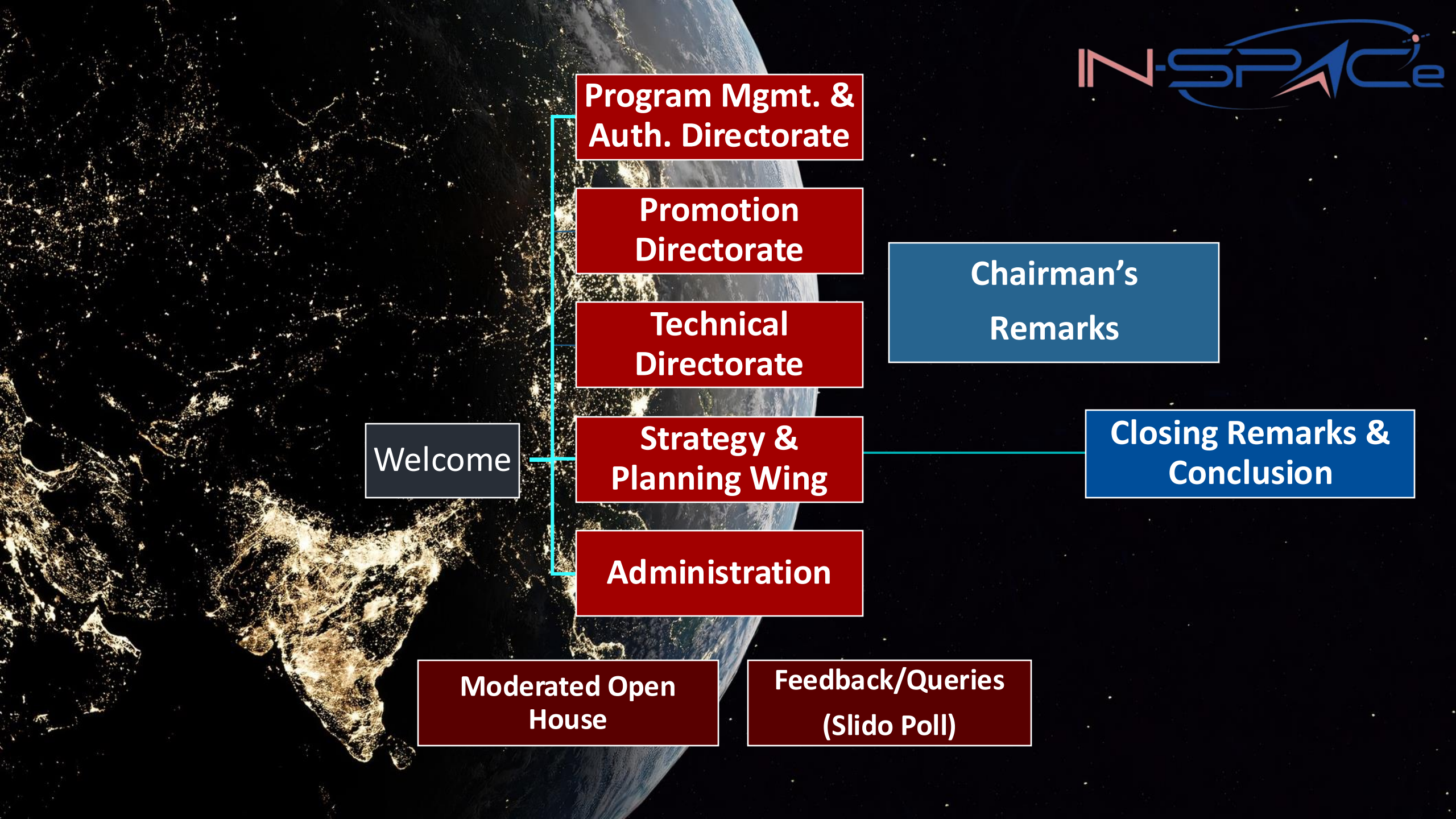
8TH IN-SPACe INDUSTRY CONNECT

Virtual Meet

28th October 2025 || 1100 Hrs. Onwards


Program Mgmt. & Auth. Directorate
Promotion Directorate
Technical Directorate
Chairman's Remarks
Welcome
Strategy & Planning Wing
Closing Remarks & Conclusion
Administration
Moderated Open House
Feedback/Queries (Slido Poll)

Over to

Program Management & Authorization Directorate…

Authorizations

NGP 2.0

Additional Guidelines + Revisions

- Space Situation Awareness
- Space Exploration, Human in Space & Re-entry
- Third Party Liability Framework

Suggestions in previous IICs

Authorization

100+ authorizations issued

- Optimization of Authorization processing time by IN-SPACe.

Suggestions in previous IICs

- Necessity for timely submission of applications & **Complete information** (at least 90-120 days in advance)
- Early action recommended for LSA, ITU Filing, Import/export, insurance, approvals of other non-Indian Govt., etc.
- Audits w.r.t. issued Authorization to commence shortly.
- Webinar planned in Nov-Dec 2025 (Registration of Space Object, ITU Filing, use of Amateur bands): **Any views?**

Facilitation & Enablement

Facilitation

ISRO facility access / launch onboard ISRO LV

- Optimization of facilitation processing time by IN-SPACe [test facility: 60 days & ToT: 94 days].
- Security clearance of the Applicant.
- Necessity for Clear inputs on testing requirement.
- E-sign for fast track signing of MoU, NDA & JPIP under consideration.
- Importance of Financial and technical readiness to ensure firm launch commitments

Enablement

- SATCOM ecosystem
- GSaaS
- Royalty fee for data reception GS

Types of Authorization Applications:

Type-1	Type-2	Type-3
Review within IN-SPACe	**Review limited to security & geo political considerations by MHA & MEA**	**Inter-Ministerial Review**
T0 + 75* days (Max)	**T0 + 90* days (Max)**	**T0 +120* days (Max)**
• **Satellite / constellations with cumulative weight less than 50 Kg** • **Ground systems** • **Sub-orbital and Orbital Launches** • **Data dissemination registration** • **ITU Filing** • **ISRO missions** *working days	Type-1 applications from first time applicants (whose security clearance is yet to be done) OR change in KMPs OR has Foreign Transaction/Element involvement.	All applications excluding Type-1 and Type-2

Over to

Promotion Directorate…

IN-SPACe Industry Outreach…

Estimation of the Contribution of space Economy in National GDP

- ❖ Methodology finalized and survey form to collect the data from NGEs prepared and circulated in April 2025.
- ❖ A communication from Secretary DoS, Secretary MoSPI and Chairman IN-SPACe was sent to 92 central ministries/department & 36 states/UT requesting inputs. A total of 24 responses are received till date.

Semiconductor For Space System

- ❖ A Webinar on “Empowering India’s Space Sector through Semiconductor Excellence” was Organized on August 08, 2025. As a follow up requirement of indigenous manufacturing shall be obtained.

Quality and Certification for Space Systems

- A methodology for quality certification of NGE’s is being worked out with QCI.`

IN-SPACe Industry Outreach

IN-SPACe Pre-Incubation Entrepreneurship (PIE) Development

- A short-term skill development course on “Entrepreneurship Development for the Space Sector” was organized for PIE applicants along with others. Mid review of the selected applicants is completed.

IN-SPACe Seed Fund Scheme: Use cases from the Govt. and PSUs are collected for demonstration by NGEs,, which results in orders from Users. Five funding opportunities are announced for specific use case demonstration.

2nd National Space Day and National Meet

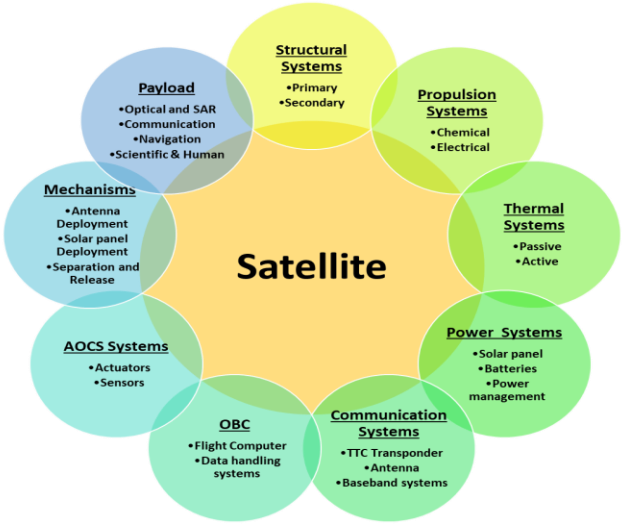
- IN-SPACe provided platform to NGEs to exhibit their products, interaction with Secretary DoS & Chairman, IN-SPACe and an Industry Session was organized during the NSpD-2025.

IN-SPACe Model Rocketry/CANSAT India Student Competition

- A total of 71 student teams are participating in the Model Rocketry/ CANSAT Competition being held at Kushinagar, UP. Four successful launches of CANSAT (7U Sat) are conducted with a gap of 5 Min.
- Employment Mela is organized to provide employment opportunity to the teams by NGEs.

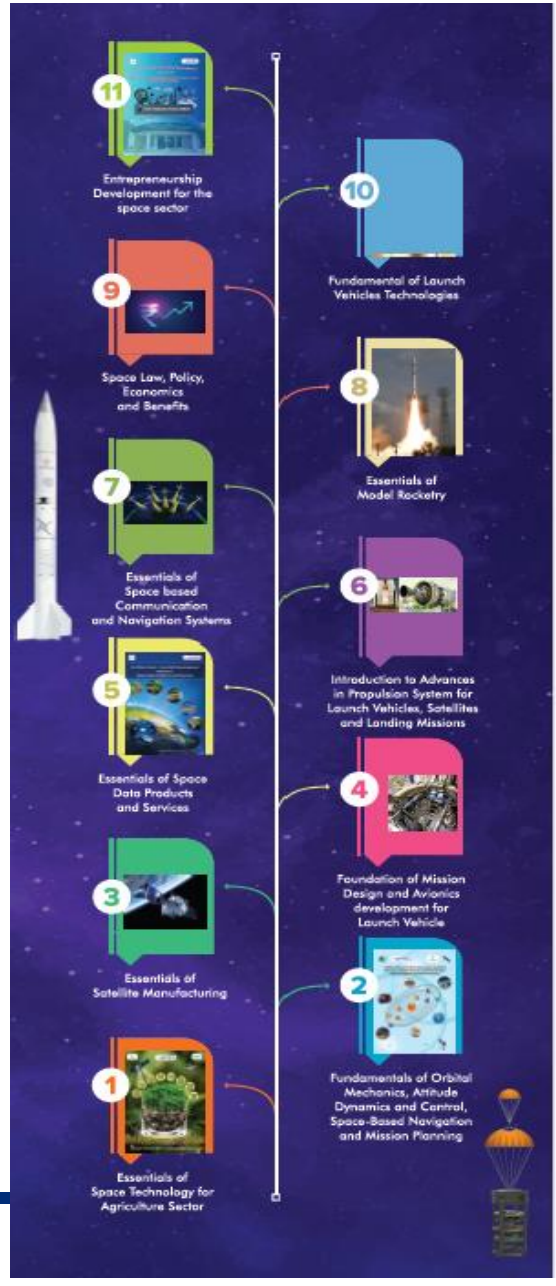
Supply Chain Management of Space Systems

- to find out the present status, Gaps and Opportunities for NGE's in space products and services. An interim report is prepared in satellite manufacturing.



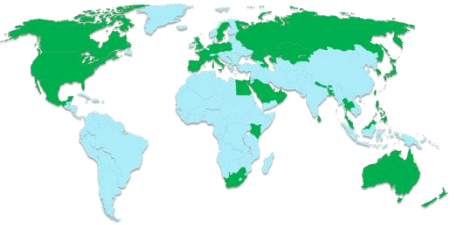
IN-SPACe Skill Development Courses

- **Eleven unique Short Term Skill Development Courses have been developed by IN-SPACe and 13 courses have been been completed training ~700 Professionals.**
- **Space Technology Minor developed by IN-SPACe and approved by AICTE is adopted by 14 Univerties/ Institutions. Over 1160 students are studying space tech minor. Over a dozen other Institutions/ Universities have shown interest.**
- **Opportunity of one Week Space Student Immersion program is provided to these students. A total of 68 students have benefited from the program till now.**
- **Over 600 internship requirement is received from NGE's.**



IN-SPACe International Outreach

- Region Specific Concept Notes have been prepared and discussions initiated with Indian Embassies / Consulates and the MEA, with focus on Global South.
- Continuous engagement with MEA on Africa Region on Capacity building for demand generation.

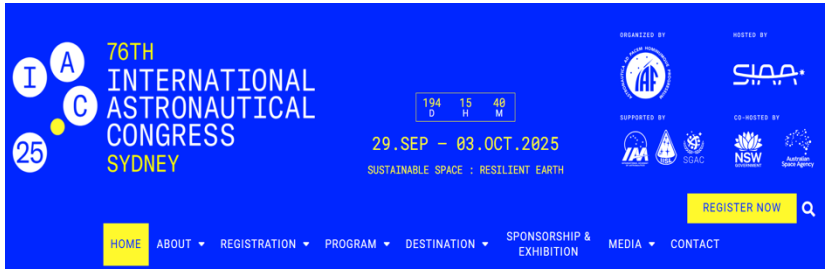


- Discussions with countries like Kenya, Maldives, Thailand, etc for an increased business collaboration environment.
- **MoU with OSTIn, Singapore signed with fields like Investments, Industry Engagement, Capacity building etc as cooperation areas.**

- IN-SPACe is formally engaged with MEA in various Govt initiatives representing the Indian Private Space Sector - India - Japan Space Dialogue (March - April 2025), India - UAE High Level Task Force for Investment, etc being examples

International Outreach Contd--

- IN-SPACe set up an India Pavilion at IAC 2025 in Sydney, Australia. 23 NGEs set up their exhibits at IAC. 28 Bilateral Engagements for Chairman IN-SPACe
- ✓ 5th India - Australia Round Table held on the sidelines of IAC
- ✓ 9 B2B MoUs involving Indian Companies were signed at IAC
- ✓ A Networking Reception attended by around 200 people were held on the sidelines of IAC
- ✓ A GNF session moderated by IN-SPACe on "Unlocking India's Space Potential - A Global Dialogue on Reforms and Partnership was held



Over to

Technical Directorate…

Technical Facilitation

63,000 + Hours Utilisation

- 65% occupancy in Co-Working Space
- 85% occupancy in Cleanrooms
- New Additions: 1.5m TVAC chamber, GNSS simulator, CORTEX receiver, COTS upscreening and Co-working Seats

74 Bi-Partite Agreements Signed

50 % Price Support

Outcomes:

ISRO Facility :

- 44 NGEs Enabled

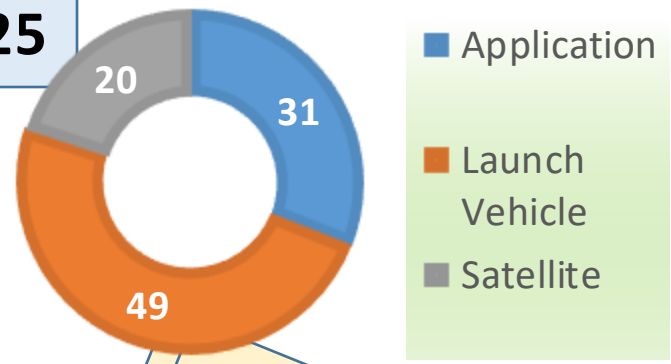
Technical Centre :

- 35 NGEs Enabled
- 31 NGEs Enabled for Upstream
- 4 NGEs Enabled for Downstream
- 19 Products Designed/Tested
- 9 POEM Payloads Tested
- 2 Immersion Programmes

Technology Transfer

Identify and facilitate the transfer of technologies developed by ISRO

100 Technology Transfer Agreement Signed as on 30th September 2025



30 % Price Support on TTF

Technology transfer – SSLV

Has been awarded to Hindustan Aeronautics Limited (HAL) which enables HAL to manufacture, integrate, launch SSLV for commercial and strategic space missions

Upcoming Technologies

Indian Mini Satellite(IMS) -2 Bus, Travelling Wave Tube Amplifier, Ku Band flat Panel Patch Antenna Array, Rb Atomic Clock etc.

Technology transfer – Spin-off

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

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

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.

30 Applications received on IDP are under scrutiny

4 Applications are in advance stage

IN-SPACe has scouted for 92 emerging long-horizon technologies

Indicative list of technologies

No.	Component
1	Space Grade Diodes
2	Space Grade Transistors
3	Space Grade Digital Integrated Circuits
4	Space Grade Linear ICs
5	Space Grade Interface ICs
6	Space Grade Serializer & Deserializer ICs
7	Space Grade VLSI devices
8	Space Grade Data Convertor ICs (8-24 Bit)
9	Space Grade MIL BUS ICs
10	Space Grade Optocouplers
11	Space Grade AFE (12-14 Bit)
12	Space Grade RF passive device
13	Space Grade Bare Packages
14	Space Grade RF Hybrid microcircuits
15	Space Grade Resistors
16	Space Grade SMD & Leaded Capacitors
17	Space Grade SMD Inductors
18	Space Grade EMI Line Filters
19	Space Grade Feed Throughs
20	Space Grade Relays

No.	Component
21	Space Grade Multipin Connectors
22	Space Grade Fuse
23	High Power Duplexer, Circulators, Isolators, Diplexer
24	Antenna Systems
25	Ground Receivers, terminals and Ground Stations
26	Sensors, Transducers, Detectors & Processors
27	1553 Devices : Microcontrollers, Data transformers, Data Bus transceivers, ACE BC-RT-MT terminal
28	Bead: Ferrite cable core, Shielded bead
29	Bobbin
30	Flexible RF coaxial cables
31	Ultracompact colour video cameras
32	Capacitors: Chip, Film, Ceramic, Ceramic chip, leaded
33	Chip attenuators
34	Resistors: Chip, metallic, thin film, leaded
35	Connectors: High density D type, circular, 1553, DBAS, micro D
36	Converters: DC-DC converters
37	Crystal oscillators
38	Digital micro circuits
39	FPGA: Smart fusion SoC FPGAs, antifuse FPGAs, microprocessors, microcontrollers

Indicative list of technologies

No.	Component
40	Hybrid micro circuits
41	Inductors
42	Memory devices: EEPROM, 8kx8 AS RAM, CMOS Static Ram, Flash memory
43	MOSFET modules
44	Optocouplers
45	Power amplifiers: Solid State, TWT
46	RF & Microwave devices: Waveguide attenuators, Lumped isolator, Coaxial isolator, Current transducers LEM, Duroid laminates, Double balanced mixer, RF directional couplers, SMA cables, connectors, RF connectors
47	Sil pad: Silicone based thermal interface sheets
48	Video decoders
49	Quick connect Disconnect couplings
50	SS, pleated mesh, plasma welded filter
51	Diaphragm
52	Retaining rings
53	Servo valve
54	O-Rings
55	Dynamic Seal
56	Retaining rings
57	Satellite roller screw

No.	Component
58	Wave spring
59	Plain bush as per SAE-AS81935
60	Gas motor bearing grease
61	RTV 3140 coating chemical
62	Liquid Helium
63	Vibration Isolator
64	Pyrolitic Graphite sheets
65	Piezo ceramic plates
66	Flexible Stainless Steel Wire Rope
67	Cable Tie
68	RTV 3145 Grey adhessive
69	Heat shrinkable sleeving
70	space grade dual channel ADC
71	Space grade Inductors
72	Ferrite chip beads
73	Aerospace Grade Magnets
74	Superconducting Wire
75	Fusistors
76	Limit Switches
77	Motor Systems

No.	Component	No.	Component
78	Clock Oscillator	85	Intersatellite Links (ISL) for mesh networking of LEO constellations
79	Attenuator	86	Satellite based IOT Services (preferably with 3GPP NTN compliance)
80	Multi Junction Solar Cell	87	Space Based ADS-B Services for Air Traffic Control and Air Traffic Management as per ICAO standards.
81	Accelerometers	88	Space based AIS Services for Marine domain awareness services as per IMO standards
82	AI/ML based space technology	89	Space based GNSS-R and RO based Weather and atmospheric monitoring & Services
83	Asteroid Mining	90	Space based RTK-PPP Services (High Accuracy PNT).
84	Composite Material based products	91	Quantum Computing

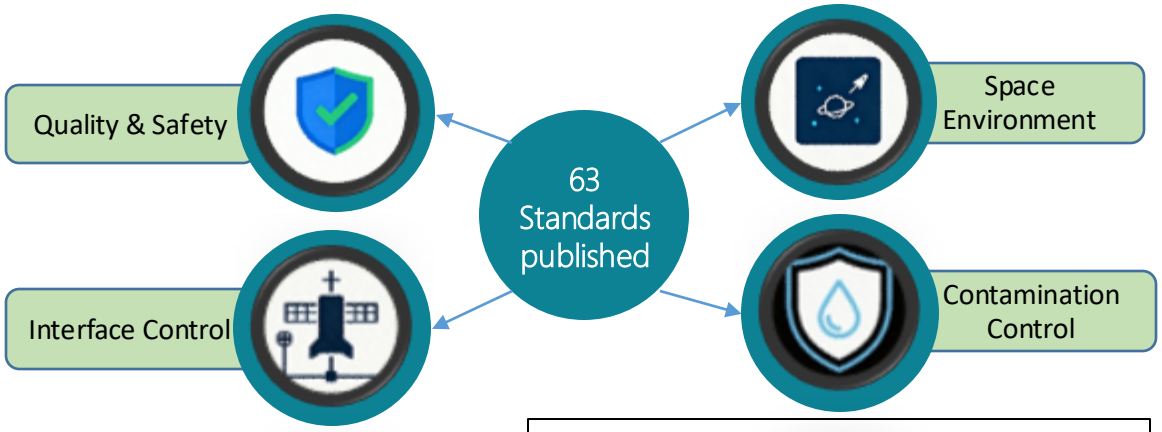
Indian Standards for the Space Sector

Sectional Committees for Space Standards – India (BIS)

- ✓ BIS:TED-14 “Air & Space Vehicle”
- ✓ BIS:LITD-22 “Geospatial Info.”

Committees for Space Standards – International (ISO)

- ✓ ISO/TC-20/SC-14 “Space Systems and Operations”
- ✓ ISO/TC-20/SC-13 “Space data and information transfer systems”



14 Standards are being reviewed

IN-SPACe & BIS to host 35th Plenary of ISO/TC-20/SC-14 in May 2026 in Delhi.

ISO Plenary 2025, Tsukuba, Japan

One Day Seminar being planned during December 2025

Draft Safety & Security Guidelines

Draft sent for Industry consultation	→	Finalization & Webinar	→	Release
Oct. 2025		Nov. 2025		Dec. 2025

Recommendations during previous IIC

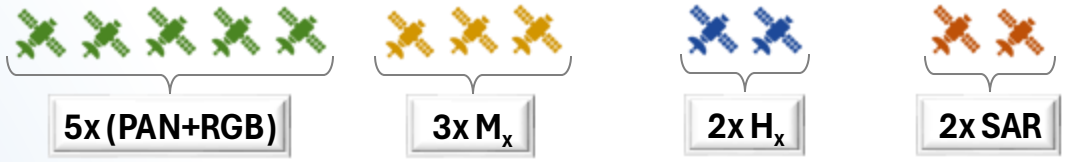
1.	Develop frameworks to ensure Technology Readiness Levels (TRLs) & Manufacturing Readiness Levels (MRLs) for Spacetech	"IS 18330 : 2023 Space Systems - Definition Of The Technology Readiness Levels (TRLs) and their Criteria of Assessment" is released. Framework for MRL and interlinking TRL and MRL is initiated.
2.	Promote standardized designs and streamline product qualification processes.	63 Standards released 14 Standards are being reviewed Seminar is planned during Dec. 25
3.	Develop a framework for data standardization and data security to address emerging cyber and infrastructure threats.	Safety and Security guidelines will be released by Dec. 25

Establishment of Earth-Observation System under PPP

- **Objective:** Design, Build and Operate a sustainable space-based earth observation (EO) system by NGE

- **Current Status:** Consortium led by PixxelSpace India and constituting of SatSure Analytics, PierSight Space and Dhruva Space has won the bid.

- **Proposed Constellation:**



Resolution (GSD):	0.5 / 1 m	2.3 m	20 m	1-3 m
Sensor Swath:	15 km	16 km	20 km	20 km
Coverage (India):	40 Days	86 Days	73 Days	66 Days

- **Timeline:**

Opportunities to scale-up downstream Applications

- Huge demand for EO data and downstream applications are evident from NM2.0 & other forums
- 119 satellite missions (103 operational + 16 Technology Demonstration missions) till 2040 identified by ISRO
- User requirements → rapid conversion to product → through NGEs
- High-resolution EO ARD & VAS provisioning → cloud native AI enabled platforms → through NGEs
- Multi-Payload Satellite Constellations and innovative sensor technologies with edge processing

A.O. *for* **use-cases** *under* **new seed fund scheme**

Pest & disease forewarning & early detection of biotic stress for major crops of India
User: MoA&FW

Reservoir Rim Slope Stability Monitoring
User: MoP

Monitoring & EWS for GLOFs with Hazard and Risk Assessment in the Indian Himalaya
User: MoP / NDMA

SAR Applications using NISAR data
User: Open
NISAR Data to be released by Mid-Nov., 2025

Decision Support System (DSS) for Power sector installations & right of way (ROW)
User: MoP

Other Opportunities
River water quality / Cloud burst EWS / Forest Monitoring / Multiple Use-cases from NM2.0
User: MoJS / NDMA - MHA / Other Central & State Depts.

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) Four NGEi selected to develop small satellite bus.

b) Grant: ₹5.00 Crores to each selected NGEi(s)

c) Realisation of bus: SQM & PFM - 15 months

15 proposals received and 4 are being selected

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.

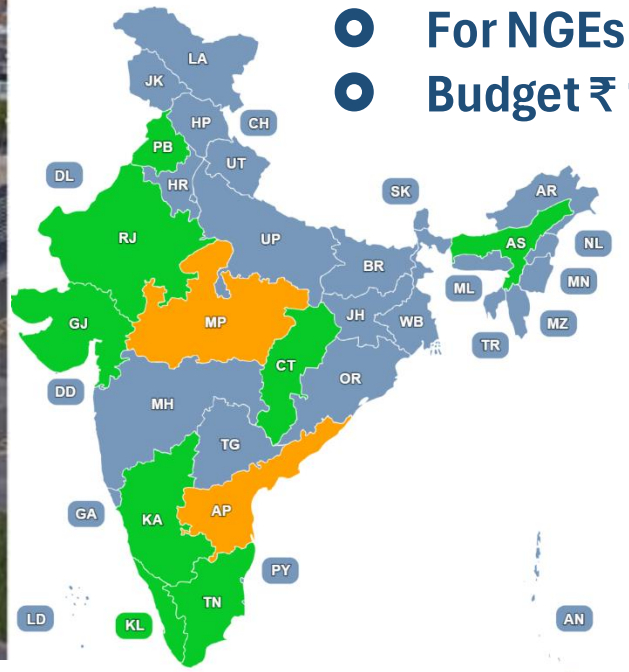
Common Technical Facilities

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



10 Indian states have responded to the proposal and three state viz Gujarat, Tamil Nadu and Karnataka are in advanced stages of developing such clusters.

Gujarat: Spacecraft Payload and Applications
Tamil Nadu: Small Launch Vehicles and Propellant Manufacturing

Over to

Strategy & Planning Wing

IN-SPACe

SAAW Themes

- North-Eastern Region
- Agri & Food Processing
- Defence 1.0 & 2.0
- Disaster Mitigation
- Assam State
- Industry SAAW
- Kerala State
- Karnataka

(Representative list)

9
SAAWs

55+
NGEs Participated

100+
NGE Participants

190+

Govt. Dept / Agencies Participants

Participants

1400+
In-person

630+
Online

NGE Suggestions:

- **Increase User Awareness**
- **Stimulate Demand across sectors**
- **Pvt. Industries to be made aware**

Inve$t Space

- Bengaluru Space Expo 2024
- InveSt Space – IIMA Ventures
- India Internet Day – TiE
- Def. & Aerospace Conf – ITI Capital
  Inflexor Ventures

NGE Suggestions:

- Alt. Financing Instruments
- Create Awareness among Investors
- Incubation / Accelerator Prgm

Participants

950+
In-person

120+
Online

170+

Investors, VC, Family Offices, AMC etc.

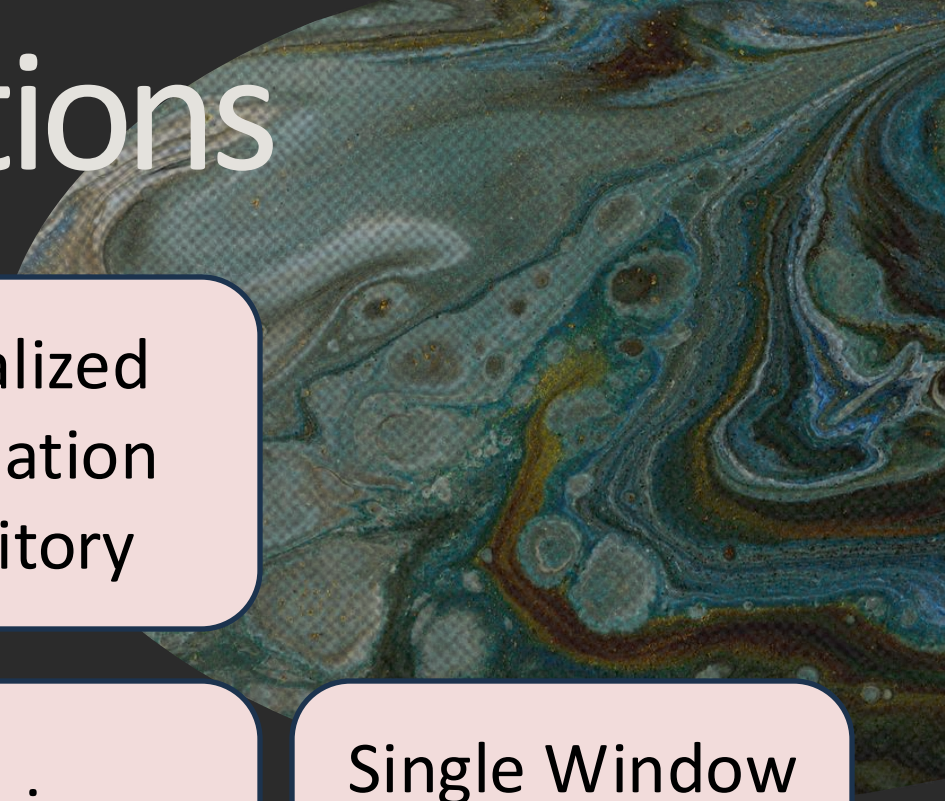
52+
VC, Investor Firms

35+
NGE Participants

(Representative list)

5
Inve$t Space

NGEs Suggestions



Repository of Manufacturers / Vendors

Dedicated Section of Upcoming Opportunities

Centralized information repository

Resources for IPR & Patent Filing

Launch Calendar

Mapping competencies

Single Window System for Authorizations

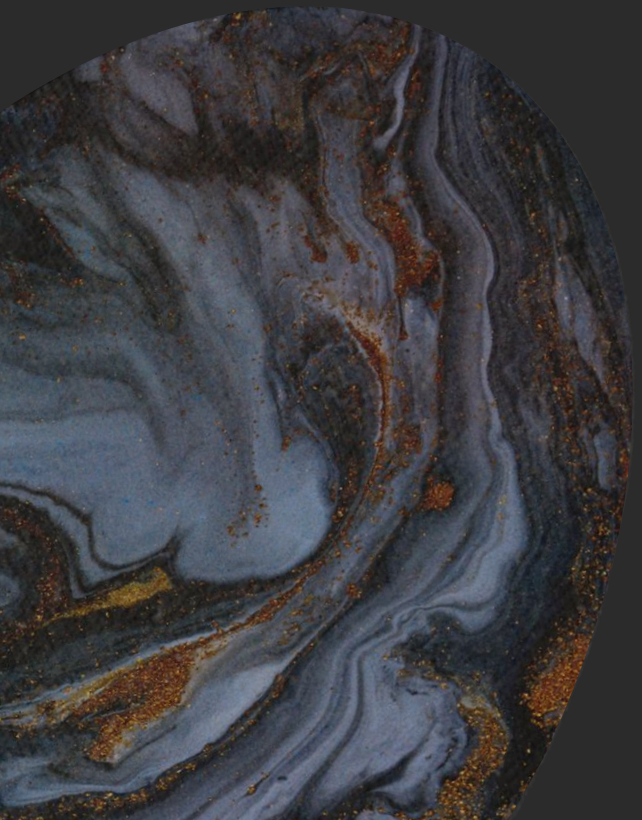
Promote Space Spin Offs

Alternative Financing Instruments

Lending by Banks & FIs

Accelerator Program

INDIAN SPACE GATEWAY



NGEs suggestions absorbed in the ISG Plans

- SPACE INDUSTRY MODULE
- PRODUCT & SERVICES MODULE
- EXPERTISE MODULE
- FACILITIES MODULE
- INCUBATION MODULE
- E-LIBRARY
- INDIAN SPACE CALENDAR
- SPACE STATISTICS MODULE
- SPACE NEWS
- TOOLKITS & SOFTWARE MODULE

‘SPACE on GeM’

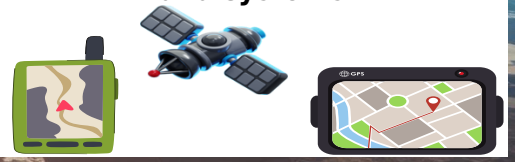
NGE Suggestions

- Customize templates
- Standardize product specifications
- Onboard NGEs for Space on GEM
- Vendor Onboarding on GeM

Host ‘Space products and services’ through the GeM portal

INPUTS>>

Spacetech-Enabled User Devices and Systems



GIS software Tools & COTS Spacetech tools/ platforms

Value Added Solutions & Spacetech Applications

Satellite based Geospatial Data, EO products & Imagery

Space Education, Training Services, Memorabilia & Others

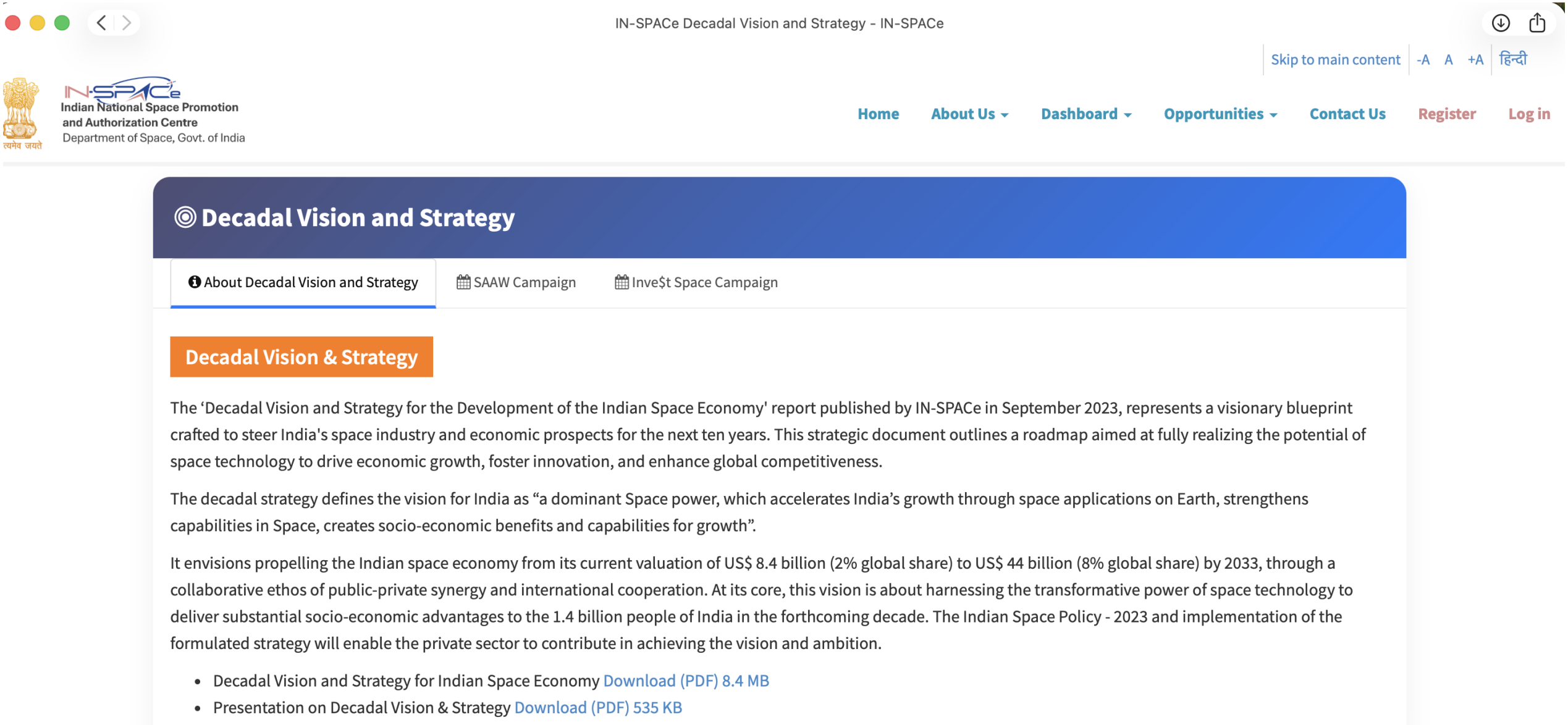
Decadal Vision Implementation

Program Management Framework for Decadal Vision Implementation

Executed by all IN-SPACe Directorates & external agencies.

NGEs suggestion on utilizing Ex-ISRO officials for Space Sector : 30 Technical Advisors Empaneled

NGEs suggestion on Providing Presentations, Reports:



Over to

Administration

Space Bill

Department of Space (DOS) has drafted a Space Bill based on the inputs from IN-SPACe and is under process.

Antariksh Venture Capital Fund (1000 Cr VC Fund)

- M/s SIDBI Venture Capital Ltd (SVCL) is selected as Fund Manager
- SVCL: Applied to SEBI for Registration, approval awaited.

NGEs Suggestions

Tax Relaxation for NGEs at par with ISRO

Custom Duty Exemption for NGES

GST Waiver on critical satellite subsystems

Recognizing ‘Space’ as an Infrastructure Sector under the Harmonized Master List of Infra

Discussion

01

Any Comments or Suggestions from your side?

02

Any issues/ challenges we should know?

Chairman's Remarks

Dr. Pawan Kumar Goenka Chairman, IN-SPACe
Department of Space, Government of India

Jai Hind!