



ACCELERATING COMMERCIAL TECHNOLOGY
FOR NATIONAL SECURITY

DIU + SPACE

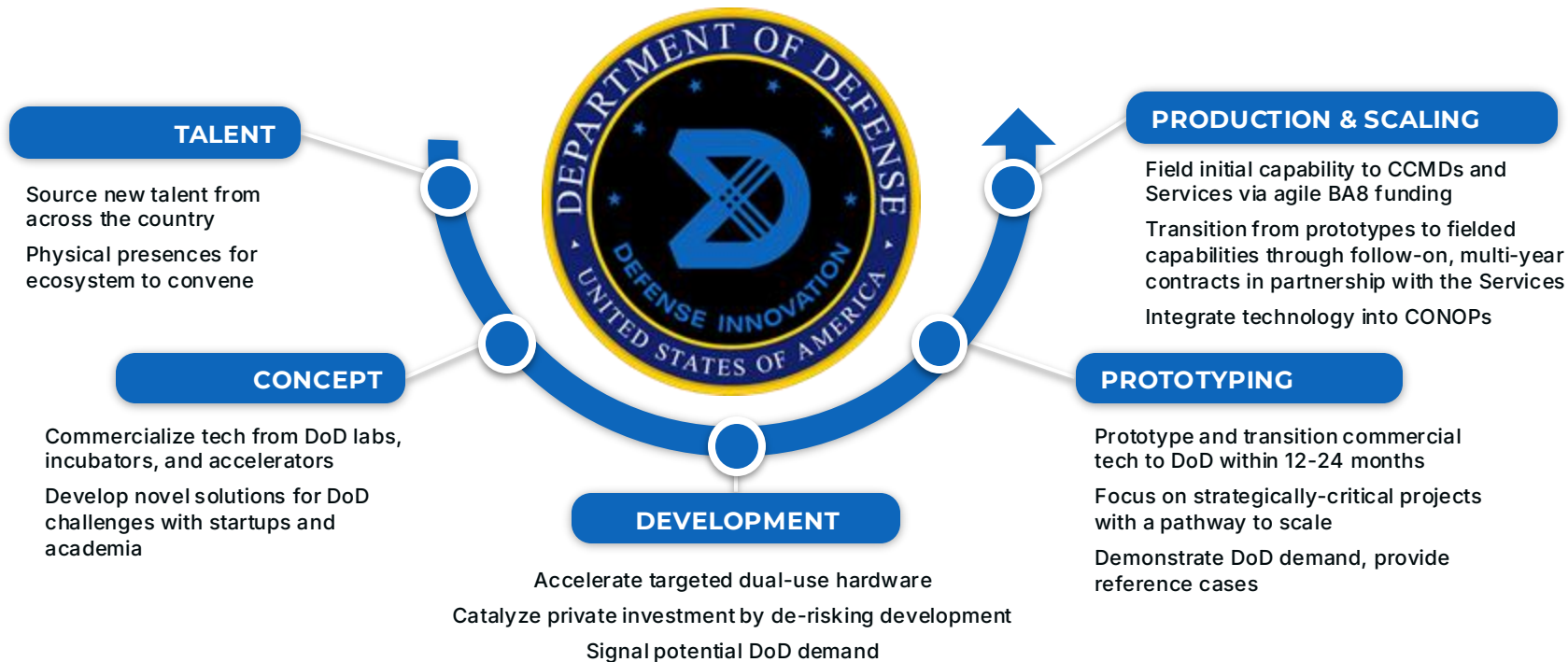
STIGUR Meeting

August 13, 2025



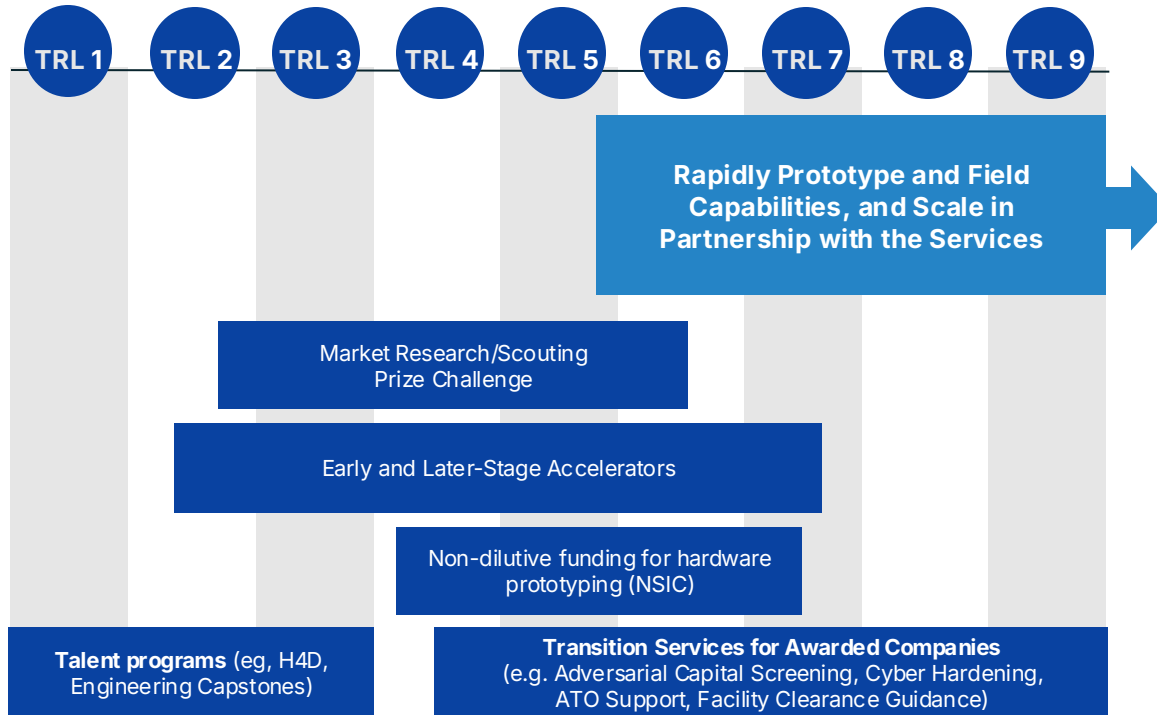
Strengthening the National Security Innovation Base

DIU serves as the unified onramp that facilitates the engagement and growth of talent, early-stage tech, and non-traditional companies working to solve key DoD problems





Leverage a Variety of Tools to Deliver Solutions



Mechanisms

Prototyping & Fielding (DIU Projects)

- CSO process: award prototype OTs with the potential to transition into follow-on production without further competition
- Rapid Acquisition Prize Challenges
- Other DIU pathways (e.g., 10 U.S.C. § 4023, procurement for experimental purposes)
- Increase ongoing project \$: add funds to scale solutions within active OTs

Prototyping & Fielding (Supporting Others' Projects)

- Funding support to emerging needs sourced from CCMD/Service Leadership (e.g., MIPR)
- Funding support to DICE partner investing in emerging innovative technologies (e.g., STRATFI, CDAO contract)

Transition & Scale

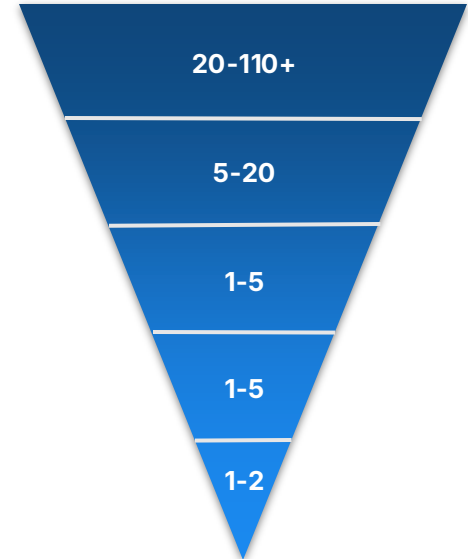
- Aligning DIU projects to hand off to Programs of Record
- Hand off to partners like CDAO, R&E, and A&S for DoD enterprise delivery



OTA and Commercial Solutions Opening (CSO): Our Fast, Competitive Unique Project Lifecycle

Problem Curation & Diligence	<ul style="list-style-type: none"> ●Receive, understand, and evaluate DoD partner problem ●Confirm commercial market exists to address problem 	No Requirements
Commercial Solutions Opening (CSO)	Phase 1 ●Solicit digital proposals in response to a problem statement	~10 business days
	Phase 2 ●Evaluate proposals and invite a short list of bidders to pitch	60-90 days to contract award (goal)
	Phase 3 ●Select contract awardee/s and negotiate agreement	
Prototyping	●Execute prototype project	12-24 months
Initial Fielding & Scaling	<ul style="list-style-type: none"> ●Award non-competitive agreement to successful performers ●Deliver & scale solution to transition partner/s 	No Re compete FAR Not Req'd

Approximate Number of
Vendors Participating





Presence Across U.S. = Asset for Early-Stage Support

Commerical Ops focuses on enhancing and leveraging local innovation ecosystems to help smaller and early-stage companies get their tech into the hands of our warfighters

Regions

- 8 Regions, supported by 30+ externally oriented representatives across the country
- 5 OnRamp Hubs acting as Front Doors

Universities

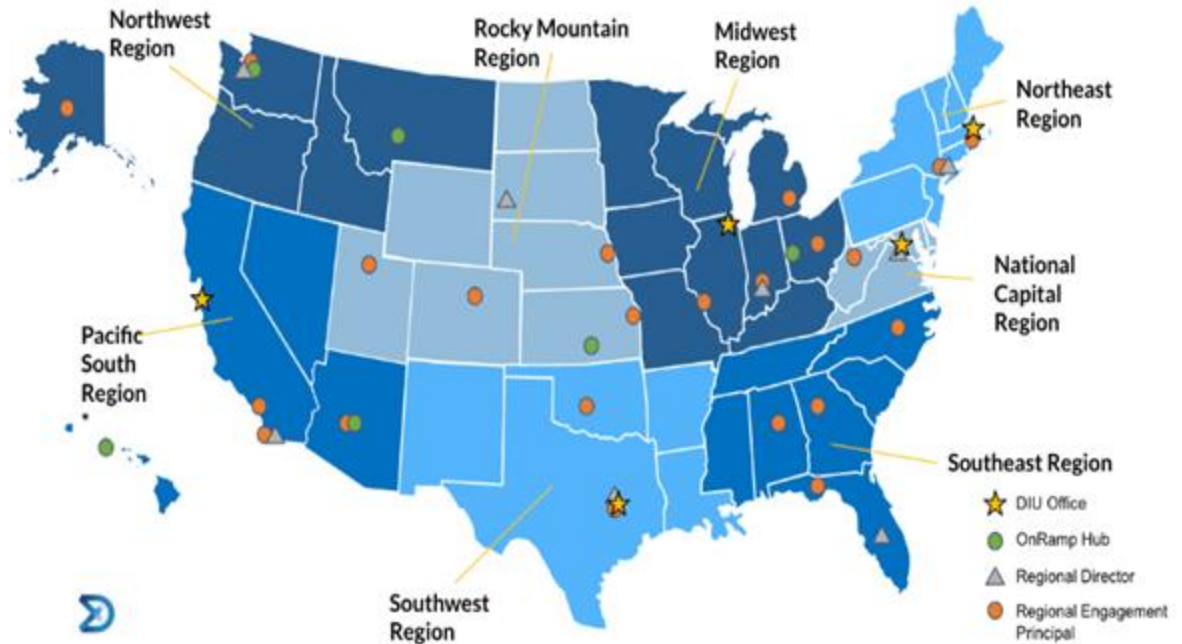
- Engaged 85 universities

Companies

- Received solicitations from all 50 states
- Issued awards in 37 states + DC

NEW LOCATIONS

- Wichita, Kansas
- Phoenix, Arizona
- Dayton, Ohio
- Honolulu, Hawaii
- Renton, Washington
- Louisville, Kentucky
- Montana
- Minneapolis-St. Paul, Minnesota





Enablers: Prizes & Challenges

Prize Challenges bring collaborators from the defense, academic, and venture communities together to work on challenging technical problems. These competitions can offer both monetary and non-monetary awards, fostering the development of dual-use technologies that meet both defense and commercial needs.

- **Scouting/Market Research-Focused Challenges** provide DoD mission partners with insights into emerging technologies through these prize competitions.
- **Growth/Rapid Acquisition Challenges** identify and validate solutions for immediate acquisition, streamlining the on-boarding process with in-person demonstrations and test evaluations. The Blue UAS Refresh Challenge is a recent example of this in action.
- DIU has also launched combined **prize challenges with key foreign partners** like Japan, India, and Singapore

FY24 Key Stats

12 Challenges
101 Companies Participating
59 Awards totalling \$3.25M



RF SPECTRUM
SHARING CHALLENGE



DIU & ATLA PRESENT

U.S.-JAPAN GLOBAL
INNOVATION
CHALLENGE



How: NSIC Prototype Support & Funding

National Security Innovation Capital (NSIC) enables dual-use hardware startups to advance key milestones in their product development by addressing the shortfall of private investment.

\$12.1M of Prototype Support for 5 Companies in FY2024

\$46.9M in Total Awards for 21 Companies from FY2021-24

FY24 examples include:

- SubSeaSail's autonomous surface vessel demonstrated technical viability and leveraged NSIC support to up their production capacity
- Spaceport's sea-based mobile launch platforms benefitted from NSIC support to establish a suborbital launch capability, attracting follow-on USAF funding and diversifying future launch options that will help respond to threats, deploy satellites, and reduce congestion at major launch sites
- Great Lakes Crystal Technologies, with its proprietary diamond substrate technology for next-generation microelectronics and sensor applications, demonstrated early R&D milestones off of SBIR contracts and is now working to demonstrate production viability via NSIC funding





DIU Tech Portfolios At-A-Glance: 7 Sectors



AI/ML



Autonomy



**Cyber &
Telecommunications**



Energy



Human Systems



Space



Emerging Technology



**THOMAS
HORAN**

*Director, AI/ML Portfolio
Mountain View, CA*

**58 Awards
\$189.5M**



**DAVID
MICHELSON**

*Director,
Autonomy Portfolio
Boston, MA*

**162 Awards
\$664.0M**



**PATRICK
GOULD**

*Director, Cyber &
Telecommunication
Portfolio
Mountain View, CA*

**70 Awards
\$124.0M**



**DR. ANDREW
HIGIER**

*Director,
Energy Portfolio
Mountain View, CA*

**80 Awards
\$377.6M**



**DR. CHRISTIAN
WHITCHURCH**

*Director,
Human Systems Portfolio
Mountain View, CA*

**76 Awards
\$407.4M**



**Maj Gen STEVEN J.
BUTOW**

*Military Deputy, DIU
Director, Space Portfolio
Mountain View, CA*

**78 Awards
\$553.8M**



**DR. NICK
ESTEP**

*Director, Emerging
Technologies Portfolio
Mountain View, CA*

**20 Awards
\$159M**

**532 Prototype OT Awards at
\$2.4B**



Space Portfolio Focus Areas



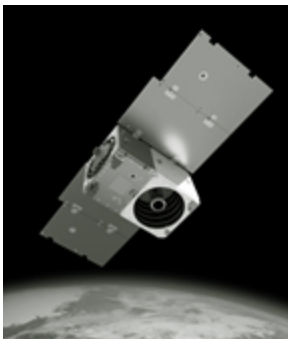
Responsive Space

Rapidly (re)constitute most critical systems & capabilities to, from & through space with sustainable maneuver at affordable cost and massive scale. Includes point-to-point delivery & contested logistics.



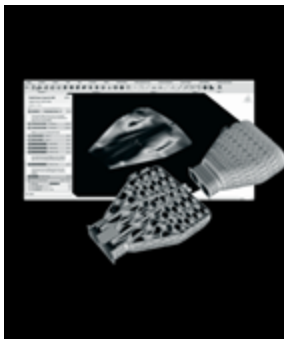
Resilient Communications

Address the joint and coalition warfighter need for secured, assured, low latency, multi-path, trusted and resilient broadband & narrowband satellite voice/data comms across all domains.



Persistent Sensing & Time Sensitive Awareness

Improved situational awareness & decision making at the tactical edge satisfied by less expensive, day/night, all-weather imaging satellites proliferated to sense in real time at the limit of persistence.



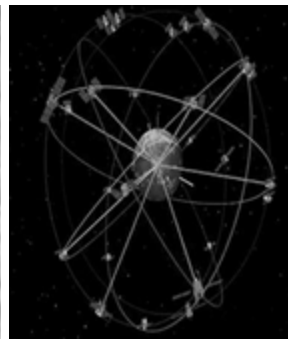
Adaptive Manufacturing & Supply Chain Resiliency

Accelerate growth of domestic space supply chain at economies of scale for on-demand & surge production while retaining agility through software-defined and AI-enabled adaptive manufacturing



Advanced Propulsion & Power

Accelerate development and integration of advanced in-space propulsion and nuclear power sources critical to increase survivability, performance and sustained maneuver of space systems .



Assured PNT

Fuse conventional and unconventional methods of position, navigation, and timing at high precision to assure users access across all terrestrial and extraterrestrial domains.

Vision

DIU's Space Portfolio facilitates DoD's access to commercial space technology while **leveraging significant venture capital and private equity investment in "New Space"** to achieve the following objectives:

- address **strategic capability gaps**;
- improve **situational awareness** and **decision making**;
- Create **asymmetric advantage** in sensing, information, maneuver and lethality,
- strengthen the **U.S. space industrial base**;
- improve **interoperability** with allies & partners;
- contribute to the preservation and sustainment of the **United States' leadership in space**.

The United States of America has no intention of finishing second in space. This effort is expensive — but it pays its way for freedom and for America.

President John F. Kennedy

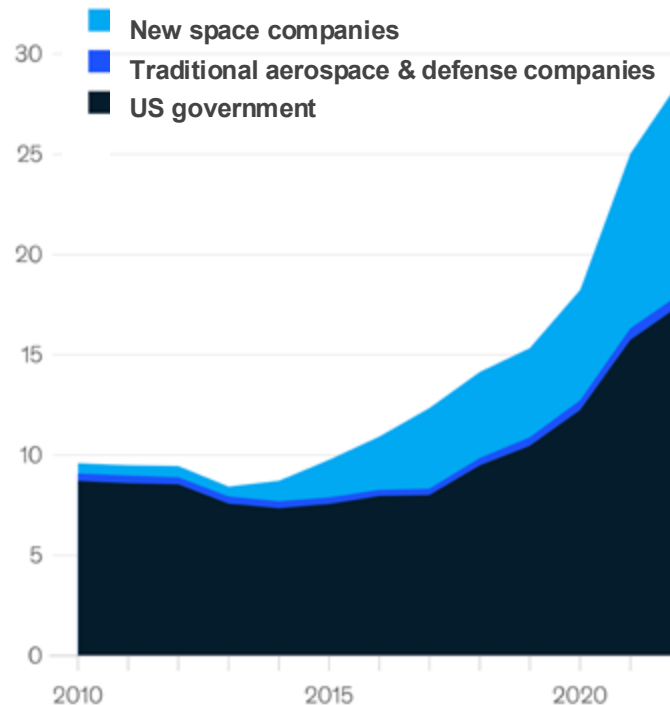




U.S. Space Related R&D Expenditures

New space companies are increasingly fueling disruptive technology

- The United States tech sector contributes **nearly \$2 trillion or 8.9%** to the U.S. gross domestic product (GDP) today.¹
 - In comparison, the estimated value of the **global space economy** will be **\$1.8 trillion by 2035**.²
- Independent R&D (or IRAD) invested by traditional aerospace and defense companies remains at zero growth.³
 - And yet, **<1% of defense acquisition contracts are awarded to non-traditional companies**.⁴
- Sustained U.S. space leadership is paramount to U.S. economic growth and national security.



Graphic credit: McKinsey & Co.

¹ BEA, 2024.

² Space Foundation Report, 2024

³ Future of Space Economy research, McKinsey and Company, 2024.

⁴ Defense Innovation Board, 2025.



Value Proposition: Why a Space Portfolio?

Challenges:

- Capital intensive
- Nascent commercial market
 - Greater dependence on government business
 - PRC postured to seize U.S. market share
(U.S. satellite imaging is the most immediate at risk)
- Exquisite systems do not scale
- Government:
 - “Bespoke-first” culture within DoD
 - Standards & regulatory processes create barriers to innovation
 - Warfighter vs. intelligence needs often at odds
- Risk taking essential to achieve significant outcomes

Opportunities:

- Space leadership leveraging commercial innovation
 - Short term: Deterrence
 - Long term: GDP growth
- Leverage significant private investment in space
- Fostering and procuring US-based capabilities will incentivize critical technology providers to develop in the U.S. for the U.S. market
- Talent pool extraordinary ... but must grow!
- Interagency collaboration → unified action
- Allied cooperation (NATO, AUKUS, Japan)
- Business Models (COCO, GOCO, GOGO, etc.)
 - Anything as a Service

Projects:

Responsive Space

- Novel Responsive Space Delivery (NRDS)
- Multi-Orbit Logistics Services
- Tactically Responsive Space (TacRS)
- Sinequone (xGEO, Cislunar)
- Modularity for Space Systems (M4SS: ISAM)
- Point to Point Multi-Domain Payload Delivery
- Hybrid Space Architecture (HSA)



Autonomy Portfolio Lines of Effort



Unmanned Aerial Systems

Increasing access to small drones, lowering procurement barriers, and supporting the U.S. drone industrial base



Defense and Threat Protection

Defensive systems to detect, track, identify and defeat adversaries and threats



Maritime

Domain awareness, hazard defeat and resilient logistics



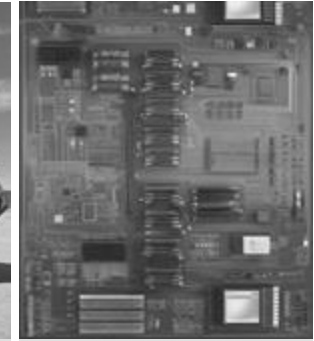
Supply Chain

Sourcing, rapid design, manufacturing, storage, and transport of critical supplies and capabilities



Ground Mobility

Technology to improve safety systems and fuel economy, increase force protection, and reduce boots on the ground



Software, Protocols, and Architecture

Fostering interoperability for seamless collaboration, reliability, and national security



Cyber Portfolio Lines of Effort



Electromagnetic & Spectrum Warfare

Bolster battlefield communications by providing secure and reliable data, video, and voice capabilities for service members in austere environments.



Cyber Warfare Operations

Enable military cyber operators and analysts to combat malicious cyber threats, vulnerabilities, and effects against critical infrastructure.



Enterprise IT Security & Modernization

Update and enhance the security controls, usability, and defensive cyber posture of the DoD's enterprise IT networks and devices.



AI-Enabled Cyber Operations

Integrating AI-powered cybersecurity solutions into cyber warfare operations to lower the cognitive load on operators and analysts.



ADVANCING COMMERCIAL TECHNOLOGY
FOR NATIONAL SECURITY

Thank You

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