

ARISE-ANIC Initiative

January 12, 2021

In news

ISRO, as a part of ARISE-ANIC Initiative, announced that it will be adopting 100 Atal Tinkering Labs across the country to promote education in the field of STEM, Space education and space technology related Innovations for school students.

About ARISE-ANIC Initiative

- Atal Innovation Mission (AIM), NITI Aayog, launched the Aatmanirbhar Bharat ARISE-Atal New India Challenges, to spur applied research and innovation in Indian MSMEs and startups in september 2020.
- The programme is driven by Indian Space Research Organization (ISRO), four ministries–
 - Ministry of Defence
 - Ministry of Food Processing Industries
 - Ministry of Health and Family Welfare and
 - Ministry of Housing and Urban Affairs–and associated industries to facilitate innovative solutions to sectoral problems.
- The Aatmanirbhar Bharat ARISE-ANIC program is national initiative to promote research & innovation and increase competitiveness of Indian startups and MSMEs.
- The Aatmanirbhar Bharat ARISE-ANIC programme supports deserving applied research-based innovations by providing funding support of up to Rs 50 lakh for speedy development of the proposed technology solution and/or product.
- The objective of Aatmanirbhar Bharat ARISE-ANIC program is to proactively collaborate with esteemed Ministries and the associated industries to catalyse research, innovation and facilitate innovative solutions to sectoral problems.

- The objective is also to provide a steady stream of innovative products & solutions where the Central Government Ministries / Departments will become the potential first buyers.
- The Aatmanirbhar Bharat ARISE-ANIC program is in line with the Honourable Prime Minister's mandate of "Make in India", "Startup India", "Aatmanirbhar Bharat" to fast track the growth of the Indian MSME sector.

Aatmanirbhar Bharat ARISE-ANIC Challenge Statements

Indian Space Research Organization (ISRO)

- Propulsion – Green propellants, Electric propulsion, advanced air-breathing
- Geo spatial information – Geo-spatial information using ML /AI useful in crop monitoring, weather forecasting and program evaluations.
- Robotics/AR/VR – Application of robotics, AR / VR techniques supporting space exploration, outer space monitoring.

Ministry of Defence

- AI based predictive models – AI based Predictive Maintenance of Plant Machinery
- Auto Stabilizer system – Design & Development of latest technology Auto stabiliser system as Form, Fit & Function (FFF) replacement of existing Auto stabiliser system
- Communication Modem – Wide band HD data communication modem with 4G Automatic link establishment data throughputs of the order of 120 kbps

Ministry of Food Processing Industries

- Waste to wealth – Waste to wealth – in food processing. Effective utilization of commercial food processing industry waste streams.

- Alternative food packaging materials – Development of alternative food packaging materials, against the use of single use plastics; materials from food waste and bio-sources.
- Machinery for indigenous food products – Development of machinery for indigenous food products. Optimized processing conditions and machinery for bulk production of native Indian product.

Ministry of Health and Family Welfare

- Health Data analytics – Use of data analytics to identify early breakout of epidemics based on the historic Curve and data.
- AI solutions – AI based solutions for Anti-Microbial Resistance (AMR) surveillance.
- Healthcare monitoring – Monitoring the logistics of cold chain in immunization program.

Ministry of Housing and Urban Affairs

- Project Water – Water pressure sensing systems to monitor leakage, illegal activity and help manage planned pressure in water supply lines.
- Project Clean Air – Development of Smart technology to reduce pollution through construction dust by at least 25%.
- Project Move – Development of usable smart technology to create a real time mobility decision support system for Indian cities.

What is STEM education?

It is a curriculum based on the idea of educating students in four specific disciplines – science, technology, engineering and mathematics – in an interdisciplinary and applied approach. Rather than teach the four disciplines as separate and discrete subjects, STEM integrates them into a cohesive learning paradigm based on real-world applications.

Atal Innovation Mission (AIM)

AIM is Government of India's flagship initiative to promote a culture of innovation and entrepreneurship in the country. AIM's objective is to develop new programmes and policies for fostering innovation in different sectors of the economy, provide platform and collaboration opportunities for different stakeholders, create awareness and create an umbrella structure to oversee innovation ecosystem of the country.