DIU Rapid Prototyping and Rapid Acquisition

Driving innovation and rapid-fielding across DoD by curating rapid prototyping and rapid acquisition

Riverside Research subject matter experts (SMEs) curate the rapid prototyping and rapid acquisition of critical dual-use commercial technologies to drive innovation and rapid-fielding across the DoD. Our team focuses on critical dual-use commercial technologies to enhance, speed up, and sharpen portfolios and processes.

Our unique combination of rapid-prototyping/rapid-development expertise—combined with DIU's unique Commercial Solutions Opening process—have dramatically shortened the R&D and acquisition times necessary to field mature or maturing technologies to the DoD.

DIU Technical Portfolio















Our Reach

Riverside Research SMEs provide program management and project curation across all DIU technology portfolios, including:

- AI/ML
- Autonomy
- · Emerging Technology
- Cyber and Telecommunications
- · Human Systems
- Space
- Energy
- · Digital Platforms

Additional support provided to enterprise-level horizontals, including:

- · Commercial engagement
- · Directors Action Group
- Due Dilligence/FOCI Analysis
- Acquisitions support



Key Features

- Program management and project curation support
- Enterprise-level horizontals support
- Unique combination of rapid-protyping/rapiddevelopment expertise
- Dramatically shortened timelines to field mature technologies to DoD

DIU Rapid Prototyping and Rapid Acquisition

Riverside Research SMEs provide program management, project curation, and additional support across DIU technology portfolios:



DIU Autonomy: Replicator 1 & 2

Department-wide effort to rapidly define requirements and acquire commercial solutions, at scale, to address Blue UAS and Counter sUAS needs across the force

Riverside Research SMEs provided:

Curation, technical expertise, engagement, define and provide capabilities



DIU Cyber: Joint Cyber Hunt Kit

Prototype Security Operations Center (SOC) in a Box

Commercial standardization of Cyber Hunt Kits

Portable and globally deployable

Curation, SME support, vendor engagement, coordination



DIU Energy: Advanced Nuclear Power for Installation (ANPI)

Microreactor nuclear energy to provide resilience power to US military bases

Technical expertise, licensing/ certification expertise, program support



DIU Energy: Hydrogen at the Tactical Edge of Contested Logistics (HyTEC)

Hydrogen generation systems to fuel UAS and tactical power requirements—resilient deployable energy production

Program management, prototype development, field testing



DIU Autonomy: AI for Small Unit Maneuver (AISUM)

Multi-agent UAS teams autonomous, collaborative operations; building on DARPA OFFSET program

Successful field tests with US Army, other DoD users

Curation, programmatic support, technical expertise



DIU Autonomy: Construction Scale Additive Manufacturing (CSAM)

Automated 3D-Printed construction to enable rapid expeditionary operations

Curation, field test, demonstration



DIU: DoD Digital OnRamp Platform

Matches commercial vendors with DoD requirement owners

Uses LLMs and other GenAI to enable DoD commercial technology adoption at scale

Program management, stakeholder/ vendor curation, user test-base



DIU Autonomy: Artemis

Commercial low-cost, long-range one-way UAS platforms

Program management, stakeholder/vendor curation



DIU EmTech: Hypersonic and High-Cadence Airborne Testing Capabilities (HyCAT)

Low-cost, High-Cadence test capabilities

Duel-use airborne testing platforms

Programmatic leadership, execution, test flights



DIU EmTech: Transition of Quantum Sensing (TQS)

Proving military use-cases for quantum sensing for A-PNT and anomaly detection

Quantum Inertial Sensing and Quantum Gravimeters

Curation, technical expertise



DIU AI: Thunderforge

GenAI, Agentic AI, and AI-enabled SW integration to support operational and theater-level planning

USINDOPACOM and USEUCOM Test Users

Curation, engagement, technical expertise, field testing



DIU Human Systems: Digital Front Door

Rapid prototype commercial solution to modernize military medical system

Patient experience, provider support, data management



Critical Tech Areas



















microelectronic





DoD Priorities



- 1 Southwest Porder Activities
- 2. Combating Transnational Criminal
- 3. Audi
- 4 Nuclear Modernization (including NC2)
- 5. Collaborative Combat Aircraft (CCAs)
- 6. Virginia-class Submarine
- 7. Executable Surface Ship
- 8 Homeland Missile Defens
- 9 One-Way Attack/Autonomous Systems
- 10. Counter-small UAS Initiatives
- 11. Priority Critical Cybersecurity
- 12. Munition
- 13. Core Readiness, including full DRT funding
- Munitions and Energetics Organic Industrial Bases
- 15. Executable INDOPACOM MILCON
- Combatant Command support agency funding for INDOPACOM, NORTHCOM, SPACECOM, STRATCOM, CYBERCOM, and TRANSCOM
- 17 Medical Private-Sector Care