

Manifesting an India-Singapore Technology Compact

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Summary

India and Singapore are deepening their partnership in high-technology sectors like semiconductors, space, artificial intelligence and financial technology, reflecting an alignment of strategic interests and complementary strengths. Progress could result in both countries positioning themselves at the forefront of Asia's digital transformation.

India and Singapore have a strong foundation for technology cooperation but there is significant scope to deepen and broaden it. Their complementarities – India's scale, talent and digital infrastructure, and Singapore's capital, regulatory sophistication and role as a global technology hub – can be harnessed in four key issues: semiconductors, space, artificial intelligence (AI) and financial technology (FinTech).

This introductory brief and four subsequent briefs on these four issues that reflect the discussions at the *2025 India Singapore Futures Forum* elucidate how and where technology cooperation can occur. India-Singapore technology cooperation can move from transactional exchanges to structural partnerships – integrating ecosystems, co-developing standards and positioning themselves as trusted 'middle powers' in global technology governance and supply chains.

At the heart of this collaboration are semiconductors – the essential components that power everything from smartphones to satellites. Both countries aim to build resilient supply chains around semiconductors. In September 2024, the two governments signed an India-Singapore Semiconductor Ecosystem Partnership. This memorandum of understanding aims to support India's fast-growing semiconductor industry while giving companies from Singapore an entry into India's rapidly expanding market. Semiconductors are a strategic asset because they underpin modern economic, scientific and military capabilities. By pooling resources, the two countries hope to build more resilient supply chains and position themselves as key players in the global chip economy. India's Semiconductor Mission seeks to build a full-stack ecosystem, while Singapore has a well-established semiconductor industry. Cooperation can expand in market size, design and joint ecosystem development.

Space is another frontier where collaboration is accelerating into commercially viable ventures. The emergence of 'New Space' has shifted the focus from large government-led projects to commercially viable, privately funded ventures. Singapore's space regulator – the Office for Space Technology and Industry – is negotiating a partnership with India's IN-SPACe that moves beyond research and development to joint commercialisation, particularly in Earth-observation applications through initiatives like Singapore's Earth Observation Initiative such that the collaboration could address real-world problems. India has liberalised its space industry and attracted startups, while Singapore focuses on niche satellite technologies. India's space agency has already launched 19 satellites for Singapore,

and Singapore's nascent space sector now boasts around 70 companies employing 2,000 people. This growing commercial ecosystem underscores why a bilateral space partnership could deliver practical benefits in areas ranging from infrastructure monitoring to climate resilience. Future space cooperation can extend to space exploration, environmental mapping, supply chain management and global space governance.

The next pillar of cooperation is AI. Both countries recognise AI's transformative potential. India's IndiaAI Mission and Singapore's AI Singapore programme provide frameworks for cooperation. During the India-Singapore Ministerial Roundtable in August 2024, leaders from both countries highlighted AI's transformative potential and agreed to strengthen joint work on emerging technologies. India's robust digital public-infrastructure ecosystem and large pool of AI-skilled professionals complement Singapore's sophisticated regulatory frameworks and research capabilities. Structured collaboration in research, policy, regulation, innovation and skills development could advance their shared digital-economy goals while setting ethical standards for AI deployment. India's large population offers a testbed for inclusive AI solutions that could be relevant for Singapore. Collaboration opportunities exist in AI talent development, linguistic large language models, applications, and research and development.

In FinTech, cooperation is crucial for a trusted, inclusive and innovation-driven corridor across Asia. India's Unified Payments Interface (UPI) has been linked with Singapore's PayNow, allowing real-time cross-border transfers using mobile numbers or virtual payment addresses. Future cooperation can deepen cross-border payments, establish interoperable digital identity frameworks and promote green finance and investment. The linkage enables seamless fund transfers and represents a major advance in cross-border remittances. Such interoperability capitalises on India's vast digital payments network and Singapore's status as a global financial hub, creating a trusted and inclusive corridor for digital finance across Asia.

Taken together, these partnerships in semiconductors, space, AI and FinTech illustrate how India and Singapore are building a comprehensive technology compact. The critical challenges largely manifest in the form of potential regulatory differences, geopolitical constraints, and lack of financing for joint projects. These constraints do not preclude cooperation but potentially stall it. That said, there exists great potential in combining India's scale, talent and rapidly developing innovation ecosystem with Singapore's sophisticated regulation, capital and global networks for mutual benefit.

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