



**Department of Defense
Chemical and Biological Defense Program (CBDP)**

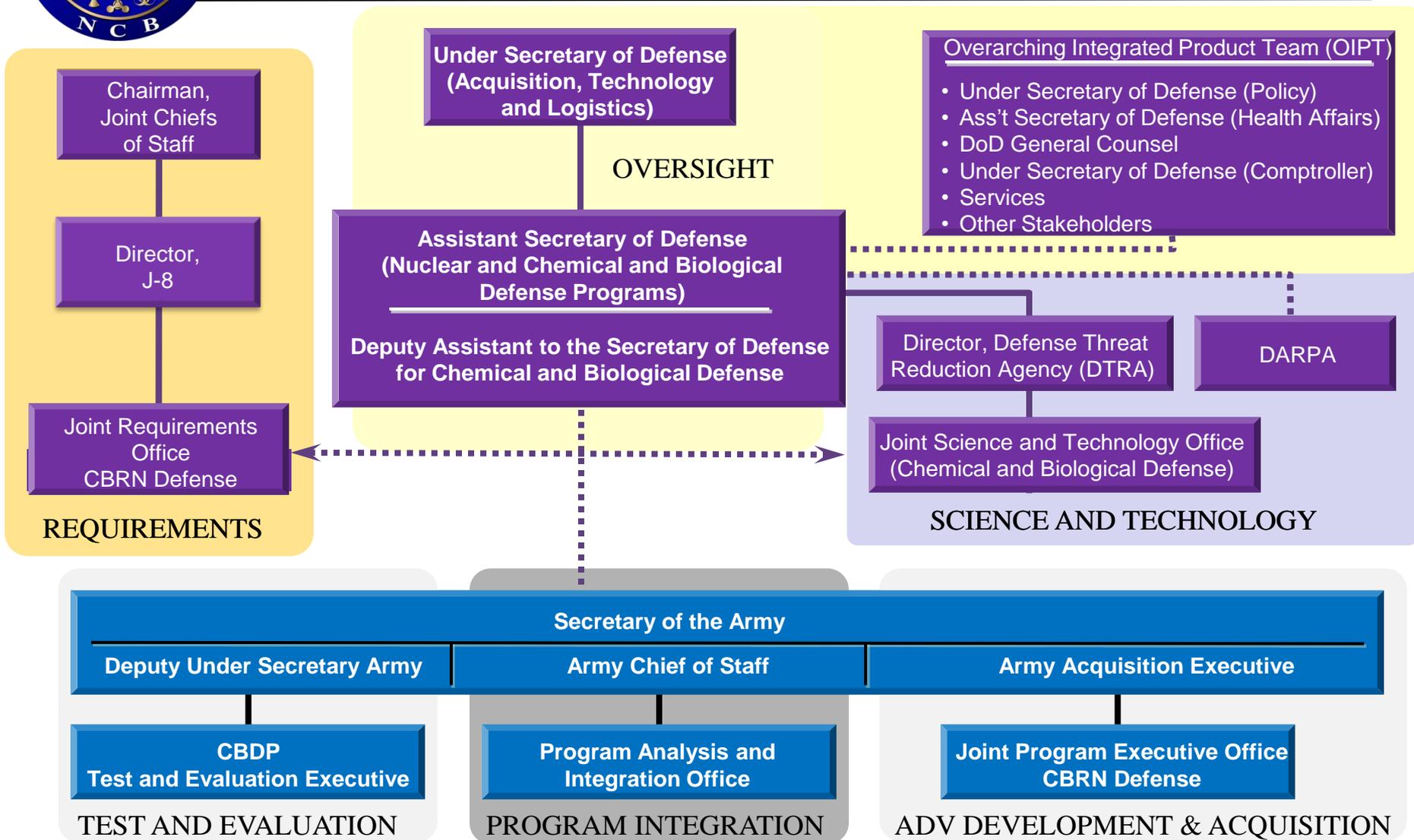
National Defense Industrial Association
2012 Joint CBRN Conference & Exhibition

**Dr. Gerald W. Parker Jr.,
Deputy Assistant to the Secretary of Defense**

March 13, 2012



CBDP Organization





CB Defense Program Senior Leadership

*Chairman,
Joint Chiefs of Staff*



**General
Martin E. Dempsey**

*Acting Under Secretary of
Defense (Acquisition,
Technology and Logistics)*



HON Frank Kendall

*Director for Force
Structure, Resources,
and Assessment, J8*



**Lieutenant General
Larry O. Spencer**

*Assistant Secretary of
Defense (Nuclear,
Chemical, and Biological
Defense Programs)*



Hon Andrew C. Weber

*Director, Defense Threat
Reduction Agency*



Mr. Kenneth A. Myers III

*Director, Joint
Requirements Office
CBRN Defense*



**Brigadier General
Lucas N. Polakowski**

*Deputy Assistant to the
Secretary of Defense for
Chemical and Biological
Defense*



Dr. Gerald W. Parker, Jr.

*Director, Joint Science
and Technology Office
for Chemical and
Biological Defense*



Dr. Alan S. Rudolph

*Joint Combat
Developer*



**Colonel
Vance (Phil) Visser**

*Acting Assistant Secretary
of the Army for Acquisition,
Logistics and Technology*



Ms. Heidi Shyu

*CBDP
Test and Evaluation
Executive*



Mr. James C. Cooke

*Joint Program Executive
Officer for Chemical and
Biological Defense*



**Brigadier General
Jess Scarbrough**



CBDP Vision and Mission

Vision

A Department of Defense (DoD) that prevents, protects, and responds to chemical and biological threats

Mission

Provide global chemical and biological defense capabilities in support of National Strategies

The CBDP is a key part of a comprehensive national strategy to prevent, protect, and respond to an evolving spectrum of 21st Century CBRN threats



Global Security Environment

Threats

- Pervasive impact
- Conflict engagement
- Regional prevalence
- Asymmetric warfare (WMD)
- Adaptive / emergent

Major Challenges

- Traditional / non-traditional threats
- Irregular warfare
- Catastrophic consequences
- Disruptive economic impact

Stakeholders

- Joint Forces
- Interagency Partners
- International Collaborators

These issues must be addressed with the right mix of resources to enhance the nation's security and improve Warfighter CBRN defense capabilities

PRIORITY – ENHANCE HOMELAND DEFENSE AND IMPROVE WARFIGHTER CBRN DEFENSE CAPABILITIES



Threat Environment

Biological

Traditional Threats

- Bacterial pathogens (anthrax, plague)
- Viral pathogens (VEE, WEE)
- Toxins (botulinum, ricin)

Emerging Threats

- Current and emerging diseases
 - **Anthrax**
 - **Botulinum**
 - **VEE / EEE / WEE**
 - **Emerging Infectious Diseases**

Enhanced Threats

- Strains enhanced for environmental survivability
- Selection or creation of hypervirulent strains and pathogens with increased resistance to preventatives and treatments

Advanced Threats

- Pathogens with altered targets or symptoms to confound diagnosis and treatment
- Creating viruses *de novo*

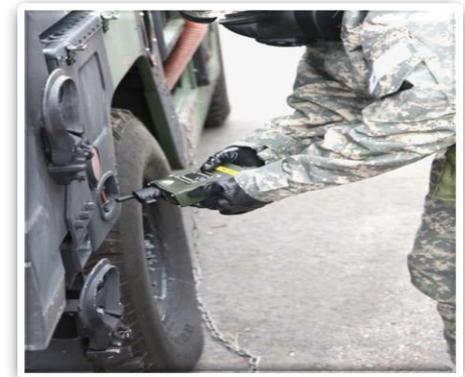
Chemical

Traditional Threats

- Chemical warfare agents (nerve, blood, and blister)
- Agents designed for military operations/ applications
- Toxic Industrial Materials (TIMs)/Toxic Industrial Chemicals (TICs)

Advanced Threats

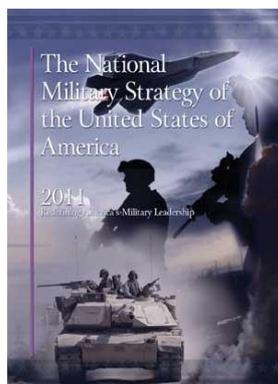
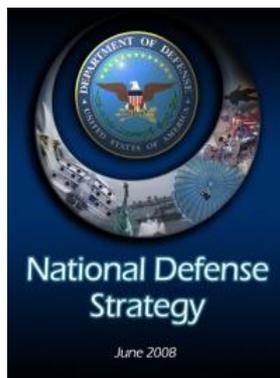
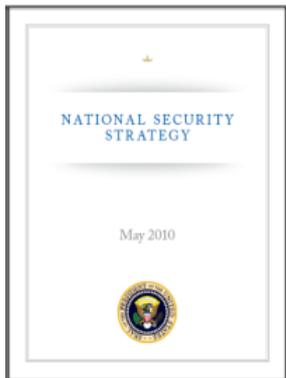
- Non-traditional Agents (NTA)
- Asymmetric applications and/or engagements



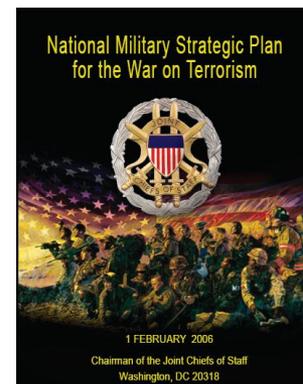
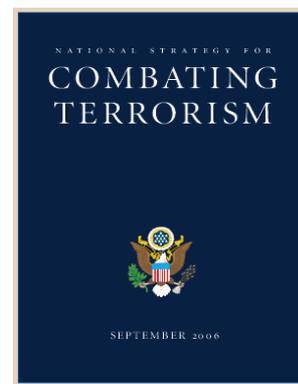


The NCB Provides Key Capabilities to Support Multiple National Strategies

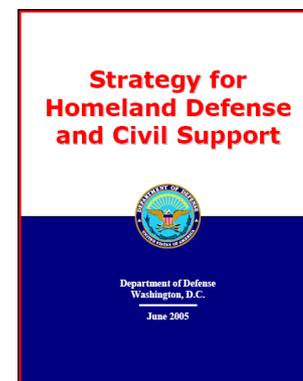
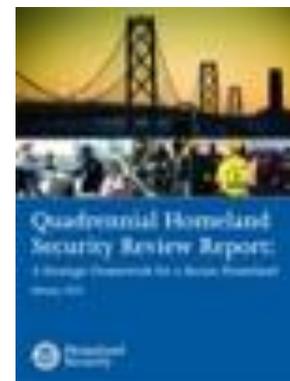
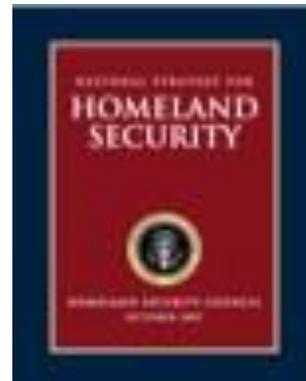
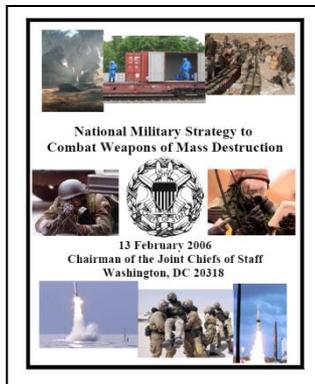
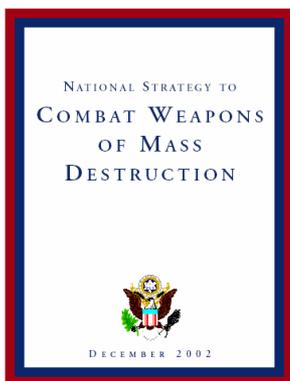
National Security



Combating Terrorism



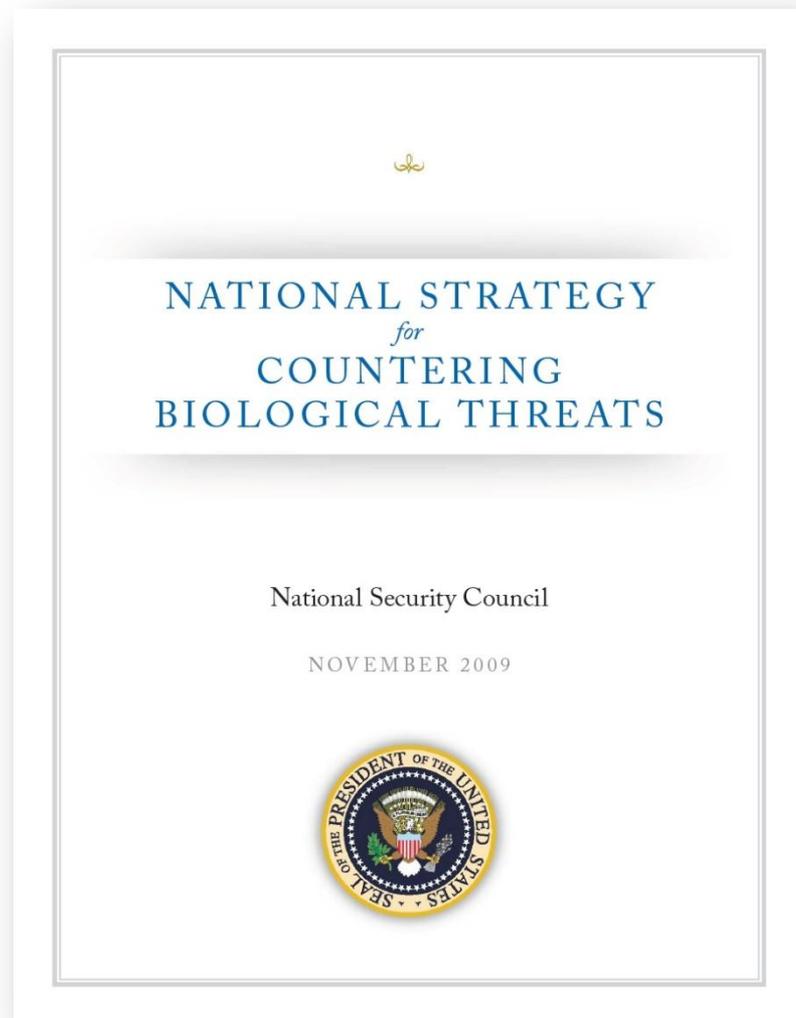
Combating WMD





Changing Threats - New Strategies 1

- Promoting global health security
 - Marriage of traditional BW defense and public health programs
 - Building capacity for global health surveillance: detection, diagnosis, and reporting
- Improving international capacity against infectious disease
 - Working with international partners to improve surveillance, response, recovery, and attribution of disease outbreaks





Changing Threats - New Strategies 2

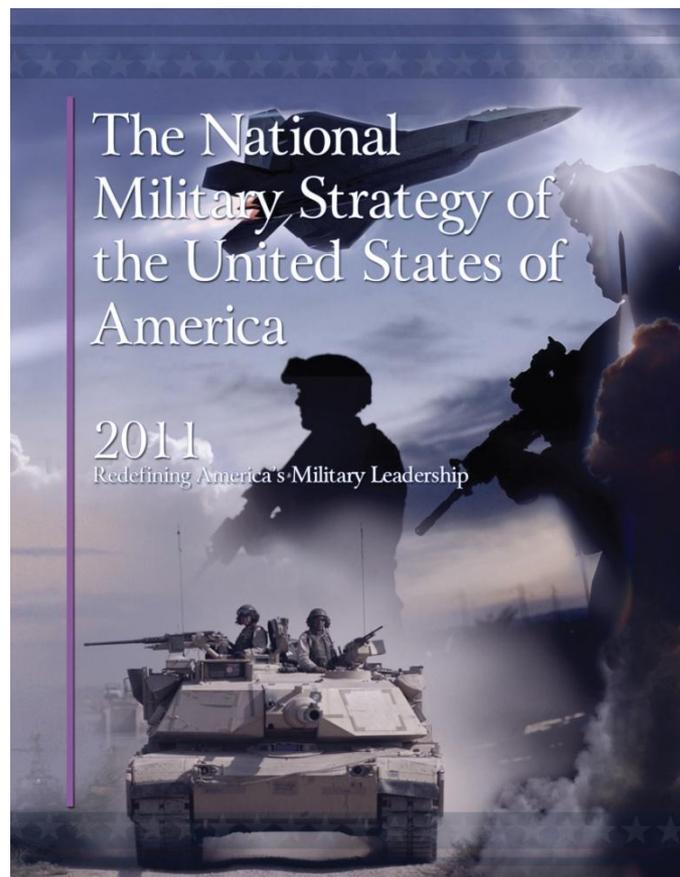
- “Whole-of-Government Approach”
 - Coordinate across Departments and Agencies to strengthen national capacity and response
 - Links defense, diplomacy, intelligence, and health missions
 - Leverage (not duplicate) the capabilities of governmental partners
 - Work with private and multinational entities to accomplish mission
 - Encourage international partners to examine US approach





Changing Threats - New Strategies 3

- Emphasis on Prevention of CBRN Attacks
 - Work through institutions, alliances and coalitions to extend reach and dismantle proliferation networks
 - Increase and improve the interdiction of materials and secure CBRN worldwide
 - Assist allies in developing detection capabilities to provide early warning of attacks and outbreaks.
 - Help partners to develop CBRN elimination technologies to mitigate the impact of attacks on their populations.





Changing Threats - New Strategies 4

CWMD is a Primary missions of the U.S. Armed Forces

Incorporate an active “Whole-of-Government Effort”

Continue to invest in capabilities critical to future success
...to detect, protect against, and respond to WMD use

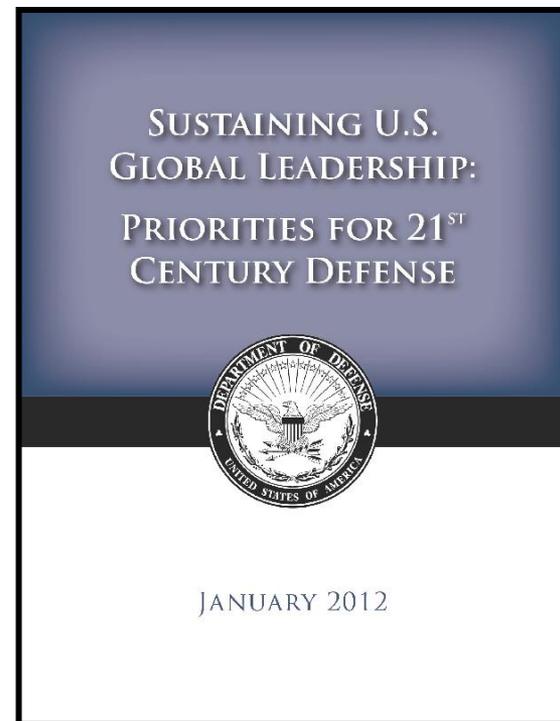
Differentiate between those investments that should be made today and those that can be deferred ... “reduce the cost of doing business”... ensure *“reversibility”*

Maintain our edge in technology superiority by protecting investments in development of future capabilities

Build partnership capacity elsewhere for sharing the costs and the responsibilities of global leadership ...

Make every effort to maintain adequate industrial base and our investment in S&T

Encourage innovation in concepts of operation





CBDP Key Objectives

- Produce medical countermeasures (MCM) that meet current CBR threats utilizing platform technologies capable of meeting emerging threats
- Field CB defense technologies capable of supporting biosurveillance
 - Produce point-of-need diagnostic capabilities against CBRN threats to enable rapid force protection decisions
 - Develop affordable, broad-spectrum CB detection capabilities to detect current and emerging CB hazards
- Integrate NTA defense capabilities into all future CB defense systems
 - Further efforts to provide an expanded NTA capability to the Joint Force
- Maintain right-sized core CBDP physical infrastructure and intellectual capital, aligned with research, development, and acquisition priorities, to rapidly develop, test, and field CBR defensive capabilities to the warfighter



CBDP Focus Areas

- **Medical Countermeasures**
 - Fund S&T efforts to develop the next-generation of manufacturing systems and regulatory science technologies.
 - Provide a dedicated, cost-effective, reliable, and sustainable advanced development and manufacturing capability.
 - Enhance the MCM S&T pipeline and advanced development portfolio to address priority threats.

- **Biosurveillance**
 - Develop capabilities to prevent or reduce the impact of biological and Chemical threats and risks
 - Provide early warning & detection to reduce impact
 - Strengthen decision-making and force health protection by informing overall biological situational awareness with integrated health, environmental, and other data.

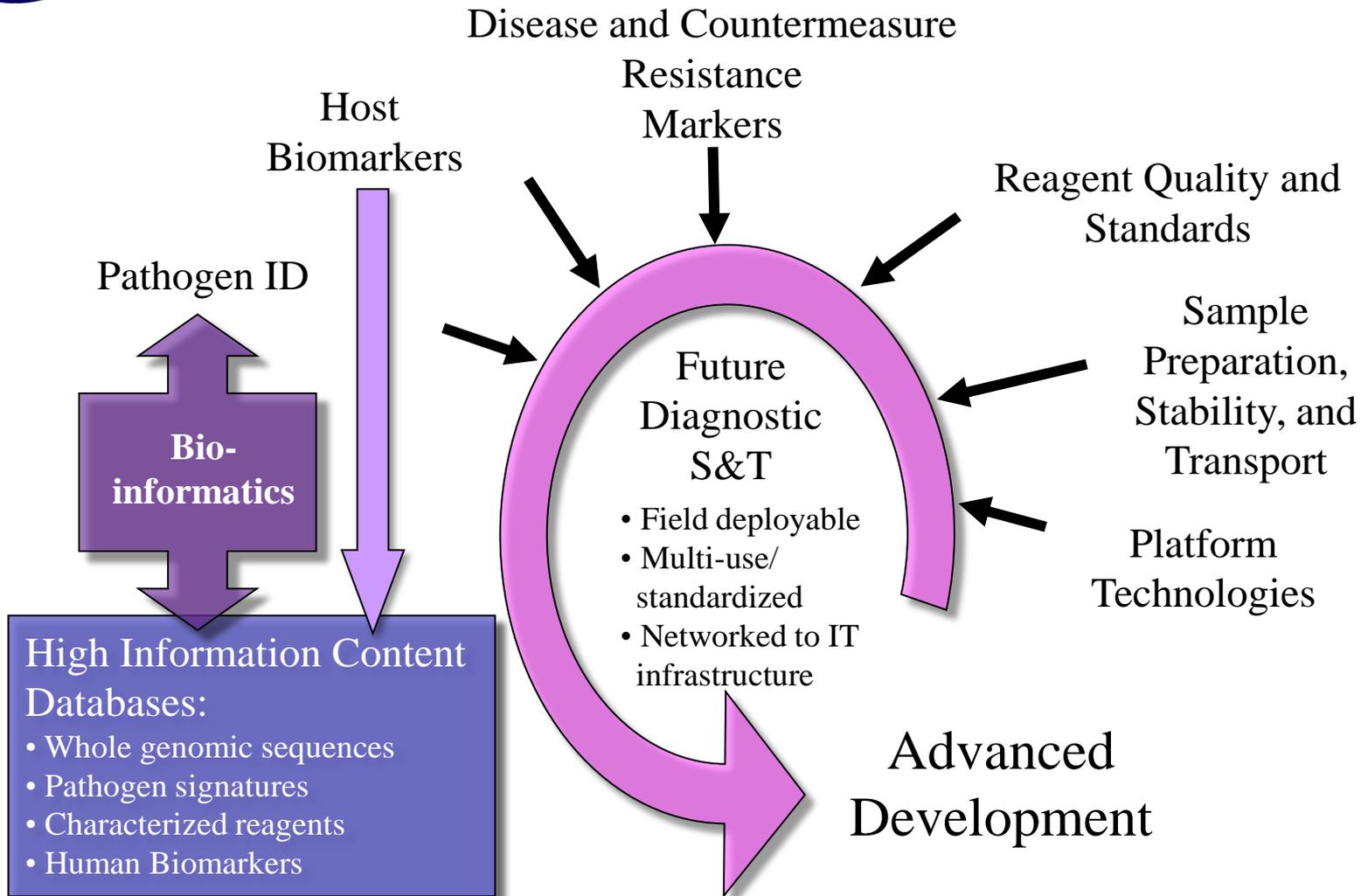


CBDP Focus Areas (Con't)

- **Diagnostics**
 - Resource a robust portfolio that provides capabilities to:
 - Identify threats in both permissible and non-permissible environments by autonomous individuals or teams with limited to no infrastructure support, e.g., a small team deployed to the third world
 - Diagnose the causative agent and survey for the presence of disease to anticipate, detect, identify, and quantify, disease-causing organisms with limited supporting infrastructure
- **Non-Traditional Agent (NTA) Defense (Countering Advanced Threats)**
 - Develop technologies that address existing and emerging NTAs in the near, mid, and far-term.
 - Strengthen and integrate capabilities that provide warning of attack, barrier protections, and both pre-treatments/prophylaxes and post-exposure treatments.
 - Expand interim NTA defense capabilities to additional DoD response forces

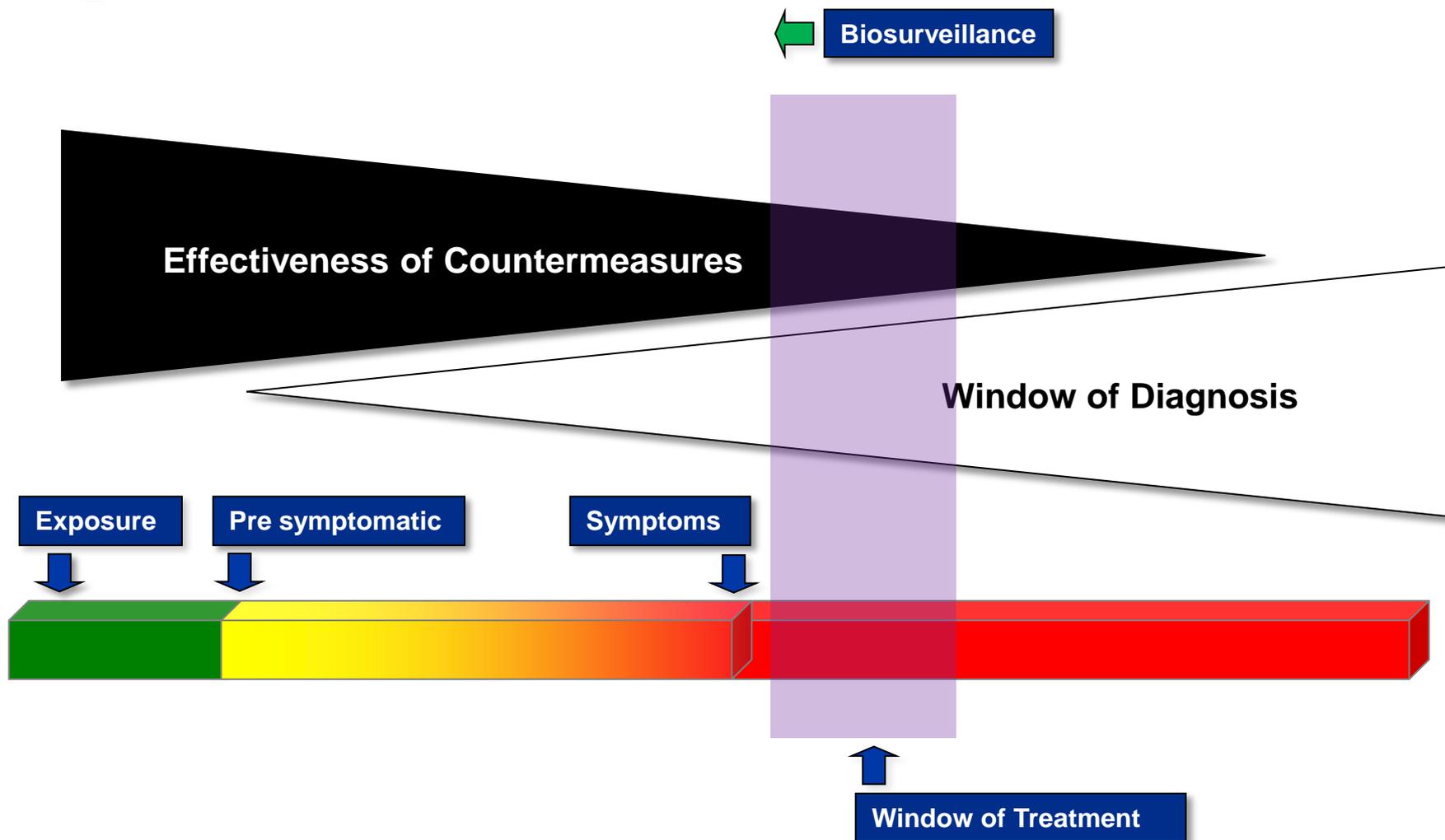


Diagnostics, Detection and MCM





Early Detection Improves Response





Full Spectrum CB Defense

■ Surveillance

- Detection
- Information
- Diagnostics

■ Hazard Mitigation

- Individual Protection
- Collective Protection
- Equipment/Infrastructure Protection
- Individual Decon
- Equipment/Infrastructure Decon
- Environmental Decon
- Human Remains Decon
- Containment

■ Medical Countermeasures

- Pretreatment
- Prophylaxis
- Therapeutics

■ Modeling and Characterization

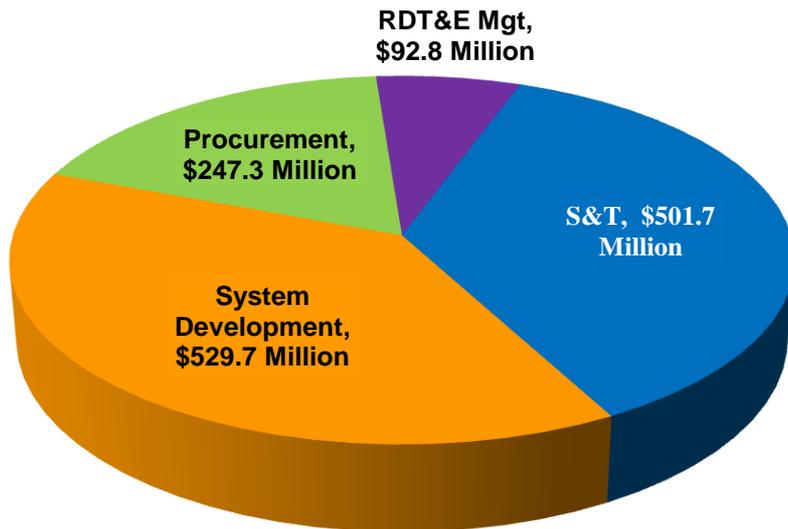
- Dissemination
- Agent Fate
- Agent Characterization
- Physiological Response
- Agent / Simulant Synthesis & Culturing



Resources: 2012 and 2013

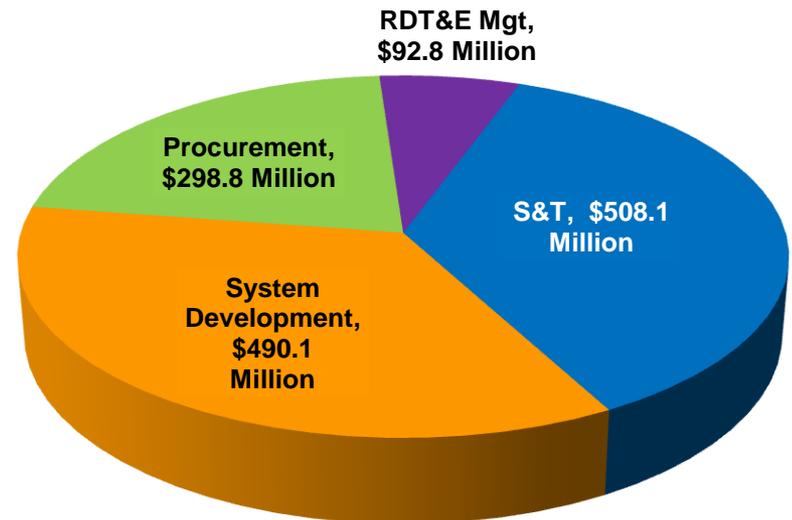
FY12 Appropriated

(TOA = \$1,387 Billion)



FY13 Presidential Budget Request

(TOA = \$1,405 Billion)





Strategic Partnerships are Key



Logos from Official Websites



Questions



Full Spectrum CB Defense

CFA Framework

1 Surveillance

- CO 1.1 Detection
- CO 1.2 Information
- CO 1.3 Diagnostics

2 Medical Countermeasures

- CO 2.1 Pretreatments
- CO 2.2 Prophylaxis
- CO 2.3 Therapeutics

3 Hazard Mitigation

- CO 3.1 Individual Protection
- CO 3.2 Collective Protection
- CO 3.3 Equipment/Infrastructure Protection
- CO 3.4 Individual Decontamination
- CO 3.5 Equip./Infrastructure Decon.
- CO 3.6 Environmental Decontamination
- CO 3.7 Human Remains Decontamination
- CO 3.8 Containment

4 Modeling & Characterization

- CO 4.1 Dissemination
- CO 4.2 Agent Fate
- CO 4.3 Agent Characterization
- CO 4.4 Physiological Response
- CO 4.5 Agent / Simulant Synthesis & Culturing

Enabling CO

Capability Focus Area

Capability Objective