

AFRL

WARTECH

TRANSFORMATIONAL S&T FOR THE DAF FUTURE FORCE

WHAT IS IT?

WARTECH brings together warfighters, technologists, planners, and acquisition personnel to collectively develop operational concepts motivated by future force design and enabled by high-payoff science and technology (S&T).

"WARTECH is a partnership with our number one customer which is the warfighter. It allows us to roll up our sleeves to tackle their operational challenges, things that they can't do today. And then to work together on ideas and solutions, and then curating down to those ones that are most within our grasp" said Maj. Gen. Heather Pringle.

HOW DOES IT WORK?

The process begins with a demand signal from those building Future Force Designs. Through cross-functional collaborative forums, operational challenges emerge that are informed by current and projected threats, trends and needs.



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WARTECH is a process that scientists, engineers, operators, strategists, and planners use to identify transformational operational concepts that enable near-term game-changing capability demonstrations. These proposals are built based on inputs from a wide array of stakeholders, but also consider data from tech scans, other relevant government investments, requests for information to industry, and existing analytical studies. An executive committee, separate from the Transformational Capabilities Office (TCO), approves a small number of these concepts for maturation. This initial step ensures concepts are aligned to strategy before teams dive deeper into developing actionable program plans. Once a concept is selected for further incubation, the multi-disciplinary team begins building the Transformational Capability Integrated Plan (TCIP).

(Continued on page 2)

THE AIR FORCE RESEARCH LABORATORY

(Continued from page 1)

HOW DOES IT WORK? Cont'd

The TCIP includes a summary of operational relevance, the technical approach, and a transition strategy all of which include supporting analytics. These plans undergo a variety of reviews including red teams, independent technical reviews and costing assessments before the executive committee considers the plans for investment.

WARTECH EFFORTS

Vanguard programs Skyborg, NTS-3 and Golden Horde were pre-WARTECH. The WARTECH process helps to evolve the current Vanguards, ensure enterprise commitment and identify clear transition pathways. WARTECH has produced the Vanguard program Rocket Cargo and Vanguard prospects such as Resolute Sentry and Area Effects Demo.

Rocket Cargo

Determine the viability and utility of using large commercial rockets for Department of Defense global logistics.



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Rocket cargo, a Vanguard candidate program highlighted during WARTECH, seeks to enable rapid delivery of aircraft-size payloads for agile global logistics. (Graphic courtesy of SpaceWorks® Enterprises)

Resolute Sentry

Real-time, multi-domain battlespace awareness in highly contested environments.

Area Effects Demo

Survivable hypersonic systems that can deliver individual effects over large areas.

ABOUT AFRL

The Air Force Research Laboratory (AFRL) is the primary scientific research and development center for the Department of the Air Force. AFRL plays an integral role in leading the discovery, development, and integration of affordable warfighting technologies for our air, space, and cyberspace force. With a workforce of more than 11,500 across nine technology areas and 40 other operations across the globe, AFRL provides a diverse portfolio of science and technology ranging from fundamental to advanced research and technology development. For more information, visit:

www.afresearchlab.com.