

Update on the problems/requirements of line ministries/industry posed to TIHs under NM-ICPS

I-Hub for Robotics and Autonomous Systems (ARTPARK), IISc Bangalore

	<u>#</u>	<u>Problem Area/ details</u>	<u>Name of line ministries/ States Govt/ PSUs/ industries</u>	<u>Collaborating TIH</u>	<u>Collaborating Partner other than TIH</u>	<u>Projects undertaken</u>	<u>Technology/ product developed (current status)</u>	<u>Any other update</u>
Other direct Initiatives	1.	Robotics	Army Technology Hub, Bangalore/ Army Design Bureau, Army Headquarters, Delhi	-	Robert Bosch Centre for Cyber Physical Systems, IISc Bangalore	Legged Robot Mule for transportation of light loads in rugged inaccessible terrains	Minimum Viable Product developed; Product team being constituted at ARTPARK for commencing project execution	Acceptance of Necessity (AoN) accorded by the Deputy Chief of Army Staff (CD&S) for 75% R&D co- funding from Army (over Rs 7 Cr), PNC in end July 2022
	2.	High speed motors	Optel India, Opto Electronics Factory (OLF), Dehradun	-	Indian Institute of Science (Deptts of Electrical and Mechanical Engg), Start-ups (Preusse Powertrain, Jyoma, Unmanned Dynamics)	Indigenisation of High-speed gyroscopic motors and related sub-systems	R&D proposed under Defence Innovation Start up Challenge (DISC)#6 under Innovation for Defence Excellence	Proposed by ARTPARK spawned off start up (ART Secure Innovation Pvt Ltd) focussed on Defence and security domains
	3.	AI-based Simulator	Indian Navy	-	Indian Institute of Science (CPDM Deptt), Start up	AI/AR- based Virtual Assistant for Radar maintenance		

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					(Sunlux Technovations)			
	4.	Robotics	Indian Army	-	Robert Bosch Centre for Cyber Physical Systems, IISc Bangalore	Legged Robot for de-mining operations		
	5.	Health (Data, AI, Validation s)	Indian Council of Medical Research (ICMR)		IISc. AIIMS Delhi. PGIMER. GB Pant. Metastring Foundation. Other likely collaborators: WHO, NIRT, CMC Vellore, etc.	Institutionalizing a technology-enabled hubs & spokes mechanism for gold-standard datasets and validations for the research and innovation ecosystem in India.	National program creation. Technology and framework development to collect, curate, make available and validate. Multiple representative datasets. Validation process.	Approved. Work underway.
	6.	Education for All	MHRD		Stempedia	Developing NEP-Guided learning programme leveraging technology	Reading Programme for all, new experiential learning programme for all with exposure in AI/ Robotics	

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	7.	Health (One Health / Pandemic preparedness)	PSA (Principal Scientific Advisor to PM). National Digital Livestock Mission / Ministry of Fisheries, Animal Husbandry and Dairying.		ICAR-NIVEDI. Several orgs across India and globally will collaborate.	Institutionalizing environmental sampling and modelling for pandemic preparedness in animal populations.	National program creation, network and capacity building. Environmental sampling and data. Epidemiological modelling.	Approved. Work will start soon.