



DHS Office of Health Affairs

Biological Threat Characterization Panel

**2008 Annual DHS University Network Summit
March 19, 2008**

**Diane Berry, Ph.D.
Chief Scientist
Director, Threat Characterization & Countermeasures
DHS Office of Health Affairs**



**Homeland
Security**

DHS Office of Health Affairs



VISION

A Nation prepared for the health consequences of catastrophic incidents

MISSION: The Office of Health Affairs serves as the Department of Homeland Security's principal agent for all medical and health matters. Working throughout all levels of government and the private sector, the Office of Health Affairs leads the Department's role in developing and supporting a scientifically rigorous, intelligence-based biodefense and health preparedness architecture to ensure the security of our Nation in the face of all hazards.



**Homeland
Security**

OHA's Primary Goals

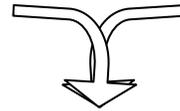
- Serve as the *principal medical authority* for the Department of Homeland Security
- Lead the Department's *biodefense* responsibilities
 - End-to-end leadership for implementation of HSPD-9 (Ag/Food Defense) and HSPD-10 (biodefense), including early threat detection and biosurveillance integration
- Lead a coordinated *National architecture for Weapons of Mass Destruction (WMD) planning and catastrophic incident management*
 - Ensure planning and mitigation strategies for biological threats are coordinated across the Interagency
 - Serve as DHS POC for state, local, tribal, and private sector partners for health preparedness
- Ensure DHS employees are supported by effective *occupational health and safety* programs
 - Standardize and direct a Departmental occupational health and safety program
 - Provide medical oversight for health delivery throughout the Department



Homeland
Security

Chem/Bio Defense IPT

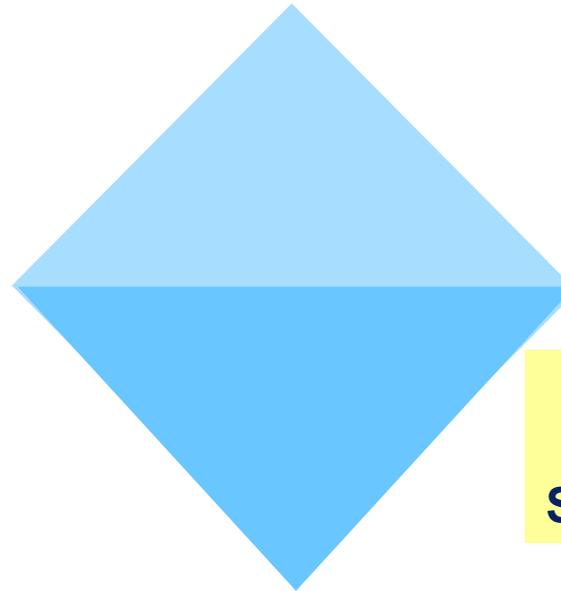
Jeff Runge
Assistant Secretary & CMO
Office of Health Affairs



OHA/IP

Bob Stephan
Assistant Secretary
Office of Infrastructure Protection

Acquisition



Chem/Bio

Elizabeth George
Acting Chem/Bio Director
Science & Technology Directorate

Multiple Users

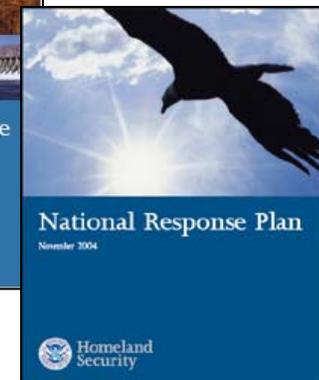
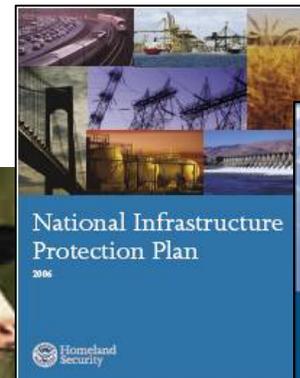
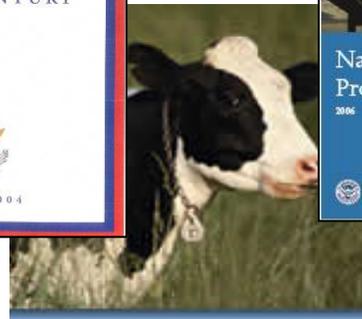
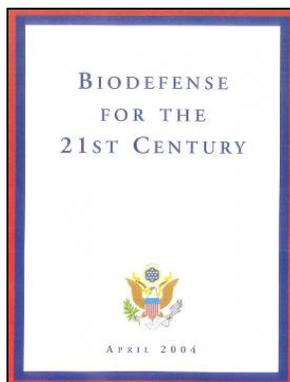


**Homeland
Security**

Where do our requirements come from?

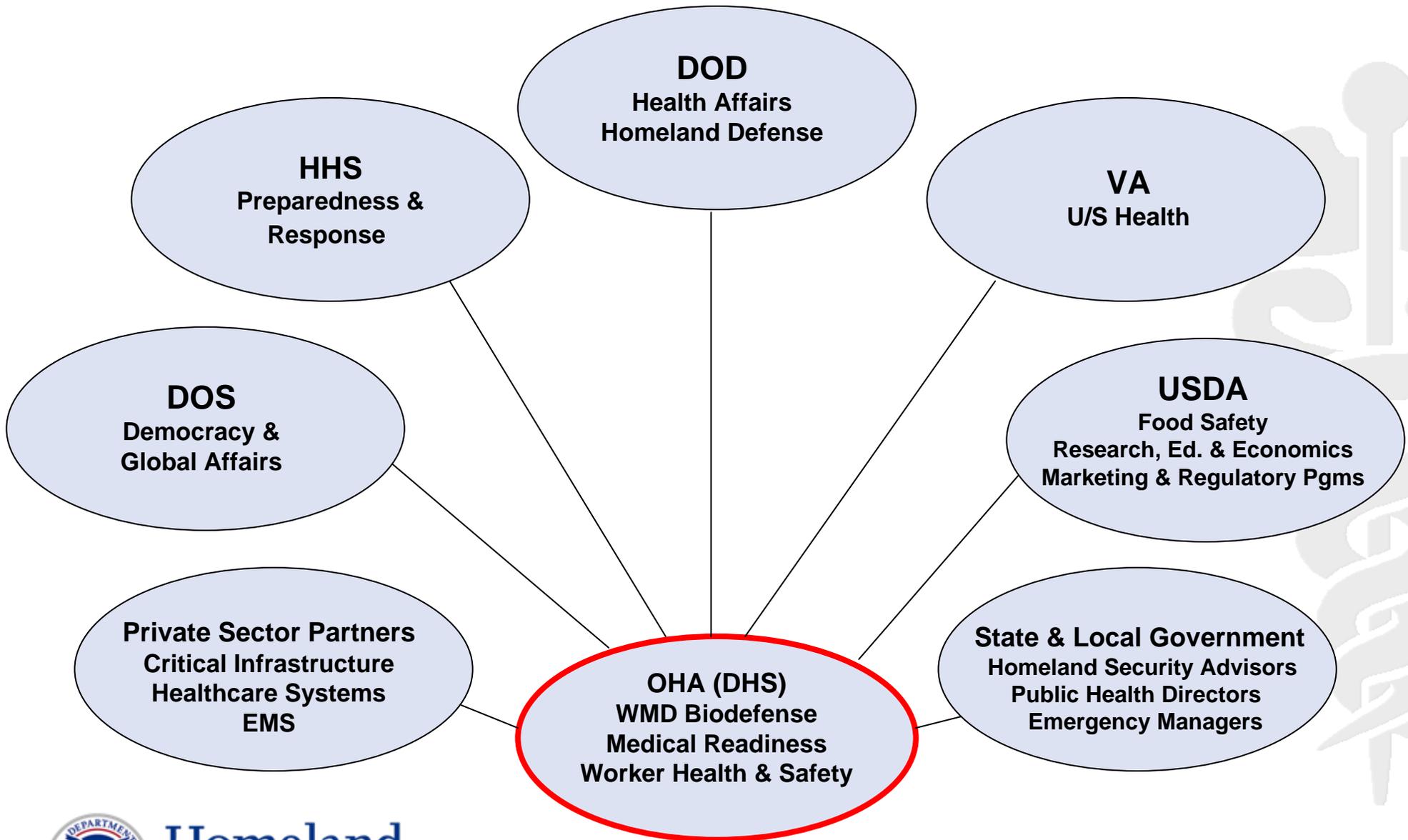
OHA bases its requirements on

- Homeland Security Presidential Directives – 8, 9, 10, 18, 22
- Congressional legislation & guidance
- National planning & implementation guidance – NIPP, NRP, NIMS, and the National Planning Scenarios
- Risk, vulnerability and mitigation studies
- Private, local, state inputs



Homeland
Security

OHA: Gateway to External Customers



**Homeland
Security**

Example #1: Project BioShield

**The *Project BioShield Act of 2004*
became Public Law 108-276
on 21 July 2004.**



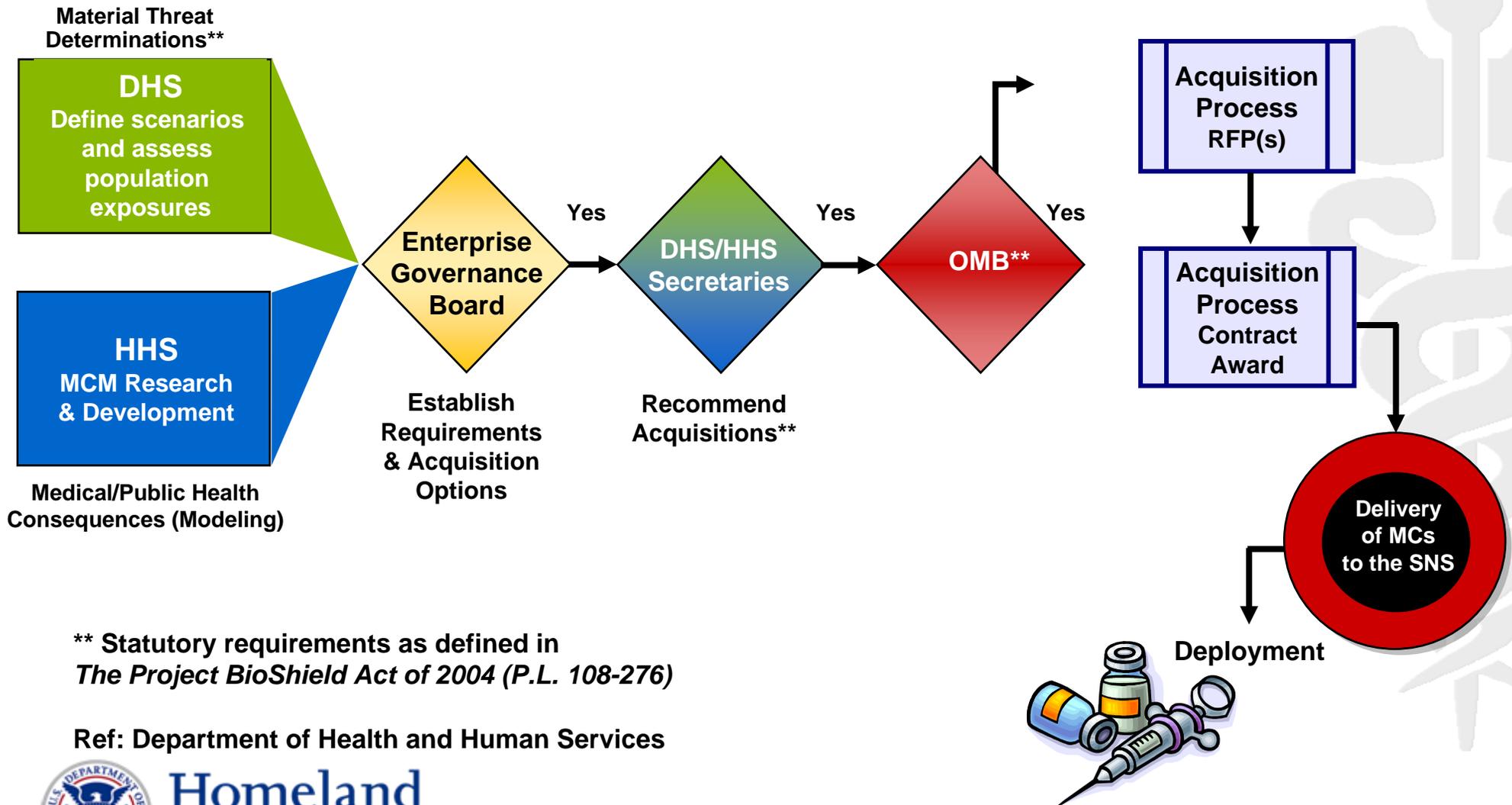
PURPOSE

To accelerate the research, development, purchase, and availability of priority medical countermeasures to protect the U.S. population from the effects of chemical, biological, radiological, and nuclear (CBRN) threat agents.



**Homeland
Security**

Project BioShield Acquisition Process



** Statutory requirements as defined in
The Project BioShield Act of 2004 (P.L. 108-276)

Ref: Department of Health and Human Services



Homeland
Security

S&T CBD Assessments supporting the MTDs

- ***Bioterrorism Risk Assessment (BTRA):***

A quantitative, end-to-end risk assessment that integrates the findings of the intelligence and law enforcement communities with input from the scientific, medical, and public health communities.

- ***Material (Population) Threat Assessments:***

A set of plausible, high consequence scenarios used to estimate the potential number of exposed individuals, their exposure levels, contaminated areas, and other ‘collateral effects.’



Homeland
Security

Example #2: BioWatch National Network



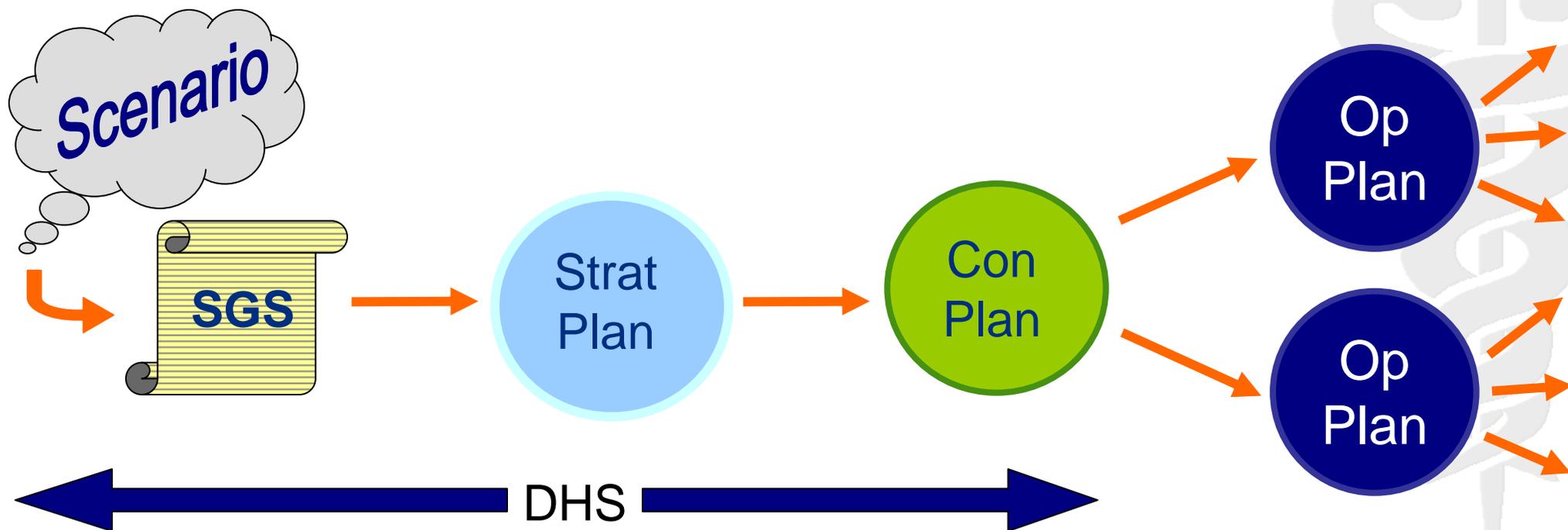
- Operates continuously in more than 30 major population centers
- Detects attacks against our Nation's cities and other high value assets
- Poised to:
 - Enable early detection
 - Provide situational understanding to guide response
 - Share information among partners
 - Integrate into the national networks of reference laboratories
 - Serve as critical element in a national capacity to respond rapidly to bioterrorism events



Homeland
Security

Example #3: Strategic Planning

- HSPD-8 “*National Preparedness*” and Annex 1 “*National Planning*” – establishes a standard and comprehensive approach to national planning to enhance the preparedness of the U.S. against terrorist attacks and natural disasters.
- Planning involves 3 levels: strategic, operational, and tactical.





Example #4: 24/7 SME Support &.....

- **Biological Threat Characterization Analyses & Reports**
 - Lab studies to close major gaps in understanding of biological agents.
 - Awareness Bulletins
 - Factbooks
 - Special Reports



**Homeland
Security**



Homeland Security

Material Threat Determinations & Population Threat Assessments To-Date

Agents	MTD Issued	PTA Published/ Anticipated Publication
Biological		
Botulinum Toxin (Clostridium botulinum)	January 2004	August 2004
Plague (Yersinia pestis)	September 2006	August 2004
Anthrax (Bacillus anthracis)	January 2004	April 2005
Smallpox (Variola Major)	September 2004	N/A*
Tularemia (Francisella tularensis)	September 2006	December 2006
Typhus (Rickettsia prowazekii)	September 2006	December 2006
Q-fever (Coxiella burnetti)	N/A	December 2006
Rocky mountain spotted fever (Rickettsia rickettsii)	N/A	December 2006
Glanders (Burkholderia mallei)	September 2006	February 2007
Melioidosis (Burkholderia pseudomallei)	September 2006	February 2007
Viral Hemorrhagic Fevers ▪Filovirus (Marburg, Ebola)	September 2006	December 2006
Viral Hemorrhagic Fevers ▪Arenavirus (Junin, Lassa, Machupo, Guanito) ▪Flavivirus (Dengue, Yellow, Kyasanur Forest, Omsk) ▪Bunyavirus (Rift Valley, Crimean-Congo, Hantaan)	September 2006 (Junin)	February 2007



Material Threat Determinations & Population Threat Assessments To-Date

Agents	MTD Issued	PTA Published/ Anticipated Publication
<i>Chemical</i>		
Volatile Nerve Agent (Sarin)	N/A	November 2005
Low Volatility Nerve Agent	N/A	January 2007
Cyanide Initial Evaluation	N/A	January 2007
Pulmonary Agents	N/A	March 2007
Vesicants	N/A	May 2007
Blood Agents	N/A	July 2007
<i>Radiological/Nuclear</i>		
Radiological Materials	September 2004	July 2005
Nuclear Detonation Effects Initial Evaluation	September 2004	December 2005

* No formal PTA has been requested



**Homeland
Security**

Food, Agriculture, & Veterinary Defense

- DHS is overall incident manager during national incidents
- Links together resources and expertise of USDA, HHS, DOD, state, tribal, and local governments, and the private sector to protect and respond to threats to the Nation's agriculture and food
- Mitigates vulnerabilities in food, agriculture, and water systems
- Develops a robust biological threat awareness capacity



Homeland
Security

CBD IPT: Technology Transition Agreements (TTAs)

A Good Faith Agreement

S&T



OHA

Key Performance Parameters

Exit Criteria

Technology Status and Development Strategy

Deliverables

Schedule

Funding (S&T; customer)

Acquisition Program Identified



**Homeland
Security**



HSPD-10 lays out an integrated end-to-end biodefense strategy

THREAT AWARENESS

- Intel
- Assessments
- Anticipate future threats

PREVENT & PROTECT

- Diplomacy
- Interdiction
- Critical Infra Protection

SURVEILLANCE & DETECTION

- Attack Warning
- Attribution

RESPOND & RECOVER

- Response Planning
- Risk Comm
- Med CM
- Mass Cas Care
- Decon



Homeland
Security