

Joint Test Concept Abstract

The ascent of peer/near-peer (P/N-P) actors raises the probability that the Joint force will be contested in all domains during the execution of distributed and potentially non-contiguous, combat operations. Ensuring our nation's military maintains its advantage over P/N-P competitors and adversaries will stretch traditional testing and evaluation (T&E) capabilities further than ever before. T&E must be re-imagined, placing increased emphasis on the operational and mission context in which the system under test is expected to perform. Director Operational Test and Evaluation (DOT&E) has outlined several lines of effort to tackle the issue of a joint T&E environment in its Strategy Implementation Plan-2023 (I-Plan). Through the Acquisition Innovation Research Center (AIRC), DOT&E contracted the Virginia Tech Applied Research Corporation (VT-ARC), in partnership with Virginia Tech (VT), to develop a Joint Test Concept (JTC) in support of the I-Plan.

Study team members will explore the complex JTC development process to include the cultivation of a diverse community of interest and the identification of barriers to T&E best practice implementation, complex dependencies across the Department, potential solutions within the existing constraints and restraints, ways to empower Department employees to realize these solutions, the application of digital and model-based systems engineering, and recommendations for practice, policy, and organizational change. The team will present the VT-ARC human-centered design approach that employs innovative problem framing, solution discover, and creative adaptability to harness community analytic potential.

The re-imagining of T&E to ensure Joint force capabilities in a combined, all domain, contested, and distributed environment across the conflict continuum is a critical part of meeting the 2022 National Defense Strategy requirements. The JTC must consider all stakeholders' equities to include industry, operational force, and acquisition community; address T&E requirements across the entire system lifecycle; and enable delivery of the system at the pace of relevancy. The JTC study team, together with the COI, have set the JTC foundation, and begun to construct a pilot JTC framework. Continued involvement from the growing COI remains critical to JTC effectiveness.