

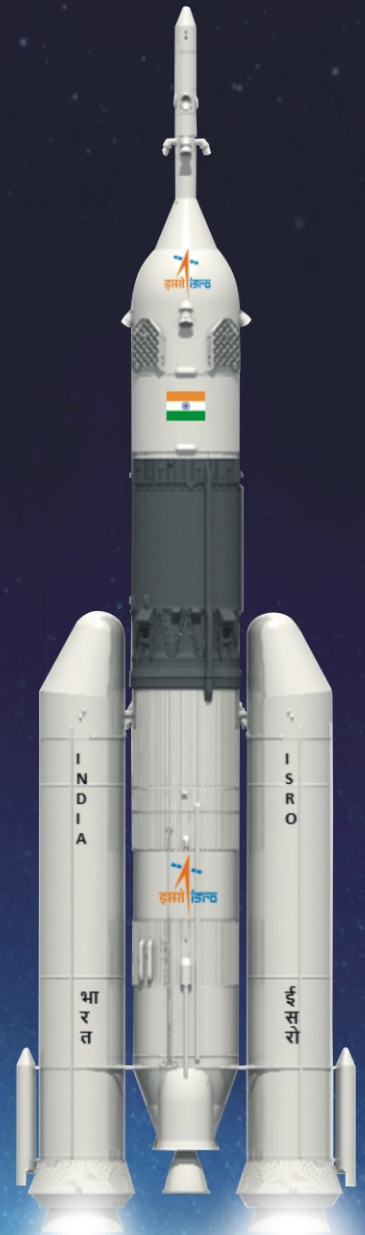


7th BENGALURU SPACE EXPO 2022

INTERNATIONAL CONFERENCE AND EXHIBITION

5 - 7 September, 2022 | BIEC, Bengaluru, INDIA

NURTURING NEW SPACE IN INDIA



Conference

Exhibition

B2B

Parallel Sessions

HIGHLIGHTS

3 Day International Conference- Nurturing New Space in India

3 Day Exhibition- showcasing strength in the space arena by Indian & global space agencies

Ideal platform to Indian and International space agencies to interact and explore the opportunities of partnerships

Highlight of policy encouraging Indian Industry & start-ups in space sector

CONFERENCE BROCHURE

PROGRAMME GRID

MAIN SESSIONS

DAY 1 - 05 September 2022 (Jacaranda Hall)

0800 - 1000 Hrs	Registration
1000 - 1130 Hrs	Inaugural Session
1130 - 1200 Hrs	Tea/ Coffee Break
1200 - 1300 Hrs	Inauguration of Exhibition
1300 - 1400 Hrs	Lunch Break
1400 - 1515 Hrs	New Space in India: Current Scenario, Policies, Challenges & Way Forward
1530 - 1645 Hrs	India's Private space sector at rise – Business opportunities
1645 - 1730 Hrs	Driving India's Space Sector through Startup ecosystem.

DAY 2 - 06 September 2022 (Jacaranda Hall)

1030 - 1145 Hrs	Earth Observation Applications- Emerging trend, opportunities and enabling technologies
1200 - 1315 Hrs	Enhancing Space Transportation Technological Capabilities and Research –a new paradigm.
1315 - 1415 Hrs	Lunch Break
1415 - 1530 Hrs	Satellite communications- Emerging Trends, Technologies, Opportunities & Issues
1545 – 1700 Hrs	Highlight Talk: Human Spaceflight and Space Exploration Missions

DAY 3 – 07 September 2022 (Jacaranda Hall)

1030 - 1145 Hrs	International collaborations in space sector- Towards sustainable development: Avenues and opportunities
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COUNTRY AND FOCUSED SESSIONS

DAY 2 – 06 September 2022 (Cassia Hall)

1030 - 1130 Hrs	Explore cooperation with the Netherlands Space ecosystem
1200 - 1315 Hrs	The UK Session
1315 - 1415 Hrs	Lunch Break
1500 - 1800 Hrs	Start-up Investor Meet

DAY 3 – 07 September 2022 (Jacaranda Hall)

1200 - 1315 Hrs	Australia's Space Ecosystem: Accelerating Australia-India space collaboration
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INTERNATIONAL CONFERENCE ON SPACE NURTURING NEW SPACE IN INDIA



DAY 1 : 5 SEPTEMBER, 2022

Jacaranda Hall, BIEC, Bengaluru

INAUGURAL SESSION

1000 Hrs – 1130 Hrs



S. SOMANATH
CHAIRMAN, ISRO
Secretary, Department of Space



DR. PAWAN GOENKA
CHAIRMAN
Indian National Space Promotion And
Authorization Center



H.E. Mr. Marten Van Den Berg
AMBASSADOR EXTRAORDINARY
AND PLENIPOTENTIARY
Embassy Of The Kingdom Of The
Netherlands



ENRICO PALERMO
HEAD
Australian Space Agency



ANNA SHOTBOLT
DEPUTY TRADE COMMISSIONER,
SOUTH ASIA
Department for International Trade,
United Kingdom



DR. D. RADHAKRISHNAN
CHAIRMAN AND MANAGING DIRECTOR
NewSpace India Limited (NSIL)



JAYANT PATIL
CHAIRMAN
CII National Committee On Space



KAMAL BALI
DEPUTY CHAIRMAN
CII Southern Region



SUDHEER KUMAR N
DIRECTOR, CBPO
ISRO HQ

NEW SPACE IN INDIA: CURRENT SCENARIO, POLICIES, CHALLENGES & WAY FORWARD

Session 1 : 1400 – 1515 Hrs Session Theme

India's space sector has made tremendous growth over the decade. The country has seen the rise of NewSpace with over 50 new companies that have been formed in the space sector for the last 5 years. At present, India's share in global space economy is around 2% today, however offers the great potential to increase Space commerce for the new players. The formation of Indian National Space Promotion and Authorization Centre (INSPACe) and opening-up of Space sector for the private sectors have also provided the foundation for India to integrate into the global space economy. In addition, efforts taken by the Department of Space (DoS) towards revising the space policies including the FDI policy for the space sector has another endeavor to spur the growth of private sectors, increase industry's share in the Indian Space and global space market. The session will deliberate on current status of NewSpace in India, new reforms & policies and will take into account the current opportunities, challenges and provide a perspective on how Indian industry can develop new products/services that can plug into meeting demand both locally and globally.

DRIVING INDIA'S SPACE SECTOR THROUGH STARTUP ECOSYSTEM

Session 3 : 1645 – 1730 Hrs Session Theme

Space start-ups are making impactful marks across the Space Value Chain across the world. Over the last few years, the world including India has also seen the rise of innovative space ventures with start-ups aiming to build their own satellites, launch vehicles, communication, and geospatial services. Today, India accounts for only 2% of the global space economy and start-ups operating in the satellite tech space will play a major role in boosting the country's capabilities and presence in the space sector. India space tech startups would play a major role in developing/designing multiple downstream applications. Moreover, ISRO with the recent reforms and recognizing the significance of start-ups to propel India in fulfilling its space dreams has been taking proactive steps towards facilitating the Space start-ups ecosystem across the country. With the foundation available from ISRO's legacy of established suppliers and human resources base, a plethora of new ventures can take shape in Indian space sector with this as a launch pad.

The session focuses upon the role of existing start-ups driving the space tech across world and India, capabilities of start-ups and new entrepreneur, drivers for creating a robust start-up ecosystem in India, measures and support to catalyze the maturity of space startups in India, way forward to develop the ecosystem for start-ups and new entrepreneur, Startup's role in supporting commercialization of space applications in India, and role of government in facilitating the space start-ups.



INDIA'S PRIVATE SPACE SECTOR AT RISE – BUSINESS OPPORTUNITIES

Session 2 : 1530 – 1645 Hrs Session Theme

India has emerged as one of the most successful nations to have developed the capacity to develop satellites for services and interstellar missions, with vigorous and determined efforts of ISRO. ISRO had been working with over 500 industry partners for their overall operations and activities so far. Today India's space economy is barely USD 7 bn, which is less than 2% of the global market. With new reforms, ISRO and Indian industries have been attempting to go beyond the vendor-supplier relationship and work on developing space-based services and bolster the Indian space economy. As the floodgates to the Indian private space sector is being opened up it is important to understand how the industry believes it can grow and mature. There are several approaches every company can consider growing themselves within the different verticals in the industry. Some of them may look at demand coming locally, and the others may look at taking a risk of building products and services that target global customers. This session shall discuss the significance of Indian Industries in Space sector, their capabilities and various approaches and opportunities that the private companies in Indian space sector can take over the coming years.



DAY 2 : 6 SEPTEMBER, 2022

Jacaranda Hall, BIEC, Bengaluru

EARTH OBSERVATION- EMERGING TREND, OPPORTUNITIES AND ENABLING TECHNOLOGIES

Session 4 : 1030 – 1145 Hrs

Session Theme

Earth Observation is one of the fastest growing verticals within the space economy. The availability of remote sensing data assets with both free and commercial sources ramping up have led to mushrooming off the number of applications possible. This makes it a very lucrative moment for applications within emerging countries like India and for export of products and services from India in this domain. In addition, ease of spatial data availability, the companies and start-ups are leveraging the technologies such as AI, 3D data visualization, cloud computing technologies and blockchain to provide the value-added service in near real time using data from multiple sources. The session deliberates on current and emerging trends within the Earth observation, applications and the impact in various industrial value chains, emerging players, opportunities, and challenges, evolving space applications and commercial opportunities and new technologies and their roles

ENHANCING SPACE TRANSPORTATION TECHNOLOGICAL CAPABILITIES AND RESEARCH –A NEW PARADIGM

Session 5 : 1200 – 1315 Hrs

Session Theme

Space transportation has evolved over the last 10 years rapidly with the rise of reusability and small rockets that can offer dedicated launchers to small satellites. There are also several new architectures that are being tested out and developed to offer reliable and low-cost access to space and on orbit. Even the Indian government, while encouraging the private players to play a significant part in the space sector with policy reforms, has also been focusing on R&D and building technological capabilities for space exploration and reusable rockets. India has put in place a technological & regulatory framework with a release of draft National Space Transportation Policy, by Department of Space. At recent past, two (02) start-ups- Agnikul and Skyroot had also signed agreement with ISRO to use their expertise and access facilities to test and qualify its small rocket that can launch into low orbit. This session shall discuss how India can play a greater role in providing space transportation and on orbit propulsion capabilities to the burgeoning demand in the world market.



SATELLITE COMMUNICATIONS- EMERGING TRENDS, TECHNOLOGIES, OPPORTUNITIES & ISSUES

Session 6 : 1415 – 1530 Hrs

Session Theme

Satellite communications is continuously evolving with the emergence of Low Earth Orbiting (LEO) constellations providing services such as broadband and IoT. The increase in small satellites, the use of low-Earth orbit (LEO) and realizing LEO satellite constellation for satellite communication, launches on reusable rocket launch vehicles and new use cases for 5G, 6G, and Internet of Things (IoT) are some of the most important developments to watch. Further, we are witnessing innovation in ground equipment (e.g flat panel antennas, virtualization, etc) that goes hand in hand with the space segment. At the same time there is still a large interest and demand for services such as broadcasting from GEO operators. Additionally, India with its large market for mobile and data-based services attracts investment from major players who aim to improve the consumer experience and drive down user costs. In the session, the speakers will share the emerging trends, technologies, opportunities and intricacies with respect to satellite communications from both traditional and a new space perspective through India-specific outlook from different market players.

HIGHLIGHT TALK: HUMAN SPACEFLIGHT AND SPACE EXPLORATION MISSIONS

Session 7 : 1545 – 1700 Hrs

Session Theme

India has announced its maiden human spaceflight mission Gaganyaan that is expected to fly Indian astronauts to space onboard an Indian rocket. This mission can lead to significant capacity development in the country which can form the foundation to have India's own space station in the coming years. This panel shall discuss various aspects of potential collaboration towards human space flight and explanation based on cooperation.



PARALLEL AND FOCUED SESSIONS

Cassia Hall, BIEC, Bengaluru

The Netherlands Session: 1030 – 1130 Hrs
The United Kingdom Session: 1200 – 1315 Hrs
Start-ups and Investors Meet: 1500 – 1800 Hrs



DAY 3 : 7 SEPTEMBER, 2022

Jacaranda Hall, BIEC, Bengaluru

INTERNATIONAL COLLABORATIONS IN SPACE SECTOR - TOWARDS SUSTAINABLE DEVELOPMENT: AVENUES AND OPPORTUNITIES

Session 8 : 1030 – 1145 Hrs

Session Theme

World has always recognized that space has dimension beyond national considerations, which can only be addressed through international collaboration. The scope for cooperation has become multifaceted. There are several challenges that society is facing due to the impact of climate change and its effect on sustainable development. These are already impacting several emerging countries and stifling their growth. Outer space is a critical arena to derive data and offer support to tackle some of the challenges arising from these challenges. Besides this, Space agencies across the world including India Space agency, ISRO has also been collaborating with each other with the aim of building and strengthening existing ties between countries; taking up new scientific and technological challenges; refining space policies and defining international frameworks for exploitation and utilization of outer space for peaceful purposes. Today, the scope of international cooperation has become wider and diverse, with tremendous progress in recent time. In this session, the speakers shall discuss different opportunities and avenues that forged between space agencies and companies in a collaborative fashion to support space sector and further sustainable development.

AUSTRALIA'S SPACE ECOSYSTEM: ACCELERATING AUSTRALIA-INDIA SPACE COLLABORATION

Australian Session : 1200 – 1315 Hrs

Session Theme

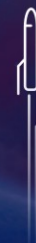
Australia has a strong and dynamic space sector, with high ambitions and great potential – expected to grow to \$12 billion by 2030. This session will provide an overview of Australia's space industry ecosystem, global trends accelerating the adoption of space technology, R&D and services, and Australia's value proposition as a space partner, investor and innovator. The Australian Space Agency and industry players will share insights on a new \$25 million (INR144 crore) India stream of the International Space Investment Initiative, Australia's planned support for Gaganyaan, and how Australia can support launches, space exploration, earth observation, satellite communication, and navigation. This will assist Indian industry, startups and institutions better understand opportunities for collaboration, incubation and engagement across Australia's dynamic space sector.

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