coordination across lanes
- We are at war – bring urgency to our daily efforts