

**Exhibit R-1, RDT&E Programs
Defense Threat Reduction Agency
Fiscal Year (FY) 2020 Budget Estimates**

Appropriation: RDT&E, Defense-Wide

Date: February 2019

OVERVIEW

The Defense Threat Reduction Agency (DTRA) is the Department of Defense's (DoD) principle Research, Development, Test & Evaluation (RDT&E) program for combating and countering the threat posed by the networks and capabilities of foreign weapons of mass destruction (WMD), improvised explosive devices (IEDs) and other improvised threats. These present an immediate, persistent, and evolving risk to our nation's security. Detecting, deterring and defeating these threats is a primary DoD priority, and the mission of DTRA.

The DTRA RDT&E funding for FY20 will meet critical Combatant Command and Service requirements across the chemical, biological, radiological, nuclear, and improvised threat mission space. These activities address ongoing and emerging strategic, operational, and tactical challenges to sustain and advance DoD's capabilities to provide WMD and improvised threat surveillance, detection, defeat, prevention, nonproliferation, counterproliferation, and consequence management.

DTRA develops information systems and advanced analytical tools to enable the Joint Force, coalition partners and the interagency the ability to synthesize and exchange complex technical information in real time for actionable planning and action. By rapidly delivering material solutions across the WMD and improvised mission space, capabilities are delivered that allow for the identification, detection, prevention, neutralization, exploitation, and mitigation of the impact of WMD and improvised threat use on the battle field. This RDT&E effort directly supports National Defense Strategy Line of Effort (NDS LOE) 1: Build a More Lethal Force.

The RDT&E portfolio includes a basic research initiative that balances the scientific exploration, discovery, and experimentation with near- and mid-term priorities. This portfolio facilitates innovative solutions and technologies that transition to cost effective capabilities. In addition, the RDT&E portfolio includes leading information science, advanced analytics, and modeling and simulation capabilities, while providing operational, near real-time decision support. To ensure that developed capabilities meet warfighter requirements the RDT&E portfolio also includes end-to-end test event planning and management and includes data analysis that supports DoD, federal agencies, and coalition partners counter WMD and improvised threat programs.

The RDT&E portfolio includes a long standing nuclear technology development effort focused on technologies that support a safe, secure, and effective U.S. nuclear deterrent as well as those technologies that prevent a nuclear or radiological attacks against the U.S. or its allies. This portion of the portfolio includes a broad range of issues including: nuclear weapons effects for targeting in support of U.S. strategic deterrence, nuclear survivability standards, and technology supporting the Joint Force, leading edge nuclear detection technologies that can detect, characterize and potentially attribute the use of nuclear material or detonations.

The RDT&E portfolio also develops technologies to counter WMD and improvised threats through the development of: weapons effects and planning capabilities, target sensing and characterization technologies, novel methods for the defeat and destruction of chemical and biological agents, technologies supporting sensing surveillance and reconnaissance (ISR) capabilities and tools and technologies that hold adversary networks at risk by modeling the effects and trade-offs of weapons systems against enemy targets including hard and deeply buried targets.

DTRA continually assesses the total RDT&E portfolio with respect to new and emerging requirements, the current and future threat environment and the continually changing technology landscape. This submission is driven by requirements from the combatant commands that support specific warfighter needs. This submission reflects the Agency's RDT&E portfolio restructuring to bring greater agility and efficiency to programmatic and financial operations and better integrate refreshed organizational roles which supports. DTRA's RDT&E portfolio continues to reflect Services Requirements Review Board reductions previously implemented across the FYDP.