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Confederation of Indian Industry

In association with



CREATING DYNAMISM IN INDIAN SPACE ECOSYSTEM

'Enabling New Space in India'



6th BENGALURU SPACE EXPO 2018

6-8 SEPTEMBER, 2018 | BIEC, Bengaluru, INDIA

www.bsxindia.com

Global Space Scapes

Today, benefits from satellites are nearly immeasurable. We are entering an exciting era in space where we expect more advances in the next few decades than throughout the human history so far.

As the cost of space access plummets, the future looks bullish for the extraterrestrial industry. Bank of America Merrill Lynch sees the size of the space industry exploding over the next three decades, to at least \$2.7 trillion. A raft of new drivers is pushing the "Space Age 2.0": reusable launch by SpaceX, the growth of private ownership in the market, investment by more than 80 countries and the falling launch costs from vehicles such as Rocket Lab and Vector. While there are few pure play companies with 100 percent activity in the space business, the remainder has medium-to-low exposure to the space industry's growth.



Dr. K Sivan

*Secretary, Department of Space, Government of India and
Chairman, Indian Space Research Organisation (ISRO)*

Indian Space Scapes and the Orbiting Bengaluru Space Expo

Indian capabilities in space represent a wide spectrum of expertise ranging from "conceptual designs" to building and operating a variety of space systems, which are matched only by a few nations in the world. In view of these multiple dimensions and capabilities, further added with cost economics, India is recognised as a leader in space applications that have a wide impact on society.

With increased missions and launches, the industry will have to play a larger role in manufacturing while ISRO will focus on Research and Development.

Adding to it, the Make in India initiative introduced by the Government of India has Space as one of the focus sectors wherein the industries - both global and local - are invited and encouraged to manufacture in India and do the joint development of Satellites, payloads etc.

Bengaluru Space Expo 2018 aims to provide the platform for carrying forward these interactions and "explore" possible ways to work with Indian Space Industry.

The Indian Space Canvas - An Untapped, Lucrative Universe

- The vision is to "Harness space technology for national development, while pursuing space science research and planetary exploration"
- One of the world's most effective space programmes
- Accomplished 166 missions till date
- 15 Communication Satellites, 8 Navigation Satellites, 10 Remote Sensing Satellites, 3 Metrological Satellites and 2 Space Science Missions are in orbit
- Launched 237 Satellites for 29 countries till date
- Cooperative arrangements with 443 countries and 4 Multi-national bodies
- Offers high quality education at undergraduate, graduate, doctoral and post-doctoral levels on areas with special focus upon space sciences, space technology and space applications through world class institutes
- 100% FDI allowed in satellites-establishment and operation*

A Stellar 2017

By all accounts, India's space programme had a stellar 2017. On 15 February 2017, India's work horse Polar Satellite Launch Vehicle (PSLV), in its thirty ninth flight (PSLV-C37), launched 104 satellites, a world record. This was capped with the launch of India's hundredth satellite, along with 30 other satellites on-board PSLV-C40 on 12 January 2018.

“ ENABLE INDUSTRY TO MEET INDIA'S COMMERCIAL SPACE REQUIREMENT WITH ISRO TECHNOLOGY & HAND HOLDING ”

Government Drive

Today, space is not about weather prediction or DTH Services; but also about the growing number of applications at the Central and State Government for Planning, Monitoring & Evaluation, Governance and Decision Making and many societal applications. The inclusion of Space as one of the focus sectors in 'Make in India' initiative is reaffirming Government of India's commitment in increasing industry participation in manufacturing of satellites, subsystems and Infrastructure. The announcement of ISRO on setting up Space "Parks" at Bengaluru and Sriharikota is a step towards its vision to enhance the Industry participation which shall certainly forge new partnerships and encourage domestic participation in integrating sub-systems to assembly of launch vehicles. Now, India's Space Sector can start unleashing the domestic and global opportunities through enhanced partnerships and collaborations. This will also build a strong space eco-system in India.

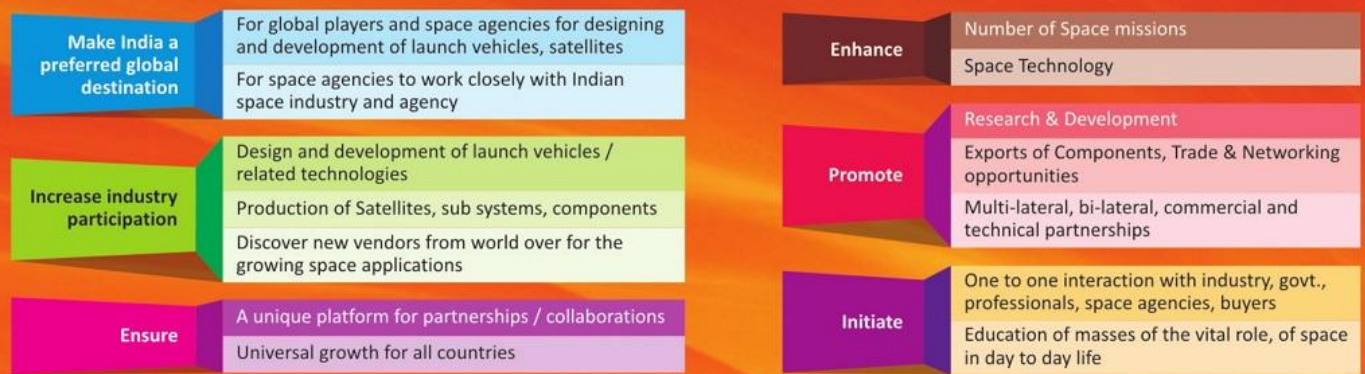
Bengaluru Space Expo 2018 – Creating Dynamism in Indian Space Ecosystem

Bengaluru Space Expo was conceptualised as an event to provide a platform to interact with the space agencies, specialists, entrepreneurs and space industry heavyweights. The exhibition, in parallel, would showcase the latest technological advancements, related products and technical services by Space agencies and industries. The sixth edition of Bengaluru Space Expo (BSX 2018) is scheduled from 6-8 September 2018 at Bengaluru International Exhibition Centre (BIEC), Bengaluru, Karnataka, India. The theme for BSX 2018 is "Creating Dynamism in Indian Space Ecosystem" with specific focus on "Enabling New Space in India". Join the leaders defining the future of Space Industry and discuss the future commercial prospects for International and Asian Space Industry.

Universe of Opportunities

With one of the most cost-effective space programmes in the world today, India is one of the few countries in the elite club of nations having the ability to perform end-to-end space missions indigenously. With the focused theme of "Creating Dynamism In Indian Space Ecosystem - Enabling New Space in India" BENGALURU SPACE EXPO is all set to unleash the floodgates of opportunities in India.

Indian Space Research Organization (ISRO) is increasingly going to double the number of satellites launched in the next two years and this would necessitate active involvement and participation of the private sector. Association with private players is vital for capacity building, cost reduction and getting an extra mile cutting-edge advantage. Beckoning the private sector in Indian space, ISRO desires to see start-ups, new and established subsystems providers evolve into partners, thus enhancing partnerships and collaborations...



International Conference "World Space Biz"*

6th September 2018

Highlight Talk

Emerging Global Space Market scenario

Special Session – New Space

Indian Space Eco System – New Space, Current Scenario, Challenges and Way Forward

Technical Session – 1

Launch Vehicle – Opportunities and Avenues for Industries

7th September 2018

Special Session - Transitions

Space Transportation and Space Infrastructure – The Movers and Shakers

Technical Session – 2

Convergence of COMSAT Systems and Emerging Technologies

Technical Session – 3

Navigation- Synergetic Applications and Future Developments

Technical Session – 4

Earth Observation – Emerging Trends, Enabling Technologies and Policies, Emerging Players and Evolving Opportunities

Parallel Session

IRS Data – Global User Meet

8th September 2018

Technical Session – 5

Satellite Management Services- Emerging Technologies (Communication and EO) & Challenges

*Agenda subject to change

Exhibitor Canvas**

- Allied Industry Products & Component Manufacturers
- Allied Services
- Banks and Finance
- Communication & Telecom Systems related to Space
- DTH Providers
- Educational Institutions
- Electronics and Optics
- Government Departments in Space Technology
- GPS Navigation
- IT & Automation for Space
- Launching Facilities Providers
- Manufacturers of Space Equipment, Components and Accessories
- Research Organisations
- Satellite Manufacturers
- Satellite Parts and Components
- Satellite Technology Areas
- Security Systems Related to Space
- SMEs
- Space Agencies
- Space Applications
- Space Ground Support System Providers
- Space Research & Development
- Surveillance Equipment, Satellites



**The list is illustrative

Product Canvas*

- Amplifiers
- Antennas
- Automation and Control Technologies
- Connectors
- Data acquisition and Management
- Deployment Mechanisms
- EGSE & MGSE
- Electronics Optics and Optics
- Filters
- GIS Service Providers
- GIS Software Developers
- Insurance and Management of Project & Test
- Launch Vehicle Subsystems
- Mobile Multi Media Services
- Mechanical Sub Systems
- Mechanisms and Robotics
- Multiplexures and Demultiplexurers
- Payload Sub Systems
- Platform Sub Systems
- Precision Components
- Printed Circuits for Electronic Equipment
- Propellants, Propulsion and Propulsion Technologies
- Radars-Tracking Radars, Wind Profile Radars and Weather Radars
- RF Cables and Components
- Satellite Manufacturers
- Semi Rigid Cables
- Solar Panels and Batteries
- Space Vehicle Engines
- Structures
- System Integrators
- Teleport Services Providers
- Thermal Control Space Applications
- Transmitters & Receivers
- Transponders
- Valves
- Waveguides
- All other Space Related Products

Visitor Canvas*

- Astronauts
- Associations & Institutions
- Buyers & Sourcing Personnel from Space & Research Organisations
- Consultants
- Dealers & Suppliers
- Decision-Makers from Private Sector
- Educational Institutions
- Energy and Exploitation
- Entrepreneurs
- Geological Department Officials
- Government Departments
- Government Officials
- ISRO Centres
- Managers & Executives from related Industries
- Manufacturers
- Marketing Personnel
- Media Houses
- Meteorological Departments
- Oceanographers
- Overseas Delegates
- Private Sector / Industry
- Research Analysts
- Satellite Manufacturers
- Scientists
- Security Agencies
- Space Agencies
- Surveyors
- Technical Experts
- Telecommunication and Broadcasting
- Venture Capital Institutions

*The list is illustrative

ISRO

Indian Space Research Organisation (ISRO) is the national space agency under the Department of Space, Govt. of India. The prime objective of ISRO is to develop space technology and its application to accelerate national development. ISRO has put two major national satellite systems, namely INSAT and IRS, in place. The INSAT system provides a robust infrastructure in space for telecom, broadcasting and meteorological observations. IRS system provides high quality data from space to support natural resources management and their development tasks. ISRO's developments in launch vehicles such as PSLV and GSLV provide reliable space transportation services for satellites in various orbits. ISRO promotes extensive international cooperations and industrial spin offs from its space activities, having successfully launched its mars and lunar crafts (Mangalayan and Chandrayan series). www.isro.gov.in

ANTRIX

Antrix Corporation Limited was incorporated in September, 1992 as the commercial arm of the Department of Space, Govt. of India with an objective of commercialising immense expertise and experience that Indian Space programme had garnered. To the domestic and global space users, Antrix offers a wide range of space based products and services, including state of the art spacecraft system launch services, connectivity services and Information derived from space. Antrix had already accomplished the prestigious 'Miniratna' status from the Govt. of India through a steady and significant progress over the years in pursuit of its charter. www.antrix.co.in

CII

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes.

CII engages closely with Government on policy issues and interfaces with thought leaders to enhance efficiency, competitiveness and business opportunities for industry through a wide portfolio of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues. Extending its agenda beyond business, CII facilitates corporate initiatives for integrated and inclusive development across diverse domains.

As a developmental institution working towards India's overall growth with a special focus on India@75 in 2022, the CII theme for 2018-19, India RISE : Responsible. Inclusive. Sustainable. Entrepreneurial emphasizes Industry's role in partnering Government to accelerate India's growth and development. The focus will be on key enablers such as job creation; skill development; financing growth; promoting next gen manufacturing; sustainability; corporate social responsibility and governance and transparency.

Founded in 1895, India's premier business association with around 9000 members, from the private as well as public sectors, and an indirect membership of over 300,000 enterprises from around 265 national and regional sectoral industry bodies. With 65 offices, including 9 Centres of Excellence, in India, and 11 overseas offices in Australia, Bahrain, China, Egypt, France, Germany, Iran, Singapore, South Africa, UK, and USA, as well as institutional partnerships with 355 counterpart organizations in 126 countries, CII serves as a reference point for Indian industry and the international business community. www.cii.in

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