

India-US Geospatial Business Summit

June 2, 2022, Monterey

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Embassy of India
Washington, D.C., USA



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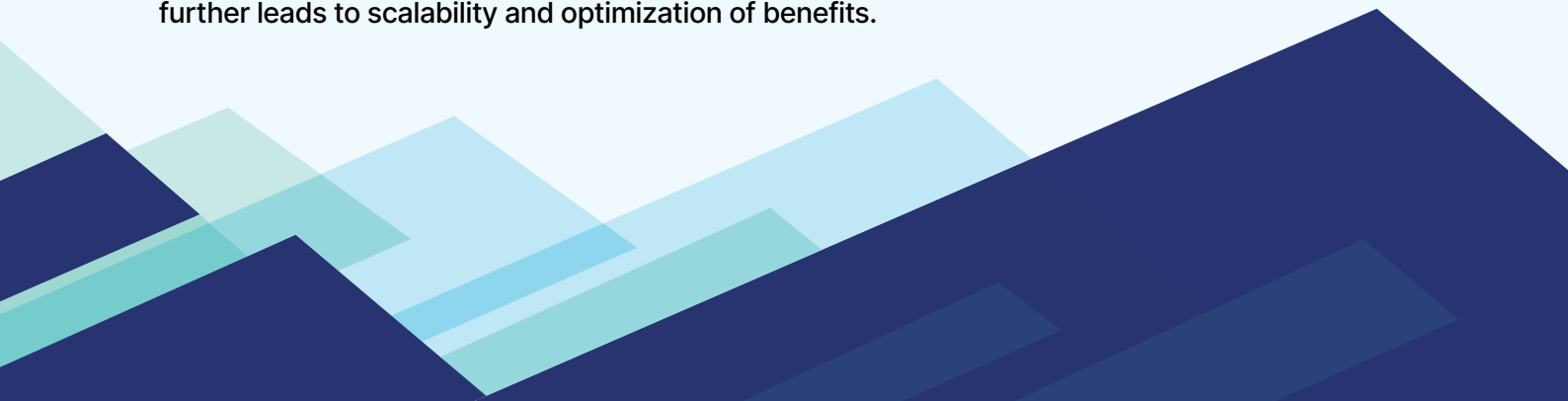
High Level Opening Messages

1. The relationship between India and the United States is growing in the geospatial sector, going from strength to strength over the past few years, ensuing global good. In the geospatial domain United States is top trading partner for India and accounts for 83% of the total USD 1.45 billion geospatial technology and enabled services exports by India globally. And India imports in geospatial technology and products to the tune of approximately USD 350 million dollars from United States. Thus, from a geospatial standpoint – the trade and commerce between the two countries, continues to be strong
2. A strong collaboration exists in civil space between India and the U.S., which is very beneficial and profitable to both countries. Since 2007, the two governments have been engaging in discussions which involve four different working groups, including one on Earth sciences, space exploration, and most recently on human spaceflight.
3. The 10-year-long NASA-ISRO mission, NISAR, is a phenomenal initiative and will revolutionize the civil space Earth Observation industry – including a range of applications across different vertical applications.
4. One of the key aspects of the Quadrilateral Security Dialogue (QSD) or Quad – an informal security alignment of Australia, India, the United States and Japan — is also aimed at sharing satellite data of the countries, using Earth Observation data for sustainable development, and to consult on the norms and guidelines for the long-term sustainability of the space environment. To operate successfully and peacefully, the countries are going to work together, where one objective is to improve public access to Earth Observation data and applications with the intent to create sustainable development.
5. There is a need to find opportunities for the governments and the industry to come together to brainstorm and explore workable business models for furthering business interaction and creating transparent workflows.
6. There is a need for close collaboration between the federal players, and the private/commercial sector in the field of Space Situational Awareness capabilities. The role of the government is in enabling the geospatial enterprise commercially and identify opportunities for public-private partnership to enable an advanced commercial space industry in the U.S. and around the world.

Geospatial Infrastructure and Public Policies Enabling Business Opportunities

1. India and the U.S. face a similar situation with respect to national mapping as both countries have large areas to map. By way of commonalities, the two countries have experienced floods/natural hazards in the past two years. Both countries have a highly educated geospatial workforce that is growing and both also share the common goal of enhancing government services to rural communities and improving transportation infrastructure countrywide. The two have identified geospatial information as a key fundamental information towards national development. A collaboration among the two nations presents opportunity to learn and adapt the best practices from each other and identify opportunities to grow and improve geospatial services by learning and sharing knowledge from each other.
2. Constellations of GNSS systems like GPS (Global Positioning System) and IRNSS (Indian Regional Navigation Satellite System) are a classic example of an infrastructure that enables socioeconomic activities.
3. The Government of India brought out new geospatial guidelines in February 2021 and revised its drone policy in August 2021, with space policies currently being in the works. Together, these policies will provide a significant boost to the geospatial sector in the country. There is a lot of excitement from the commercial geospatial industry, academia and research community, as well as in the national geospatial agency of the country – the Survey of India.
4. The Indian economy is going through a structural change – and there is a need to foster a better economic partnership in the geospatial sector and facilitate ease of doing business, which is critical for economic and business growth.
5. The Ministry of Defence, India, and the National Geospatial Intelligence Agency (NGA), USA, have recently signed BECA, or the Basic Exchange and Cooperation Agreement, which offers framework for data sharing relationships – and identify the protocols by which the U.S. and India can share geospatial data with each other. BECA makes provisions for sharing hydrographic, topographic, aeronautic and geophysical basic data packages that will put the militaries of the two nations on a path to operate together, train together, respond to disasters together and provide mutual safety and security.
6. While discussing partnerships and collaboration between two countries, it is important to discuss the prevailing policies pertaining to cybersecurity, data integrity and privacy. From a critical infrastructure perspective, as well as to develop resilient systems, it is imperative for both countries to identify the common objectives and how these issues can be addressed together.

Technology Transfer and Make in India: Opportunities and Potentials

1. Technology transfer is an economic activity. Successful technology transfer is possible through strong partnerships and collaborations between the parent company and the subsidiary (which may also be locally owned) and the user stakeholders (including national geospatial agencies, ministries, etc.) – defined by mutual investments and mutual benefits. One of the important know-hows of technology transfer is to share and transferring the knowledge of building technology in a cost-effective manner
 2. To take forward the strategic alliance between the companies of India and those of the U.S., it is imperative for each partner to know that they have something critical to offer which can define the framework and help in ease of doing business and establish a better working relationship. Technology transfer within the Indian sub-continent is beneficial for its cost effectiveness which further leads to scalability and optimization of benefits.
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3. Key aspects of technology transfer are meshing the two cultures to fit processes and workflows easily. This requires consideration of each other's cultures with respect to working styles, including transferring and training people across nations to create awareness and understanding of varied cultural processes and develop a distributed workflow.
4. Most large technology companies still operate on the traditional model, and they must take into consideration the Intellectual Property (IP) aspects of technology transfer, specifically because there are complexities associated with it which go beyond the work environment. Government policies have a critical role to play here to establish frameworks which consider IP transfer and address complex issues. It is, therefore, important for governments to align their strategies with those of the business working environment to enable fruitful technology transfer protocols.

Conclusions and Recommendations

1. Political relationship and alignment provide direction to bilateral agreements and strategic business cooperation. Given the strategic role of geospatial infrastructure and services in national security and development, it is highly recommended that political and administrative mechanisms of the two countries provide leadership to strengthen commercial and business partnerships between the two countries.
2. The relationship between India and the U.S. is gaining strength by leaps and bounds, especially in strategic sectors like defense, manufacturing, information technology, climate change and energy. The space and geospatial sectors are emerging as an important boosters that are capacitating the transformation of a New India and offer great potential for strategic engagement with the U.S. Given the growth potential of the Indian space and geospatial industries, it is suggested that facilitation of greater investments and establishment of joint ventures for manufacturing plants for hardware and software products.
3. India is one of the largest hubs of geospatial services and has enormous capacities to deliver low-cost and high-quality geospatial services. Given the fact that geospatial services market is likely to grow at an increasing rate, powering the entire digital ecosystem, it is suggested to advance business opportunities between the two countries.
4. India has the potential to become a geospatial hub in the Indo-Pacific region, particularly so given the strategic partnership between India and the U.S. with regards to the region. It is suggested that the geospatial industry in India be empowered and supported in its mission to serve and enable geospatial adoption in the Indo-Pacific region including Philippines, Malaysia, Indonesia, Vietnam and Thailand to name a few.
5. Though the geospatial sector has tremendous growth potential worldwide and offers unique opportunities for greater collaboration between the U.S. and India, it needs to be nurtured and matured through qualitative engagement of stakeholders of the two countries. There is greater recognition of the need to socialize, conceptualize and operationalize commercial and business partnerships through leveraging the political alignment and commonalities of development goals of the two countries. Given the exclusive and niche nature of the geospatial industry, it is recommended that a platform for continued facilitation and engagement be developed, that can offer market insight and develop an understanding of technology innovation and its value chain for strategic collaborations between the two countries.

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