



# Innovations for Defence Excellence

## Why in News?

[Innovations for Defence Excellence \(iDEX\)](#), the flagship initiative of the Ministry of Defence, has signed its 250th contract – first under [Mission DefSpace](#) – and 100<sup>th</sup> [SPRINT \(Navy\)](#) contract.

## What are Mission DefSpace and SPRINT Navy Contracts?

- **Mission DefSpace Contract:**
  - Space startup InspeCity has been awarded the **first iDEX contract of Mission DefSpace**.
  - InspeCity had emerged as the winner of a challenge conducted by the Defence Space Agency focused on developing a gas based **Micropropulsion system for cubesats**.
    - Cubesats are a class of small satellites and are easy to manufacture, modular, modular, low cost, integrate and launch. The cubesats are critical for **launch-on-demand capabilities and are good for Imagery, Reconnaissance/communication**, and also Intelligence Surveillance.
  - This technology will enable **precise manoeuvring and orbit correction for satellites**, including the cubesat swarm being developed under Mission DefSpace.
- **SPRINT (Navy) Contract:**
  - Siliconia Technologies Pvt Ltd, has emerged as the winner of a **SPRINT (Supporting Pole-Vaulting in R&D through iDEX, NIIO and TDAC)** Challenge focused on developing a **lightweight Application-Specific Integrated Circuit (ASIC)** based communication system for phased-array radars.
  - The system provides **multiple independent receiver/transmitter sources** crucial for satellite tracking.
  - It utilizes software-defined antennas for communication with [Low Earth Orbit \(LEO\)](#), **Medium Earth Orbit**, and [Geostationary Satellites](#).

## What is iDEX?

- **About:**
  - iDEX, launched in 2018, is an **ecosystem to foster innovation & technology development in Defence and Aerospace** by engaging innovators & entrepreneurs to deliver technologically advanced solutions for modernizing the Indian Military.
  - It provides funding/grants to [Micro Small and Medium Enterprises \(MSMEs\), start-ups](#), individual innovators, R&D (Research and Developments) institutes and academia to carry out research and development.
  - The iDEX-Prime aims to support projects requiring support beyond **Rs 1.5 crore up to Rs 10 crore, to help ever-growing start-ups** in the defence sector.
    - [iDEX portal](#) was launched to provide wider publicity and better visibility of iDEX activities and enable more efficient running of future challenges through better information management.
- **Objectives:**
  - **Indigenization:** Rapid development of **new, indigenized and innovative** technology.
  - Innovation: Creates a **culture of engagement with innovative startups** to encourage co-creation.

- **Funding:**
  - iDEX is funded and managed by **[“Defence Innovation Organisation \(DIO\)”](#)**.
  - iDEX will function as the **executive arm of DIO**, carrying out all the required activities while DIO will provide high level policy guidance to iDEX.
- **Achievement:**
  - iDEX has been awarded the prestigious Prime Minister Award for Public Policy in Innovation Category for the year 2021.

## What is Mission DefSpace?

- It was inaugurated by Prime Minister of India during the October 2022 edition of India’s DefExpo.
- It aims to **nurture the Indian Private Space industry through challenges addressing every stage** of a space mission – from mission planning to satellite data analytics.
- This mission encompasses **75 Defense Space Challenges that directly suit the needs of end users**.
- These challenges have been categorised into the existing **DDP initiatives of iDEX, Make-I, and Make-2**, allowing participation from private industries, including startups, MSMEs, and individual innovators.
- The challenges are categorized into **five different domains:**
  - Launch System
  - Satellite System
  - Communication & Payload System
  - Ground System, and Software System.
    - Together, they offer an in-depth and complete understanding of space from a 360-degree perspective.

## What are Government Initiatives Regarding Defense?

- **[First Negative Indigenisation](#)**
- **[Positive Indigenisation List](#)**
- **[New FDI Policy in Defence Sector](#)**
- **[Defence Acquisition Procedure 2020](#)**
- **[Defence Industrial Corridors](#)**

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