Fact Sheet: India-U.S. Defence Acceleration Ecosystem (INDUS-X)

Feb. 21, 2024

In June 2023, the U.S. Department of Defence (DoD) and Indian Ministry of Defence (MoD) launched the India-U.S. Defence Acceleration Ecosystem (INDUS-X), guided by a bilateral collaboration agenda. INDUS-X has continued to advance the commitment by the U.S. and Indian national security advisors to build a defence innovation bridge between the two countries under the initiative on Critical and Emerging Technology (iCET). INDUS-X facilitates partnerships among U.S. and Indian defence companies of all sizes, incubators and accelerators, investors, and universities with the support of the U.S. and Indian governments.

ACHIEVEMENTS

Since June 2023, U.S. and Indian government officials, defence companies, investors, accelerators and universities have collaborated through INDUS-X to accelerate defence technology innovation in the United States and India. Primary achievements under INDUS-X to date include the following efforts:

Joint Challenges. The U.S. DoD's Defence Innovation Unit (DIU) and Indian MoD's Innovations for Defence Excellence (iDEX) coordinated to design, launch, and select winners for the first round of INDUS-X joint challenges, in which companies competed to identify commercial technology solutions that address warfighter challenges. HydroNet, OceanComm, PierSight, Pixxel, and Sea-Gal Technologies collectively won $300,000 to develop technologies on maritime intelligence, surveillance, and reconnaissance (ISR) and undersea communications. AlKairos, Airbotix Technology, Prof. D. Saha and Prof. S. Ganguly, SAR Space, and Zeus Numerix will collectively receive upto $900,000 for the same challenge topic.

- **Education Series.** During the 2+2 Ministerial Dialogue in November 2023, the U.S. Secretary of Defence and Indian Minister of Defence announced the INDUS-X Gurukul, or Education Series, a hybrid information series for U.S. and Indian defence start-ups. In the series, experts convene with defence companies to discuss a range of topics that

include harnessing private capital, navigating export controls, and building industrial partnerships. The Gurukul Series was launched by DIU's National Security Innovation Network (NSIN) and iDEX on February 9 with an inaugural virtual session on sourcing private capital. A hybrid session on technology export control policies and regulations followed at the February 2024 INDUS-X Summit in New Delhi.

- **Industry and Academia Workshops.** FedTech, as well as IIT Hyderabad in partnership with Hacking4Allies, organized workshops for over 120 defence start-ups on best practices for navigating the U.S. and Indian defence establishments. U.S. and Indian universities also hosted three academic workshops to exchange best practices on technology transfer and licensing, the role of the government as a customer, and advancing research in emerging defence technology domains, including space.

- **Investor Strategy Session.** The U.S. India Strategic Partnership Forum (USISPF), in collaboration with the IndUS Tech Council, hosted an investor strategy session in New Delhi in November 2023 to harness joint innovation funding for U.S. and Indian companies that produce critical defence technologies. Both governments welcome ongoing efforts by investors to identify funding from trusted capital sources and to support defence and dual-use companies in technology categories for the capabilities identified in the U.S.-India Roadmap for Defence Industrial Cooperation.

THE WAY FORWARD

At the 2024 INDUS-X Summit, U.S. and Indian government officials, researchers, investors, technology incubators and accelerators, start-up leaders, and defence executives convened to discuss next steps for INDUS-X. INDUS-X will continue to expand opportunities for defence innovation, including through the following initiatives:

- **Joint Challenges.** At the February 2024 INDUS-X Summit, DIU and iDEX announced that they will open applications for two joint challenges focused on space-based ISR in the coming months.

- **Academic Partnerships.** Penn State University and the Association of University Technology Managers (AUTM Foundation), an educational

non-profit, are developing workshops under INDUS-X to strengthen technology transfer from academia to start-ups. The Indian Space Association (ISpA); Indian Institute of Science (IISc); Indian Institute of Technology, Kanpur; and Penn State University hosted virtual workshops on building academia-industry partnerships and developing solutions for space situational awareness and the transfer of technology.

- **Testing Range Access.** A consortium of industry, academia, and nonprofit organizations across the United States and India will explore pathways to help companies access their premier testing facilities, creating new opportunities for researchers to collaborate and for companies to demo their technology together. The following organizations announced the INDUSWERX consortium to expand testing facility access for defence and dual-use companies: FATHOMWERX, Penn State University, North Carolina State University, The Texas A&M University System (TAMUS), University of Texas at Austin, University of Maryland, Skydio, Liquid Robotics (a Boeing Company), Albers Aerospace, the Society of Indian Defence Manufacturers (SIDM), the Indian Institutes of Technology (IITs) led by Roorkee, IISc Bengaluru, Astrome Technologies, Space Pixxel, and Thermaissance.

- **Industrial Partnerships.** U.S.-India industrial partnerships provide advanced defence capabilities and reinforce defence supply chains. Skydio, a U.S.-based manufacturer of A.I.-enabled unmanned aircraft systems (UAS), announced a new partnership with Aeroarc, an Indian-based UAS manufacturer. Through this partnership, Skydio and Aeroarc will strengthen defence capabilities, expand artificial intelligence (AI) collaboration between the U.S and India, and support demand from global customers. General Atomics Aeronautical Systems, Inc., a U.S.-based unmanned aerial vehicle (UAV) manufacturer, announced two partnerships to support U.S.-India industrial collaboration on India's future MQ-9B UAV program. General Atomics will leverage expertise from 114ai, an Indian technology company, to jointly develop software and artificial intelligence models to process ISR data more effectively. General Atomics is also partnering with Bharat Forge, and Indian engineering company, to manufacture MQ-9 components and assemblies in India for use on all MQ-9B aircraft worldwide. Liquid Robotics, a Boeing Company, highlighted their collaboration with Indian partners to develop capabilities of the Wave Glider Uncrewed Surface

Vehicle (USV) to enhance maritime security through maritime domain awareness.

- **Advisory Forums.** To actively engage stakeholders on new initiatives and further progress on current activities, MoD and DoD will engage senior leaders from the private sector and academia through the INDUS-X Senior Leaders Forum (SLF). The U.S. Institute of Peace (USIP) and Society of Indian Defence Manufacturers (SIDM) held the first SLF at the 2024 INDUS-X Summit to identify pathways for advancing industrial partnerships. The DoD and MoD established a Senior Advisory Group (SAG) to guide the governments' efforts to advance INDUS-X. The SAG supports all INDUS-X initiatives, including the joint challenges, the *Gurukul* Education Series, accelerator workshops, and investor engagement events.