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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Office of the Secretary Of Defense **Date:** March 2023

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603950D8Z / <i>National Security Innovation Network</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	76.190	34.876	79.268	21.575	-	21.575	21.494	21.374	21.821	22.297	Continuing	Continuing
845: <i>National Security Innovation Network</i>	76.190	34.876	79.268	21.575	-	21.575	21.494	21.374	21.821	22.297	Continuing	Continuing

Note

New Start (Y/N): No

A. Mission Description and Budget Item Justification

This program supports the Department’s initiatives to Build a Sustainable and Long-Term Advantage, and Build a Resilient Joint Force and Defense Ecosystem.

The National Security Innovation Network (NSIN) is a program office within the Office of the Under Secretary of Defense for Research and Engineering (OUSD(R&E)) and authorized through Section 219 of the National Defense Authorization Act for FY 2021. NSIN reports through the Defense Innovation Unit (DIU) to the USD(R&E). NSIN’s mission is to build networks of innovators that generate new solutions to national security problems. NSIN develops and executes programs that engage these networks to solve the problems of Department of Defense (DoD) entities from the Military Services, Joint Staff, Combatant Commands, Defense Agencies, and Field Activities. NSIN is organized around three core lines of effort: Network Building, Program Execution, and Transition Support. These lines of effort include: 1) regional engagement and community building to source problem solvers and solutions to national security problems; 2) executing programs to attract new talent and solutions from among students, entrepreneurs, and the startup, venture and academic communities; and 3) enabling transition by providing subject matter expertise to reduce ambiguity and provide reliable, clear, and dependable information to the NSIN network making it easier for solutions to be identified, assessed, and implemented.

The Regional Network Team is NSIN's outreach arm responsible for building the networks of innovators. The physical network is spread across nine (9) regions spanning the Continental United States and reaching out to Hawaii. Regional engagement activities are led by nine (9) Regional Directors supported by additional Regional Network Team members able to reach into critical venture innovation hubs throughout the country including: Boston, MA; New York City, NY; Washington, DC; Orlando, FL; Chicago, IL; St. Louis, MO; Austin, TX; Denver, CO; Seattle, WA; San Diego, CA; and San Francisco, CA. Additional members of the Regional Network Team currently include Regional Engagement Principals (REPs) that are embedded in and have responsibility for specific, critical innovation ecosystems within each region including universities and other tech hubs. Currently, NSIN has a total Regional Network Team of 44 members throughout the country.

NSIN executes programs through two portfolios: Talent and Venture. The Talent Portfolio provides inspiration and opportunity for individuals outside the traditional federal talent pipeline to serve our country and solve real-world national security, technology, and policy challenges. By bridging the gap between students, academics, and entrepreneurs to engage with the Department of Defense (DoD), NSIN is helping build a deep bench of diverse, qualified civilian and military workers to preserve our competitive emerging technology advantage with resilient personnel trained for the unpredictable global operating environment. The Talent Portfolio acknowledges that people are the most valuable resource to achieving the mission. The Venture Portfolio develops and executes programs and services intended to facilitate access to emerging technology as it engages the talents of fast-moving innovators and non-traditional problem-solvers. The Venture Portfolio works directly with dual-use

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early stage ventures emerging from both the academic and venture community who have solutions that address Department of Defense (DoD) problems. The Venture Portfolio creates advantage for defense innovation through customer discovery and solution adoption.

The NSIN Transition Cell reduces ambiguity and provides reliable, clear, and dependable information to NSIN program participants, Mission Acceleration Center users, and to the larger NSIN DoD mission partners; making it easier for solutions to be identified, assessed, and implemented. The Transition Cell ensures dual-use early stage ventures have the resources they need to understand and access the DoD market, provides education and resources to strengthen and fortify dual-use business maturity of alumni ventures, and provides materials and consultation to the DoD on the various authorities and vehicles available. The Transition Cell bridges the gap between NSIN post-program and solution implementation, facilitates market research within the non-traditional early stage venture ecosystem, and builds a bridge between the dual-use investor community, dual-use ventures, and the DoD innovation ecosystem. The Transition Cell enables the identification of reusable pathways to get solutions to the place where they will have the greatest effect.

In prior years, NSIN was predominantly funded through Congressional Additions but was included in the President’s Budget submission for FY 2020 (\$25.000 million). FY 2022 was the first year that NSIN appeared as a funded Program Element throughout the Future Years Defense Program and its program mission was codified in Section 219 of the NDAA for FY 2021. In FY 2023, NSIN was included in the President’s Budget submission at \$22.028 million and received a total Congressional Addition of \$57.240 million.

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	36.203	22.028	21.955	-	21.955
Current President's Budget	34.876	79.268	21.575	-	21.575
Total Adjustments	-1.327	57.240	-0.380	-	-0.380
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	57.240			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.327	-			
• Program Adjustments	-	-	-0.380	-	-0.380

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 845: *National Security Innovation Network*

Congressional Add: *NSIN Program Increase*

Congressional Add: *Secure Email Access*

Congressional Add: *DoD mission acceleration centers*

	FY 2022	FY 2023
	15.000	-
	-	1.240
	-	50.000

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Congressional Add Details (\$ in Millions, and Includes General Reductions)

Congressional Add: *Adaptive Threat Force Cyber Cell*

Congressional Add: *Hacking 4 Defense*

Congressional Add Subtotals for Project: 845

Congressional Add Totals for all Projects

	FY 2022	FY 2023
	-	1.000
	-	5.000
	15.000	57.240
	15.000	57.240

Change Summary Explanation

FY 2024 minimal reduction due to programmatic adjustments.

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Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603950D8Z / <i>National Security Innovation Network</i>				Project (Number/Name) 845 / <i>National Security Innovation Network</i>			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
845: <i>National Security Innovation Network</i>	76.190	34.876	79.268	21.575	-	21.575	21.494	21.374	21.821	22.297	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

NSIN executes the following programs and pilot activities, all of which are designed to enhance DoD’s access to technologists and entrepreneurs for the purposes of improving its talent pool, enable collaboration with universities and the early-stage venture community to develop novel concepts and solutions for end-user problems and requirements, and prototype and test new technologies to place them on the path to becoming programs of record or integrated with existing platforms.

- **Technology and National Security Fellowship:** a national, one-year fellowship pilot that places STEM graduates into the immediate offices of policymakers in Congress and the Pentagon for the purposes of enhancing technical literacy and improving policy outcomes through an informed understanding of emerging and nascent technologies.
- **X-Force Fellowship:** a summer fellowship experience for current students that embeds project-based teams of graduate and undergraduate students with DoD mission partners for the purposes of developing early-stage prototypes. Occurs annually from June-August.
- **Hacking for Defense:** a course taught at universities around the country that pairs DoD end-users with top university students for collaborative problem-solving over the course of an academic semester. Students work to develop a minimum viable product solution to improve the real-world problems of service members that can be adopted by the DoD end-users.
- **Bootcamp:** a national program that provides crowd-sourced solutions for DoD mission partners by deploying faculty from top-tier research universities to bases and installations to facilitate early-stage concepts for technology and policy-based problems.
- **Maker:** a national program that offers rapid prototyping for solutions drawn from accepted novel solution concepts from NSIN programming, allowing customers to turn ideas from the abstract and theoretical into practical and real prototypes.
- **Capstone:** a national program that pairs prototyping development needs for DoD mission partners with extant engineering capstone courses from top-tier research universities throughout the country. Outputs include TRL-4 prototypes that can undergo testing and evaluation.
- **Forge/Foundry:** a national program that identifies breakthrough DoD and other USG lab technology and leverages it to solve the real-world problems of DoD and commercial customers. Teams of entrepreneurs (Foundry) or ventures (Forge), working with DoD lab scientists and technologists, assess the market viability and the potential to commercialize DoD lab technologies.
- **Propel:** a national program that partners with commercial accelerators to sponsor particularly promising technology and early-stage ventures into cohort-based customer discovery that improves DoD end-user validation.
- **Challenges:** NSIN Challenges bring collaborators from the defense, academic, and venture communities to work on the most challenging technical problems in national security.
- **Emerge:** a national program that identifies extant university IP, matches it against DoD mission partner IP needs, and then commercializes the technology through entrepreneurial training, recruitment, and licensing agreements.
- **Fulcrum:** a pilot program that enables access to critical infrastructure that can be used to accelerate the development of solutions by early stage ventures.
- **Dual-Use Fundamentals:** A pilot program delivering dual-use fundamental curriculum to early stage ventures.

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<p>Title: National Security Innovation Network (NSIN)</p> <p>Description: NSIN's mission is to build networks of innovators that generate new solutions to national security problems. NSIN develops and executes programs that engage these networks to solve the problems of Department of Defense (DoD) entities from the Military Services, Joint Staff, Combatant Commands, Defense Agencies, and Field Activities. NSIN is organized around three core lines of effort: Network Building, Program Execution, and Transition Support.</p> <p>FY 2023 Plans: In addition to executing programs and pilots with its DoD mission partners, NSIN will:</p> <ul style="list-style-type: none"> • Establish at least one (1) project site for the Emerge program in as many states. • Expand the Propel program, which partners with commercial incubators and accelerators to sponsor early-stage dual-use ventures of DoD interest to up to five (5) different sites throughout the United States. • Expand the Mission Acceleration Center program from one (1) pilot location in Seattle, WA to at least five (5) total locations across the United States. • Pilot additional program concepts in partnership with the Office of Small Business Programs, ManTech, SBIR office and offices of the Deputy Director of Research and Engineering for Modernization, including efforts for Diversity, Equity, Inclusion, and Accessibility. • Conduct at least 5 national prize challenges on areas of critical need for the Department of Defense. • Develop 15 prototypes of promising concepts from NSIN alumni through the Maker rapid prototyping program. • Establish additional regional providers for the innovation Bootcamp program, to keep up with the rapidly increasing demand signal from DoD Organizations. Develop and deliver a Train-the-Trainer option for high demand and capable mission partners. <p>FY 2024 Plans: NSIN will continue to:</p> <ul style="list-style-type: none"> • Establish 15 project sites for the Emerge program in as many states. • Expand the Propel program to sponsor early-stage dual-use ventures of DoD interest to up to 15 different sites throughout the United States. • Pilot additional program concepts in partnership with the Office of Small Business Programs, ManTech, SBIR office and offices of the Deputy Director of Research and Engineering for Modernization, including efforts for Diversity, Equity, Inclusion, and Accessibility. • Conduct at least 10 national prize challenges on areas of critical need for the Department of Defense. <p>FY 2023 to FY 2024 Increase/Decrease Statement: Slight decrease reflects minor budget fluctuations.</p>	19.876	22.028	21.575
Accomplishments/Planned Programs Subtotals	19.876	22.028	21.575

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		FY 2022	FY 2023
Congressional Add: NSIN Program Increase FY 2022 Accomplishments: The Congressional Add of \$15 million enabled NSIN to: <ul style="list-style-type: none"> • Continue supporting the Mission Acceleration Center pilot and expand program offerings. • Establish rapid prototyping sites at new universities and accelerators to facilitate Maker projects. • Develop a deeper regional presence in Oklahoma, Texas, Georgia, North Carolina, and West Virginia to facilitate NSIN programming opportunities. • Establish additional regional providers for the Bootcamp program, to keep up with the rapidly increasing demand signal from DoD Organizations. • Continue to expand Foundry (rebranded from the Defense Innovation Accelerator program) to other Government laboratories (e.g., Department of Energy (DOE), National Nuclear Security Administration (NNSA), etc.), Federally Funded Research Centers (FFRDCs), and other sources of latent technology. 		15.000	-
Congressional Add: Secure Email Access FY 2023 Plans: Develop and manage pilot program designed to enable access to a secure facility within an academic institution that will be available to “cleared” faculty researchers, visiting government researchers, and industry partners.		-	1.240
Congressional Add: DoD mission acceleration centers FY 2023 Plans: • Respond to Section 231 of the NDAA for FY 2022 requirement to build a "pilot program on the use of private sector partnerships to promote technology transition". NSIN will provide mechanisms for data capture of small business interest in working with the DoD. <ul style="list-style-type: none"> • \$50 million in FY 2023 funding for Mission Acceleration Centers (MACs) to continue supporting the Pacific Northwest Mission Acceleration Center (MAC) pilot and expand program offerings by establishing new regional Mission Acceleration Centers (MACs) in Ohio, Hawaii, Arizona, and Kansas. • The FY 2023 5 MACs across the country will give the DoD the opportunity to co-locate and collaborate with non-profits, academia, and a broad spectrum of private industry that includes entrepreneurs and venture capitalists that will accelerate the pace of innovation regarding the challenges facing the DoD: (1) Facilitate Collaborative Interaction with the DoD, Academia, and Venture Communities; (2) Broaden the National Security Industrial Base; and (3) Mature the Network. • Continue to support the development of a national network of geographically dispersed and strategically located innovation defense ecosystems that enhances the National Security Innovation Network (NSIN) Regional Network Team activities. 		-	50.000

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	FY 2022	FY 2023
<ul style="list-style-type: none"> By continuing the Pacific Northwest MAC and expanding to key defense ecosystems to include but not limited to Arizona, Hawaii, Kansas and Ohio, the DoD will be able to leverage regional expertise through embedded industry experts to deliver timely and innovative solutions to national security problems through persistent tech scanning, regional strategic engagements and warfighter support. 		
<p>Congressional Add: Adaptive Threat Force Cyber Cell</p> <p>FY 2023 Plans:</p> <ul style="list-style-type: none"> The Adaptive Threat Force (ATF) Cyber Cell will conduct red team challenges as opposing force (OPFOR) and support the blue force (BLUFOR) at Camp Shelby during Thunderstrike. ATF will meet mission partner requirements and demand signal by providing an experienced and complex hybrid warfighting force as ATF. The Adaptive Threat Force Cyber Cell will embed with the U.S. Army National Guard (USARNG) and conduct joint experimentation and hybrid warfare training simulating near peer capability. In addition, the ATF will participate in the planning and execution of the Army and DoD's future doctrine with multi-domain operations. 	-	1.000
<p>Congressional Add: Hacking 4 Defense</p> <p>FY 2023 Plans: Execute Hacking 4 Defense (H4D) at 36 major universities within the Continental United States and Hawaii.</p>	-	5.000
Congressional Adds Subtotals	15.000	57.240

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A