

Department of Defense Chemical, Biological, Radiological and Nuclear Defense Program Overview



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Director, Chemical / Biological Defense Programs



Outline

ODATSD (CBRN Defense)

- **Program Overview:**
 - ✓ **Program Restructure**
 - ✓ **Program Corporate Goals**
 - ✓ **FY05 President's Budget Submission**
 - ✓ **CB Defense Program Initiatives Fund**
 - ✓ **Other Initiatives**

- **Wrap-up and Questions**



CBRN Defense Program

Vision and Mission

ODATSD (CBRN Defense)

VISION

Combat Weapons of Mass Destruction through a Strong Chemical, Biological, Radiological, and Nuclear Defense Program

MISSION

Provide CBRN defense *capabilities* to effectively execute the National Strategy for Combating Weapons of Mass Destruction. Ensure all capabilities are integrated and coordinated within the Interagency community



CBRN Defense Program Strategic Environment

ODATSD (CBRN Defense)

- **Defense of the Homeland**
- **Global War on Terror**
- **DOD Role in Bioshield**
- **Proliferation of Weapons of Mass Destruction**
- **Challenge of Non-Traditional CBRN Agents**
- **Biosurety**

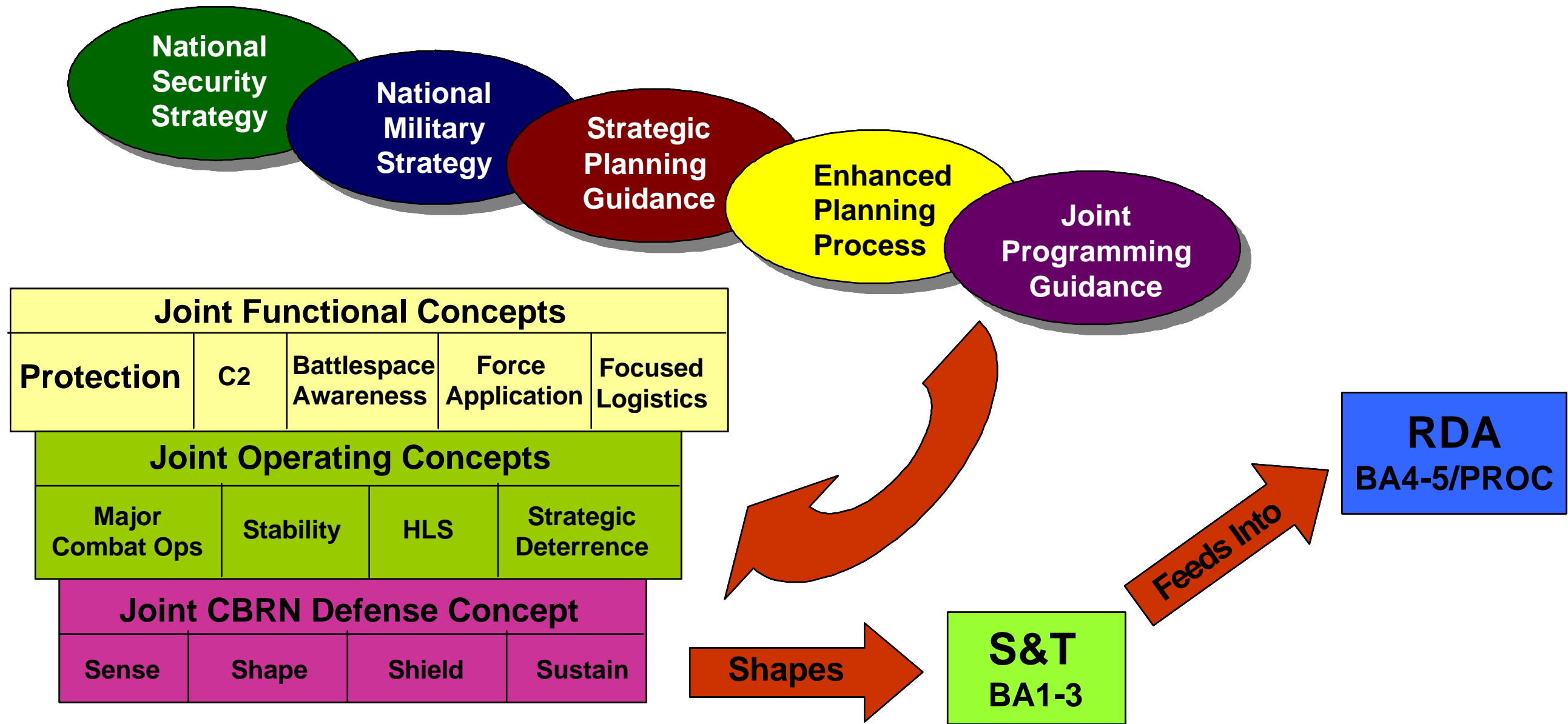
“The *greatest threat* before humanity today is the possibility of *secret and sudden attack* with *chemical, or biological, or nuclear weapons*”

*President George W. Bush
Remarks at the National Defense University
11 February 2004*



CBRN Defense Program Policy Drivers

ODATSD (CBRN Defense)





Secretary of Defense's FY05 Priorities

ODATSD (CBRN Defense)

- **Successfully Pursue the Global War on Terrorism**
- ***Strengthen Combined/Joint Warfighting Capabilities***
- **Transform the Joint Force**
- **Optimize Intelligence Capabilities**
- ***Counter Proliferation of WMD***
- **Improve Force Manning**
- **New Concepts of Global Engagement**
- ***Homeland Security***
- **Streamline DOD Processes**
- **Reorganize DOD and USG to Deal with Pre-War Opportunities and Post-War Responsibilities**



ODATSD (CBRN Defense)

Program Restructure



CBRN Defense Program Paradigm Shift

ODATSD (CBRN Defense)

- ***Prior to the transformation***, the ***major focus*** to provide improved capabilities for the warfighter to survive, fight, and win on any battlefield contaminated with chemical and biological weapons.

- The current paradigm shift directs both a ***broadening and deepening*** of the CBRNDP.
 - ✓ CBRN consequence management (about 1997)
 - ✓ Force protection (in 1999)
 - ✓ Homeland Defense (in 2002)
 - ✓ Visibility of “radiological and nuclear” aspects of the program (2003)
 - ✓ Inclusion of the US Coast Guard (2004)

- This broadening requires a carefully developed program strategy to ***ensure that warfighter capabilities are maintained and advanced*** concurrently with these added missions.



CB Agent Threat Spectrum

ODATSD (CBRN Defense)

CLEARLY CHEMICAL

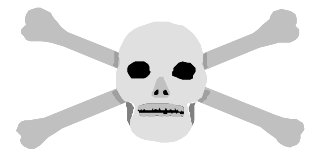
CLEARLY BIOLOGICAL



CW

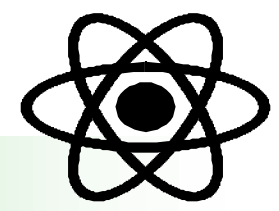
BW

CLASSIC CHEMICAL	EMERGING CHEMICAL	BIOREGULATOR	TOXIN	PATHOGEN
BLOOD	PROTECTION DEFEATING	PAIN	PLANT	BACTERIA
VESICANT	PHYSICAL INCAPACITANT	SLEEP	BACTERIAL	VIRUSES
NERVE	TOXIC INDUSTRIAL CHEMICAL AND MATERIAL	BLOOD PRESSURE	VENOM	RICKETTSIAE
PSYCHOLOGICAL INCAPACITANT (BZ)		MOOD ENHANCERS	MARINE	GENETIC ENGINEERED MICRO-ORGANISMS
CHOKING			FUNGAL	
			ALGAL	



Traditional Nuclear

Asymmetric Weapons



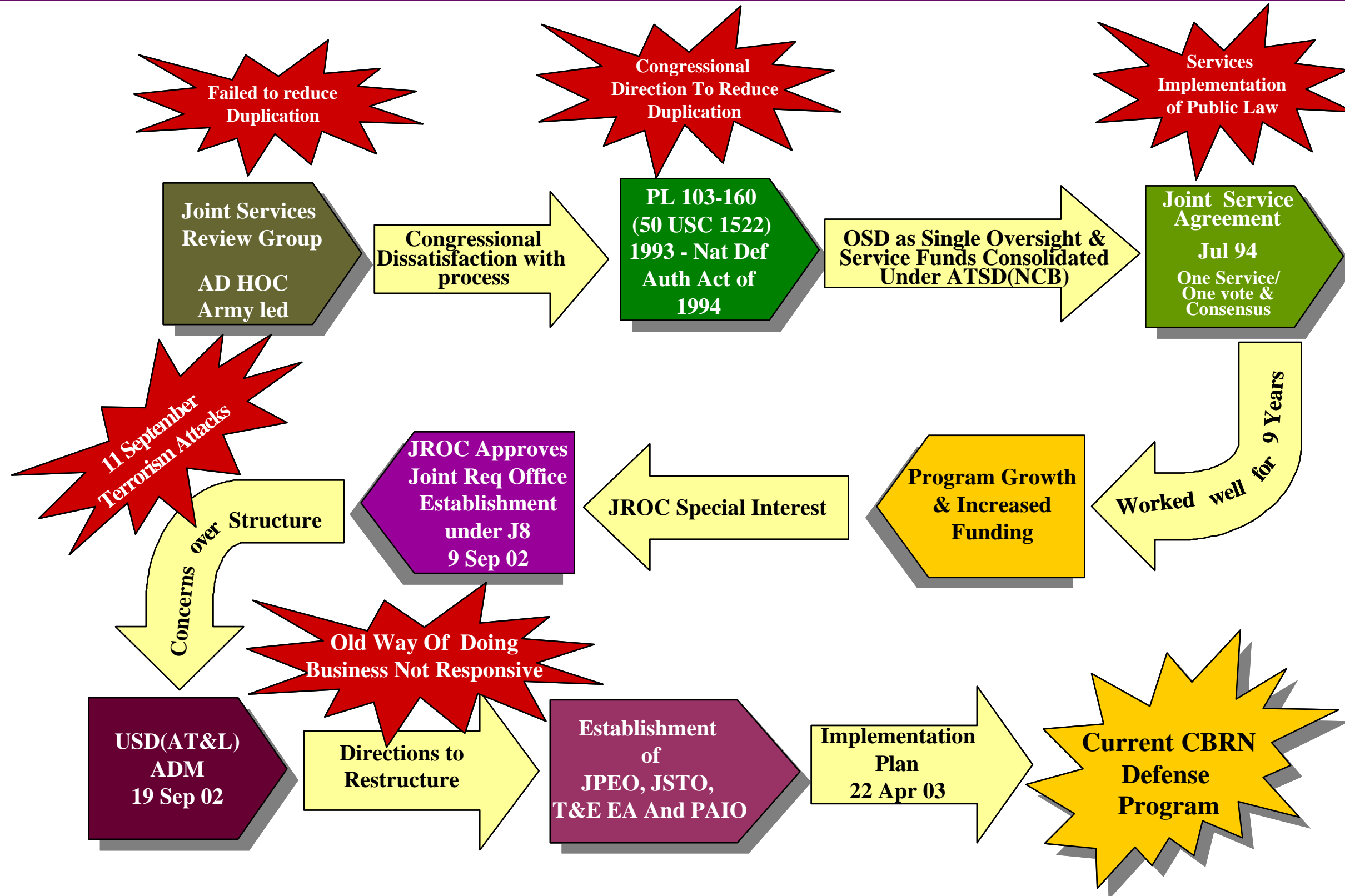
- Nuclear Bombs
- Nuclear Missiles
- Tactical Nukes

- Radiological Dispersion Devices
- Improvised Nuclear Devices
- Nuclear Power Plants



Joint CBRN Defense Program Restructure

ODATSD (CBRN Defense)





Establishment of Three New Organizations

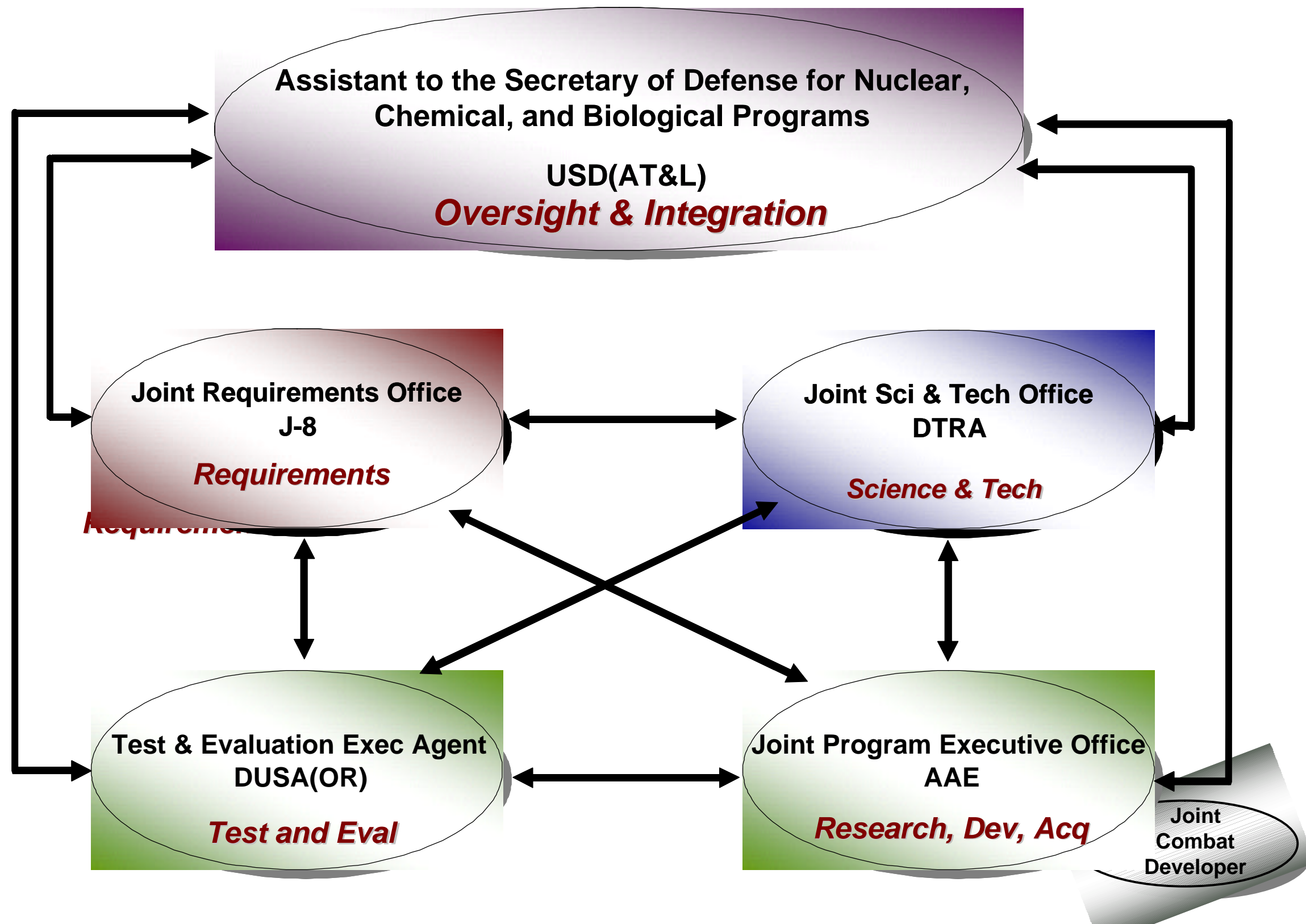
ODATSD (CBRN Defense)

Joint Service Agreement		CBRNDP Restructure	
Organization	Responsible Agency	Organization	Responsible Agency
Joint Service Integration Group (JSIG)	Training and Doctrine Command	Joint Requirements Office (JRO)	J-8 Joint Staff
Joint Service Material Group (JSMG)	Army Material Command	Joint Science and Technology Office (JSTO)	Defense Threat Reduction Agency
		Joint Program Executive Office (JPEO)	Army Acquisition Executive



CBRN Defense Program Interface

ODATSD (CBRN Defense)

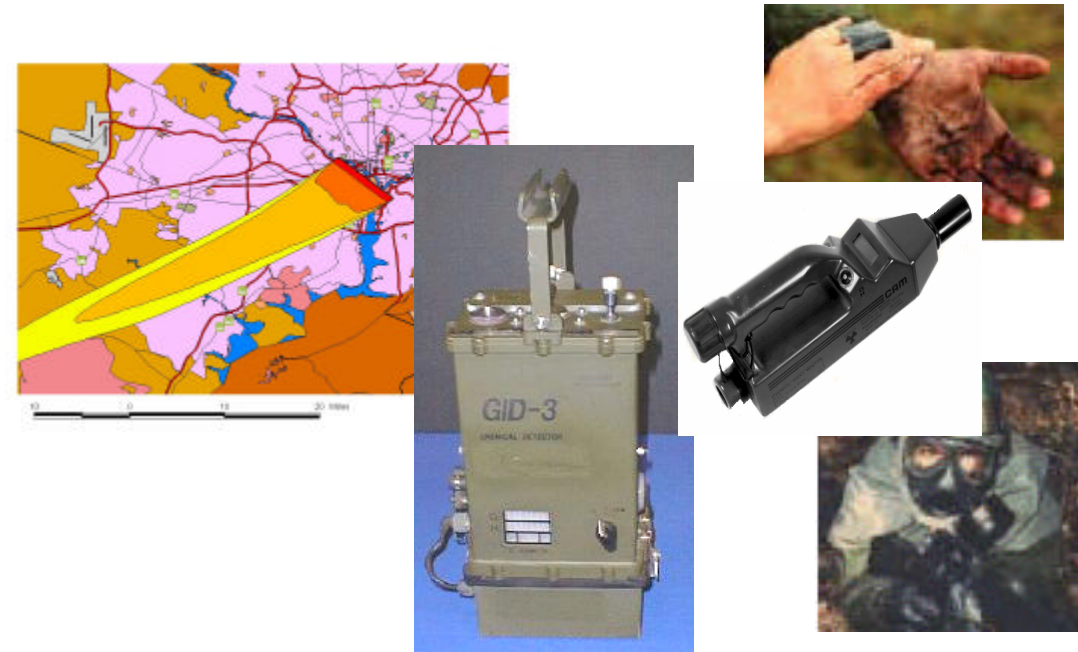
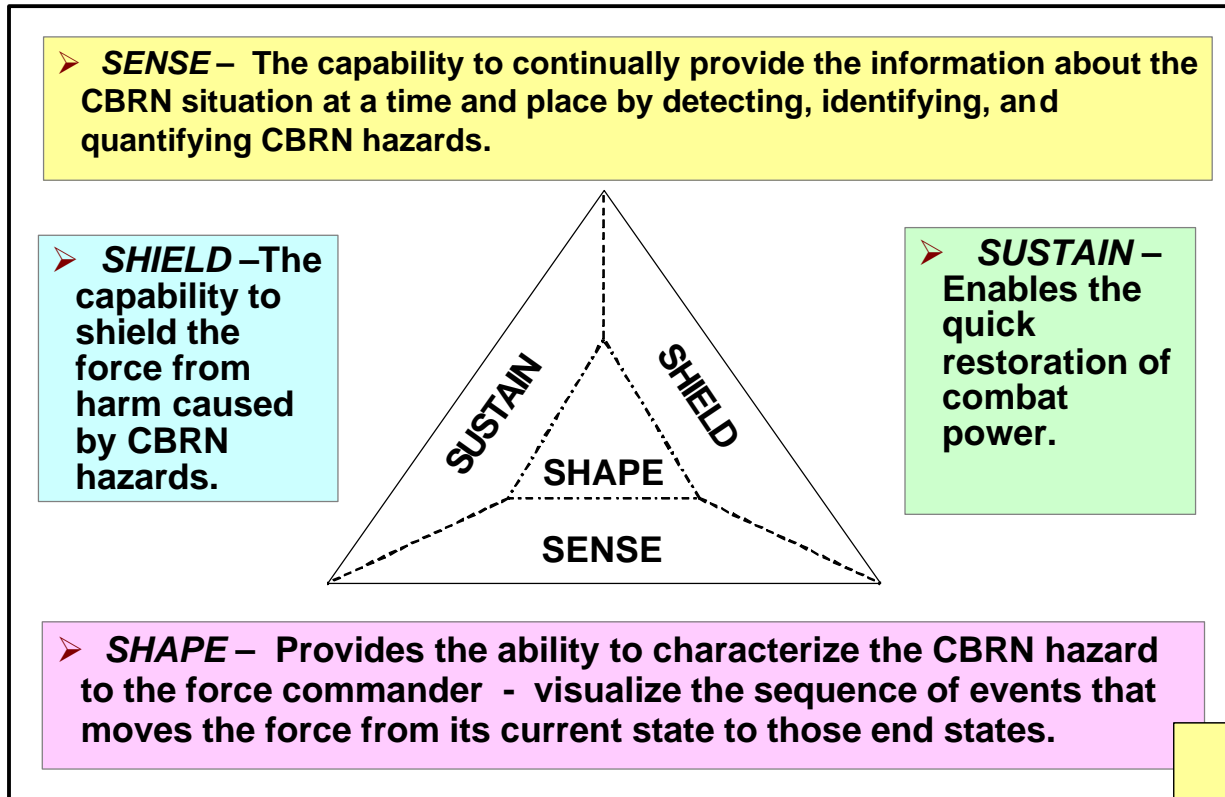




Joint Functional Concept and Joint Core Capabilities Summary

ODATSD (CBRN Defense)

Joint Functional Concept



Joint Core Capabilities Summary

<p><u>SENSE</u> Point Detection Stand-off Detection NBC Reconnaissance (Chemical, Biological, & Radiological, Nuclear)</p>	<p><u>SHAPE</u> Integrated Early Warning Battle-space Management Battle-space Analysis</p>
<p><u>SHIELD</u> Respiratory and Ocular Protection Percutaneous Protection Expeditionary Collective Protection Medical Prophylaxes</p>	<p><u>SUSTAIN</u> Individual Decon Equipment Decon Fixed Site Decon Medical Diagnostics Medical Therapeutics</p>





Results of Restructure

ODATSD (CBRN Defense)

- **Requirements Efforts Elevated to Joint Staff Level**
- **Focused S&T in a Single Organization**
- **Joint Service PEO Established**
 - **Reduction Of Milestone Decision Authorities from 9 to 2**
 - **Milestone Decision Authority for High Interest/High Value Programs At AT&L Level (Sentinel Programs)**
- **Single Joint Service Test Organization Designated**



ODATSD (CBRN Defense)

Program Corporate Goals



CBRN Defense Program

Corporate Goals

ODATSD (CBRN Defense)

Goal 1

Develop *new or improved* CBRN defense capabilities to meet Joint Acquisition Objectives at reduced costs and on schedule

Goal 2

Develop and support a *Science and Technology Base Program* that ensures technological superiority, avoids technological surprises, and integrates the DoD and other Federal agency CBRND research efforts

Goal 3

Develop and support DoD standardized, tested, and accredited CBRN defense *Modeling and Simulation (M&S) capabilities* to meet DoD analysis, acquisition, and training M&S requirements at all levels



CBRN Defense Program Corporate Goals (Con't)

ODATSD (CBRN Defense)

Goal 4

Develop and support ***improved CBRNDP test and evaluation processes*** and capabilities to ensure that sufficient data are obtained to support materiel characterization, systems of systems integration, and information flow in a timely and cost effective manner

Goal 5

Leverage DOD CBRN defense expertise to ***support vital national programs***

Goal 6

Improve DOD CBRN defense management practices-become a ***high performance organization***



ODATSD (CBRN Defense)

FY05
President's Budget Submission



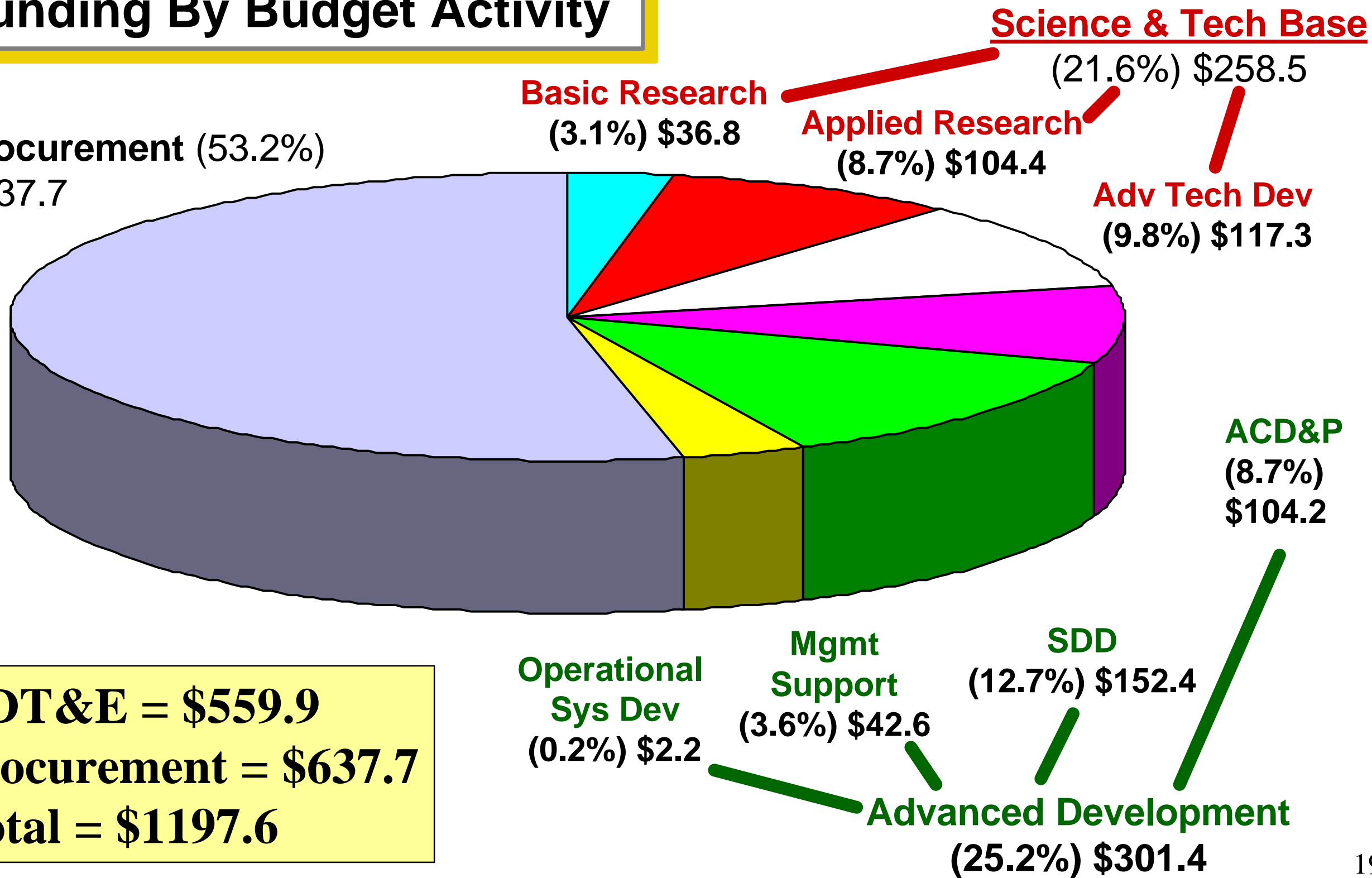
DoD CBRN Defense Program

FY2005 PB (\$M)

ODATSD (CBRN Defense)

Funding By Budget Activity

Procurement (53.2%)
\$637.7



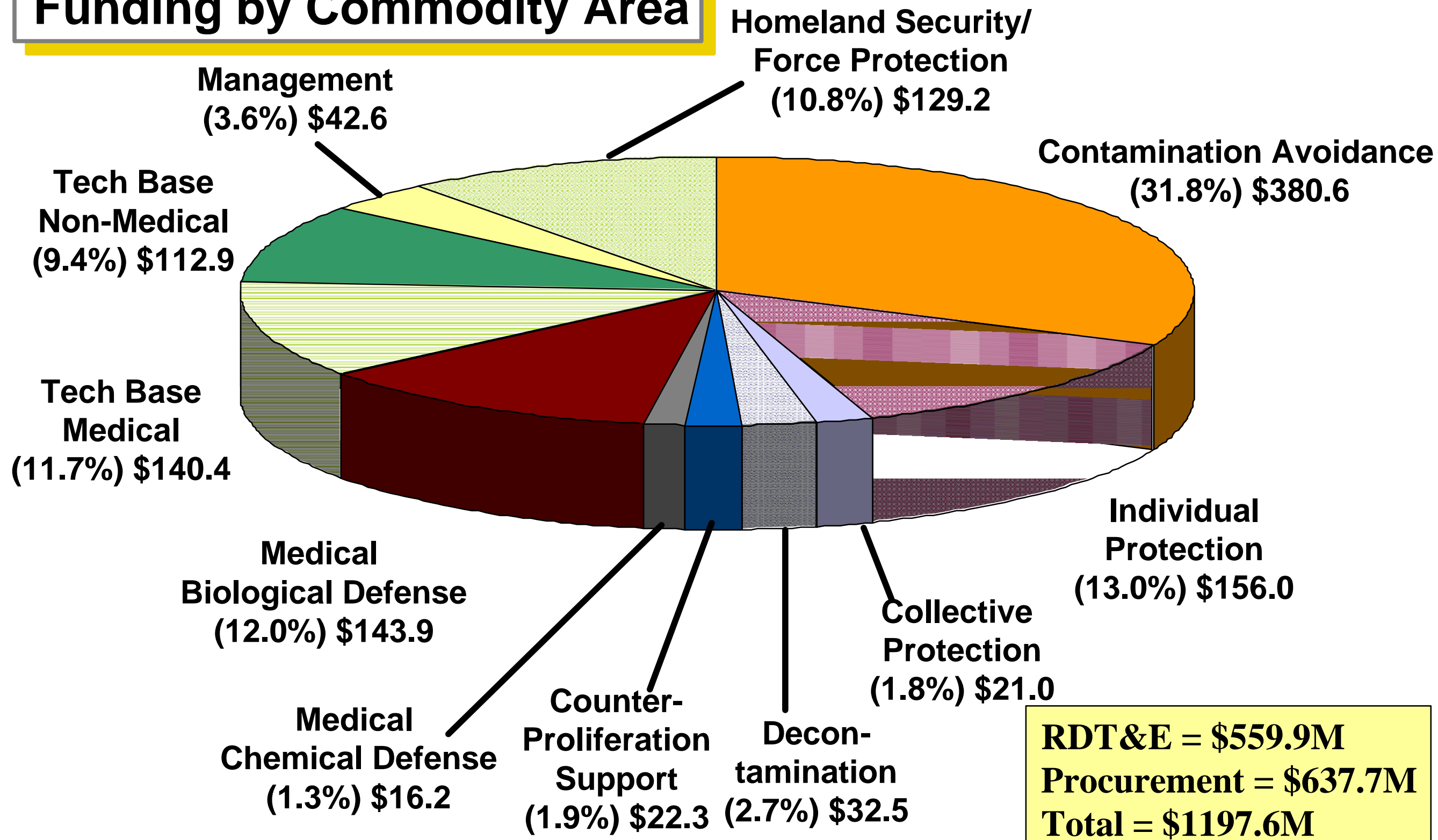
RDT&E = \$559.9
Procurement = \$637.7
Total = \$1197.6



DoD CBRN Defense Program FY2005 PB (\$M)

ODATSD (CBRN Defense)

Funding by Commodity Area





ODATSD (CBRN Defense)

***FY 04 CB Defense Program
Initiatives Fund***



CB Defense Program \$25M Initiatives Fund

ODATSD (CBRN Defense)

FY03:

Established for 6.2
Applied Research

Directed to be allocated by the Secretary of Defense *“among the program proposals listed...”*



FY04:

Established for 6.3
Advanced Technology Development

Directed to be allocated among *“programs which yield the greatest gain in our chem-bio defensive posture,”*

New strategy in FY04 needed to ensure a full and open competition through the use of competitive procedures



CB Defense Program Initiatives Funds Methodology

ODATSD (CBRN Defense)

Broad Agency Announcement

- **Satisfies the intent of Congress**
- **Provides for broad solicitation of proposals**
- **Facilitates open competition**
- **Most compatible with Scientific Research and Experimentation**
- **Mechanism widely used for research contracts (NSF, NIH; recommended by NAS – Institute of Medicine)**
- **Allows selection of technologies with maximum potential for meeting the needs of the DoD**



CB Defense Program Initiatives Fund Milestones

ODATSD (CBRN Defense)

- **Feb 24** *BAA Draft completed and submitted for approval*

- **Apr 9** **BAA presolicitation notice**
- **Apr 23** **BAA announced and opens**
- **May 24** **BAA closes and review processes begin**
- **May 24 – June 30** **Scientific & Programmatic Reviews**
- **Jul 15** **Allocation decision and notification**
- **Sep 30** **Contract Awards**



Initiative Fund Review Process

ODATSD (CBRN Defense)

Approval

ATSD (NCB)



Deputy Assistant to the Secretary of Defense for Chemical/Biological Defense (DATSD(CBD))



**Tier 2
Programmatic Review**

Joint Integration Panel (JIP)
Executive Committee: DATSD(CBD), chair; JSTO(CB); JRO(CBRN); JPEO(CBD)



**Tier 1
Scientific Peer Review**

Peer Review Panels (PRPs)
Core Directorate: JSTO(CB)
Panel Chairs: Capability Area Program Officers
Panel Members: Scientific experts in capability areas

2-tiered process modeled after a study by the National Academy of Sciences Institute of Medicine that garnered high praise from the scientific community, advocacy groups, and Congress.



Other Initiatives

ODATSD (CBRN Defense)

International Programs

*Institute of Medicine/National Research
Council Study*

Project BioShield

Biological Agent Security (Biosurety)



International Partnership

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Foreign Comparative Testing



Cooperative Research and Development



Foreign Military Sales



Cooperative Production

Exchange of Personnel



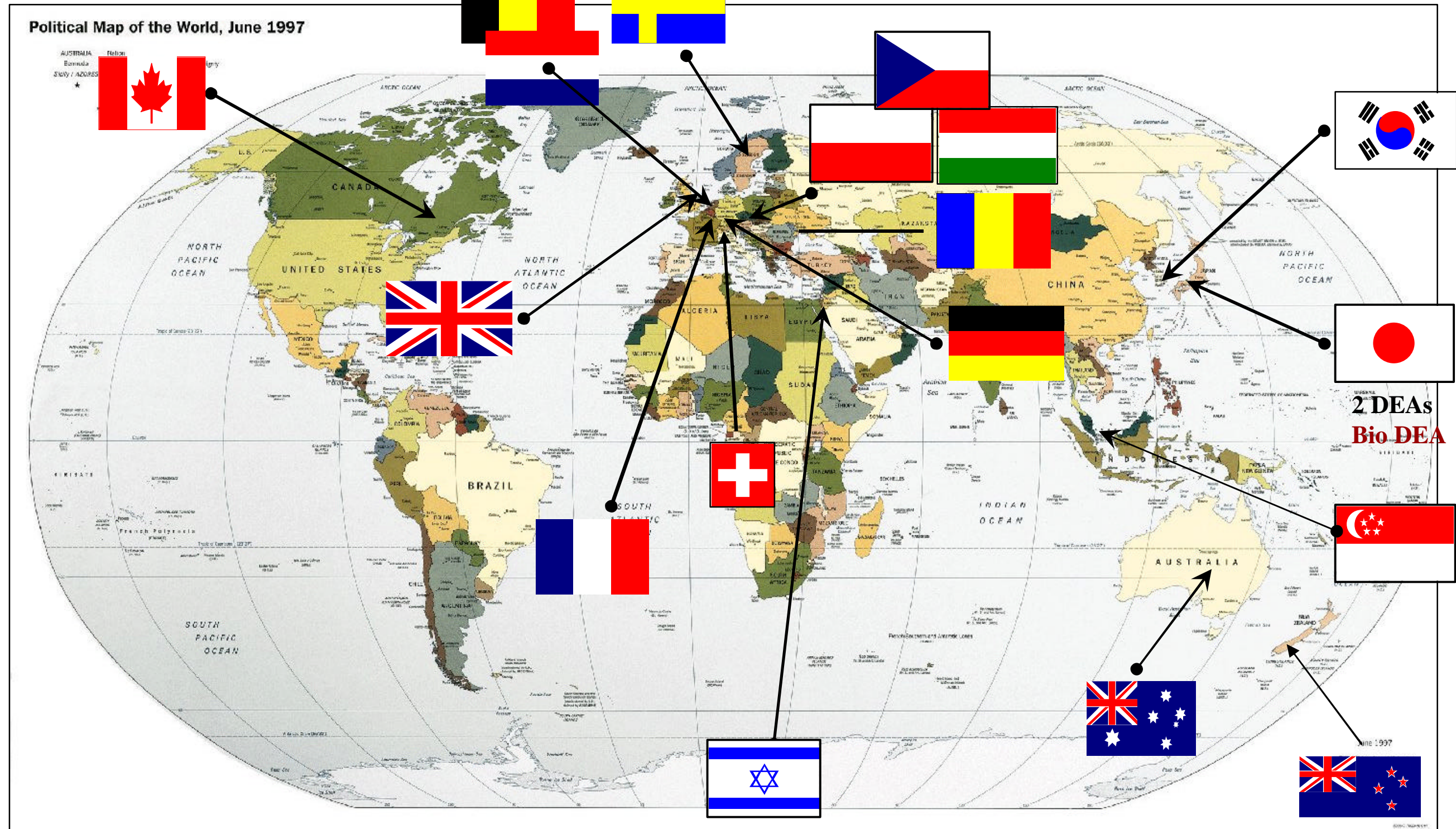
Loans

Exchange of Information



CB DEFENSE COOPERATIVE FOCUS WORLDWIDE

ODATSD (CBRN Defense)





Research and Development Agreements In Place

ODATSD (CBRN Defense)



- **Ecotoxicology (Sweden)**



- **Smallpox Vaccine Development (Canada)**



- **CB Suit Technologies (Singapore)**
- **CB Agent Water Monitor (Singapore)**



- **Collective Protection (United Kingdom)**



- **Plague Vaccine Development (United Kingdom, Canada)**





CBR MOU



- **Trinational MOU Among US, Canada, United Kingdom**
- **Established in 1980, Updated MOU, Includes New Capability, Signed 1 June 2000**
- **Makes Rational Use of US/UK/CA Resources in CBD Defense**
- **Addresses Critical Issues in**
 - **Requirements for CBD Materiel**
 - **Doctrine Related to the Employment of CBD Materiel**
 - **Cooperative Development of CBD Materiel**
 - **Joint Acquisition of CBD Materiel**



The Technical Cooperation Program



ODATSD (CBRN Defense)

- **Established in 1948, Brings Together Defense Related Research in U.S./UK/CA/AS/(NZ)**
- **Chemical, Biological and Radiological Defense Group Lead for CBR Defense Research**
- **Seven Subordinate Groups Focusing on All Aspects of CBR Defense**
 - **Medical Countermeasures**
 - **Biological Detection**
 - **Toxicology**
 - **Radiological Defense**

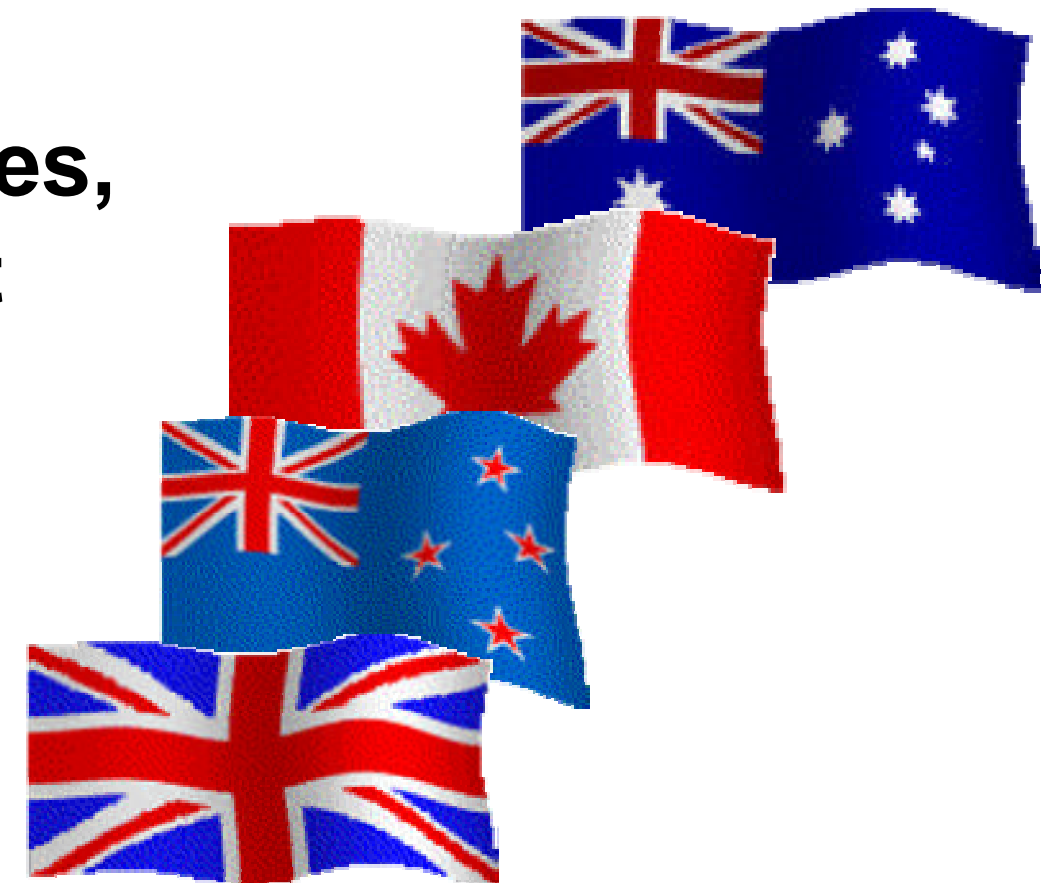




International Standardization

ODATSD (CBRN Defense)

- **Standardization of Procedures, Equipment and Doctrine Through Two Mechanisms**
 - NATO Land Group 7
 - American British Canadian Australian (ABCA) Armies
- **Both Develop Common Practices, Equipment Specifications, Test Protocols, etc, through the Establishment of Standard Agreements:**
 - STANAGS (NATO)
 - QSTAGS (ABCA)





ODATSD (CBRN Defense)

*Institute of Medicine/National Research
Council Study on Medical BW Agent
Countermeasures*



IOM Study Summary

ODATSD (CBRN Defense)

- **DOD has fielded ONE licensed medical countermeasure since the Desert Storm**
- **DOD efforts are “fragmented of responsibility and authority, changing strategies, and lack of financial commitment”**
- **DOD has only \$267 M (annual) budget for CBD; compare with NIH \$1.7 B (annual); or Project BioShield \$5.6 B (10 years)**
- **Other concerns: Limited facilities, personnel expertise and retention, shortage of non-human primates and testing facilities**



IOM Recommendations

ODATSD (CBRN Defense)

- Integrate all Bio Defense Activities
- **Create DOD Medical Biodefense Agency**
- **Establish External Review Committee**
- **Organize with knowledgeable staff**
- **Increase funding \$100M to \$300M+ over next five years**
- Partner with industry, academia, NIH
- **Implement the FDA “Animal Rule”**
- **Establish streamlined FDA sensitive RD&A**
- **Increase support for bottlenecks: Infrastructure and primate capability**



Ongoing DOD Actions

ODATSD (CBRN Defense)

- **Analyze results of the IOM study**
- **Provide recommendations to AT&L/ DepSecDef**
- **Develop recommended Course of Action and present best options to U.S. Congress**
- **Continue to make use of the 2002 FDA “Animal Rule” as a viable pathway to CBD medical product approval**
- **Develop interagency agreements to leverage partnerships with DHHS, DHS, and industry, for example Project BioShield**



ODATSD (CBRN Defense)

Project BioShield



Project BioShield

ODATSD (CBRN Defense)

Presidential initiative **designed to attract industry interest** to develop and manufacture needed medical countermeasures against weapons of mass destruction.



Project BioShield: Highlights

ODATSD (CBRN Defense)

- Appropriation of \$5.6 billion / 10 years DHHS/DHS
- The legislation has three distinct features:
 - ✓ Provides accelerated funding for research and development
 - ✓ Allows contracts to procure promising medical countermeasures still undergoing clinical testing
 - ✓ Provides for the emergency use of countermeasures not yet approved by the Food and Drug Administration
- First procurements for FY04 include anthrax, botulism and smallpox



Project BioShield: Challenges for Industry

ODATSD (CBRN Defense)

- Limited market for CBD products: No commercial market, or “Government-only” market
- Cost of maintaining knowledge and technology base for future production runs to replenish Strategic National Stockpile
- Intellectual property/ patent concerns
- Issues of product liability (indemnification or medical product insurance)



DoD's Role in BioShield

ODATSD (CBRN Defense)

- **Leverage military requirements for medical countermeasures with DHS and DHHS resources for research, development and procurement**
- **Continue to produce viable medical product candidates from the DoD research tech base**
- **Maintain the unique DoD intramural medical biodefense program that includes necessary laboratory expertise and infrastructure**

DoD role in Bioshield is significant and this legislation has the potential to streamline the acquisition of needed WMD medical countermeasures for the government.



ODATSD (CBRN Defense)

Delivering New Capabilities to the Warfighter



Accelerating Technology Transition Operation Iraqi Freedom

ODATSD (CBRN Defense)

Fox TICs Data Chip



Chemical Biological Protective Shelter (CBPS)



Special Purpose Automatic Chemical Agent Alarm (ACADA)

Navy Bio Detector

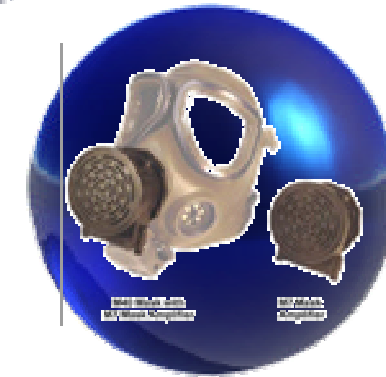


Decontamination System (Karcher)

500+ Special Fit Protective Masks



1600+ Special Fit Protective Suits



M40 Mask Voicemitter



Dry Filter Unit 2000 (DFU)



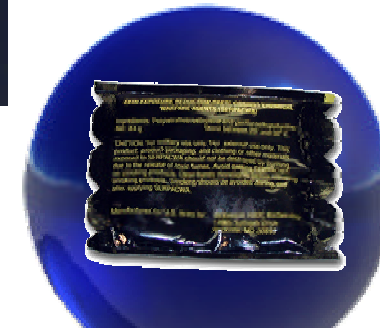
Chemically Protected Deployable Medical System (CP DEPMEDS)



Reactive Skin Decontamination Lotion (RSDL)



Antidote Treatment, Nerve Agent Autoinjector (ATNAA)



Skin Exposure Reduction Paste Against Chemical Warfare Agents (SERPACWA)

Department of Defense Chemical, Biological, Radiological and Nuclear Defense Program Overview



www.fedbizopps.gov

www.acq.osd.mil/cp/