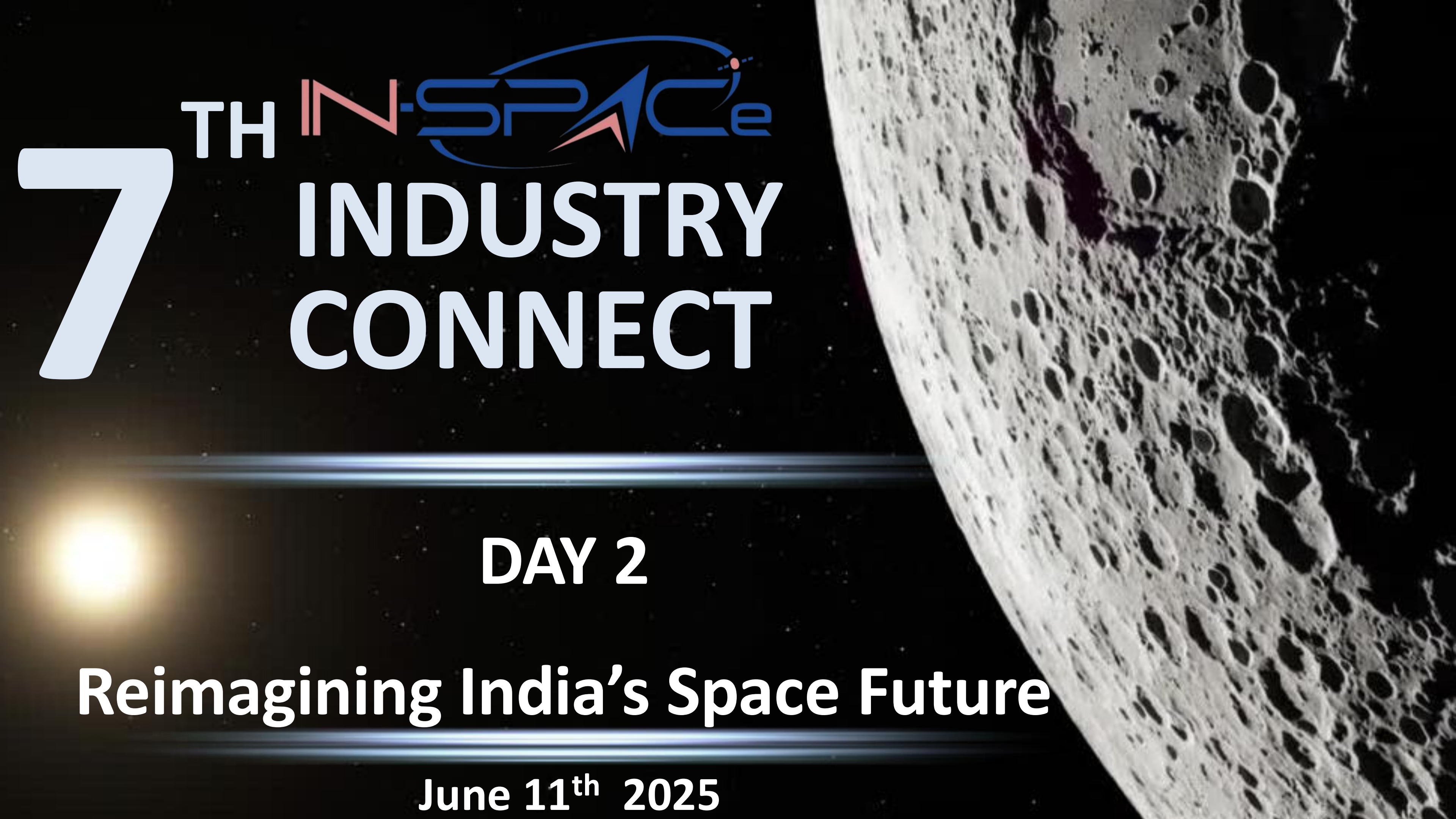




7TH INDUSTRY CONNECT

DAY 2

Reimagining India's Space Future

June 11th 2025

Day 2 || Reimagining India's Space Future || Overview

With the central theme of "Reimagining India's Space Future", the day began with IN-SPACe Report by senior leadership from IN-SPACe led by Dr Pawan Goenka- Chairman IN-SPACe, and was followed by the session titled "States for Space", where representatives from Gujarat, Karnataka, and Tamil Nadu, shared the efforts of their respective governments in developing regional space ecosystems.

Ms. Neha Kumari, IAS, Mission Director Gujarat State Electronics Mission (GSEM), Government of Gujarat, Shri Rahul Sharanappa Sankanur, IAS, Managing Director, Karnataka Innovation and Technology Society (KITS), Government of Karnataka, and Shri Sandeep Nanduri, IAS, Tamil Nadu Industrial Development Corporation Limited (TIDCO), Government of Tamil Nadu, addressed the audience about the support & developments in their respective states.

A special address by AVM Pawan Kumar VM, Director General, Defence Space Agency, brought out the important use cases of space technology in the Defence and strategic sector. This was followed by address on measurement of the Indian space economy by Shri Rajeev Kumar, Deputy Director General, MoSPI.

The highlight of the day was a set of breakout brainstorming sessions led by industry associations—ISpA, SIA-India, Geospatial World, CII, and FICCI—exploring key themes like, Space-Enabled Applications, Demand Generation, Spacecraft Manufacturing, Access to Space & the Outer-Space Economy and Access to Finance. These discussions culminated in outcome presentations and actionable recommendations for IN-SPACe & other stakeholders to take forward.

The event concluded with 'Kaleidoscope', where perspectives of different stakeholder communities, viz. Industry leadership, Users, Investors, Industry associations, and Academia were presented by selected representatives to offer a 360° view of India's evolving space narrative.

Chairman IN-SPACe & Dr. Vinod Kumar, Director PD thereafter hosted an Open House session. Afterwards the event concluded with closing remarks by Chairman IN-SPACe and Vote of Thanks by AVM D V Khot, Director Strategy & Planning.



IN-SPACE Leadership

7TH IN-SPACE
INDUSTRY
CONNECT



Dr. Pawan Goenka
Chairman, IN-SPACE



Sh. Rajeev Jyoti,
Dir. - Technical Directorate



Dr. Vinod Kumar
Dir. - Promotion Directorate



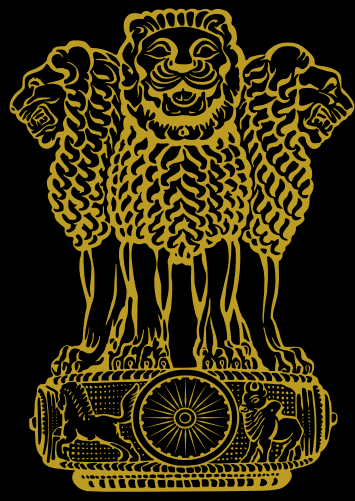
Dr. P K Jain
Dir. - Program Management &
Authorization Directorate



Sh. Lochan Sehra, IAS
Joint Secretary, IN-SPACE



AVM D V Khot (Retd.), AVSM, VM
Dir. - Strategy & Planning, IN-SPACE



Reimagining India's Space Future

**7TH IN-SPACE
INDUSTRY
CONNECT**



Welcome Address

**Dr. Vinod Kumar, FIE, FIETE
Director, Promotion Directorate, IN-SPACe**





Reimagining India's Space Future

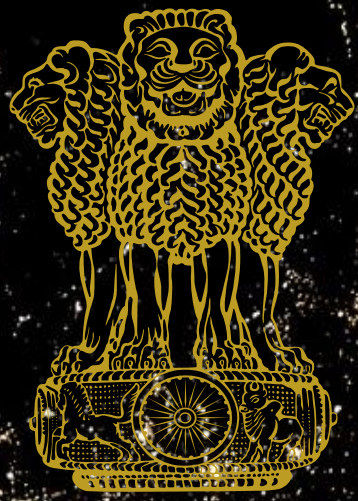


June 11th 2025

Program Schedule

Imperia (Ground Floor)

0915 - 1000	Registration & Networking Tea				
1000 - 1055	IN-SPACE Report				
1100 - 1145	Leading the Charge: States for Space		• Gujarat - Ms. Neha Kumari, IAS, Mission Director, Guj. State Elec. Missn. • Tamil Nadu - Sh. Sandeep Nanduri, IAS, MD - TIDCO • Karnataka - Sh. Rahul S S, IAS, MD - KITS, Dir- Dept of Elec., IT, BT, S&T,		
1150 - 1210	Special Address :		Air Vice Marshal Pawan Kumar, VM, Director General Defence Space Agency		
1215 - 1235	Capital in Cosmos - Measuring Indian Space Economy :		Sh. Rajeev Kumar, Deputy Dir. Gen. MoSPI		
1240 - 1250	Briefing for Breakout Sessions				
1250 - 1400	Networking Lunch		@ Imperia Ground Floor		
1400 - 1500	Strategies & Solutions for the Indian Space Sector (Brainstorming Sessions)		Breakout Room	Brainstorming Themes	Steered By
			1 - (Main Hall)	• Space Enabled Applications	GWCC
			2 - (3rd Floor)	• Demand Generation	ISpA
			3 - (3rd Floor)	• Access to Space & Outerspace Economy	SIA India
			4 - (3rd Floor)	• Spacecraft Manufacturing	CII
			5 - (3rd Floor)	• Access to Finance	FICCI
1500 - 1600	Kaleidoscope	@Imperia (Ground Floor)		• Leadership Dialogue Redux- AVM Khot (Retd.), IN-SPACE • Industry Associations - Lt. Gen A K Bhatt (Retd.), Director General - ISpA • Investors - Sh. Ravinder Pal Singh, Thought leader & Investor • Users - Sh. P L N Raju, Special Secretary, Govt. of Assam • Academia - Prof. Joseph Mathew, Dept. of Aerospace Eng., IISc	
1600 - 1630	Networking Tea				
1645 - 1715	Brainstorming Outcomes & Recommendations				
1715 - 1745	Open House Discussion				
1745 - 1800	• Closing Remarks • Vote of Thanks		1800 Onwards		
			High Tea & Networking		



IN-SPACE Report

**7TH IN-SPACE
INDUSTRY
CONNECT**



**Dr. Pawan Goenka
Chairman, IN-SPACE**

IN-SPACe Update

IN-SPACe Industry Connect – 7 **June 11, 2025**

IN-SPACe is shaping a space-forward India that is globally competitive, commercially robust, socially impactful, and guided by a clear, enabling policy framework

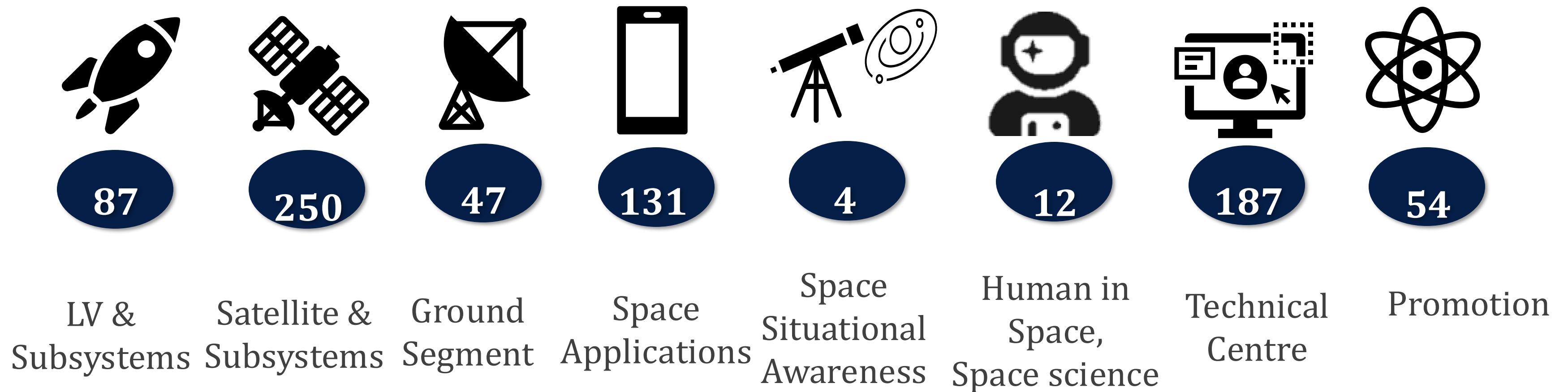
with

a bold milestone to grow the Indian space economy to \$44 billion by 2033

IN-SPACe is empowering Indian enterprise by providing regulatory guidance and access to market opportunities, investments, technology, and world-class infrastructure

Space activities gaining momentum

~770+ applications received by IN-SPACE seeking authorization or facilitation

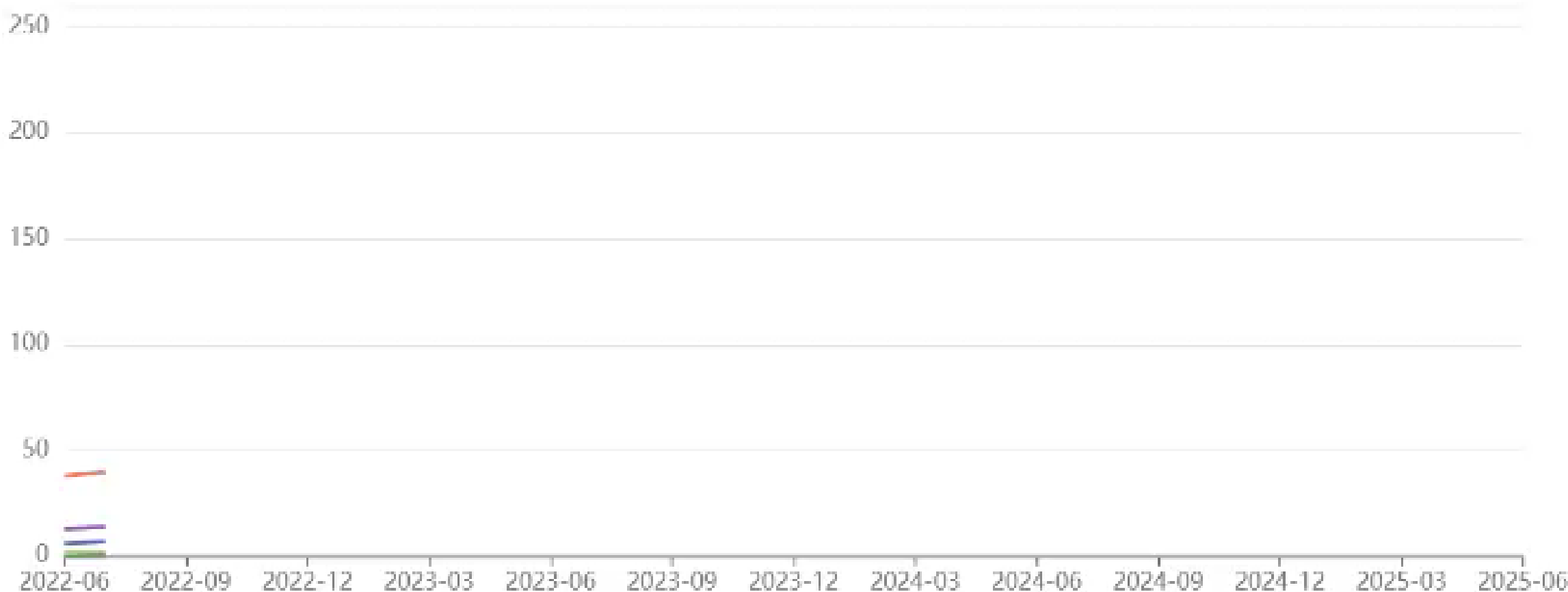


- 10 payload from NGEs hosted on POEM-4
- First Indian private EO constellation by Pixxel Space India
- Data Dissemination permitted from 18 EO satellites & 18 constellations (~800 satellites)
- Authorized multiple GSO/NGSO satellites for communication

Representing:

- 100+ Start ups
- 50+ MSMEs
- 80+ Other companies
- 30+ Academic institutes
- and Others

IN-SPACe Applications



July 2022

■ SATCOM

- Extension of the cut-off date for ongoing contracts of non-Indian satellites capacity to **30 Sept 2025**
- SATCOM demand projection for next five years.
- First time ever an ISRO/DoS ITU Filing made available to an NGE (M/s ATL) for a communication satellite (Ka band HTS)
- Considering making new ITU Filings exclusively for NGEs, and also exploring additional ISRO/DoS Filings for utilization by NGEs through AO.

■ Access to Space

- Plan for offering a SMiLE (SSLV Module in LEO Experiment) platform: a joint initiative of ISRO, IN-SPACE and NSIL. **AO released for mission in Jan-Mar 2026**
- AO released for SSLV mission in Oct-Dec 2025 to accommodate NGE satellites

- Ground Station as a Service (GSaaS)
 - Released a Paper on GSaaS opportunities and guidelines
 - Active discussions with ISRO/DoS to facilitate NGEs ground stations in ISRO premises
 - Working with DoT on-
 - revising royalty fee for EO data reception stations
 - Regulatory framework for DoT clearance to GSaaS operators
- In Pipeline
 - Revision of NGP mainly to include authorization guidelines for SSA, Space exploration, and Human Space flights
 - White paper on Amateur frequency band utilization for space activities
 - Strategy for SATCOM demand generation in coordination with DoT, MI&B and ISRO

Technology Adoption Fund (TAF)



1. Adoption of early-stage technologies to make it ready for commercialisation
2. Import substitution

Bridge the gap b/w R&D and commercialization



TRL 3

Technology

TRL8/9

Leverage 'on the shelf' space technologies at academic/research institutes for commercialization

Eligibility:

- a) Eligible only for NGEi
- b) Shall be at least **TRL-3**

Maximum funding: ₹25 Crores.

Startups / MSME	60% of the project cost
Large Industry	40% of the project cost

Applications received on IDP are under scrutiny

Satellite Bus as a Service (SBaaS)

Objective:

- a) NGEi to design, build, operate and own the satellite bus & provide hosted payload services
- b) Provide platform for the payload developers
- c) Indigenisation and position Indian industry as a global satellite bus manufacturer.

Phase-1:

- a) Select up to four NGEi to develop small satellite bus.
- b) Grant: ₹5.00 Crores to each selected NGEi(s)
- c) Realisation of bus: SQM & PFM - 15 months

AO released: 26 April 2025

Last date of submission: 23 June'25

Phase - 2:

- a) Realise two hosted payload missions through 1 or 2 NGEi (bidding process)
- b) Launch in Indian LV (Partial funding)
- c) 1st Mission - 12 months; 2nd Mission – 18 months.





- **Objective:** Design, Build and Operate a sustainable space-based earth observation (EO) system by NGE
- **Scope:** Constellation of EO satellites configured, designed, launched and commercialised by NGEs.
Establishment Funding: Up to 30% of total project cost or ₹ 350 Cr. (max)

- **System Requirements:**

Space Segment : Bands, Coverage, Swath, GSD, Revisit, MTF, SNR, Radiometry, Polarisation, Sensitivity (NESZ, PSLR)

Ground Segment : Master Control in India only [Hired / Owned]

Space Data : ARD and VAS

- **Timeline:**

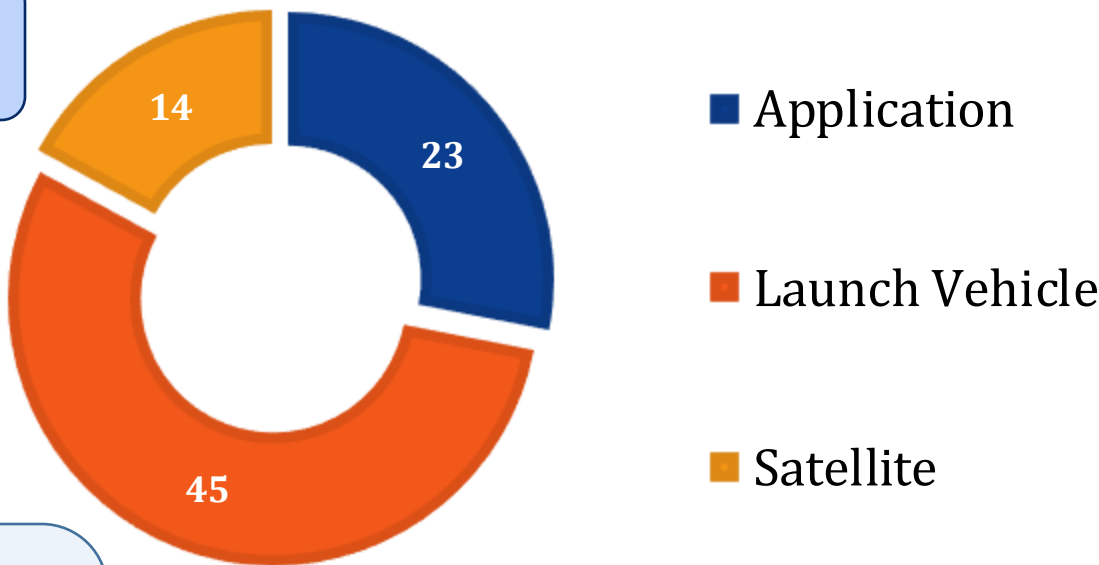
Selection of NGE & Concession Agreement signing	Mid Aug 2025
Readiness of first set of satellites	July 2027
Completion of Constellation	Aug 2029

Technology Transfer



Identify and facilitate the transfer of technologies developed by ISRO

82 Technology Transfer Agreement Signed as on 30th April 2025



**30 % Price Support
on TTF**

Technology transfer – Spin-off

In discussion with Automotive Research Association of India (ARAI) for technology transfer to automotive industries



Objective:

- Establish an Indian industry for building and launching launch vehicles end-to-end

Technology Transfer :

- License to use the technical data and knowhow to manufacture the SSLV developed by the DOS/ISRO

Launch Pad

- SDSC : Inclined LEO
- Kulasekarapatnam : SSO (Readiness targeted by 2027)

Selection of NGE

June 2025

Initiation of Technology Transfer

August 2025

Completion of two missions

August 2027

Common Technical Facilities

Dedicated Space-Manufacturing Clusters (SMC)

- Proposed across India
- Industry to establish R&D and Manufacturing facilities
- Collaborative Ecosystem
- Mitigation of Supply-Chain issues
- Job Creation

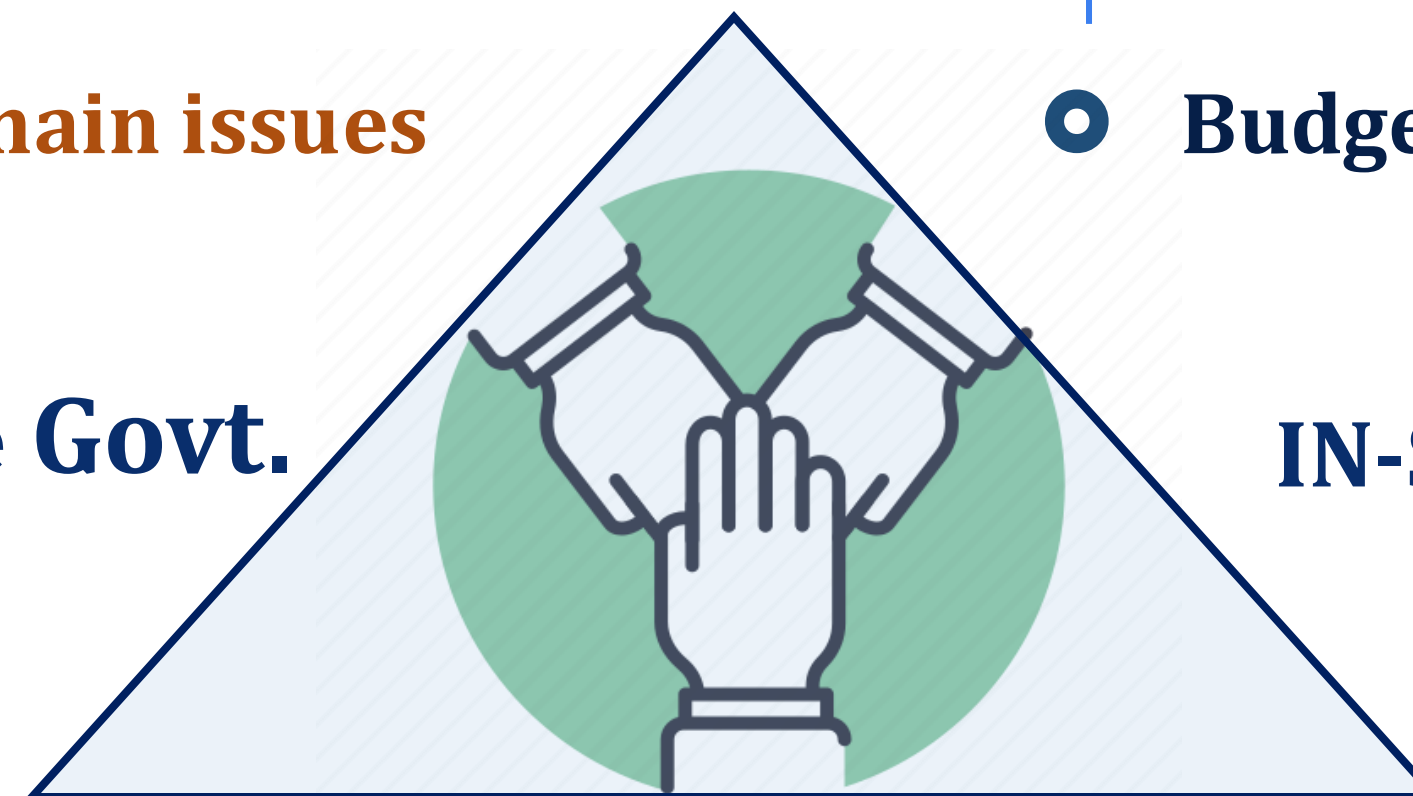
Common Technical Facilities (CTF) in SMCs

- Capital-intensive thematic facilities
- Located within the SMCs
- For NGEs within and outside SMC
- Budget ₹ 100 Crores for each CTF

State Govt.

IN-SPACe

NGE



IN-SPACe Technical Centre: Dedicated Infrastructure for NGEs



Fast and Easy Access | Mentoring | Training



An Integrated Design and Testing Platform For Space

24,000 +
Hours
Utilisation

- 100% occupancy in Co-Working Space
- 85% occupancy in Cleanrooms
- Continuous enhancements tailored to evolving NGE requirements

62 Bi-Partite
Agreements Signed



IN-SPACe Technical Centre Inauguration (Mar'24)

Outcomes:

27
+
NGEs Enabled

9
POEM Payloads Tested

7
Products
Designed/Tested

2
Immersion Programmes

BIS Sectional Committees for Space Standards

35 Standards cleared during 2024-2025:

- Program Management, Quality Assurance & Safety protocols Interface control & testing methodologies of S/C
- **28 standards awaiting notification – Aug '25**
- Space Environment, Contamination and Cleanliness Control, Interface control and compatibility of launch vehicle

IN-SPACe & BIS to host 35th ISO Plenary in May 2026 in Delhi.

ISO/TC-20/SC-14 Space Systems and Operations

- India is a participating member of the Committee with voting rights.
- 8 Working Groups under SC14. India's active participation is solicited.
- New Standards from India will get the ownership and further the standards.

ISO Plenary 2025, Tsukuba, Japan





IN-SPACe Pre-Incubation Entrepreneurship (PIE) Development

- Three Phase Program aimed at viability and Proof of concept demonstration for new ideas in Space technology (*viz. Ideate, Innovate and Demonstrate*)
- From the 105 proposals received , after a thorough and in-depth review, 10 proposals have been selected for the second phase viz INNOVATE phase.

IN-SPACe Seed Fund Scheme



- IN-SPACe Unique seed fund scheme to fund start-ups with novel concept leading to a meaningful outcome.
- Four announcements of opportunities completed.
 - Agriculture Sector, (ARMS4AI, mistEO)
 - Disaster Management (Xovain Aerospace , Augtual Reality Labs Ltd.)
 - Urban Development (Hy-space Tech, SEAGULL GNSS Private Ltd)
 - Marine Sector (Suhora)
- Shortly AO will be released for user generated use cases

Contribution of Space Economy in National GDP



- Methodology finalized by inter-ministerial working group and survey form made live to collect the data from NGEs
- Information sought on parameters like activities engaged, revenue from space activities , Investment , employment in the NGEs.
- A sustainable and harmonized framework defining space activities will aid economic analysis and subsequent policy formulation

Supply Chain Management of Space Systems

- to find the *Gaps and Opportunities in supply Chain for space systems*
- Report under generation identifying the suppliers of satellite components and subsystems globally with emphasis on Indian capabilities.

Leading Industry Delegation to various events in India

- Startup Mahakumbh, S2STEP, Techkriti, GLEX 2025 etc.





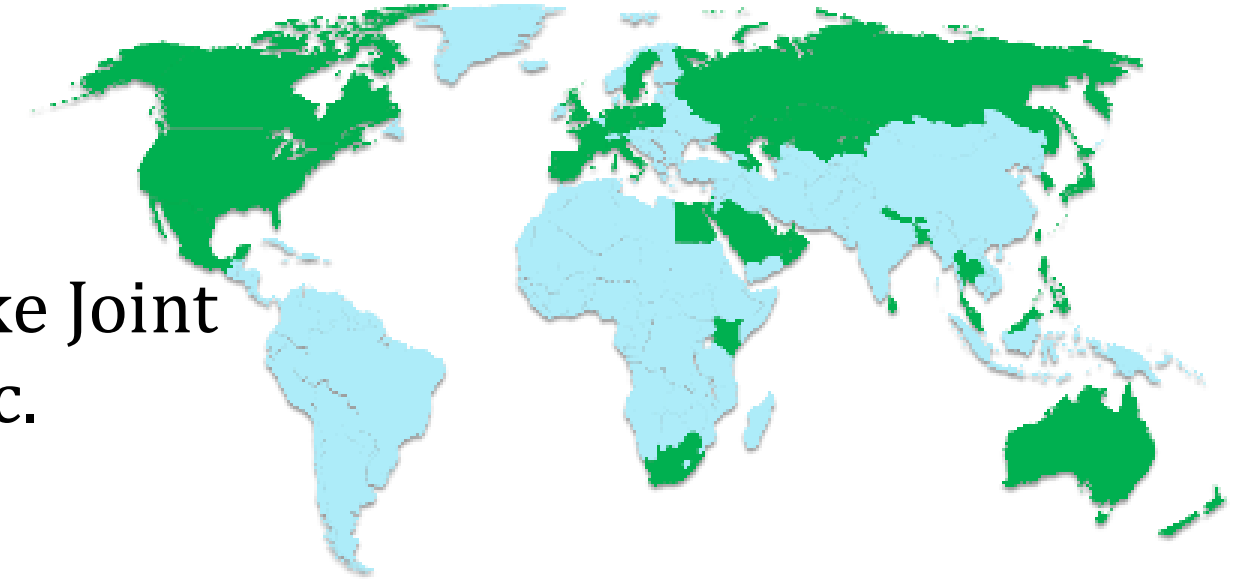
IN-SPACe Short term Skill development Courses

- Till date , IN-SPACe has organized *09 skill development courses and a workshop* on model rocketry which is recognized by NCVET
- Facilitation in adoption of Space Technology Education: *Over a dozen academic institutions* has started
- IN-SPACe Student *Immersion Programme and Internship Opportunities*
- Setting up of *Centre of Excellence* at Academic Institutions
- CANSAT Competition: PDR Review completed and Final competition planned in Oct-25
- Model Rocketry Competition: PDR, Model rocketry workshop completed and final competition planned in Oct-2025



Facilitation of International Promotion and Engagements

- Formulated strategy for “Expanding the Indian Commercial Space Sector footprint Globally”
 - More than 150+ B2B collaborations with foreign entities in areas like Joint Developments, Technology Co-operation, Procurement contracts etc.
- IN-SPACe International Space days for promoting focused commercial interactions
 - Luxembourg, Italy, Japan, Australia, Singapore, Sweden, Netherlands
- Pursuing Inter-governmental agreements for easing interactions & collaborations.
- Leading Space industry delegations to International Astronautical Congress (Baku, Italy), Dubai, Kenya, Australia, Singapore
 - Call for participation at IAC 2025 shortly



Decadal Vision Initiatives



Demand Generation

Access to Finance

Space Applications Adoption Workshop (SAAW)

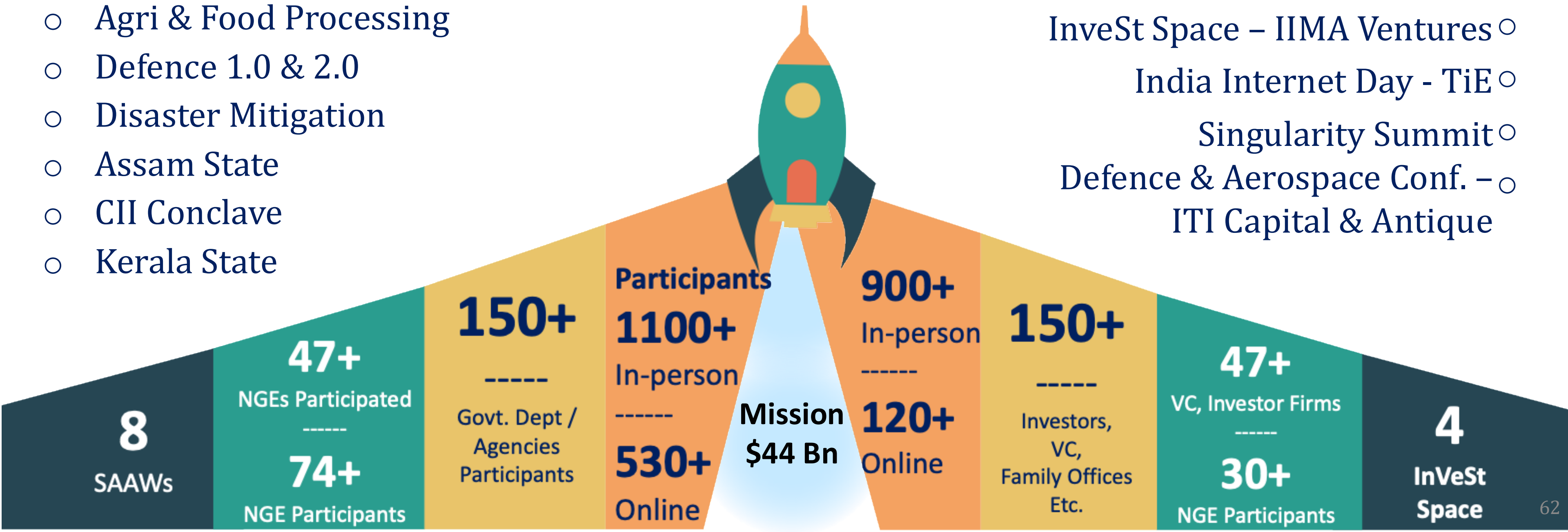
Inve\$t Space Campaign

Target Audience

- North-Eastern Region
- Agri & Food Processing
- Defence 1.0 & 2.0
- Disaster Mitigation
- Assam State
- CII Conclave
- Kerala State

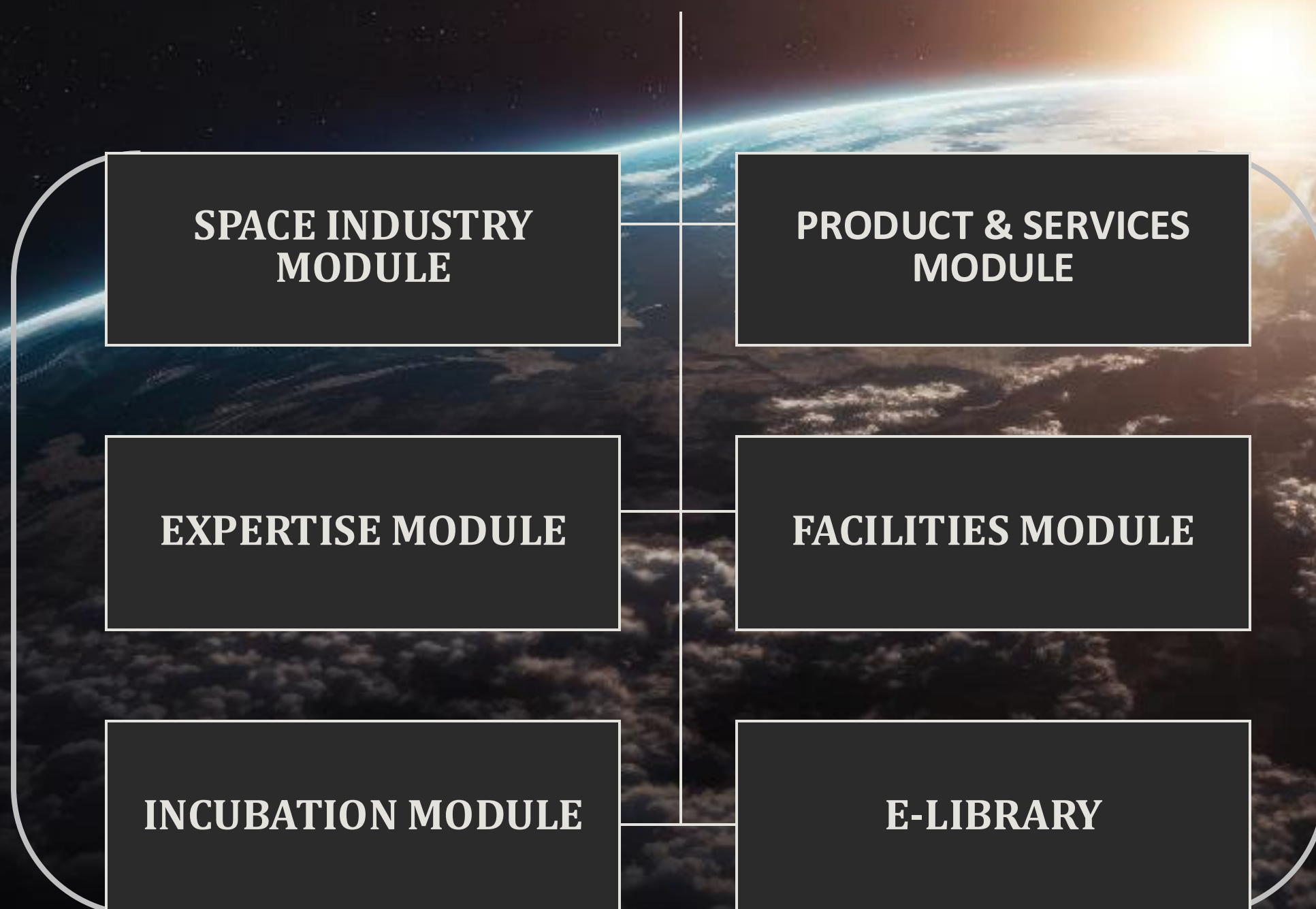
Events

- Bengaluru Space Expo 2024
- InveSt Space – IIMA Ventures
- India Internet Day - TiE
- Singularity Summit
- Defence & Aerospace Conf. – ITI Capital & Antique



‘INDIAN SPACE GATEWAY’

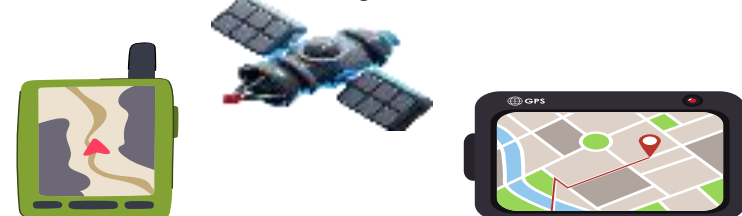
A Comprehensive Digital Portal for
‘Access to Information’ related to
the Indian Space Ecosystem



‘SPACE on GeM’

Host ‘Space products and
services’ through the GeM portal
for government users for easy
procurement and adoption.

Spacetechn-Enabled User Devices
and Systems



GIS software Tools & COTS
Spacetechn tools/ platforms



Value Added Solutions &
Spacetechn Applications



Satellite based Geospatial Data,
EO products & Imagery



Space Education, Training
Services, Memorabilia & Others



धन्यवाद / THANK YOU