

Defense Threat Reduction Agency Brief for NDU Capstone Class 22-1

Dr. Rhys Williams

Acting Director

Defense Threat Reduction Agency

07 October 2021

The overall classification of this briefing is: **UNCLASSIFIED**





UNCLASSIFIED

DTRA's Mission

The Defense Threat Reduction Agency enables the Department of Defense (DoD), U.S. Government, and International Partners to counter and deter Weapons of Mass Destruction (WMD) and Emerging Threats.



Detect. Deter. Defeat.

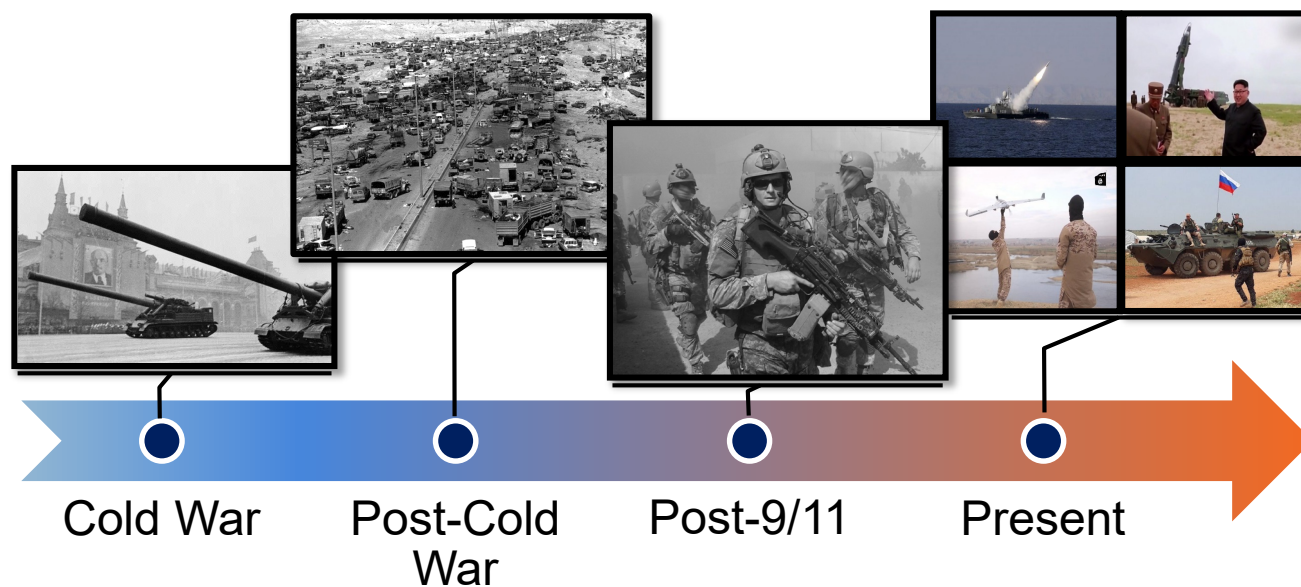
UNCLASSIFIED



UNCLASSIFIED

Our Security Challenge

Current and Emerging Threats in the WMD Space



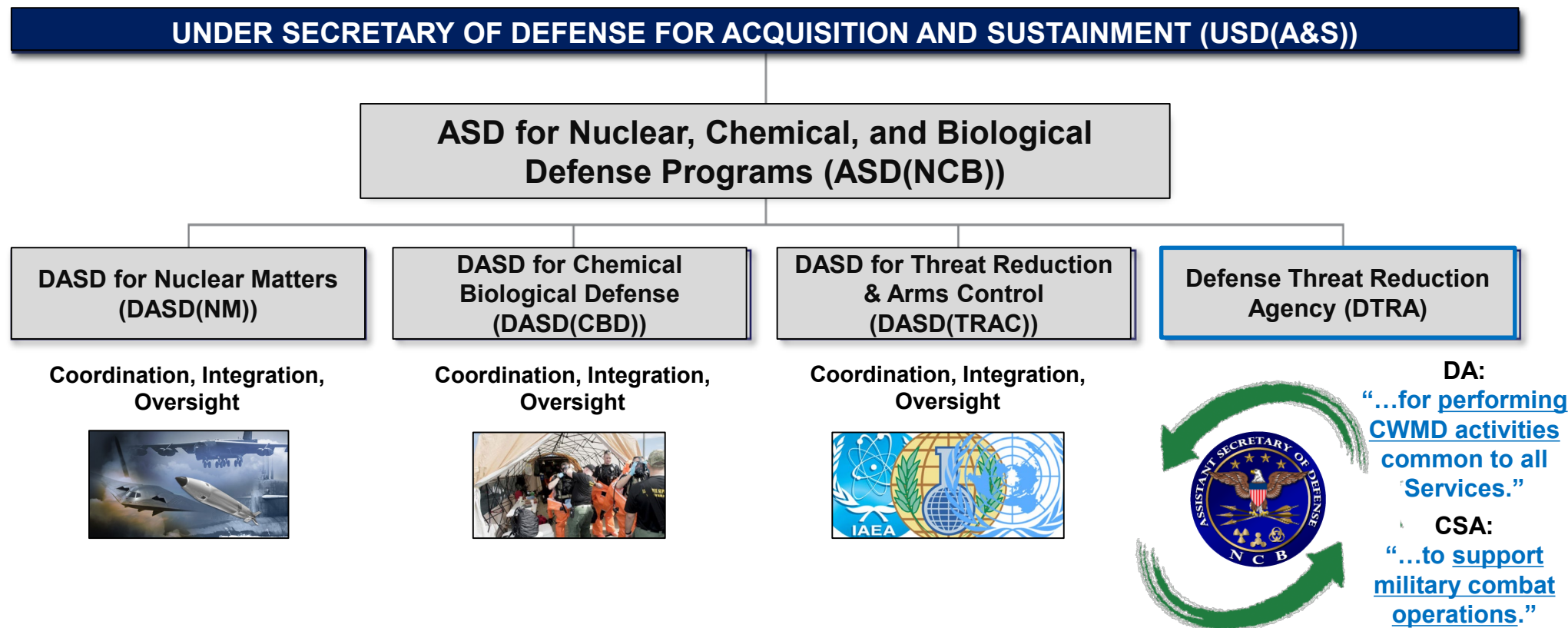
- Pace & adaptability of **technological change**
- Increased diversity and breadth of threats
- Rise of **synthetic biology & bioinformatics**
- **Dual-use** chemical and pharmaceutical agents (which frustrate attribution)
- “Big computing” & **machine learning**
- **Additive manufacturing**, 3-D printing
- Grey zone operations, and **competition** below the level of armed conflict
- Changing nature of “domain dominance”
- Opportunistic cooperation to counter U.S.
- Multi-domain, synchronous attacks
- **Erosion of norms** for CBRN use



UNCLASSIFIED

Our Role(s)

DTRA's Charter is Unique Within the ASD(NCB) Portfolio



DTRA was established to provide:

"...the technical, operational, & intellectual underpinnings of the Department's WMD expertise..."

"...the institutional means for a more focused response to new security challenges."

Detect. Deter. Defeat.

UNCLASSIFIED

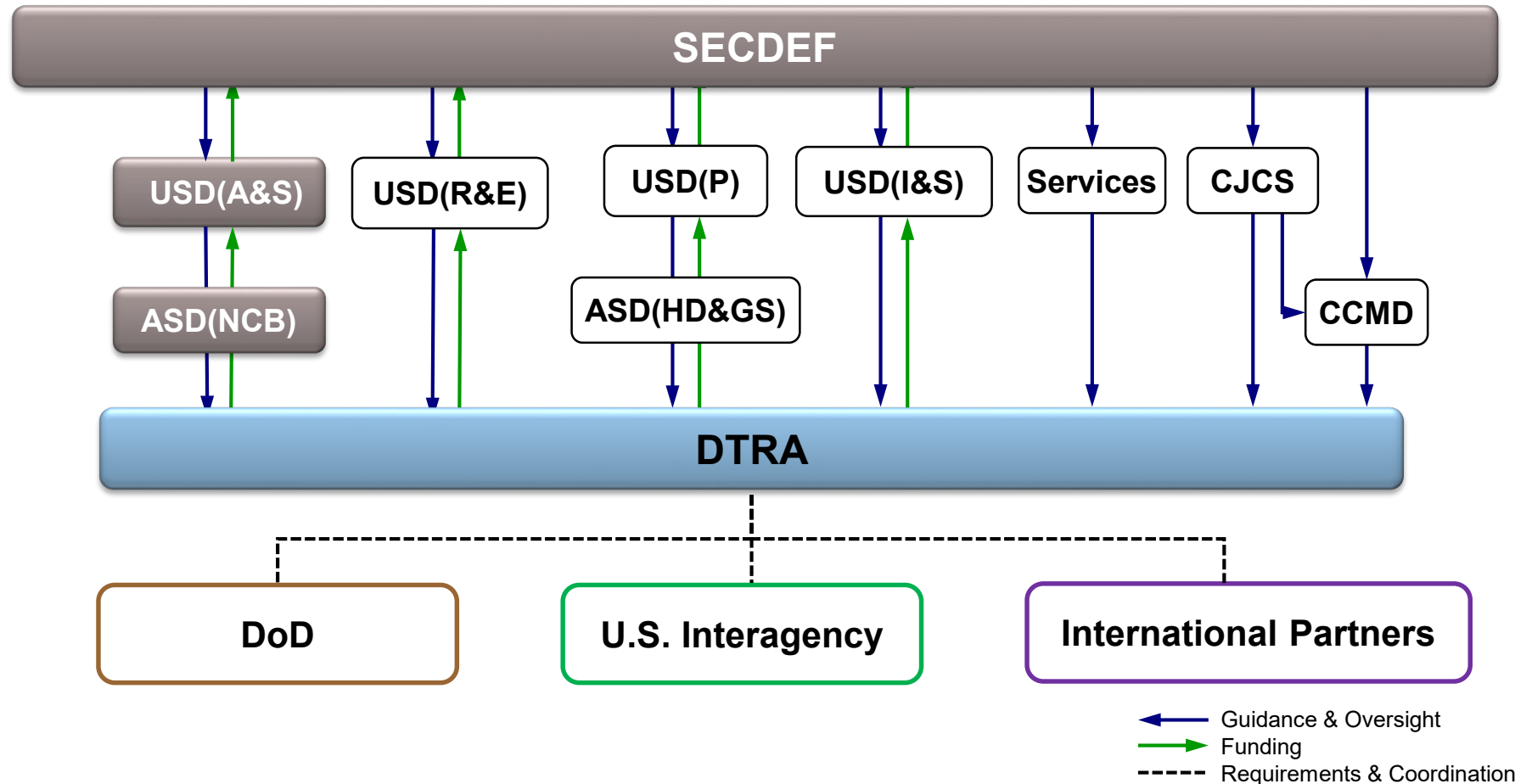


Our Partners

Inform Our Portfolios

Because of its dual roles and various assigned responsibilities, DTRA receives guidance, oversight, funding, requirements, and direction from many sources.

One of the Agency's unique benefits is our ability to engage meaningfully within and between these stakeholders, and to make connections that might otherwise go unnoticed.





UNCLASSIFIED

Guidance

In the New Administration

SECDEF priorities & guidance

- China as “preeminent pacing challenge;” great power competition against capable adversaries
- Renewed focus on partnerships, international leadership
- Renewed focus on domestic health, safety, security
- Continued drive to innovate and modernize



“The cornerstone of America’s defense is still deterrence, ensuring that our adversaries understand the folly of outright conflict.”

- Secretary of Defense Lloyd J. Austin III

“The U.S. must tend to the alliance system and modernize and cultivate it.... [the] concept of integrated deterrence will be cornerstone to that approach”

- Colin Kahl, USD(P)



UNCLASSIFIED

Core Functions

Derive from our Charter, and enable our Strategy

As a Defense Agency, we...



Enable Strategic Deterrence



Support U.S. Treaty Implementation and Verification

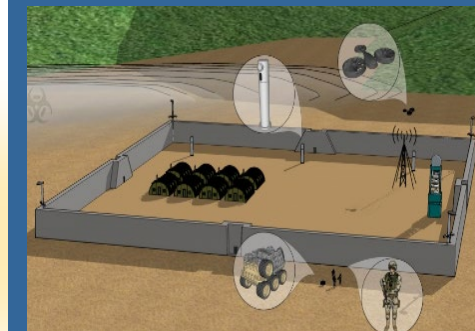


Partner to Reduce Global WMD Threats

As a Combat Support Agency, we...



Identify Vulnerabilities & Mitigation Strategies



Develop and Deliver Rapid Capabilities

The Agency *integrates* across its DA and CSA roles to serve DTRA's strategic goals:

- To ensure a safe, secure, reliable, and effective nuclear deterrent
- To counter weapons of mass destruction and emerging threats
- To enable the Joint Force and our allies/partners to compete and win against adversaries, and
- To build an adaptive and resilient Agency



UNCLASSIFIED

Enable Strategic Deterrence

Lines of Effort

Provide nuclear weapons sustainment and support to the Combatant Commands (CCMDs) and DoD designated response

Conduct Mission Assurance Assessments (MAAs) to ensure continued function and resilience of DoD nuclear security & support infrastructure

Improve nuclear weapons effects applications to inform protection and response against adversary nuclear attacks

Provide subject matter expertise to **conventional/nuclear wargaming and analysis**



*DTRA ensures that the DoD maintains
a safe, secure, and effective nuclear deterrent*



UNCLASSIFIED

Support U.S. Treaty Implementation and Verification

Lines of Effort

Conduct on-site inspections, monitoring, escort activities, and observations under various treaties and conventions:

Current:

- New START
- Conventional Forces Europe
- Vienna Document Inspections
- International Atomic Energy Association (IAEA)
- Plutonium Production Reactor Agreement
- Nuclear Testing Treaties (NTT)
- Chemical Weapon Convention

Legacy:

- Open Skies Treaty
- Strategic Arms Reduction Treaty (START)
- Intermediate-Range Nuclear Forces (INF) Treaty

Manage, operate, and sustain seismic, infrasound, and radionuclide nuclear detonation detection stations



DTRA provides world-class technical advice to U.S. arms control policy makers during ongoing treaty negotiations and implements DoD activities of existing treaties and agreements



UNCLASSIFIED

Partner to Reduce Global WMD Threats

Lines of Effort

Build a partner nation's capacity and capability to counter WMDs during:

- Maritime and Border security operations, to include Interdictions and Criminal investigations
- Disease surveillance, detection, identification, reporting & response operations
- Nuclear & Chemical security, transportation, and response operations
- Counter emerging threats and networks operations

DTRA enhances partner nation capabilities to counter WMD and emerging threats, while building strong relationships for the United States globally





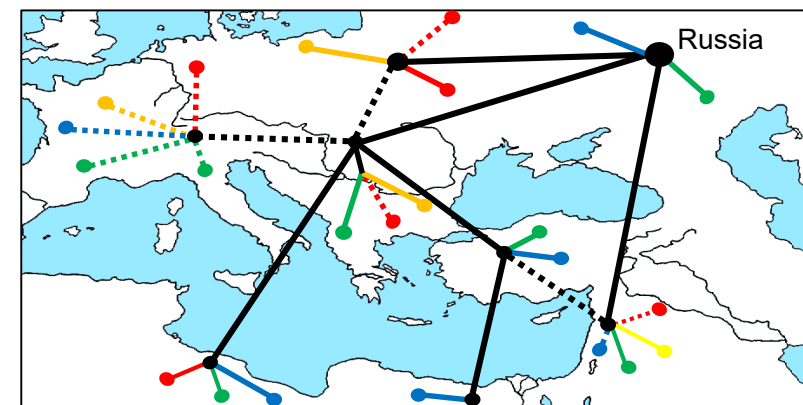
Identify Vulnerabilities and Mitigation Strategies

Lines of Effort

Conduct threat network analysis focused on National Defense Strategy priorities of China, Russia, Iran, and North Korea in support of the Combatant Commands efforts to conduct great power competition below the level of armed conflict

Coordinate Agency operations, actions, and investments, **enable sensitive activity missions**, and **provide modeling and predictive capabilities**

Operational analysis to identify previously unknown threat activity, solve asymmetric problems, and impose costs on competitors



- State Sponsored
- Proxies
- Legitimate Business
- Criminal Networks
- R&D

DTRA counters malign influence by providing early and expert threat identification, analysis and leadership decision-space



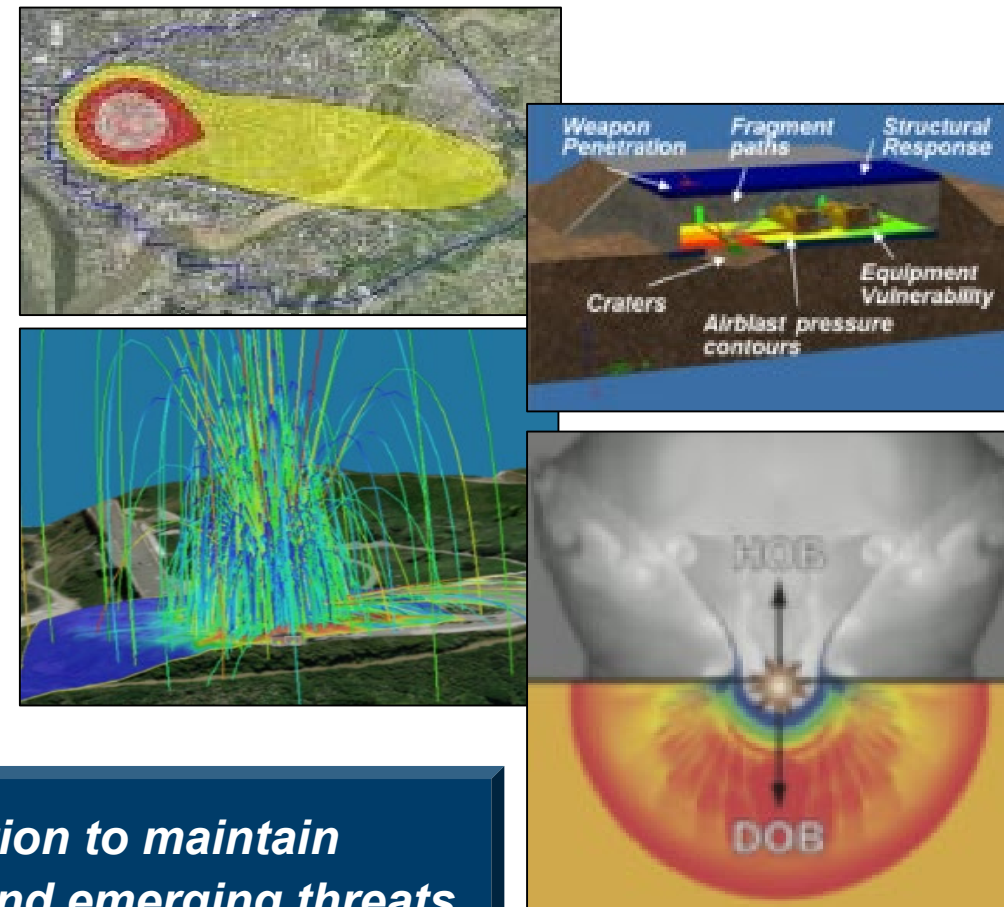
UNCLASSIFIED

Develop and Deliver Rapid Capabilities

Lines of Effort

Provide science, technology and capability development in countering WMD and asymmetric threats:

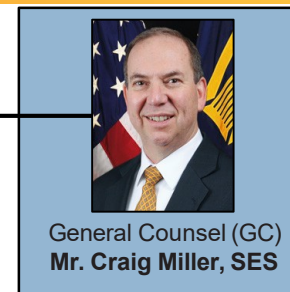
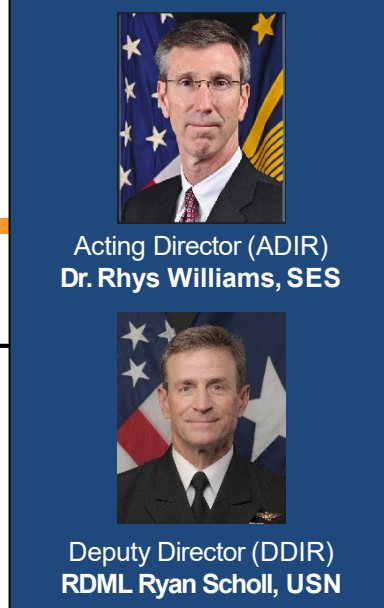
- Understand the environment, threats, and vulnerabilities
- Control, defeat, disable, and/or dispose WMD threats
- Safeguard the force and manage consequences
- Develop enabling technologies that underpin development efforts



DTRA drives research, development, test, & evaluation to maintain technological superiority across the spectrum of WMD and emerging threats

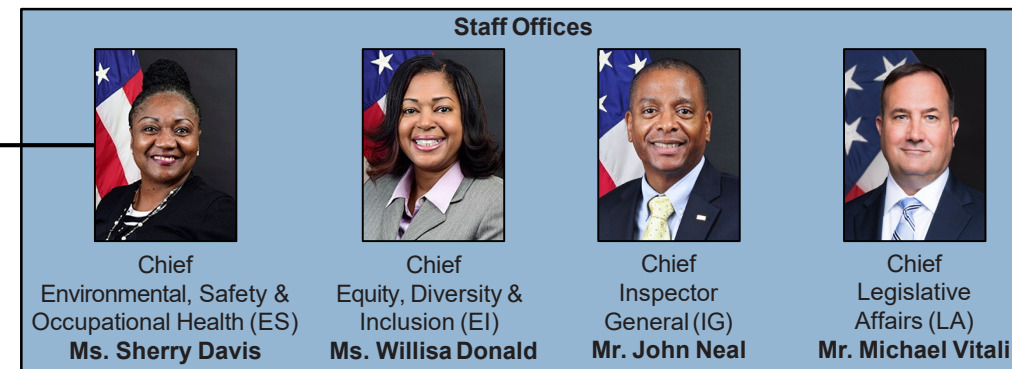
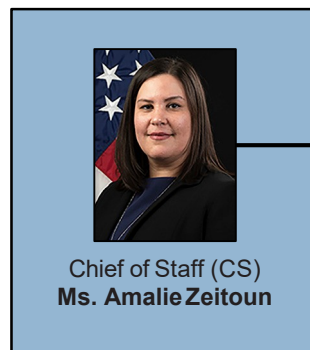


Organization



**Operational
Directorates**

**Mission Support
Directorates &
Staff Offices**



Director
Nuclear Enterprise (NE)
**Brig Gen John
Edwards, USAF**



Director
On-Site Inspection &
Building Capacity (OB)
Mr. David Musgrave, SES



Director
Cooperative Threat
Reduction (CT)
Dr. Robert Pope, SES



Director
Operations and
Integration (OI)
Mr. Kyle Lampela, SES



Acting Director
Research &
Development (RD)
Dr. Ronald Hann, SES



Director
Strategic Integration (SI)
**Mr. Hunter Lutinski,
SES**



CIO and Director
Information Management
& Technology (IT)
Mr. Mario Vizcarra, SES



Director
Acquisition, Contracts
& Logistics (AL)
Ms. Lisa Swan, SES



Director
Human Resources (HR)
**COL Christine Enriquez,
USA**

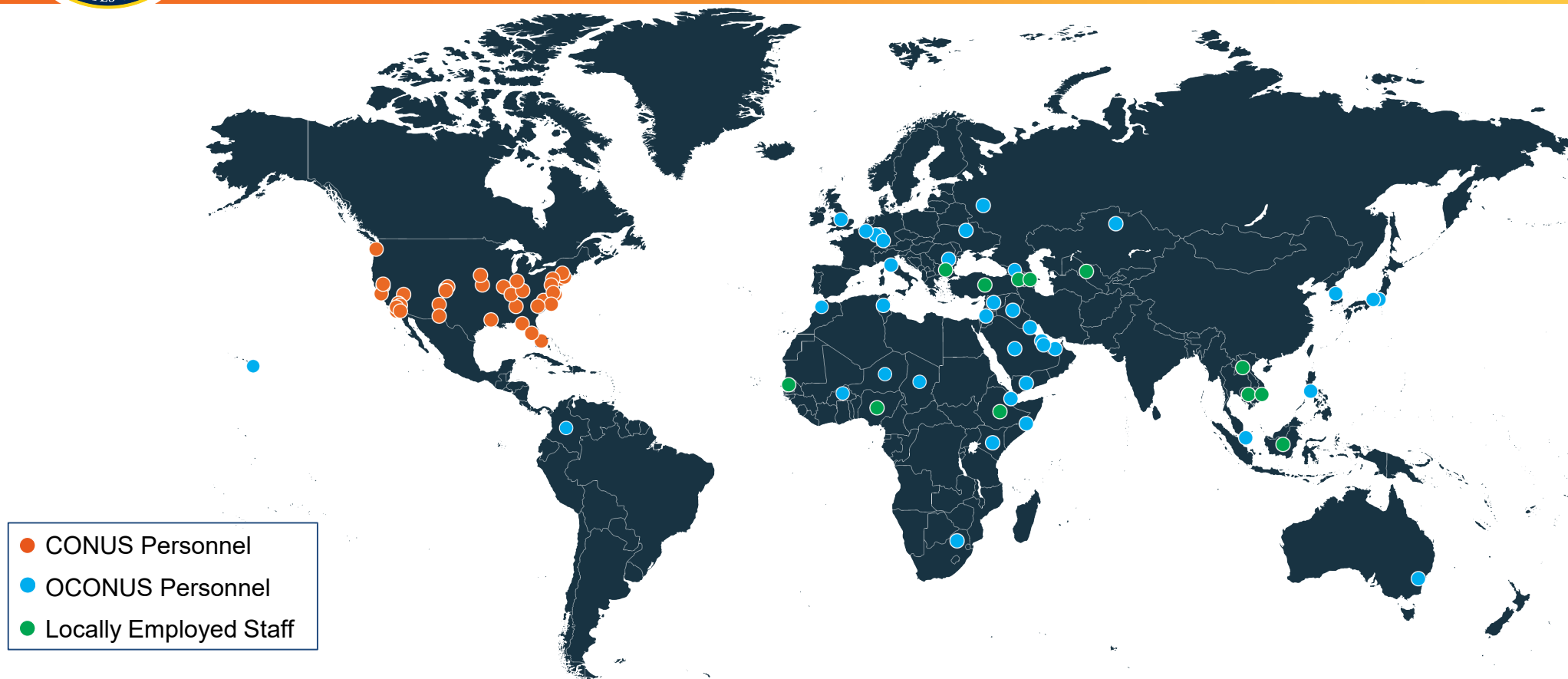
Detect. Deter. Defeat.

UNCLASSIFIED



UNCLASSIFIED

Worldwide Footprint



DTRA's forward footprint enables us to better understand operational requirements and the environment where capabilities to detect, deter, and defeat WMD and emerging threats must perform



UNCLASSIFIED

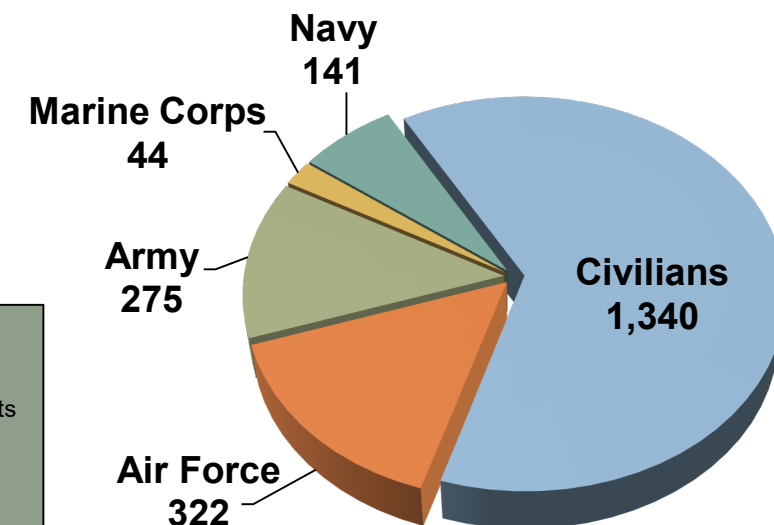
A Unique, Specialized Workforce



Total DTRA Budgeted FTEs: 2,122

Military: 782 Military

Civilian: 1,340

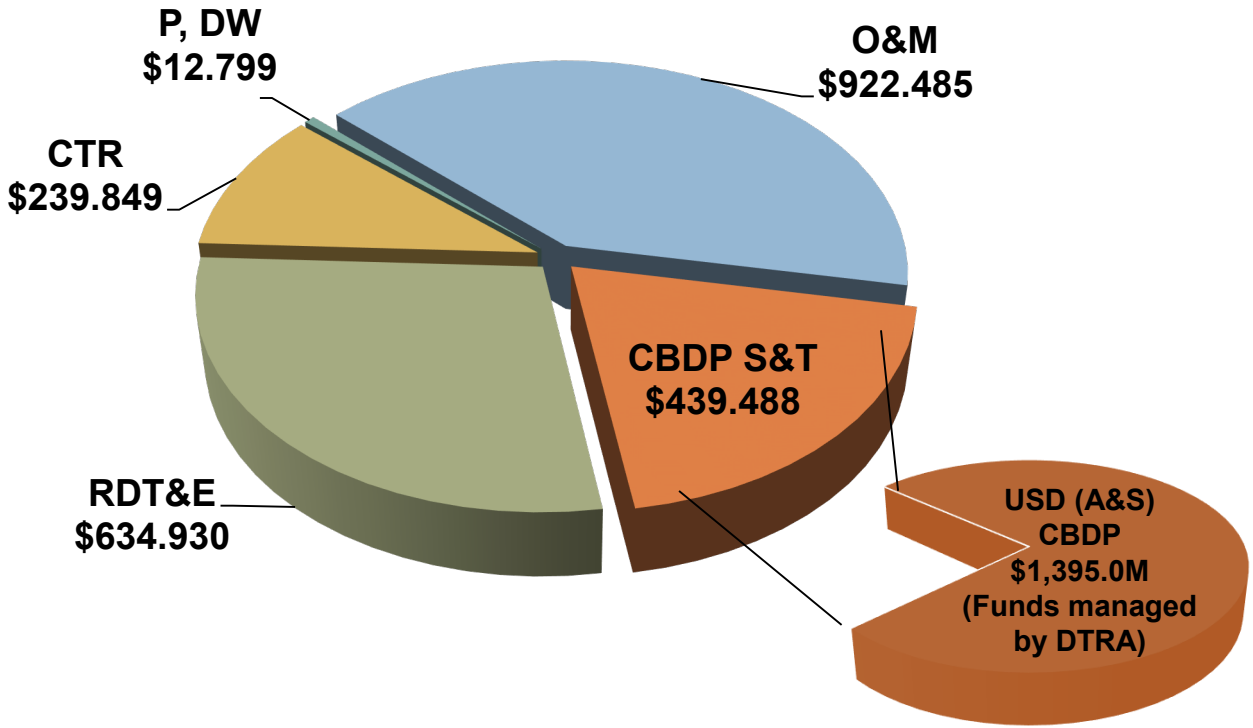


DTRA's workforce is an integrated mix of personnel from government, military, and industry, blending a variety of skillsets at the individual and organizational level.



Multiple Funding Streams

DTRA FY22 Request



Program	FY21 Enacted (\$M)	FY22 PB ¹ (\$M)
Cooperative Threat Reduction (CTR)	360.2	230.8
Research, Development, Test & Evaluation (RDT&E)	594.1	634.9
Operations & Maintenance (O&M)	909.9	922.5
Procurement, Defense-Wide (P,DW)	12.7	12.8
Military Construction (MILCON)	46.6	0
Total DTRA	1,923.5	1,810.1
Joint Science & Technology Office Chemical Biological (JSTO/CB)	443.7	439.5
Total non-DTRA	443.7	439.5
Total Executed by DTRA	2,367.2	2,249.6

¹ Excludes fenced program
Total Executed by DTRA = Total DTRA Request \$1.810B + CBDP S&T \$439.488M



UNCLASSIFIED

Threat-Based Solutions Around the World

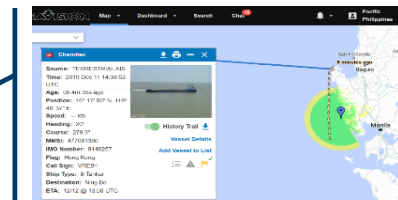
Conduct force protection and vulnerability assessments of national and Allied infrastructure



Consolidate and secure WMD-related systems and materials



Understand the nexus between Great Power Competition and WMD threats



Support partner nations in developing counter-WMD capabilities



Eliminate declared WMD Stockpiles



Counter Asymmetric & Emerging Threat Networks through Border Surveillance & CBRN Interdiction

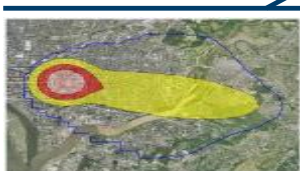


Develop a global biosurveillance network to detect outbreaks of especially dangerous diseases



Provide critical PPE to laboratory technicians and healthcare workers on the COVID frontlines

Provide tailored chemical, biological, radiological, and nuclear education and training to U.S. forces



Provide 24/7 technical reachback to advise incident managers and assist in forensic analysis



Detect. Deter. Defeat.

UNCLASSIFIED

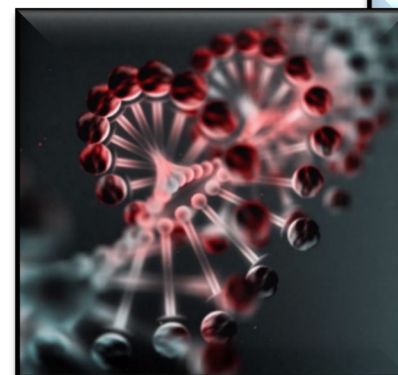
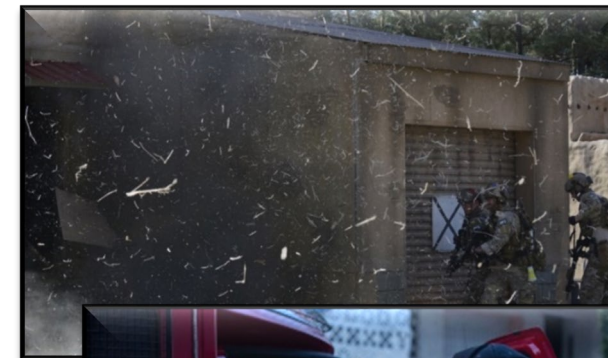


How Do You Get Support From DTRA?

- Reach out to your Combatant Command Representative
 - Utilize the annual requirements process to submit Requests for Support
- Contact the 24/7 Technical Reachback Center
 - (703) 767-34445
 - dtra-reachback@mail.mil
- Call the 24/7 Joint Operations Center
 - (703) 767-2000
- If all else fails, I and DTRA's DDIR, RDML Ryan "Doc" Scholl, are here to help:
 - rhys.m.williams.civ@mail.mil; rhys.m.williams.civ@mail.smil.mil; rhys.williams.civ@dtra.ic.gov
 - ryan.b.scholl.mil@mail.mil; ryan.b.scholl.mil@mail.smil.mil; ryan.scholl.mil@dtra.ic.gov



UNCLASSIFIED



Detect. Deter. Defeat.

UNCLASSIFIED

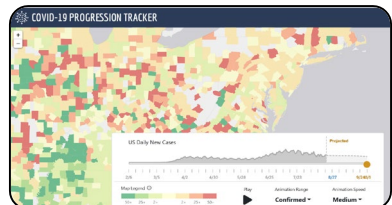


Backup Slides

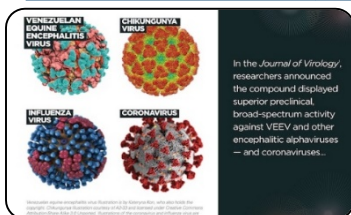


UNCLASSIFIED

...and In Depth (DTRA's COVID Response)

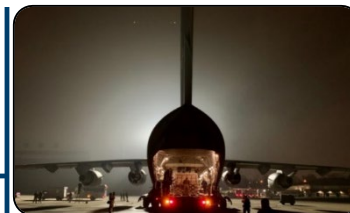


Effects-modeling, for uses in tracking PPE and response readiness, as well as military-industrial impacts



Rapid identification of already FDA approved therapeutics

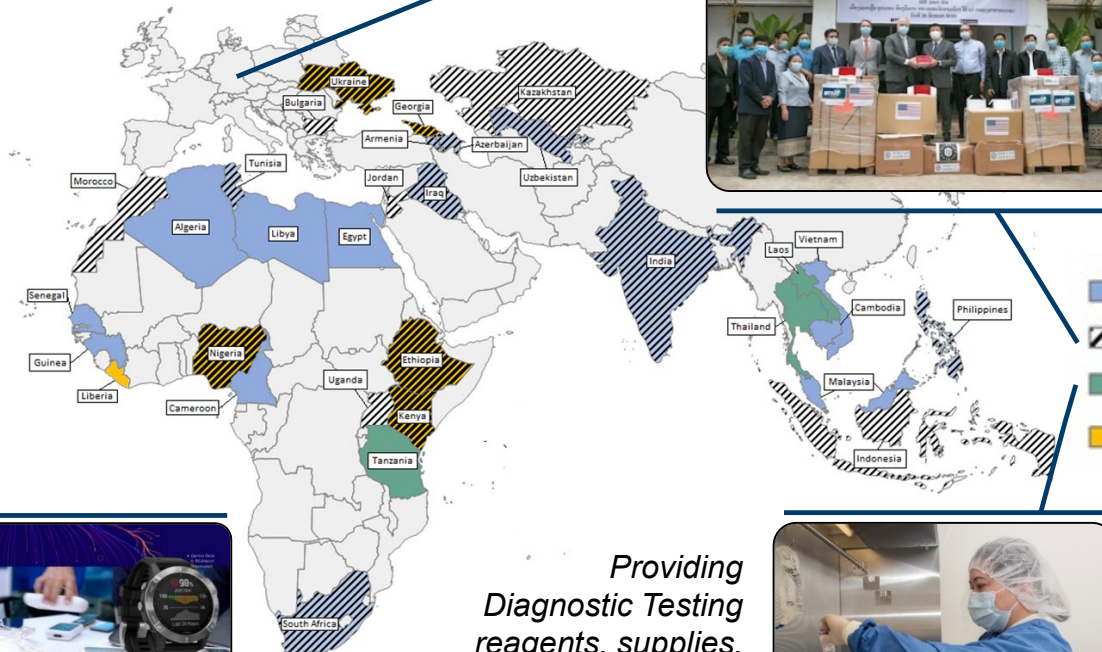
Established the Air Bridge to support transportation of COVID supplies to the US



Developed Transport Isolation System for constant in-flight patient care, while protecting aircrew, medical personnel, and the aircraft



Providing critical PPE and Lab Equipment to laboratory technicians and healthcare workers on the COVID frontlines



Adapting wearables for prediction and early diagnosis

Providing Diagnostic Testing reagents, supplies, and training

