

Organised by



Confederation of Indian Industry

In association with



**5<sup>th</sup> BENGALURU SPACE EXPO 2016**

**1-3 SEPTEMBER, 2016 | BIEC, Bengaluru, INDIA**

**[www.bsxindia.com](http://www.bsxindia.com)**



**BENGALURU SPACE EXPO 2016**

# A REPORT

Only B2B event on Space,  
Satellites, Launch vehicles and  
related products, services and  
technologies

Over 3,875 people in attendance

83 exhibitors and participation  
from over 15 countries

“World Space-Biz” attended by  
595 delegates from India and 18  
countries

B2B Session on Small Satellite  
Manufacturing attended by over  
100 delegates



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The 5th Bengaluru Space Expo 2016 organized by the Confederation of Indian Industry (CII) in association with the Indian Space Research Organisation (ISRO) and Antrix Corporation unveiled on 1 September 2016; was successfully concluded on the 3 September 2016 at Bengaluru. The Bengaluru Space Expo has been the only B2B event focusing on Space, Satellites, Launch vehicles and its related products, services and technologies for Indian and global space industry to address the challenges, and deliberate for better growth.

BSX 2016, Asia's only focused exhibition on Space, Satellites, Launch Vehicles and its related

products and technologies received encouraging response from the industry with over 83 exhibitors and participation from over 15 countries. These comprise Canada, France, Germany, Hong Kong, India, Malaysia, Singapore, Thailand and USA. The new entrants at this edition are Australia, Japan, Russia, Switzerland, Taiwan (RoC) and Ukraine. BSX witnessed for the first time, participation from a number of Space Agencies including the Australia Space Agency and Space industry Association of Australia, French Space Agency (CNES), National Space Center, Taiwan, Swiss Space Center and Japan Space Exploration Agency (JAXA).



Australia



Canada



France



Germany



Hong Kong



India



Japan



Malaysia



Russia



Singapore



Switzerland



Taiwan (RoC)



Thailand



Ukraine



USA





**Dr. Kiran Kumar**

Secretary, DOS

Chairman, Space Commission and Chairman, ISRO

Dr. Kiran Kumar, Secretary, DOS, Chairman, Space Commission and, Chairman, ISRO, inaugurated BSX 2016 and flagged the theme of encouraging Indian Industry to build entire Satellites and partner in rocket integration by taking bigger stakes.

He said, "Industry needs to take on the larger role of building entire Satellites and partner in rocket integration by taking bigger stakes", while delivering the inaugural address of the 5th Bengaluru Space Expo 2016 at BIEC, Bengaluru. Further, he added that with the industry taking the larger role, ISRO can focus predominantly on the Research & Development and developing futuristic technologies. He said that with this lead role coupled with ground systems and downstream application services, the business opportunities within the country will be large. Mr. Kumar also mentioned that this event is to ensure interaction between ISRO and the industry; also it's an opportunity for international exposure, to showcase the products as well as have an interaction with the Indian industry. He informed that ISRO is trying to reach out across industry and convey the opportunities in the space segment. Today, Indian industry is poised for large growth through the Make in India initiative. He said that there has been a lot done in the field of ground station, small satellite etc. that requires active support from the industry.

For the last four decades, ISRO has demonstrated unstinted efforts to make new space technologies for the development of the country both in the rural and the urban areas. The industry now needs to take a bigger role by developing further, the applications based on these technologies.







**Mr. Rakesh Sasibhushan**  
CMD, Antrix Corporation Limited

Mr. Rakesh Sasibhushan, CMD, Antrix Corporation Limited says the Indian space programme has been the driving force in conceiving ISRO-Antrix-CII partnership. Mr. Rakesh also emphasized on the output required from BSX 2016 and the difference observed in BSX 2016, unlike previous years. He highlighted that the show is a platform where global professionals meet with the industry and exchange ideas for the development." Today, we are in the era that is highly influenced by technology and in the near future, space technology is going to be useful in our daily lives. This year, BSX is a platform to make the industry aware of the new space technologies and that is only possible by highlighting the enormous opportunities in this sector", he added.



**Mr. Deep Kapuria**  
Chairman, Trade Fairs Council, CII  
MD, Hi-Tech Gears

Mr. Deep Kapuria, Chairman, Trade Fairs Council, CII and MD, Hi-Tech Gears addressed the inauguration and stated that there is a supply chain challenge that an organization faces. This results in the slowdown of the process. The prime interest in organizing BSX is to make use of space technology & innovation of the industry. Thereafter, utilize it to make it a success and deliver solutions that the country demands. It's a platform to highlight the opportunities in the field of space like deep space opportunity, mining in outer planets for the industry and seek their association in the endeavour. Mr. Kapuria assured the ISRO Chairman that CII and Indian Industry will be forthcoming to participate in ISRO's future initiatives. He ended his speech saying that space has no boundaries and demands technology for creating a better world.





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# INAUGURATION CEREMONY

November 2016



"The initiative of CII in organizing this event was to create a B2B platform connecting the ISRO and Antrix teams and the Indian industry to work together in creating a new definition in the field of defence and aerospace. There are immense opportunities in the field of space technology that have not been exploited by the organizations but await new expansion", stated Mr. Ravi Raghavan - Chairman CII Karnataka during his address at the inaugural session.

Dr. Kiran Kumar, Secretary, DOS / Chairman, Space Commission and Chairman, ISRO was joined by Mr. Deep Kapuria, Chairman - Trade Fairs Council, Confederation of Indian Industry (CII), Mr. Rakesh Sasibhushan, CMD Antrix Corporation Limited, Mr. Ravi Raghavan - Chairman CII Karnataka, Mr. Virendra Gupta, Deputy Director General - Confederation of Indian Industry (CII), Mr. Samir Pal, Director, Antrix Corporation Limited for the inauguration of BSX-WSB 2016.



Over 3,875 people, a confluence of decision makers, professionals, consultants, representatives from ISRO Centres and students from the renowned Space Institutes of the country attended the event. The event showcased a wide range of innovations, solutions and technologies by Indian Space Industry, alongside those from overseas facilitating a platform for discussing various ongoing projects / future projects and partnerships. The event also highlighted the fact of enhancing the role of private sector in the space missions. Overseas delegations from Australia, Canada, France, Germany, Hong Kong, Japan, Malaysia, Singapore, Thailand, Ukraine, and USA attended BSX 2016 and conducted successful business meetings.

During the three days, the event generated a number of business enquiries, in addition to expression of interest in joint working by visiting delegations. While BSX 2016 provided a defined platform to students for networking and showcasing their innovations; it also provided a unique opportunity to interact with senior personnel of ISRO on their role and future in the Indian Space Industry.

Number of events for engaging the industry were also organized during the event and received an overwhelming response. The events primarily focused on enhancing the partnership between industry, start ups and ISRO Centres.







The B2B Session on Small Satellite Manufacturing highlighted the importance of industry support for Indian Space Programme. It was shared that there is a growing load on small satellites and how it is a business opportunity for Indian Industry who can initially meet Indian requirements and scale up to deliver for global small satellite programmes. ISRO officials mentioned that India has now reached a stage where Small Satellites can be created by Vendors / Industry with minimal support from ISRO. The session witnessed the attendance of over 100 delegates.

The B2B Session on Composites and Solar Arrays by Antrix Corporation Limited gave perspective on business prospects in the area of composites and on solar arrays with regard to ISRO missions and also on the need to build capability within Indian industry to meet enquiries from overseas space system operators. The ISRO team informed that the solar array requirements are increasing for ISRO missions and the volumes as expected by the industry are large in the future. They further added that ISRO is looking for industry partners who can integrate and offer an end-to-end solution for the solar array realization. The session concluded with the suggestion by industry to form a focused task group between industries and ISRO Centres.

The other events by Antrix – ISRO included User Meets with DTH and Telecom Industry.





The visit of Swiss delegation comprising key people from Swiss Space Center, leading academic institutes in space research and companies facilitated by Swiss Consulate, Bangalore, organised a "Swiss Space Innovation Evening" to connect with Indian Space Research Organisation and business community to identify opportunities and areas of interest for future collaborations.

A Special interaction by Team Indus on Manufacturing of Satellites was also organized to bring together the partners from Space Technology, Satellite Manufacturing, Space Startups and entrepreneurs.

BSX 2016 was also supported by a concurrent three-day International Conference "World Space-Biz" which deliberated on various space-related aspects. The three day Summit was attended by over 595 delegates from India and overseas, representing the space agencies, satellite, navigation, remote sensing and equipment manufacturing companies from 18 countries. A number of technical presentations were made at the Summit, which was addressed by prominent speakers from many countries. The subjects covered were Advances in Satellite Technology – Small Satellites, Unlocking Potential through HTS, GIS and Navigation Enabling and Trends, How the World Will Communicate in 2030. The 'World Space - Biz' provided platform for international and domestic space industry, space agencies, academia and scientific community, vendors and suppliers to discuss and deliberate upon future commercial prospects for international space industry in general and Asian region in particular.





## **GLIMPSE OF THE 1ST SPACE TASK FORCE MEETING ORGANIZED DURING BSX-WSB 2016**

A special task force for the Indian industry with ISRO and Antrix officials to have an exclusive interaction was also organized. The task force is formed to understand the requirements of ISRO / Antrix; to communicate and discuss various procedural issues, challenges faced including R&D, investment for developing new products etc while dealing with space organizations.

A concurrent Business to Business (B2B) meeting was also organized to provide maximum benefits to participants at exhibition and conference. The B2B meetings helped participants and industry to understand the expansion plans and the mission within the Asian Space network while guiding the concentrated path for a better Space future.







The exhibition successfully achieved its aim of developing multi-lateral & bilateral trade relations with the attendance of high-level overseas delegations from over seventeen countries. BSX 2016 spread across five thousand sq mtrs. concluded on the promising note of forming a space conglomerate with participation from Department of Space, ISRO, Antrix and Indian Industries.

With an overwhelming response from both domestic and international participants, the exhibition was hugely successful.



## EXPLORING MULTIPLE OPPORTUNITIES IN INDIAN SPACE SECTOR

The positive mood at BSX 2016 was due to the strong turnout of decision-making buyers and the presence of leading importers. Using proven and innovative marketing strategies, the organisers' strategically increased the reach of the event by addressing the target visitor group extensively.



Confederation of Indian Industry

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