



GLOBAL TECHNOLOGY SUMMIT

SAMBHAVNA









REPORT 2025

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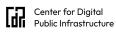




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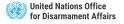












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INTRODUCTION

Carnegie India, in collaboration with the Ministry of External Affairs, Government of India, organized its ninth annual Global Technology Summit (GTS), themed *Sambhavna*—meaning possibilities, from April 10 to 12, 2025.

Despite turbulence in global orders and international orientations alike, this iteration of the Summit focused on finding new "possibilities" and discovering opportunities to initiate reforms for domestic growth.

The Summit brought together leading ministers and other government officials, tech experts, industry leaders, public policy professionals, entrepreneurs, civil society representatives, and scholars from India and abroad to deliberate on key technology policy issues. Discussions focused on digital public infrastructure (DPI), artificial intelligence (AI), data governance, critical and emerging technologies, tech-driven partnerships, and the current state of geopolitics today.

GTS 2025 was designed to explore and debate technologies that will shape the future of India and the world. It featured discussions on and around the fast-changing approaches to the geopolitics of technology, the promise of AI, its intersection with cybersecurity, India's upcoming AI Impact Summit, space technologies, trade & tariffs, different aspects of digital public infrastructure (DPI) including the new DPI marketplace, different DPI adoption journeys in the Global South, and DPI and climate change. The Summit also had various conversations on tech partnerships, including the newly launched TRUST (Transforming the Relationship Utilizing Strategic Technology) initiative between India and the United States, and technology cooperation between India and Europe.

In addition to the public sessions, the Summit also hosted off-the-record, closed-door discussions and workshops on a range of topics, including two Track 1.5 dialogues between India and the United States on AI infrastructure roadmap and active pharmaceutical ingredient (API) supply chains. The other closed-door discussions focused on nuclear cooperation between India

and the U.S., brainstorming for the next AI summit in India, the changing geopolitics today, cybersecurity of critical infrastructure, AI in agriculture, and DPI.

Carnegie India also partnered with the German Marshall Fund (GMF) to host a closed-door India trilateral forum, with senior government officials from India, Europe, and the United States.

The Summit commenced with an inaugural address by S. Jaishankar, the External Affairs Minister of India, followed by an inaugural conversation moderated by Rudra Chaudhuri. Over two days, the Summit witnessed contributions from ninety-eight speakers and 180+ closed door participants from across the world.

Hosted at The Oberoi, New Delhi, the Global Technology Summit (GTS) 2025 achieved remarkable impact and outreach with more than 6,400 registrations, both online and in-person. Over the course of two days, 2,002 people attended the Summit in person, making it the most-attended edition of the GTS to date.

The specially curated website for the Summit, featuring the latest agenda, speaker lineup, and a dedicated resource library, was accessed by more than 248,000 users from over 160 countries in eight languages.

Carnegie India's YouTube channel recorded 96,454 views for GTS 2025-related content, as part of a broader digital outreach strategy. The live broadcast and short videos on *X* received 4,281 views, and Instagram Reels garnered an additional 8,817 views. Total video views across platforms reached 2,746,912. This included 1,551,424 views via *ANI*, 389,433 from other media outlets, 96,454 on Carnegie India's YouTube channel, 66,265 via *The Print*, 3,882 through *AsiaNet*, and 626,356 from video content shared by other outlets on social media.

GTS 2025 successfully connected with a diverse audience online, garnering over 14.3 million impressions across social media platforms and YouTube. Our media and digital partner outlets—Asianet, The Print, and ANI—collectively garnered 592,043 views. The engagement extended well beyond these established channels—Carnegie India's YouTube channel and X handle, along with other platforms, brought the total viewership for GTS 2025 to over 8 million. GTS 2025 received extensive media coverage, with over 1,100 news articles published across regional, national, and global outlets. This included leading publications such as Business Standard, Bloomberg, the Financial Times, The Times of India, the Hindustan Times, the Deccan Herald, and The Tribune, among many others.

In addition to the Ministry of External Affairs, with whom the Summit is co-hosted, the event received support from its philanthropy partner, Tata Trusts, and its summit partners—Meta, Salesforce, Google, Microsoft, Tata Consultancy Services, LinkedIn, Mastercard, IBM, SAP, Qualcomm, and Amazon.

The knowledge partners for the Summit were the Gates Foundation, GMF, Co-Develop, Centre for Digital Public Infrastructure, EkStep Foundation, Centre for Open Societal Systems, United Nations Office for Disarmament Research (UNODA), Premji Invest, and the Centre for Grand Strategy at King's College London.

Building on the success of the GTS Young Ambassadors Program (YAP) from past editions of the GTS, the third cohort included students from premier institutions such as the International Institute of Information Technology, Bangalore; the Centre for Responsible AI, Indian Institute of Technology, Madras; Indraprastha Institute of Information Technology, Delhi; BML Munjal University; Indian School of Business; Kautilya School of Public Policy; Indian School of Public Policy; and the National University of Juridical Sciences. The YAP allowed students access to key debates and discussions on technology policy through public sessions and closed-door discussions. It also allowed the Young Ambassadors access to a wide range of stakeholders, including leading scholars, to discuss aspects of their work and the importance of collaboration in facilitating learning opportunities.

Asianet News served as the Summit's media partner, under which Carnegie India curated a series of four opinion pieces around the theme of the Summit. Each article from the series was translated into six languages—Tamil, Malayalam, Kannada, Bangla, Telugu, and Hindi—and published on Asianet's regional platforms, reaching around 70 million users.



POLICY PATHWAYS

As the summit achieves prominence in global technology and policy debates with its theme Sambhavna, Carnegie India endeavours to continue bringing together diverse stakeholders to shape public dialogue on the future of emerging technologies. Several concrete substantive recommendations emerged from the discussions at this edition of the summit, the most significant of which are the following:

'SAMBHAVNA': THE STATE OF GEOPOLITICS OF TECHNOLOGY

- Close the Policy Gap: The rapid pace of technological evolution is outpacing policy, creating a gap that needs to be addressed through specific, dynamic, and collaborative regulations to protect public interests and manage foreign interference.
- 2. Strategic Focus for India: India should focus on strategic sectors like life-tech, advanced materials, and quantum computing, while prioritizing renewable energy and reintroducing human accountability in AI, to strengthen its position in the global tech landscape.
- 3. *Private Sector's Role in National Security:* The role of the private sector in technology and national security is critical, requiring new, collaborative approaches to partnerships to drive innovation and address emerging challenges.

INDIA-U.S. TRUST INITIATIVE

A Policy Roadmap for Accelerating AI Infrastructure

 Revise AI Diffusion Rules: Participants emphasized that current U.S. export controls under the AI Diffusion Rules constrain AI infrastructure development in India and recommended rationalizing graphic processing unit (GPU) caps and simplifying regulatory processes to align with the goals of the India-U.S. TRUST initiative.

- Strengthen Reliable Power Supply: Reliable, renewable energy access was identified as critical for AI infrastructure, with potential measures including alternative energy sources, improving grid reliability, and securing trusted vendors to enhance energy security.
- Promote Open-Source AI Models: There was strong support for jointly promoting U.S.-origin open-weight AI models to boost AI adoption in India and ensure continued U.S. leadership, while avoiding export controls on these models.

A Resilient Pharma Supply Chain

- Leverage Existing Strengths: India's cost-effective, FDA (U.S. Food and Drug Administration)-compliant API (active pharmaceutical ingredient) manufacturing infrastructure should be a foundation for building a resilient India-U.S. pharmaceutical supply chain, rather than duplicating facilities in the United States.
- Create Market Certainty and Harmonize Regulations:
 Demand forecasting, advanced market commitments, and regulatory alignment between India and the United States are essential to de-risk investments and accelerate production timelines.
- Strengthen Research and Supply Chain Ecosystem: Integrated industrial clusters, strong academia-industry partnerships, streamlined environmental approvals, and mobilized funding to counter predatory pricing are key to countering China's dominance and enhancing pharmaceutical collaboration.

The Future of Nuclear Cooperation

- Regulatory and Structural Reforms Needed: Participants
 emphasized the need to amend India's Civil Liability for
 Nuclear Damage Act (CLNDA) and the Atomic Energy
 Act to align with international norms, facilitate private
 sector involvement, and create a more industry-friendly
 environment for civil nuclear cooperation.
- Gradual Industrial Opening and Capacity Building: It was
 recommended that India should gradually open its civil
 nuclear sector beyond the Department of Atomic Energy
 (DAE) while simultaneously investing in workforce
 development, supply chain reliability, and a strong nuclear
 safety culture to handle an expanded industry.
- Strategic Importance of SMRs and Financing Models:
 Small modular reactors (SMRs) were seen as critical for India's energy and AI goals, requiring uniform technology standards, innovative financing solutions with longer repayment periods, and strong U.S.-India collaboration to lower costs, scale up deployment, and strengthen supply chains.
- THE PROMISE OF ARTIFICIAL INTELLIGENCE
- 1. *Inclusive AI Development:* There is a need to democratize access to AI, ensuring broader participation, reducing bias,

- and making safety tools accessible to promote innovation and fairness in AI systems.
- Global Regulatory Cooperation: Harmonized international AI regulations are essential to avoid a fragmented landscape that could hinder innovation, with frameworks like the EU AI Act and the Hiroshima Code of Conduct as examples.
- Workforce Adaptation and Reskilling: To address potential
 job market disruptions due to Al advancements, proactive
 investment in upskilling and reskilling programs focused on
 augmentable skills is crucial to minimize negative impacts
 on employment.

INDIA'S AI IMPACT SUMMIT

- Inclusive and Developmental Focus: India's AI Summit should prioritize inclusivity by engaging micro, small, and medium enterprises (MSME), regional voices, and Global South countries, while framing AI as a tool for dignity, development, and real-world impact across sectors like health, agriculture, and education.
- Building Sustainable AI Ecosystems: The summit should emphasize workforce development, AI sandboxes, sustainable financing models, and climate-aligned AI solutions to create resilient and scalable AI ecosystems for India and other developing countries.





3. Global Leadership and Continuity: India has a unique opportunity to drive a Global South-centered governance model for AI by learning from previous summits (that have taken place in the UK, South Korea, and France) by advancing voluntary corporate commitments, and setting up an AI Safety Institute rooted in democratic values.

SAFEGUARDING CYBERSECURITY OF CRITICAL INFRASTRUCTURE

- Alternative Models of AI Development: DeepSeek's
 emergence highlights that competitive AI can be developed
 with limited resources, challenging the notion that
 only highly resourced ecosystems can dominate. India
 should therefore focus on expanding domestic compute
 infrastructure and backing high-potential AI startups
 through long-term partnerships, drawing inspiration from
 China's approach of cultivating "national champions" from
 early stages to market success.
- India's AI Imperatives: For India, the focus must shift from merely achieving benchmark performance to building impactful, application-specific AI solutions. Prioritizing innovation, increasing national AI funding, and reducing

- bureaucratic hurdles are critical to fostering sustainable Al growth.
- 3. *Civil-Military Fusion in AI Strategy:* The evolving AI arms race demands greater integration between India's civilian and defense sectors. Breaking down institutional silos will be essential to accelerating AI adoption for strategic applications and strengthen national security.

FUTURE OF DPI

- Multi-Stakeholder Global Framework: Countries should create inclusive forums to develop global principles on cybersecurity cooperation, involving governments, private companies, and academia to address local and international challenges. The UN's Global Digital Compact (GDC) offers a key platform for fostering this collaboration.
- Technology-Neutral Norm Development: Focus on voluntary global norms centered on behaviours rather than specific technologies to ensure cybersecurity frameworks remain adaptable to future technological advancements and uphold human rights.

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3. Technical Standards for Content Authentication:
Collaboration between the public and private sectors is essential to establishing frameworks for marking Al-generated content, such as through watermarks, to distinguish original material in the digital domain.

DEMYSTIFYING DEEPSEEK: THE FUTURE OF AI

- Evolving Cyber Threats and Critical Infrastructure Protection:
 The definition of critical infrastructure must remain flexible and adaptive as threats evolve, with cyberattacks increasingly targeting sectors like data centres, satellites, and undersea cables.
- 2. Need for Stronger National and International Cyber Norms: India should consider establishing a dedicated cyber command, while also contributing to international efforts like the UN norms for responsible state behaviour in cyberspace, to strengthen resilience and deter cyber threats globally.
- 3. Strengthening Public-Private Partnerships and Supply Chains: Greater collaboration between governments, the private sector, and academia is essential for threat detection, response, and building secure, trusted supply chains, along with investments in cyber workforce and resilience-building.

GUARDIANS OF THE GALAXY: SPACE SECURITY NORMS & STRATEGIC PARTNERSHIPS

- 1. Evolving Space Governance Requires Multilateral and Inclusive Norm-Setting: The increasing commercialization and militarization of space demand updated global frameworks that go beyond the outdated Outer Space Treaty. Both India and the EU have emphasized the need for inclusive multilateral dialogues, distinguishing between safety-focused (Vienna) and security-focused (Geneva) tracks, to build consensus on responsible behavior in outer space.
- Public-Private Collaboration is Crucial for Space Situational Awareness (SSA): With the proliferation of satellites and orbital debris, space traffic management is becoming a critical global issue. Indian startups are playing a pivotal role by partnering with government and military agencies, underscoring the importance of integrating private sector innovation into global SSA frameworks.
- 3. Strategic Partnerships Must Align Interests for Long-Term Security: While India and the EU have expressed interest in deepening cooperation, aligning national threat perceptions remains a challenge. Establishing bilateral dialogues,

promoting dual-use technology regulation, and supporting frameworks like anti-satellite (ASAT) testing bans can help ensure that space remains a secure and sustainable domain.

THE FUTURE OF DPI

- Trust and Collaboration are Crucial: Building trust
 within the DPI ecosystem, both among stakeholders
 (governments, private sector, and digital public goods
 (DPG) asset holders) and citizens, is vital for sustainable
 adoption. Trust-building mechanisms, such as third-party
 accreditations and transparency in procurement, should be
 considered to build trust within and across DPI ecosystems.
- Evolving DPI Frameworks Must Focus on Outcomes:
 Conversations around DPI have shifted from technical design to outcome-driven goals like economic growth, welfare enhancement, and climate resilience. A forward-looking, citizen-centric approach is needed, focusing on scalable, shared capabilities to address population-level challenges.
- 3. Private Sector Engagement is Essential for Scalability:
 The private sector's role in DPI development and implementation is important, but effective collaboration with governments is key. Creating clear business cases, aligning incentives, and addressing procurement challenges are critical for scaling DPI solutions.

DPI & CLIMATE CHANGE

- DPI's Versatility Across Policy Areas: Digital infrastructure
 often proves useful beyond its original scope. For instance,
 Brazil's registry, initially aimed at domestic forest oversight,
 now also supports export verification for deforestation-free
 goods to meet EU requirements.
- 2. Alternative Financing Paths Amid Geopolitical Shifts:
 With the United States' exit from the Paris Agreement,
 traditional climate finance faces uncertainty. DPI-based
 solutions offer high-impact, cost-efficient alternatives.
 Investments should focus on shared, interoperable digital
 platforms rather than isolated systems, with public-private
 collaboration essential to accelerating adoption.
- 3. Emerging Use Cases in Climate Response: New DPI applications are emerging, such as repurposing existing government-to-people (G2P) payment systems for rapid climate disaster relief. These tools can enable instant support to affected populations, highlighting DPI's potential for agile and scalable climate resilience solutions.











SAMBHAVNA

DISCUSSION HIGHLIGHTS

Day 1: April 11, 2025

S. Jaishankar on India's Global Tech Strategy

The Summit began with an inaugural address by S. Jaishankar, *India's External Affairs Minister,* who explored the evolving global geopolitical landscape and discussed the theme, Sambhavna, and the possibilities created by this transformation for both India and the world. He emphasized the growing intersection of trade and technology and reflected on how major global powers approach these shifts. The Minister pointed out that the United States has fundamentally altered its global engagement strategy, with technology now at the heart of the "Make America Great Again" initiative, marking a departure from the previous Trump administration's approach. He acknowledged China's technological progress, which, while not as dramatic as the U.S., holds equal significance. Turning to Europe, he highlighted its weakening geopolitical position, affected by tensions across its traditional U.S.-Russia-China triangle. The minister highlighted India's advancements in emerging technologies such as DPI, semiconductors, and space exploration, as well as the growing startup ecosystem. He also addressed key challenges in technology policy, including balancing trade with national security and sovereignty, managing talent flows, competition over energy and natural resources, and the critical role of data.

After his address, the minister engaged in a conversation with Rudra Chaudhuri, director of Carnegie India, where he discussed India's strategic opportunities in the evolving geopolitical landscape, focusing on the potential for leapfrogging through innovative technological approaches rather than following linear development paths. He emphasized India's advantages in talent and data, positioning the country well in a data-driven world. The minister outlined India's growing ties with Western economies, particularly through trade negotiations with the United States, the EU, and the UK, noting these partnerships offer greater growth potential than those with countries to the

east. On nuclear energy, he acknowledged the need to amend liability laws to instill confidence in the international nuclear sector and support India's 100-gigawatt energy target by 2047. He also highlighted India's success in digital technology adoption, with its DPI serving as a model for developing nations. Looking forward, the minister described a multipolar global order, emphasizing the need for judicious technological partnerships to balance sovereignty and strategic necessities, given the long-term implications of tech decisions.

The Future of Technology Partnerships: US-India, EU, and Al Cooperation

This was followed by a panel titled Can Politics Meet Opportunity: The Future of Technology Partnerships, where experts discussed the growing intersection of technology and geopolitics, noting how technology has become central to national power amidst geopolitical tensions. While acknowledging techno-nationalism, there was broad consensus on the strength of the India-U.S. technological partnership, which combines India's resources and scale with the United States' technology and capital, underpinned by shared democratic values. The United States' increasing focus on India, particularly considering China's rise, was emphasized, although a more transactional approach under a potential new Trump administration could push India to meet higher expectations, fostering innovation. The panel also highlighted India's strengthening technological ties with the EU, with the India-EU Trade and Technology Council (TTC) offering opportunities for collaboration in areas like clean tech, biotech, and defense. Experts urged Europe to diversify collaborations, possibly through initiatives like TRUST with India. Key policy recommendations included enhancing India-U.S. defensetechnology cooperation, strengthening the private sector to drive innovation, and charting an independent trajectory for India-EU collaboration. The government's focus on AI aims to drive transformative change across industries, with stable technological partnerships enabling significant breakthroughs.

Nandan Nilekani on Scaling Trustworthy Al

Nandan Nilekani, chairman and co-founder of Infosys and the founding chairman of UIDAI (Aadhaar), delivered a keynote titled AI: A Reality Check. He acknowledged the hype around Al but pointed out that, unlike previous technologies, society now intends to trust AI with decision-making responsibilities typically reserved for humans. This shift has led to heightened scrutiny of AI errors, making large-scale adoption more challenging. Nilekani noted that scaling AI in enterprises is difficult due to the need for accuracy to protect brand value, while public sector implementation faces unique challenges, such as structural constraints, siloed data, and the necessity of maintaining public trust. He highlighted India's unique position to drive AI adoption, thanks to its foundational DPI, including Aadhaar and UPI. Looking ahead, Nilekani emphasized that Al adoption in India would increasingly take place via mobile phones, with interfaces evolving from keypad and touchpad to voice and video. He also stressed the need to focus AI development on enhancing human capabilities and skills by concentrating on narrowly defined use cases and noted







that Al's successful adoption in India would ultimately depend on making solutions affordable at "one rupee per inference."

This keynote was followed by a conversation with Janka Oertel from the European Council on Foreign Relations covering four key themes: India's inclusive digital transformation approach, lessons from DeepSeek, challenges in the Global South, and Al's role in climate action. Nilekani emphasized that inclusive digital transformation depends on providing accessible infrastructure, or "rails," for all market players to innovate. He highlighted the success of India's UPI system, which has created a market value of \$150 billion. Nilekani also discussed China's DeepSeek Al model, which demonstrates the power of frugal innovation despite constraints, and stressed the importance of raw and synthetic data in AI development. He raised concerns about bias, inaccuracy, and exclusion in AI models and addressed the challenges faced by Global South countries, such as informal economies and a lack of educational infrastructure. Nilekani proposed that technology solutions, particularly AI and DPI, could help address these challenges. He also explored how the combination of DPI and AI could accelerate climate action by enabling decentralized, interoperable energy systems, facilitating innovations like peer-to-peer energy trading, electronic vehicle (EV) charging networks, and distributed cloud storage.

- Panel on Can Politics Meet
 Opportunity: The Future of Technology
 Partnerships
- Nandan Nilekani on Scaling Trustworthy AI
- Sunil Kant Munjal on Geopolitics, AI, and India's Role in the Future of Technology
- Panel on 'Sambhavna': The State of Geopolitics of Technology



Sunil Kant Munjal on Geopolitics, Al, and India's Role in the Future of Technology

In his keynote address titled Sambhavna: The State of Geopolitics of Technology, Sunil Kant Munjal, chairman of Hero Enterprise, highlighted India's unique and strategic role at the intersection of global technology and geopolitics. He examined the evolving power dynamics shaping global tech competition and emphasized India's contributions to open-source AI development, despite an investment gap compared to major powers like China and the United States. Citing the telecom revolution and digital innovations such as India Stack and UPI, he pointed to India's potential for technological leapfrogging. Munjal stressed India's position as a trusted, collaborative partner in global value chains, supported by a skilled workforce. He also underscored the divergence in global data governance models and the importance of India's homegrown data protection framework. Calling for robust AI and cybersecurity guardrails, he emphasized that technology must be harnessed across borders for human benefit, not driven by narrow interests. Reflecting on global trade and diplomatic turbulence, including India's measured stance on the Russia-Ukraine conflict, he concluded by urging thoughtful global dialogue to ensure technology becomes a force for inclusion, health, education, and shared prosperity.

Sambhavna on the Geopolitics of Technology and the Global Al Landscape

The panel on 'Sambhavna': The State of Geopolitics of Technology highlighted the opportunities and vulnerabilities of critical technologies in times of geopolitical flux, highlighting key trends such as cybersecurity, trade dynamics, and AI competition. With the unprecedented pace of technological evolution, the rules of competition are being rapidly rewritten, creating a significant gap between technology and policy. While policymakers struggle to create suitable and sustainable regulations, technology remains an arena where public interests and foreign interference are at stake, requiring governments to act in the best interests of their citizens. The panel emphasized

that regulations must be specific, reliable, and dynamic, with trust, inclusion, and impact at the core of the technology-policy convergence. The private sector's role was also underscored, with calls for new approaches to partnerships, as private actors now play a crucial role in driving innovation, solving problems, and ensuring national security.

Tech Bridges and Trust: Advancing India–EU Collaboration Through the TTC

This was followed by a conversation on *Tech Bridges: India-EU* Tech Cooperation that focused on the evolution of the India-EU Trade and Technology Council (TTC). Panelists noted the broadening cooperation between India and the EU across trade, investment, education, and mobility. They highlighted key achievements under the TTC's three working groups—Digital and Strategic Technologies; Green and Clean Energy; and Trade, Investment, and Resilient Supply Chains—including initiatives like startup exchange programs, progress toward aligning EV charging standards, and efforts to strengthen supply chains. While initial successes are promising, panellists emphasized that the future of the TTC will hinge on building deeper trust, fostering structured industry engagement, harmonizing regulations, particularly around emerging technologies like AI, and sustaining implementation momentum. They agreed that high-level political commitment, an agile approach, and active private sector participation will be crucial to realizing the full potential of India-EU technology cooperation and translating it into impactful large-scale outcomes.

Exploring the Impact of DeepSeek on Al Innovation and Geopolitics

The panel titled *Demystifying DeepSeek: The Future of AI* explored the global implications of China's DeepSeek model on AI development. Panelists noted that DeepSeek's success, achieved with relatively modest resources, has been celebrated by regions like Africa, as it proves that competitive AI models can be built with limited budgets, local talent, and constrained





Panel on Demystifying DeepSeek: The Future of AI



Conversation on U.S.-India Technology Cooperation

compute capacity. The discussion underscored the geopolitical dynamics, comparing China's approach of promoting a wide range of AI models through various companies to the U.S. strategy of supporting a handful of well-resourced, closedecosystem players. For India, panelists emphasized that advancing Al innovation requires prioritizing user education, bias mitigation, and application-driven development. They argued that the success of AI systems should be measured by their real-world impact rather than performance on training benchmarks. To fully capitalize on Al's potential, India must prioritize innovation over excessive regulation, overhaul and adequately fund its national AI mission, and dismantle bureaucratic hurdles to technological advancement. The conversation also underscored the strategic importance of AI in defense, calling for deeper civil-military collaboration to foster faster adoption of AI in critical sectors.

From iCET to TRUST: Reimagining the U.S.-India Strategic Tech Partnership

The conversation on *U.S.-India Technology Cooperation* reflected on the evolution of the U.S.-India partnership in strategic technology, spanning from the iCET framework in 2021 to the TRUST initiative in 2025. It highlighted how these partnerships are shaped by concerns over supply chain vulnerabilities, talent flows, and shared anxieties regarding China's technological rise. The speaker also addressed the AI diffusion rules introduced near the end of the Biden administration, which have created hurdles in U.S.-India tech relations. He explained that these rules were mainly intended to prevent China from accessing advanced computing via third-party countries and to address

concerns about subsidized AI infrastructure in the Gulf, rather than to hinder India's AI progress. The discussion also touched on the importance of using trusted vendors in supply chains to mitigate security risks, particularly with models like DeepSeek. The speaker pointed out that open-weight models, such as Meta's Llama, offer a viable alternative to DeepSeek and emphasized that there are no current plans to implement export controls. The conversation concluded with recommendations for future priorities within the TRUST framework, including civil nuclear energy, biopharmaceuticals, AI applications, and defense/space collaboration.

TRUST in Action: Charting the Future of U.S.-India Tech Diplomacy

The panel TRUST: A New Playbook for U.S.-India Strategic Technology Cooperation explored how the recently launched TRUST framework aims to chart a deeper, long-term roadmap for bilateral collaboration across semiconductors, Al, biopharma, and defense innovation. Building on the iCET, TRUST reflects a shared ambition to engage in more complex sectors amidst shifting global supply chains and a multipolar tech landscape. Speakers highlighted early successes like Micron's Gujarat facility while stressing the need for broader ecosystem development, particularly in semiconductors and Al compute infrastructure. Civil nuclear cooperation was flagged as an area requiring bold policymaking, while biopharma discussions focused on advancing from generics to high-value R&D and reducing dependence on Chinese API. Defense tech emerged as a key frontier for co-development. Policy pathways proposed include streamlining non-tariff barriers, strengthening procurement frameworks, investing in scalable R&D, deepening defense collaboration, expanding AI infrastructure, and ensuring AI cooperation remains a two-way exchange by addressing export control concerns.

Amandeep Singh Gill on Global Al Governance & the UN's Digital Compact

In a video message, Amandeep Singh Gill, the United Nations Secretary-General's Envoy on Technology, emphasized the urgent need for a coherent global framework to govern AI, warning against the growing fragmentation of AI strategies that risk deepening global digital divides. Citing the Global Digital Compact as a pivotal milestone, he outlined five guiding principles for Al governance: inclusivity, public interest, responsible data governance, multistakeholder collaboration, and alignment with the UN Charter, international human rights, and the Sustainable Development Goals (SDGs). Recognizing Al as a transformative force shaping access, opportunity, and power, he underscored the dangers of siloed national approaches that may marginalize the Global South. Gill called for a balanced approach that honours national sovereignty while enabling international cooperation and highlighted positive developments such as the creation of an Independent International Scientific Panel on AI and the launch of a Global

Dialogue on AI Governance. He concluded by stressing the importance of building local capacity, empowering regional ecosystems, and ensuring equitable access to data and digital infrastructure to foster sustainable and inclusive AI development.

Piyush Goyal on India's Trade Strategy, China, WTO & FTAs

The Ministerial Conversation between Commerce Minister Piyush Goyal and Janka Oertel focused on India's strategic role in a shifting global trade landscape. Goyal highlighted India's "delta of opportunity"—a fast-growing economy, youthful population, and resilient domestic market—as key assets for global partners. Emphasizing an "India First" approach, he reiterated India's cautious stance toward China, stating that Chinese foreign direct investment (FDI) would remain limited while India prioritizes trusted partnerships with developed economies based on reciprocity and mutual benefit. On global trade architecture, Goyal reaffirmed India's commitment to multilateralism but called for urgent WTO reforms to better protect the interests of genuine developing countries. In bilateral negotiations, especially with the United States and Europe, he advocated for prioritizing national interest over speed. Minister Goyal also criticized Europe's growing inclusion of non-trade issues, such as climate regulations, in trade deals, warning that excessive non-tariff barriers could ultimately undermine Europe's own economic competitiveness.

The Promise of Al: Inclusive Innovation, Global Governance, and Future-Ready Workforces

The panel on *The Promise of Artificial Intelligence* emphasized the critical need for inclusive AI development, advocating for democratized access, international regulatory cooperation, and workforce adaptation. The discussion highlighted the risks of bias in AI systems and concerns regarding sovereign control over advanced AI technologies, alongside the potential disruptions in job markets due to rapid technological breakthroughs. Panelists underscored the importance of democratizing access to AI and providing safety tools to eliminate bias and foster innovation. They also called for appropriate regulatory frameworks that balance human-centric Al development with technological progress, with a particular focus on harmonized regulations across borders. Drawing on examples like the European Union AI Act and the Hiroshima Code of Conduct, panelists recognized the challenges of reconciling global AI diffusion with sovereign control, especially through export controls. The potential for workforce disruption, especially in roles affected by agentic AI, was also discussed, with data predicting significant job losses by 2030. To mitigate this, proactive investment in upskilling and reskilling the workforce was deemed essential. The discussion concluded by emphasizing the three Cs for Al's promise: continuity, clarity of vision, and consensus.















GLOBAL TECHNOLOGY SUMMIT SAMBHAVNA

- 1. Panel on The Promise of Artificial Intelligence
- 2. Panel on AI & Cybersecurity: Opportunities and Risks
- 3. Panel on State of the World

Al and Cybersecurity: Navigating Risks, Safeguarding Nations, and Advancing Innovation

Next, the panel on AI & Cybersecurity: Opportunities and Risks examined how AI is fundamentally altering the cybersecurity landscape, both enhancing security and introducing new challenges. While AI has improved the speed and accuracy of detecting cyber threats, it has also expanded the attack surface, enabling risks like deepfakes, autonomous malware, and Algenerated phishing. Panelists noted that advancements in Al are lowering the technical barriers to cyber terrorism, making it more accessible. The discussion highlighted the tension between national security priorities, such as data localization and critical infrastructure protection, and the need for global collaboration on cybersecurity. Despite geopolitical divides, international cooperation remains possible, as seen in the 2024 UNGA resolution on "Secure, Safe, and Trustworthy" Al, adopted by 120 countries. While voluntary norms may not be as effective as binding regulations, they can still establish standards for responsible state behaviour in cyberspace. The panel recommended developing technology-neutral principles to address emerging cyber threats, rather than creating Alspecific norms. Speakers also emphasized the private sector's crucial role in shaping these norms, drawing on their extensive experience with AI for security. The panel concluded by stressing the importance of resilience, advocating for strategies focused on rapid recovery from cyberattacks rather than solely on prevention.

Geopolitics in Flux: Reimagining Global Order Amid Strategic Realignments

The panel State of the World examined how intensifying geopolitical tensions and shifting power dynamics are reshaping the global order. Panelists emphasized how technological transformation, economic instability, and evolving relations among major powers are driving this change. They highlighted technology's growing role at the intersection of security, economic progress, and societal needs. Major powers like China, Russia, Europe, and the United States are actively restructuring their relationships, reflecting a broader reordering of modern capitalism. Panelists noted that the decline of U.S. soft power has created openings for China to expand its global market reach and political influence. They analyzed the American Indo-Pacific strategy, pointing out its mix of consistency and contradictions, particularly amid the Russia-Ukraine conflict. They described Russia as a "swing state" that is recalibrating its engagements with the U.S. and other powers. The panel also highlighted how the European Union is evolving from primarily an economic actor to a more strategic force. In the Middle East, they emphasized Iran's disruptive role and the urgent need for careful diplomacy to stabilize the region. Throughout the discussion, panelists stressed the rising importance of regional and multilateral partnerships, the role of mini-lateral coalitions like the Quad and BRICS, and the urgent need to reimagine global strategies to meet these evolving challenges.

Day 2: April 12, 2025

Recalibrating Trade: Strategic Responses to Tariffs, Supply Chains, and Tech Sovereignty

The opening panel on Day 2, titled "Tariffied" World: T minus 90, examined the shifting contours of U.S. trade policy, particularly under the Trump administration's use of "reciprocal tariffs" against partners like Mexico, Canada, and China. Panelists questioned the opaque rationale behind these tariffs, noting their inconsistency with multilateral trade norms and lack of clear economic justification. While most tariffs are now paused, those on China remain, underscoring deeper structural tensions between U.S. policy and market realities. China, anticipating such frictions, has responded by leveraging control over minerals and supply chains. Europe, caught in the crosscurrents, may pivot toward deeper trade ties with partners like India. India, meanwhile, has adopted a cautious strategy seeking U.S. market access while safeguarding domestic priorities. The discussion emphasized that countries must tailor their responses based on distinct "pain thresholds": political for the U.S., economic for Europe, strategic for China, and reform-oriented for India. Looking ahead, panelists called for transparent trade policies, lower tariffs to boost Indian exports, WTO reforms, and greater regional cooperation to navigate an increasingly fragmented global trade landscape.

Charting Norms and Partnerships for Secure and Sustainable Space

The next panel, titled Guardians of the Galaxy: Space Security Norms & Strategic Partnerships, examined the evolving landscape of outer space governance amid rising commercialization, militarization, and geopolitical rivalry. Speakers noted that the modern space race is driven less by national prestige and more by commercial ambition, dual-use technologies, and strategic imperatives. The EU presented its five-pillar strategy emphasizing resilience, rapid response, and multilateral rule-setting. India reaffirmed its commitment to multilateralism, recognizing the outdated nature of the Outer Space Treaty and advocating for parallel engagement through the safety (Vienna) and security (Geneva) tracks. India's leadership in long-term sustainability guidelines was highlighted as a key contribution to global consensus-building. The discussion underscored the importance of private players in advancing space situational awareness (SSA) and working alongside government and defense agencies. Given the growing satellite congestion and debris, speakers stressed the urgent need for a global space traffic framework, interoperable protocols, and enhanced international cooperation. While India and the EU expressed mutual interest in collaboration, aligning national interests and regulatory approaches remains a challenge. Nonetheless, shared goals around responsible behaviour, SSA norms, and sustainable infrastructure present opportunities for deeper strategic engagement.

Digital Pathways to Climate Resilience: Lessons from Brazil and India

The conversation on **DPI and Climate Change** examined how DPI can be leveraged to address climate change, focusing on two impactful case studies from key sectors. The panellists acknowledged that the Paris Climate Agreement has fallen short of its goal to limit global warming to 1.5°C above preindustrial levels and emphasized the need for reimagined strategies. In this context, they explored Brazil's Rural Environmental Registry and India's efforts to build a unified digital energy grid. Brazil's system mandates landowners to digitally map their property and forest preservation areas, enabling oversight of environmental pledges, streamlining access to rural credit via verifiable credentials, and fostering carbon markets and payments for environmental services. Meanwhile, India is working toward an integrated digital energy infrastructure to consolidate scattered energy systems amid rapid electrification. Built on the Beckn protocol, this system supports innovative energy use cases like peer-to-peer energy trading and decentralized battery storage. Both initiatives illustrate how DPI can reengineer legacy systems to tackle climate issues more effectively and affordably.

Noureddine Boutayeb on Morocco's DPI Journey

This conversation was followed by a keynote titled *DPI in Action*, which outlined Morocco's strides in modernizing its social aid system through improved beneficiary identification and authentication. Drawing inspiration from India's model, Morocco has embraced digital transformation and emerged as a leader in DPI in Africa. A cornerstone of this effort is the country's digital ID system, which has enrolled 22 million



Panel on Guardians of the Galaxy: Space Security Norms & Strategic Partnerships



Conversation on DPI and Climate Change



citizens and enabled free medical coverage for 11 million people since its national rollout in 2022. The speaker emphasized the importance of strengthening foundational DPIs to make government services increasingly contactless, cashless, and paperless, while promoting the adoption of digital payments and secure data exchange. He highlighted the benefits of the DPG approach for DPI, noting its cost-effectiveness, rapid deployment through interoperable components, and scalability. Looking ahead, Morocco aspires to lead Africa's digital economy by 2030, a goal that, according to the speaker, will depend on committed leadership and expertise in managing transformational change.

Global Perspectives on DPI: Challenges, Innovations, and the Path to Sustainability

The next panel on *DPI in Action* featured representatives from Uganda, Nigeria, Malawi, the Dominican Republic, India, and Morocco, who shared their countries' experiences with implementing DPI and adapting it to local needs. Panelists emphasized that DPI is not just about digitization, but about building inclusive, citizen-centric systems that enhance governance and service delivery. While many countries have made advances in digital identity, payments, and data exchange, they also face challenges such as fragmented systems, lack of interoperability, limited technical capacity, unsustainable funding, and vendor dependence. The discussion highlighted that successful DPI implementation requires strong political will, cross-sectoral collaboration, and regulatory support. Key takeaways included the need for a people-first approach that prioritizes simplicity and accessibility; investment in local capacity-building through education, training, and innovation hubs; and the adoption of open standards and interoperable frameworks to ensure system integration and long-term sustainability.

India's Data Governance Model: Operationalizing the DPDP Act

Following this, the panel on *India's Approach to Data* Governance delved into the anticipated impact of the upcoming Digital Personal Data Protection (DPDP) Rules, which will operationalize the law across sectors. Key issues raised included data retention limits, consent management mechanisms, age-verification requirements, and cross-border data flows. While core banking functions—already governed by stringent regulations—are expected to see minimal disruption, sectors like advertising, marketing, e-commerce, and social media are likely to face significant adjustments, especially regarding user experience, data minimization, and compliance burdens. The draft DPDP Rules have undergone extensive public consultation and are expected to be implemented in phases to allow adequate transition time, particularly for MSMEs and public sector bodies. Importantly, the Rules will institutionalize consent managers as fiduciary intermediaries, building on an account aggregator model. This innovation opens the door to new forms of collective data rights—potentially enabling individuals to aggregate their data for collective bargaining or broader public interest uses—marking a unique feature of India's privacy governance landscape.

DPI: The New Marketplace for Scalable Public-Private Collaboration

The panel *DPI: The New Marketplace* explored the dynamic intersection of public and private sectors in the development and deployment of DPI, emphasizing that DPI should not be viewed solely as government-led systems but as foundational platforms that enable public service delivery and private innovation alike. Panelists underscored the multiple roles the private sector can play—as infrastructure builders, service providers, and innovators—by leveraging DPI to develop new products and services. The discussion highlighted the compatibility between the DPI approach and hyperscale cloud models, sharing core attributes like scalability, interoperability, security, and minimalism. India's DPI model was cited as a pragmatic and adaptable example, aligning publicprivate collaboration with citizen-centric goals and market responsiveness. Key takeaways included the need for early private sector engagement as co-creators and users in DPI design and governance; adoption of flexible partnership models that adjust public involvement based on the DPI layer; and regulatory reforms that reduce entry barriers for private players, encouraging competition and innovation within a robust DPI ecosystem.

S. Krishnan on Shaping India's Al Future and Global Leadership

In his keynote address titled India's AI Summit & the Road Ahead, S. Krishnan, Secretary at the Ministry of Electronics and Information Technology, underscored India's inclusive and pragmatic approach to global Al governance, particularly in the context of the upcoming AI Summit proposed at the Paris Al Summit. Building on India's leadership as chair of the Global Partnership on AI (GPAI) in 2023, he highlighted AI's transformative potential for enhancing productivity, governance, and economic growth, while also acknowledging the need for responsible regulation. The address traced the evolution of past summits—from early concerns around AI safety to a growing emphasis on delivering tangible, positive outcomes—and called for the forthcoming summit to showcase innovation, address foundational challenges such as compute access, affordability, and talent, and support the startup ecosystem. Krishnan also detailed key milestones under India's AI Mission, including the deployment of 15,000 GPUs, 300+ open datasets on the Al Kosh platform, and over 900 applications. Emphasizing India's commitment to integrating AI into its DPI—both at the application and agentic levels—he concluded by advocating for a multi-stakeholder, globally collaborative summit that shares real-world, inclusive AI impact stories.







- Noureddine Boutayeb on Morocco's DPI Journey
- 2. Panel on DPI in Action
- Panel on India's Approach to Data Governance

India's AI Summit Shaping an Impact-Driven Inclusive Agenda

This was followed by a panel on *India's AI Summit: The Road* Ahead that brought together perspectives from policymakers and industry leaders to discuss how the summit can advance responsible, inclusive, and impactful Al innovation. Emphasizing the importance of democratic collaboration, panelists advocated for a regulatory approach that enables Al deployment rather than merely constraining it. Drawing on lessons from past summits in South Korea, the UK, and Paris, the discussion stressed the need to tailor the summit's agenda to India's unique priorities, focusing not on all AI challenges, but on specific impact-driven sectors. French ambassador Henri Verdier noted that innovation alone does not guarantee progress—governance must ensure that AI addresses "existential needs" such as health, agriculture, and education. A central theme was making AI work for the Global South, emphasizing measurable impact over symbolic investment and ensuring African nations and other underrepresented stakeholders are included. The panel highlighted that building state capacity, inclusive governance, and institutional frameworks will be key to shaping an AI future that is both innovative and equitable.

Building a Sustainable AI Ecosystem for Climate and Innovation Impact

The panel on *Powering Al: Sustainable Futures* explored the dual imperative of reducing Al's environmental footprint while leveraging its potential to advance sustainability goals. As the energy demands of AI systems are projected to rise significantly by 2030, panelists stressed the urgency of integrating sustainability into the core of AI development. Innovations such as benchmarking model efficiency and deploying solar-powered, waterless micro data centers were highlighted as promising solutions. The panel also emphasized that sustainability and profitability can go hand-in-hand, with energy-efficient AI models helping reduce operational costs. India's strengths in scale, ethical frameworks, and frugal innovation position it to lead global efforts in sustainable Al. Moreover, panelists showcased the transformative role of Al in climate resilience, from optimizing disaster relief and predictive agriculture to enabling better resource management.

- 4. Panel on DPI: The New Marketplace
- 5. Panel on India's AI Summit: The Road Ahead
- 6. S. Krishnan on Shaping India's AI Future and Global Leadership
- 7. Panel on Powering AI: Sustainable Futures
- 8. Panel 'Sambhavna': Next is What?











They underscored the need for enabling policies that support sustainable infrastructure and incentivize eco-conscious practices across the innovation spectrum, especially for startups and smaller enterprises.

India's Role in a Fragmented Geopolitical Order

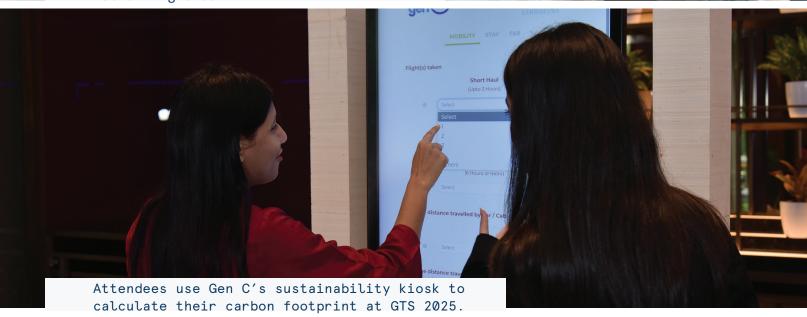
The marquee panel, titled 'Sambhavna': Next is What?, explored the shifting contours of global geopolitics and economic realignments in an era marked by uncertainty and strategic flux. As nations increasingly operate at the "speed of relevance," responding to new trade and tariff regimes, the panel underscored the global drift toward multipolarity, diversification, and regionalism. U.S. tariff actions have accelerated bilateral trade negotiations and reinforced frameworks like the EU and the Quad. Panelists discussed political and technological fragmentation in Asia, the EU's

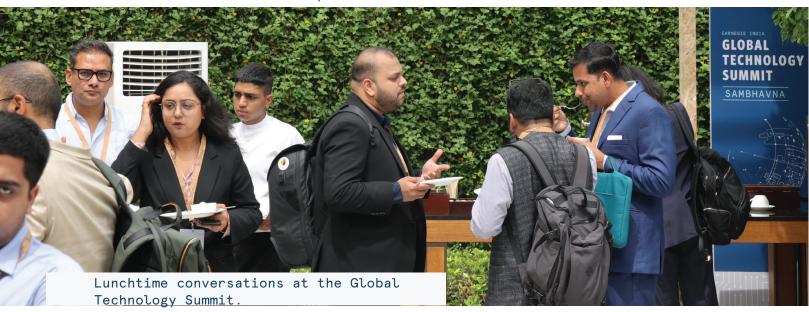
push for self-securitization and de-risking, and the uncertain future of U.S. leadership in providing global public goods. The rise of techno-globalism and counter-China strategies has prompted many countries to reassess their dependencies on China, seeking a more balanced engagement model. Panelists emphasized the urgency of tackling transnational issues such as compliance coercion, market dumping, and climate change, and stressed India's need to invest, adapt, and insulate while driving forward its economic and digital transformation. As a strategic path forward, panelists recommended that India adopt a constructive and proactive stance in bilateral negotiations with like-minded partners, including the U.S., EU, UK, and New Zealand. They suggested fostering an India-China reset through cooperation in manufacturing, technology, and green transitions, and emphasized the importance of closer regional engagement to manage the wide-ranging implications of great power rivalry.





















CLOSED-DOOR DISCUSSIONS

In addition to public sessions, eight closed-door discussions were curated on the sidelines of the GTS:

- 1. A Track 1.5 discussion on U.S.-India Roadmap on Accelerating Al Infrastructure brought together officials from both countries, industry representatives, lawyers, civil society, and experts to brainstorm a policy agenda to accelerate the build out of U.S.-origin AI infrastructure in India by enabling market access, industry partnerships, and investments; unlock constraints in financing, building, powering, and connecting such infrastructure; and support the development of innovative AI models and applications. Overall, there remains a strong commitment on both sides to accelerate Al infrastructure development, adoption, and access. The key to doing so will be to unlock the constraints in relation to power, financing, and regulation. In particular, the AI Diffusion Rules will need to be simplified and rationalized, while retaining core security objectives. Strong support for open-source technologies will also help increase AI adoption. The TRUST initiative provides a strong platform to discuss, review, and resolve these issues and encourages greater partnership between the two sides on Al policy.
- 2. The discussion on *India's AI Summit: From Action to Impact* was organized to identify strategies for ensuring that India's upcoming AI Summit delivers tangible outcomes and sets a distinctive global agenda. Participants emphasized the need for the summit to be inclusive, reflecting India's diversity and amplifying voices from the Global South, with active participation from MSMEs, Tier 2 and 3 cities, and regional stakeholders. The session highlighted five major focus areas: building AI solutions that directly benefit sectors like agriculture, education, and health; creating financing models for sustainable AI innovation; navigating global export control regimes to ensure equitable

- technology access; framing AI governance around dignity, development, and real-world impact; and ensuring continuity with commitments from previous international AI summits. Participants agreed that India has a unique opportunity to craft a socio-technical governance model rooted in democratic values and to position itself as a global leader driving inclusive, developmental, and humancentric AI for the Global South.
- The Advanced Workshop on DPI brought together global policymakers, technologists, and private sector leaders to assess the evolving DPI landscape. The discussion reflected on the rapid maturation of DPI—from India's G20 leadership and the DPI as a packaged solution, or DaaS, model to the emergence of a complex DPI marketplace with diverse actors such as hyperscalers, DPG asset holders, and philanthropies. Participants emphasized that DPI must move beyond technical design to outcome-driven objectives like economic inclusion, climate resilience, and citizen-centric governance. They stressed the need for a trust framework rooted in privacy, security, interoperability, and sustainable financing, while sharing country-specific experiences from Morocco, Malawi, Papua New Guinea, and Brazil. Breakout groups during the discussion tackled structural tensions, financing challenges, legal gaps, open source versus proprietary debates, and the importance of building trust within and across DPI ecosystems. Participants highlighted solutions such as portability standards, third-party accreditations, knowledge-sharing on DPI successes and failures, and senior-level political leadership to drive adoption. A recurring theme was the urgency of fostering a human-centric, inclusive, and collaborative approach to scaling DPI across the globe, anchored in shared risks, positive value exchanges, and sustainable, citizen-first digital ecosystems.







Track 1.5 discussion on U.S.-India API Supply Chains













- The Track 1.5 discussion on U.S.-India API Supply Chains brought together stakeholders from government, industry, philanthropic institutions, and the policy community to explore actionable pathways for long-term collaboration on building API supply chain resilience between India and the United States. As the TRUST initiative progresses and as India and the United States seek to secure pharmaceutical supply chains, efforts must focus on leveraging existing capabilities, aligning regulatory systems, and creating investment-friendly ecosystems. Instead of duplicating manufacturing infrastructure in the United States, both countries should either build on India's cost-effective, FDA-compliant API manufacturing strengths or identify strategic points along the API supply chain where U.S. capabilities can enhance resilience and efficiency. A coordinated approach to demand forecasting and market assurance—through off-take agreements or advanced market commitments—will incentivize sustained supply. Robust academic and industrial R&D collaboration, aided by university partnerships and streamlined regulatory frameworks, will drive innovation. India's regulatory architecture must be modernized for global alignment, including faster clearances and streamlined processes. Finally, collaboration must move beyond APIs to strategically important therapeutic areas like oncology, peptides, diabetes, medical devices such as inhalers, and complex generics.
- 5. The closed-door discussion on *The Future of Civil Nuclear* Cooperation highlighted key challenges and opportunities shaping India's civil nuclear landscape. Participants emphasized that the Civil Liability for Nuclear Damage Act (CLNDA), 2010, remains a major bottleneck to progress, especially Section 17(b), and called for aligning the law with international norms. A gradual opening of the civil nuclear sector—excluding the Department of Atomic Energy (DAE)—was recommended to allow Indian industry to mature. The technical foundation of the civil nuclear deal remains sound, with no need for renegotiation or added non-proliferation commitments. However, capacity building in human resources and safety culture is crucial, especially with the rise of small modular reactors (SMRs), which require streamlined financing and reliable supply chains. Financing challenges for large projects were noted, with calls for innovative credit solutions and extended repayment timelines. The group also stressed the need for uniform SMR designs, distributed generation, and supply chain quality control. Broader strategic drivers—including the role of nuclear power in enabling Al infrastructure, global supply chain positioning, and a desire to correct perceptions about U.S.-India nuclear ties—underscore the urgency for renewed cooperation ahead of high-level

- diplomatic engagements.
- The roundtable on Safeguarding Cybersecurity of Critical Infrastructure brought together cyber ambassadors, government officials, industry leaders, and think tank representatives. The session examined the evolving threat landscape targeting critical information infrastructure (CII), highlighted the varying definitions of CII across countries, and emphasized the need for adaptive strategies amid the emergence of technologies like AI and quantum computing. Participants discussed the urgency for India to establish a cyber command, the application of international law to cyberspace, and the importance of international norms and initiatives such as the UN's Open-Ended Working Group. The conversation also stressed the critical role of public-private partnerships, capacity building, securing supply chains, and building systemic resilience to protect critical infrastructure in an increasingly complex cyber environment.
- 7. The closed-door discussion on *Geopolitics Today: From* your Vantage Point addressed shifting global dynamics, highlighting the decline of U.S. unipolarity, China's rise, and Russia's resurgence. The Indo-Pacific is emerging as the center of economic power, with China's regional influence becoming more attractive as the United States repositions. The discussion noted China's dual role in maintaining its stake in the existing order while also creating alternative institutions that de-emphasize human rights. The shift toward a multipolar world, with elements of bipolarity, signals a decline in the relevance of multilateral institutions. The panel questioned the United States' commitment to strategic burden sharing and the Indo-Pacific, with its focus on Taiwan as a key credibility measure. Europe is urged to reduce reliance on both China and the United States, focusing on strategic defense technologies. For India, the session emphasized the need for reforms to boost its economy, address brain drain, and increase indigenous capabilities in AI and cybersecurity. Strengthening ties with Europe, particularly in capital and technology, was identified as key to India's future growth.
- 8. The workshop on *Unlocking Agritech for the Global South* brought together Agritech industry leaders who shared their experiences, success stories, and challenges in scaling Al systems for agriculture. Participants envisioned a future where millions of farmers could harness Al to boost crop yields, manage labor efficiently, and optimize pricing in open markets. Achieving this vision, they emphasized, requires technology that is deeply aligned with farmers' real-world needs, capacities, and priorities. Solutions must be accurate, context-specific, and accessible in multiple





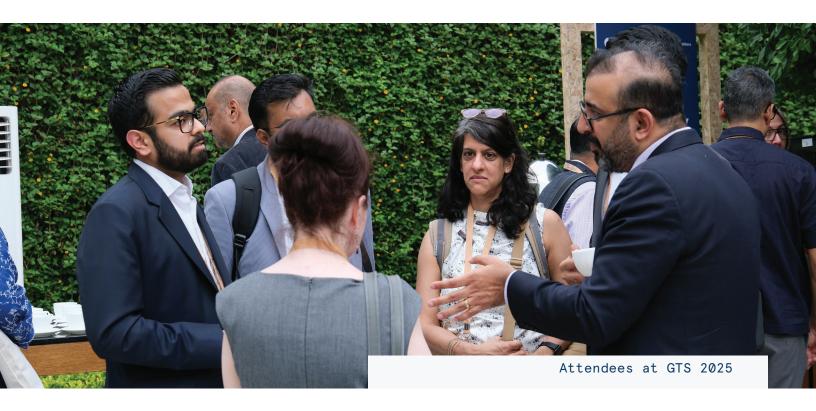




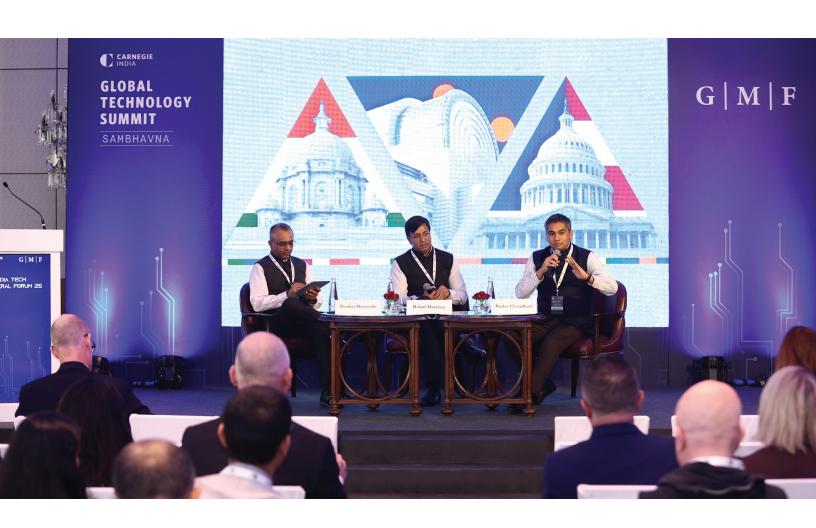




local languages, without adding extra production costs for farmers. This effort would necessitate strong public-private partnerships and widespread digitalization across governments, academia, and industry. Furthermore, robust governance frameworks would be needed to ensure data reliability and trust. Crucially, AI systems would also have to be hyper-localized to account for small but critical variations in soil and climate conditions.









INDIA TECH TRILATERAL FORUM

Carnegie India, in collaboration with the German Marshall Fund, co-hosted an India Tech Trilateral forum on April 9, as a precursor to the GTS. Held in a closed-door, invitation-only setting under Chatham house rules, the forum brought together senior government representatives, think tanks, and companies from the United States, Europe, and India to discuss opportunities for trilateral cooperation on tech; U.S. policy, including competition with China, under the Trump administration; the expansion of cooperation in and beyond the U.S.-EU and EU-India Trade and Technology Councils (TTC).

The India tech trilateral opened with a *keynote conversation with Indian foreign secretary Vikram Misri*, who offered a comprehensive overview of India's evolving foreign policy priorities and its engagement with key global powers amid a rapidly changing geopolitical landscape. He positioned India as a confident and credible actor capable of navigating the current volatility, emphasizing its balanced relationships with major players such as China, Russia, Europe, and the United States. In the India-U.S. context, Misri highlighted deepening cooperation across strategic and emerging technologies—including AI, space, defense, and semiconductors—through frameworks like the iCET and the TRUST initiative.

Despite trade tensions and tariff uncertainties, the bilateral relationship remains forward-leaning, structured by clear timelines and shared interests. On China, Misri acknowledged that while disengagement at the border is complete, normalization is still a work in progress, with trade continuing to grow even amid diplomatic caution and investment restrictions. The India-Europe relationship, marked by high-level visits and robust discussions on trade, investment, and technology, is gaining strategic urgency, with trilateral partnerships and advanced tech cooperation (for example, in Al and 6G) taking center stage. India's economic diplomacy was noted for its agility, as seen in rapid trade negotiations with the United States and strategic positioning in global semiconductor manufacturing. Technologically, India is investing in indigenous Al, especially multilingual large

language models, and positioning itself as an alternative hub for advanced manufacturing. Finally, Misri reaffirmed India's commitment to multilateralism, regional stability, and its leadership within the Quad, underscoring diplomacy and development as central to India's strategic posture in the Indo-Pacific and beyond.

Following the keynote conversation with the Foreign Secretary, the session on *Digital Transformation* explored how India's pioneering model can serve as a blueprint for global digital transformation, particularly in the context of India-EU and India-U.S. partnerships. DPI was framed not as a fixed export but as a modular, interoperable approach to building scalable digital systems that enable efficient public service delivery. The emphasis on reusability allows countries to avoid duplicative efforts while retaining sovereignty over their data and infrastructure—an increasingly important factor amid geopolitical tensions and concerns over foreign tech dependencies.

While India's DPI framework has gained traction globally, especially in the Global South, geopolitical sensitivities persist, with some countries hesitant to adopt what is perceived as the "India model." The European Union, for instance, remains cautious, citing data protection, GDPR compliance, and cloud sovereignty as key concerns, particularly regarding U.S.-controlled infrastructure. Still, DPI's flexibility and citizen-centric design offer a pathway for policy and technology alignment that respects national autonomy. The session highlighted that DPI's strength lies in its techno-legal foundations, embedding governance into code to ensure transparency, accountability, and inclusivity. Long-term success will depend on public-private partnerships, adaptable frameworks, and sustained policy commitment, with DPI positioned not as a geopolitical instrument but as a global public good focused on empowering citizens and solving real-world challenges.

The next session on *Geopolitics Today: The Way Forward* provided a comprehensive overview of evolving global dynam-





ics shaped by U.S. foreign policy and its ripple effects across Europe and Asia. Participants noted that the United States' commerce-first strategy—evident in sweeping tariffs on over 180 countries—is reshaping global economic behaviour, with even allies like Germany struggling to grasp its logic.

While Trump 2.0 appears to emphasize Indo-Pacific partnerships, including active engagement with Japan and India, there remains strategic continuity in defending Taiwan, suggesting a sustained assertive stance against Chinese aggression. However, the continuation of the G2 is seen as unlikely, with the U.S. instead competing assertively with China. In contrast, the United States' approach to Europe is more ambiguous; although NATO commitments were reaffirmed, doubts persist about sustained engagement, especially in Ukraine. Cuts to foreign assistance are eroding U.S. soft power and creating space for rivals.

In West Asia, potential progress was noted on India-Middle East-Europe Corridor (IMEC), with Trump open to re-engagement in the region. Germany, navigating a government transition, remains strategically dependent on U.S. security and economically tied to China, which poses increasing competition. Europe is diversifying its engagements globally and maintains an economic-first approach to China, while defense

needs create new opportunities for India. Sweden emphasized NATO's value and the strategic link between Europe and the Indo-Pacific, pointing to China's reputational decline due to Ukraine. India's approach to the U.S. since late 2024 has focused on aligning on key technologies, adapting to shifting geopolitics, and insulating itself through diversification. However, concerns persist about U.S. export controls, immigration policy, and trade redirection from China. India remains cautious with China, pursuing stabilization amid strategic unease and economic disruption. The India-Russia relationship has not yielded the intended distancing from China, prompting further recalibration. Overall, the session underscored a world in flux, with nations reassessing alignments considering an increasingly transactional U.S. foreign policy.

This was followed by a session on *India-U.S. Technology Partnership*, which underscored the rapid evolution of the India-U.S. strategic technology partnership, with bipartisan momentum marked by the shift from iCET to the forthcoming TRUST initiative under the Trump administration. This signals an intent to institutionalize deeper cooperation beyond diplomacy, especially in critical and emerging technologies. Semiconductors emerged as a flagship sector, with Micron's investment catalyzing broader confidence and driving fab development and ecosystem growth in India.

Defense collaboration is also progressing, with the INDUS-X platform bringing startups from both countries together and the landmark 80 percent technology transfer for GE F-414 engines. In space, opportunities for deeper collaboration were welcomed, particularly with NASA's astronaut training commitment and joint ISS mission, though ITAR compliance remains a barrier for startups. Meanwhile, sectors like AI, quantum computing, and biotech require more structured government-to-government engagement. Amendments to India's nuclear liability regime were seen as a breakthrough for long-stalled civil nuclear cooperation.

On trade, while both sides are pursuing the "Mission-500" goal to double bilateral trade by 2030, challenges persist around market access, regulatory opacity, and the slow pace of export control reform. Structural issues such as India's Russia ties, dominance of state monopolies, and limited privatization in defense and space also constrain deeper integration. Despite this, the Trump administration's transparent and commerce-driven approach has maintained support for the technology partner-ship. Participants emphasized the need for a comprehensive framework agreement, a shift from ad hoc approvals to systemic cooperation, and greater involvement of private and academic actors. Proposals included a joint moonshot space mission, enhanced quantum collaboration, and a new technology agreement on the scale of the civil nuclear deal.

The last session at the India tech trilateral focused on *India-Europe Strategic Partnership*, which highlighted the growing strategic convergence between India and Europe, driven by shared democratic values and mutual interest in a rules-based international order. Participants noted that the partnership has matured from an organic alignment to a systemic collaboration

across interlinked sectors such as clean energy, AI, and digital technologies. With a combined 25 percent of the world's population, both sides are increasingly aligning their definitions of strategic interests and seeking deeper coordination.

A major focus was on the free trade agreement (FTA) negotiations, which, while complex, are politically backed with a goal of conclusion by year-end. Both sides recognized that trade is a growth enabler, particularly when linked to investment, and

emphasized that FTA outcomes should be viewed beyond immediate trade volumes. Technology emerged as a key pillar, with the EU-India Trade and Technology Council (TTC) offering a structured platform for cooperation in semiconductors, AI, pharmaceuticals, and clean tech. Discussions also highlighted the importance of economic security and supply chain resilience, particularly considering the growing global trade tensions and sovereignty-driven policymaking.

The role of African partners in future supply chain strategies and the complex choices Europe faces in reducing dependence on Chinese technology, especially in telecom, were also addressed. Participants stressed that long-term success would require going beyond government-to-government engagement by fostering academic, business, and civil society partnerships, and addressing practical barriers such as talent mobility.

The roundtable concluded with strong momentum for further collaboration in defense, regulatory alignment, education, and potential trilateral initiatives involving Africa. Despite challenges in pace and geopolitical alignment, there was a clear consensus on the critical role of the EU-India relationship in navigating global shifts and seizing shared opportunities.



AGENDA 2025

Day 0: April 9, 2025

Closed-door Discussion: India-U.S.-Europe Trilateral

Day 1: April 10, 2025

Closed-door Discussion: TRUST: Track 1.5 on U.S.-India Roadmap on Accelerating Al Infrastructure

Closed-door Discussion: India's AI Summit: From Action to Impact (Brainstorming Session)

Closed-door Discussion: Advanced Workshop on the Future of DPI

Closed-door Discussion: Track 1.5 on U.S.-India API Supply Chains

Closed-door Discussion: The Future of Civil Nuclear Cooperation

Day 2: April 11, 2025

Closed-door Discussion: Safeguarding Cybersecurity of Critical Infrastructure

Closed-door Discussion: Geopolitics Today: From Your Vantage Point

Day 3: April 12, 2025

Closed-door Workshop: Unlocking Agritech for the Global South

Public Sessions: April 11, 2025

Welcome Remarks

Speaker:

Rudra Chaudhuri, Director, Carnegie India

Inaugural Conversation

Speaker:

S. Jaishankar, External Affairs Minister of India

Moderator:

Rudra Chaudhuri, Director, Carnegie India

Panel: Can Politics Meet Opportunity: The Future of Technology Partnerships

Speakers:

Samir Saran, President, Observer Research Foundation

Nivruti Rai, Managing Director and Chief Executive Officer, Invest India

Ashley J. Tellis, Tata Chair for Strategic Affairs & Senior Fellow, Carnegie Endowment for International Peace

Thorsten Benner, Co-Founder and Director, Global Public Policy Institute

Moderator:

Lindsey W. Ford, Senior Fellow, ORF America

Keynote Address: Al: A Reality Check

Speaker:

Nandan Nilekani, Chairman and Co-founder, Infosys and Founding Chairman, UIDAI (Aadhaar)

Conversation: AI, DPI, The Future of Technology

Speaker:

Nandan Nilekani, Chairman and Co-founder, Infosys and Founding Chairman, UIDAI (Aadhaar)

Moderator:

Janka Oertel, Director, Asia Programme & Senior Policy Fellow, European Council of Foreign Relations

Keynote Address: 'Sambhavna': The State of Geopolitics of Technology

Speaker:

Sunil Kant Munjal, Chairman, Hero Enterprise

Panel: 'Sambhavna': The State of Geopolitics of Technology

Speakers:

Debjani Ghosh, Distinguished Fellow, NITI Aayog

Tarun Chhabra, Former Deputy Assistant to the President and Coordinator for Technology and National Security, National Security Council, U.S.

Brendan Dowling, Ambassador for Cyber Affairs and Critical Technology, Department of Foreign Affairs and Trade, Government of Australia

Jon Simonsson, Senior Director, Prime Minister's Office, Sweden

Antony Cook, Corporate Vice President and Deputy General Counsel, Microsoft

Sabastian Niles, President & Chief Legal Officer, Salesforce

Moderator:

Srinath Raghavan, Nonresident Senior Fellow, Carnegie India

Conversation: Tech Bridges: India-EU Tech Cooperation

Speakers:

Ajay Kumar Sood, Principal Scientific Adviser to the Government of India

Piyush Srivastava, Additional Secretary, Europe (West), Ministry of External Affairs, India

Moderator:

Garima Mohan, Senior Fellow, Indo-Pacific Program, German Marshall Fund of the United States

Panel: Demystifying Deepseek: The Future of AI

Speakers:

Mihir Goyal, Machine Learning Engineer, Wadhwani Al

Amith Singhee, Director, IBM Research India & Chief Technology Officer, IBM India & South Asia

Shikoh Gitau, Chief Executive Officer, Qhala

Raj Shukla, Member, Union Public Service Commission

Arvind Gupta, Director, Vivekananda International Foundation

Moderator:

Vrinda Kapoor, Chief Executive Officer, 3rditech

Conversation: U.S-India Technology Cooperation: Take Stock

Speaker:

Tarun Chhabra, Former Deputy Assistant to the President and Coordinator for Technology and National Security, National Security Council, U.S.

Moderator:

Rudra Chaudhuri, Director, Carnegie India

Panel: TRUST: A New Playbook for U.S.-India Strategic Technology Cooperation

Speakers:

Sushil Pal, Joint Secretary, Ministry of Electronics and Information Technology, Government of India

Ashley Tellis, Tata Chair for Strategic Affairs & Senior Fellow, Carnegie Endowment for International Peace

Siddharth Mittal, Chief Executive Officer and Managing Director, Biocon

Rob Sherman, Vice President, Policy & Deputy Chief Privacy Officer, Meta

John Neuffer, President and Chief Executive Officer, Semiconductor Industry Association

Indrani Bagchi, Chief Executive Officer, Ananta Centre

Moderator:

Rudra Chaudhuri, Director, Carnegie India

Ministerial Conversation

Speaker:

Piyush Goyal, Minister of Commerce and Industry, Government of India

Moderator:

Janka Oertel, Director, Asia Programme & Senior Policy Fellow, European Council of Foreign Relations

Video Message

Speaker:

Amandeep Singh Gill, United Nations Secretary-General's Envoy on Technology

Panel: The Promise of Artificial Intelligence

Speakers:

Abhishek Singh, Additional Secretary, Ministry of Electronics and Information Technology, Government of India

Stefan Schnorr, State Secretary, Federal Ministry for Digital and Transport, Germany

Sabastian Niles, President & Chief Legal Officer, Salesforce

Sandeep Aurora, Group Director & Head, Public Policy & Government Affairs, Microsoft

Aditi Jha, Board Director & Country Head, Legal and Government Affairs, LinkedIn India

Rohit Chauhan, Head, Corporate Affairs, Tata Consultancy Services

Shalini Kapoor, Volunteer, Ekstep Foundation & Author, Al for You

Moderator:

Amlan Mohanty, Non-resident Research Fellow, Carnegie India

Panel: AI & Cybersecurity: Opportunities and Risks

Speakers:

Katherine Prizeman, Political Affairs Officer, United Nations Office for Disarmament Affairs

Maria Adebahr, Director for Cyber Foreign and Security Policy, Federal Foreign Office, Germany

Ernst Noorman, Ambassador at Large for Cyber Affairs, Ministry of Foreign Affairs, Netherlands

Heli Tiirmaa-Klaar, Chair of IT Coalition, UDCG Ramstein & Visiting Distinguished Fellow, German Marshall Fund of the United States

M. U. Nair, National Cybersecurity Coordinator, Government of India

Yatin Katyal, Vice President, Data Scientist AI Products, Mastercard

Sachin Kakkar, India Site Lead, Privacy, Safety, Security, Google

Moderator:

Jyotsna Jayaram, Partner, Trilegal

Panel: State of the World

Speakers:

D. B. Venkatesh Varma, Distinguished Fellow, Vivekananda International Foundation

Lisa Curtis, Senior Fellow and Director, Indo-Pacific Security Program, Center for New American Security

Thorsten Benner, Co-founder and Director, Global Public Policy Institute

Bonnie S. Glaser, Managing Director, Indo-Pacific Program, German Marshall Fund of the United States

Gaddam Dharmendra, Nonresident Senior Fellow, Carnegie India

Hervé Delphin, Ambassador of the European Union to India and Bhutan

Moderator:

C. Raja Mohan, Advisor, Council for Strategic and Defense Research

Public Sessions: April 12, 2025

Welcome Remarks

Panel: "Tariffied" World: T minus 90

Speakers:

Ashley J. Tellis, Tata Chair for Strategic Affairs & Senior Fellow, Carnegie Endowment for International Peace

Björn Conrad, CEO and Co-founder, Sinolytics

Evan A. Feigenbaum, Vice President for Studies, Carnegie Endowment for International Peace

Rosa Balfour, Director, Carnegie Europe

Shruti Rajagopalan, Senior Research Fellow, Mercatus Center

Moderator:

Arun K. Singh, Nonresident Senior Fellow, Carnegie India

Panel: Guardians of Galaxy: Space Security Norms and Partnerships

Speakers:

Marjolijn van Deelen, Special Envoy for Space, European External Action Service

Anupam Ray, Ambassador and Permanent Representative of India to the Conference of Disarmament

Dipti Mohil Chawla, Additional Secretary, Ministry of Defence, Government of India

Anirudh Sharma, Chief Executive Officer, Digantara

Moderator:

Konark Bhandari, Fellow, Technology & Society Program, Carnegie India

Conversation: DPI and Climate Change

Speakers:

Guilherme Alberto Almeida de Almeida, Program Director, Ministry of Management and Innovation in Public Services, Brazil

Sujith Nair, Chief Executive Officer and Co-founder, Foundation for Interoperability in Digital Economy

Moderator:

Rahul Matthan, Partner, Trilegal

Talk: DPI in Action

Speaker:

Noureddine Boutayeb, President, Moroccan Foundation for the Promotion of PreSchool Education

Panel: DPI in Action

Speakers:

Anish Kumar, Advisor (DPA-III), Ministry of External Affairs, Government of India

Isaac E. Vázquez Montilla, Director of Public Innovation, Ministry of Public Administration, Dominican Republic

Gertrude Kadumbo, Chief Executive Officer and Board Secretary, National Switch Limited, Malawi

Rosemary Kisembo, Chief Executive Officer, National Identification and Registration Authority, Uganda

Faruk Yusuf Yabo, Permanent Secretary, Ministry of Communication, Innovation, and Digital Economy, Nigeria

Noureddine Boutayeb, President, Moroccan Foundation for the Promotion of PreSchool Education

Moderator:

Shankar Maruwada, Chief Executive Officer and Co-founder, Ekstep

Panel: India's Approach to Data Governance

Speakers:

Bhuvnesh Kumar, Additional Secretary, Ministry of Electronics and Information Technology

Sunil Abraham, Public Policy Director, Data Economy and Emerging Tech, Meta India

Astha Kapoor, Co-founder, Aapti Institute

Aman Jain, Director, Public Policy, Amazon

Saranya Gopinath, Head, Policy & Ecosystem Partnerships, Razorpay

Moderator:

Rahul Matthan, Partner, Trilegal

Panel: DPI: The New Marketplace

Speakers:

Sanket Bhondve, Joint Secretary, Ministry of Electronics and Information Technology, Government of India

C. M. Malladi, Global Head, Digital Public Infrastructure & Inclusion programs, Enterprise Digital Products & Platforms Business, Tata Consultancy Services

Rohini Srivathsa, Chief Technology Officer, Microsoft India and South Asia

Heba Shams, Vice President, Global Public Policy Inclusive Fintech and International Development, Mastercard

Vyjayanti Desai, Practice Manager, Digital Development Global Practice in South Asia, World Bank Group

Moderator:

C. V. Madhukar, Chief Executive Officer, Co-Develop

Keynote Address by S. Krishnan

Speaker:

S. Krishnan, Secretary, Ministry of Electronics and Information Technology, Government of India

Panel: India's AI Summit: The Road Ahead

Speakers:

S. Krishnan, Secretary, Ministry of Electronics and Information Technology, Government of India

Sunil Abraham, Public Policy Director, Data Economy and Emerging Tech, Meta India

Henri Verdier, French Ambassador for Digital Affairs

Nitarshan Rajkumar, Vice-Chair, EU's General-Purpose AI Code of Practice

Moderator:

Shalini Kapoor, Volunteer, Ekstep Foundation & Author, Al for You

Panel: Powering AI: Sustainable Futures

Speakers:

Urmi Tat, Manager, Public Policy and Government Affairs, Salesforce, India

Bikas Kumar Singh, Vice President & India Head, Government Affairs, SAP

Mahaveer Singhvi, Joint Secretary (NEST), Ministry of External Affairs, Government of India

Srinivas Varadarajan, Chief Executive Officer, Vigyanlabs

Moderator:

Shruti Sharma, Fellow, Technology & Society Program, Carnegie India

Marquee panel: 'Sambhavna': Next is What?

Speakers:

Philipp Ackermann, German Ambassador to India and Bhutan

Philip Green, Australia's High Commissioner to India

Evan Feigenbaum, Vice President for Studies, Carnegie Endowment for International Peace

Ashok Malik, Partner, The Asia Group

Rosa Balfour, Director, Carnegie Europe

Tanvi Madan, Senior Fellow, Centre for Asia Policy Studies in the Foreign Policy Program, Brookings Institution

Moderator:

James Crabtree, Distinguished Visiting Fellow, European Council on Foreign Relations

Concluding Remarks





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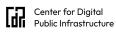




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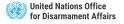












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