

CELEBRATING WORLD SPACE WEEK

SPACE KALPANA 2.0

MISSION 2047

ROCKET REVOLUTION

A national launch vehicle design challenge
for school and undergraduate students

*Young
Minds
Bigger
Possibilities*



IDEAS
DESIGN
INNOVATION
IMPACT

*Design
Build
Launch
A Better
Tomorrow*

CONCEPT NOTE



EXPLORE
DESIGN
INNOVATE
LAUNCH



STUDENTS
TODAY
SPACE LEADERS
TOMORROW



FROM
IDEAS TO IMPACT



A STRONGER
SPACE-BHARAT

AN INITIATIVE BY SIA-INDIA
UNDER THE SPACE TUTOR INITIATIVE

*For a
Brighter
Bharat*

01 | THE VISION

INSPIRE | ENGAGE | EMPOWER
A BRIGHTER SPACE-BHARAT

About Space Kalpana

Building on the success of Space Kalpana: Dream. Discover. Design, SIA-India is launching Space Kalpana 2.0 – Mission 2047: Rocket Revolution, a national-level design challenge for students from Classes VI to XII and undergraduate students.

The initiative seeks to encourage young minds to explore India's evolving space sector by imagining and designing the launch vehicles of the future. Through the Challenge, participants will move beyond learning about space to applying creativity, problem-solving and systems thinking to develop and present their own launch vehicle concepts.

This year's edition expands the Space Kalpana platform from creative expression towards design, innovation and practical engagement with India's commercial space ecosystem, providing participants with opportunities to interact with industry and gain national visibility for their ideas.

*Big Ideas
Begin Here*

*Students
Today
Space Leaders
Tomorrow*

DREAM
DESIGN
INNOVATE
LAUNCH

From Imagination to India's Future in Space



IMAGINATION
Curious minds.
Bold ideas.



DESIGN
Ideas into concepts.
Concepts into solutions.



INNOVATION
Solving real
challenges.



**INDIA'S FUTURE
IN SPACE**
A stronger,
self-reliant Bharat.

PEOPLE
IDEAS
TECHNOLOGY
OPPORTUNITIES
A STRONGER
INDIA

02 | Conceptual Background

India's commercial space sector has, since 2020, moved from a predominantly government-led enterprise to a fast-growing ecosystem of private launch vehicle manufacturers, satellite companies and downstream space-application enterprises. As this NewSpace economy matures, its sustained growth will increasingly depend on developing a strong pipeline of engineers, designers and innovators capable of conceiving, developing and communicating the space systems of the future.

Space Kalpana 2.0 is conceived under the SIA-India Space Tutor Initiative as a national platform to identify and nurture this talent at an early stage, beginning at the school level and extending to undergraduate education. Rather than testing rote technical knowledge or advanced engineering calculations, the Challenge is designed around skills that are essential to the future space industry: the ability to conceptualise a mission, develop an innovative solution, justify design choices, solve problems and communicate technical ideas effectively.

The Challenge is anchored to the theme "Rocket Revolution" and framed against the long-term vision of Mission 2047, India's centenary of independence. It seeks to position today's students as the engineers, innovators and space professionals who will contribute to shaping India's future launch capabilities.

By bringing together school and undergraduate participants on a common national platform, Space Kalpana 2.0 aims to create an early pathway for engagement with India's space ecosystem while providing participants an opportunity to translate imagination into practical design thinking.



LAUNCH
VEHICLES



SATELLITES
& APPLICATIONS



PRIVATE
INDUSTRY



SKILLED
TALENT



A SELF-RELIANT
SPACE BHARAT

A NATION OF OPPORTUNITIES
A GENERATION OF POSSIBILITIES

"TODAY'S LEARNERS. TOMORROW'S LAUNCHERS."

03 | OBJECTIVES

IDEAS FOR A BRIGHTER SPACE-BHARAT

IDEAS TODAY
LAUNCHES
TOMORROW

The Challenge aims to:



Introduce Students to Launch Vehicle Design

Through an accessible, mission-oriented national design challenge.



Provide Early Exposure to India's Space Ecosystem

And the opportunities emerging within the New Space sector.



Encourage Creativity and Innovation

By enabling participants to develop original concepts for India's future launch requirements.



Facilitate Industry Interaction

By connecting participants with professionals and organisations working in India's growing space industry.



Develop Problem-Solving and Systems-Thinking Capabilities

By requiring participants to connect mission objectives, payload requirements and vehicle design.



Identify and Recognise Promising Young Talent

With an interest in aerospace, launch vehicles and space technology.



Strengthen Communication and Presentation Skills

Through structured pitching and interaction with an expert jury.



Build a Future-Ready Talent Pipeline

Aligned with India's long-term space ambitions towards 2047.



04 | PARTICIPANT CATEGORIES

Space Kalpana 2.0 is open to three categories of participants, with teams comprising three to five members.

DREAM
DESIGN
INNOVATE
LAUNCH

 Category	 Eligibility	 Team Size
Category I	Junior School (Class VI–VIII)	3 – 5 members
Category II	Senior School (Class IX–XII)	3 – 5 members
Category III	Undergraduate Students	3 – 5 members

The three categories provide participation opportunities across the school and undergraduate pipeline while maintaining a common challenge framework.



The Challenge will be conducted as a national design competition, with teams assessed primarily on creativity, problem-solving, innovation, systems thinking and communication, rather than advanced technical execution.

NATIONAL DESIGN CHALLENGE

Every team will submit two components:

1 Launch Vehicle Concept

The concept will comprise:



Rocket Name



Mission



Payload



Rationale: Why does India need this launch vehicle?



Key Innovation



Concept Illustration:
Hand-drawn or digital



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Two-to-Three-Minute Pitch

Each team will submit a short video pitch addressing four fixed questions:



What mission does your launch vehicle serve?



Why did you choose this design?



What problem does it solve?



How is it different from today's launch vehicles?



Big Ideas
for a
Bigger
Bharat



The use of a common set of questions will provide a consistent basis for evaluation and enable comparison across teams and categories. The format is intended to keep the judging objective while allowing participants to demonstrate their creativity and understanding of the challenge.

TIMELINE

Date / Period	Activity
10 – 15 September 2026	Outreach to schools, colleges and industry partners; mobilisation of participants and partnerships
30 September 2026	Deadline for submission of team videos
1 – 7 October 2026	Jury review of submissions and shortlisting of top teams
8 – 9 October 2026	Final round of questioning by the jury and final scoring of shortlisted teams
10 October 2026	Announcement and felicitation of winners during World Space Week



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SELECTION & GRAND FINALE

IDEAS → DESIGN → INNOVATION → IMPACT

IDEAS TODAY
LAUNCHES
TOMORROW

Following the submission period, entries will be evaluated by an expert jury comprising representatives from the space industry and associated stakeholders. Entries will be assessed on the originality of the concept, relevance of the mission, clarity of the proposed solution, innovation and effectiveness of the pitch.

The leading teams across the three categories will be shortlisted for the final stage of the Challenge.

The Grand Finale, to be held during World Space Week, will provide shortlisted teams with an opportunity to showcase their launch vehicle concepts before industry leaders, launch companies, policymakers and academia.

The Grand Finale will serve as the culmination of the Challenge while providing participants with an opportunity to gain national-level visibility and interact with stakeholders from India's wider space ecosystem.

**Expert Jury**

From space industry and associated stakeholders

**Evaluation**

Based on creativity, relevance, clarity, innovation and pitch

**Shortlisting**

Leading teams across three categories

**Grand Finale**

During World Space Week

STUDENT IDEAS
NATIONAL IMPACTBig Ideas
for a
Bigger
BharatINDIA'S
NEXT GENERATION
SPACE LEADERS

07

RECOGNITION & AWARDS

CELEBRATING YOUNG INNOVATORS

Recognition is designed to extend beyond a simple winners' list, providing participants with credentials, visibility and opportunities to engage with India's space industry.

**Additional
Special Rewards
and Opportunities**Today's
Learners
Tomorrow's
Launchers**INDIA'S YOUNG
ROCKET ENGINEERS 2026****Top 15 Teams**

Top 15 Teams will receive:



Digital
Certificate



National
Recognition



Industry Interaction
& Mentorship Opportunities



Exposure to Launch Companies
and Space Ecosystem



Showcase at a National Platform
during World Space Week



Potential Opportunities
for Future Collaborations
and Internships

Space Kalpana 2.0 is intended to provide participants with an experience that extends beyond participation in a conventional science competition.

The initiative aims to:



Provide hands-on practical experience

by requiring participants to develop an original launch vehicle concept, define a mission and think through the design of a complete system.



Provide nationwide visibility

to promising concepts through SIA-India platforms, the Grand Finale and associated showcase opportunities.



Develop creative and problem-solving abilities

by encouraging participants to identify requirements and develop innovative solutions.



Create early exposure to India's space industry

and the career opportunities emerging within the commercial space ecosystem.



Build systems-thinking skills

by introducing participants to the relationship between missions, payloads and launch vehicles.



Encourage future careers in space and aerospace

by allowing participants to engage with real-world-inspired challenges at an early stage.



Enable industry interaction

through engagement with professionals, experts, jury members and industry partners.



Recognise young talent nationally

by providing strong teams with certificates, visibility and opportunities for further engagement with the space ecosystem.



Develop communication and presentation skills

by requiring participants to pitch and defend their ideas.



Create a continuing talent pipeline

from school education to undergraduate study and ultimately into India's growing space sector.

*Big Ideas
Begin
Here*

A NATION
OF OPPORTUNITIES
A GENERATION
OF POSSIBILITIES

About the Organiser

SIA-India is a non-profit organisation representing the interests of the space industry in India. Its membership includes satellite operators, manufacturers, suppliers, startups, academic institutions and law firms. The association serves as a voice for the industry, represents its interests at policy-making and regulatory bodies, and provides a platform for international collaboration and engagement with the government.

Through its Space Tutor Initiative, SIA-India extends this mandate towards building awareness, interest and capabilities among the next generation of talent that will contribute to India's growing space economy.

SIAINDIA
An association for space industry

