

Global Technology Summit
The Geopolitics of Technology
November 29 to December 1, 2022

Draft Agenda

*All timings are to be confirmed

Day 1: November 29, 2022

Sub-theme: India's Digital Way: The Road to G20

08:00-09:30 Closed-door Discussion: Aligning Principles for Cross-border Payment Systems: India's Road to G20

The current geopolitical climate has shown the importance of a country having a strong, independent, and sovereign real-time digital payment systems. In addition to being the driver of financial inclusion, the strength and efficacy of these real-time payment systems will also determine their interoperability with other payment systems.

- *What are some of the high-level principles or best practices that should be followed while building these payment systems?*
- *How can these principles or practices promote or facilitate interoperability between different payment systems?*
- *What role can India play in helping other countries develop their own payment systems?*

09:45-10:00 Welcome Remarks

Speaker: Rudra Chaudhuri, Director, Carnegie India

10:00-10:10 Inaugural Address

Speaker: S. Jaishankar, External Affairs Minister of India

10:10-10:45 Inaugural Conversation: 'Geo-digital' and its Effects

Speakers: S. Jaishankar, External Affairs Minister of India

Moderator: C. Raja Mohan, Senior Fellow, Asia Society Policy Institute

10:45-11:00 Keynote

Speaker: Rajeev Chandrasekhar, Minister of State for Electronics and Information Technology and Skill Development and Entrepreneurship of India (TBC)

11:00-11:15 In Conversation with

Speaker: Rajeev Chandrasekhar, Minister of State for Electronics and Information Technology and Skill Development and Entrepreneurship of India (TBC)

Moderator: Rudra Chaudhuri, Director, Carnegie India

11:15-11:20 Video Message

Speaker: Melinda French Gates, Co-chair and Trustee, Bill and Melinda Gates Foundation

11:20-11:30 Ministerial Address

Speaker: Isa Ali Ibrahim Pantami, Minister of Communications and Digital Economy, Federal Republic of Nigeria

11:30-11:40 Keynote

Speaker: Amitabh Kant, India's G20 Sherpa

11:40-12:10 Conversation: India's Digital Way: The Road to G20 and Beyond

Speakers: Isa Ali Ibrahim Pantami, Minister of Communications and Digital Economy, Federal Republic of Nigeria

Sunil Mittal, Founder & Chairman, Bharti Enterprises (TBC)

Amitabh Kant, India's G20 Sherpa

Nivruti Rai, Country Head, Intel India & Vice President, Intel Foundry Services, Intel Corporation

Moderator: Sachin Chaturvedi, Director General, Research and Information System for Developing Countries (TBC)

12:10-12:20 Video Message

Speaker: Nandan Nilekani, Non-executive Chairperson, Infosys

**12:20-13:15 Panel: Digital Identities: Foundational Architectures for a Digital Society
*The Road to G20***

Most countries are slowly developing digital identity solutions to provide access to basic public services and facilitate administrative processes. In addition to building national identity systems, both government and industry players across the world are gearing toward developing open-source ID solutions to accelerate digital ID implementation to ensure people have access to valid credentials and public services. Despite the expected benefits of using digital IDs for inclusive development, certain concerns around data privacy and safety still exist.

- *Since most digital identity solutions rely on biometric authentication, what legal standards can be implemented to create trustworthy digital infrastructures?*
- *What shared standards and practices can be developed globally to ensure cross-border acceptability of digital identities which can in turn facilitate trade and promote regional or global integration?*

Speakers: Saurabh Garg, Chief Executive Officer, Unique Identification Authority of India

Vyjayanti T Desai, Practice Manager, Identification for Development & Digitizing Government to Persons Payment, The World Bank

Assane Gueye, Assistant Teaching Professor, Carnegie Mellon University Africa & Co-Director, Cylab-Africa

Carsten Maple, Turing Fellow, The Alan Turing Institute

Dushni Weerakoon, Executive Director, Institute of Policy Studies of Sri Lanka

Moderator: CV Madhukar, Chief Executive Officer, Co-Develop

13:15-14:00 Lunch

14:00-14:10 Ministerial Address

Speaker: Nirmala Sitharaman, Minister of Finance and Corporate Affairs of India (TBC)

**14:10-15:05 Panel: A Connected World: Aligning Principles for Cross-border Payments
*The Road to G20***

Several inclusive real-time payment system models have been developed around the world, such as India's Unified Payments Interface (UPI), Singapore's PayNow, Brazil's Pix, and Kenya's m-Pesa. While countries are developing their own payment systems, interoperability between these different payment platforms are necessary to facilitate faster, cheaper, safer, and transparent cross-border payments.

- *How can interoperability be achieved between different payment systems that follow differing message formats, communication protocols, and payment processing rules and access regimes?*
- *What role can central banks play in defining the standards needed for interoperability of cross-border payment systems, one of the major objectives of G20 countries?*

Speakers: Ritesh Shukla, Chief Executive Officer, NPCI International Payments Limited
Sopnendu Mohanty, Chief Fintech Officer, Monetary Authority of Singapore
Sherab Jamtsho, Director, Royal Monetary Authority of Bhutan
Juliet Wangui Maina, Senior Manager, Regulatory and Public Policy, m-PESA (virtual)
Representative from WhatsApp (TBC)

Moderator: Priyadarshini D, Associate Fellow, Technology & Society Program, Carnegie India

15:05-15:15 Address

Speaker: Harsh Vardhan Shringla, G20 Chief Coordinator, Government of India

15:15-15:20 Video Message

Speaker: Brad Smith, President, Microsoft (TBC)

**15:20-16:15 Panel: The World We Live In
*The Road to G20***

Collaborating and competing to develop digital public goods, the SWIFT ban against Russian banks, and the role technology companies have played in the Russia-Ukraine crisis, exemplify how technology is both an object and a driver for international cooperation and competition. The decisions of countries and businesses alike to both provide and restrict access to critical technology and systems, based on their global alignments, clearly shape contemporary geopolitics in times of conflict as well as peace.

- *What policy strategies can countries and technology companies develop to navigate this complex environment?*

- *What differential impact will these changing circumstances have on the developed and the developing world?*
- *What can India do during its G20 Presidency, to help shape a new language for technological cooperation?*

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

Keyzom Ngodup Massally, Head of Digital Programming, UNDP Chief Digital Office

Ashok Malik, Partner & Chair (India), The Asia Group (TBC)

Colin Reed, Global Intelligence Manager, Salesforce

Moderator: Samir Saran, President, Observer Research Foundation

16:15-16:25 Coffee Break

16:25-16:35 Keynote

Speaker: R.S. Sharma, Chief Executive Officer, National Health Authority

16:35-17:30 Panel: Digital Health Solutions: Road to Sustainable Healthcare Delivery
The Road to G20

Countries around the world are leveraging digital technologies to create solutions to enable easy access to healthcare services, strengthen disease surveillance to predict future outbreaks, and tackle disinformation campaigns. CoWin in India, CommCare in Jamaica, Surveillance Outbreak Response Management and Analysis System (SORMAS) in Nigeria, and Bisa app in Ghana are some examples of how nations use open-source technologies to facilitate access to healthcare services. Despite the benefits of these digital health solutions, most of them are built by small and agile teams who sometimes lack access to expert resource pool and stable funding.

- *What support can be provided to developers or implementers of digital health solutions to create sustainable health architectures?*
- *What interoperability and technical challenges exist that might restrict cross-border flow of digital health solutions?*

Speakers: R.S. Sharma, Chief Executive Officer, National Health Authority

Pradipta Kundu, Director, Health Mission, e-Gov Foundation

Sean Blaschke, Co-founder and UNICEF Coordinator, Digital Health Centre of Excellence

Venkat Subramanian, Senior Product Manager, Google Research

Srinivas HSD, Head-Health, Tata Trusts

Max Schumann, Project Lead, Digital Innovation in Pandemic Control, German Corporation for International Cooperation

Moderator: Hari Menon, Director, India Country Office, Bill and Melinda Gates Foundation (TBC)

17:30-17:40 Curtain Raiser: Data Empowerment and Protection Architecture (DEPA)

Speaker: Rahul Matthan, Partner, Trilegal

17:40-18:20 Panel: The Next Decade of India Stack
The Road to G20

The India Stack, that came into effect in 2016, is slowly transitioning India toward a presence-less, paperless, and cashless economy. This stack has allowed governments, businesses, startups, and developers to utilize digital infrastructure to facilitate access to public services and enable digital and financial inclusion in India. In addition to improving access to financial services, India stack is also being used to streamline access to healthcare and educational services.

- *Considering the achievements of the India stack in the last decade, what new products such as Data Empowerment and Protection Architecture (DEPA) can be developed to cater to the needs of the aspirational classes in the next decade?*
- *Although a few developing markets already find India's model useful and relevant, how can the India stack be made more attractive for the developed world?*

Speakers: Jawed Ashraf, Ambassador of India to the Republic of France and Principality of Monaco (TBC)

Abhishek Singh, President & Chief Executive Officer, National eGovernance Division, Ministry of Electronics and Information Technology, Government of India

Rahul Matthan, Partner, Trilegal

Sanket Atal, Managing Director, Salesforce India Operation, Site Lead- Technology, Marketing, Product, Salesforce

Arvind Gupta, Head and Co-founder, Digital India Foundation (TBC)

Moderator: Sarayu Natarajan, Founder, Aapti Institute

18:20-18:50 Conversation:

Speaker: Representative from the U.S. Government (TBC)

Representative from Indian government (TBC)

Arun Singh, Former Member, National Security Advisory Board (TBC)

Moderator: Rudra Chaudhuri, Director, Carnegie India

18:50-18:55 Video Message

Speaker: Amandeep Singh Gill, United Nations Chief Envoy on Technology

18:55-19:35 Panel: Digital Public Infrastructure: Building Collaborative Partnerships & Alliances
The Road to G20

The coronavirus pandemic encouraged innovators around the world to develop solutions or digital public goods (DPGs) on top of digital public infrastructure (DPI) to slow disease spread or extend financial help to build an equitable global society. However, multi-stakeholder collaboration among policymakers,

private sector, philanthropy, academia, international organizations, and other donor organizations is necessary to sustain such innovation.

- *What role does each community play in developing new and innovative solutions and what steps can be taken to change the way we work and collaborate across various stakeholders?*
- *How do DPGs improve capabilities of the public and what can be the geopolitical implications if “digital public goods” are not developed collectively?*

Speakers: Liv Marte Nordhaug Co-Lead, Digital Public Goods Alliance

Kathleen McGowan, Senior Director, Policy & Advocacy, Digital Impact Alliance,
United Nations Foundation

Shivnath Thukral, Public Policy Director, India, WhatsApp

Representative from Amazon

Moderator: Aubra Anthony, Senior Fellow, Technology and International Affairs Program, Carnegie Endowment for International Peace (TBC)

**19:35-20:30 Panel: Cyber-resilience: Security of the Internet Infrastructure
The Road to G20**

In 2021, the average number of cyberattacks and data breaches increased by 15.1% from the previous year. With attacks becoming more malicious and frequent, continuous dialogue amongst component makers, software developers, manufacturers, policymakers, and businesses is imperative to develop robust, secure, resilient systems. Business and governments should also implement cyber resilience strategies that provide a consolidated solution which combines cybersecurity program with recovery mechanism to protect against and recover from disruptive cyber incidents.

- *How can the government and private sector work together to create an orchestrated resilience approach which can identify vulnerabilities in the system, detect and respond to a cyber-attack, and recover from a cyber-incident to minimize disruption and ensure digital continuity?*
- *With some countries looking to revise their existing frameworks to embrace a more cyber resilience posture, what core competencies should be developed within the government to recognize key cyber-threats, identify critical systems, and determine the resources required to test capabilities?*

Speakers: Noelle van der waag-Cowling, Lead, Cyber Programme, Security Institute for Governance and Leadership, Stellenbosch University

Manjeet Singh, Joint Secretary (Cyber), National Security Council Secretariat

David van Duren, Director, Global Forum on Cyber Expertise (virtual)

Marcus Bartley Johns, Asia Regional Director, Government Affairs and Public Policy, Microsoft

George Perkovich, Vice President for Studies, Carnegie Endowment for International Peace

Moderator: Nanjira Sambuli, Fellow, Technology and International Affairs Program, Carnegie Endowment for International Peace

20:30-20:35 Closing Remarks

20:35 onwards Dinner

19:30-21:00 Closed-door Discussion: Semiconductors: The Connecting Corridor Between Policy and Investments

The coronavirus pandemic encouraged countries around the world to develop policies to build robust semiconductor supply chains. India, in December 2021, became the first country to conceptualize a holistic semiconductor policy which addresses the design, fabrication, assembly, testing, marking, and packaging of the supply chain. Soon thereafter, Japan enacted a law in to financially support its domestic semiconductor manufacturing. The EU also soon proposed an EU Chips Act in April 2022 to safeguard and enhance Europe's position in the semiconductor supply chain. Recently, the United States also passed the Chips and Science Act that promises federal government funding to relocate semiconductor manufacturing to its shores. This discussion will seek to answer the following questions:

- *How are some of the policies described above to be implemented to achieve their stated objectives? What role can the industry play to support the government to achieve the stated goals?*
- *In September 2021, the Quad countries launched a 'Semiconductor Supply Chain Initiative' to map capacity and bolster supply chain security. How do the new laws passed by India, Japan, United States dovetail with each other? Are they in sync with the larger objective proposed in the Quad Semiconductor Supply Chain Initiative?*
- *Is there a likelihood that as technological decoupling between the US and China accelerates, the global supply chains could be fragmented into different spheres – a Sino-centric order and a US-led bloc?*

Day 2: November 30, 2022

Sub-theme: Navigating Partnerships and Alliances for the Future

08:00-09:30 Closed-door Discussion: Central Bank Digital Currencies: The Future of Global Financial System

Digitalisation of currency may be one of the most consequential developments in the evolution of money. When it comes to central bank digital currencies (CBDC), the past couple of years have seen rapid developments, from mature pilots (for e.g., PBoC and Sveriges Riksbank) to live rollouts (for e.g., Nigerian and Bahamian central banks). Collaborative cross-border CBDC experiments like Project Dunbar and mCBDC Bridge have produced key results. India too has announced the launch of a "digital rupee" by 2023. Interoperability of CBDCs, both domestic and cross-border, security and consumer focus will however be key for successful adoption, promoting innovation, and preventing fragmentation. Against this background:

- *What does domestic and international interoperability mean in the context of CBDCs and other forms of digital payments and currencies?*
- *How can this best be achieved without replicating the inefficiencies of existing systems?*

- *What role can India play to advance the developments and discussions in this space as it takes over the presidency of G20 where efficient, affordable, and accessible cross border payments are a priority?*

09:30-09:35 Opening Remarks

09:35-09:45 Ministerial Address

Speaker: Isa Ali Ibrahim Pantami, Minister of Communications and Digital Economy, Federal Republic of Nigeria

09:45-10:00 Keynote

Speaker: Randhir Thakur, Senior Vice President, and President of Intel Foundry Services

10:00-10:25 Conversation:

Speaker: Randhir Thakur, Senior Vice President, and President of Intel Foundry Services

Moderator: TBD

10:25-11:20 Panel: What's new IN-SPACE?

Space activities in India, until recently, were predominantly carried out by the Indian Space Research Organisation. The Indian government however recently setup the Indian National Space Promotion and Authorization Centre (IN-SPACE) to enable commercialization of space technology and boost investments in the space sector. The Indian private sector has positively responded to the creation of IN-SPACE. Moreover, the range of reforms introduced by the Indian government has also made the field ready for foreign investments.

- *Given the nascent stage of private sector involvement in India in the space sector, what role can IN-SPACE play in bringing the domestic and foreign stakeholders together to promote investment and innovation in the Indian space sector?*
- *IN-SPACE's ultimate objective is to enhance India's share in the global space economy through participation of private players. How is this goal perceived by Indian and foreign companies alike?*

Speakers: Rajeev Jyoti, Director, IN-SPACE Technical (TBC)

T Victor Joseph, Associate Scientific Secretary, Indian Space Research Organisation

Awais Ahmed, Founder and Chief Executive Officer, Pixxel

George Weinmann, Chief Scientist, Blue Origin (TBC)

Rajeswari Pillai Rajagopalan, Director, Centre for Security, Strategy, and Technology, Observer Research Foundation (TBC)

Moderator: Konark Bhandari, Associate Fellow, Technology and Society Program, Carnegie India

11:20-11:30 Ministerial Address

Speaker: V Muraleedharan, Minister of State for External Affairs and Parliamentary Affairs of India

11:30-11:50 Conversation:

Speaker: Nick Clegg, President, Global Affairs, Meta & Former Deputy Prime Minister of the United Kingdom

Moderator: Rudra Chaudhuri, Director, Carnegie India

11:50-12:05 Talk: India as a Startup Nation

Speaker: Mohandas Pai, Co-founder and Chairman, Aarin Capital

12:05-12:45 Panel: Startup 20: An Agenda for G20

Startups worldwide, empowered significantly by technology, are driving economic growth, and addressing global challenges relating to healthcare, climate change, and education, amongst others. While the global startup ecosystem has seen an exponential rise in recent years, both in numbers and value (with over 1000 unicorns globally and over 100 in India), they face the challenge of sustaining their growth responsibly. India, as part of its upcoming G20 presidency, should therefore consider creating an additional G20 engagement group called “Startup 20” which provides startups a platform to discuss common challenges and brainstorm ideas to address them.

- *How can the global startup ecosystem collaborate under the G20 umbrella to address operational challenges for startups, including investments, retention of talent, and skills gap, while adhering to environmental and ethical responsibilities?*
- *How can this engagement group ensure a sustainable influx of talent, capital, and resources to support the global startup ecosystem?*

Speakers: Sean Randolph, Senior Director, Bay Area Council Economic Institute

Mohandas Pai, Co-founder and Chairman, Aarin Capital (TBC)

Representative from Google (TBC)

Jeet V, Chief Executive Officer, MeitY Startup Hub

Deepak Bagla, Managing Director & CEO, Invest India

Moderator: TBD

12:45-13:00 Talk: Ayushman Bharat Digital Mission (ABDM)

Speaker: Kiran Gopal Vaska, Deputy Secretary, National Health Authority

13:00-13:20 Conversation: Healthcare.AI: Disrupting Healthcare for Bharat

The Covid pandemic highlighted the disruptive role that technology can play in ensuring easy access to affordable and quality healthcare. It is imperative for the various players in the healthcare ecosystem to embrace these changes caused by technology as they move toward patient centric digital models.

- *What role can AI/ML and deep tech play in ensuring more personalised, preventative, and predictive healthcare?*
- *How will these technologies enhance productivity in the ecosystem while empowering consumers to access healthcare on a large scale?*

Speaker: Prashant Tandon, Co-founder & Chief Executive Officer, 1MG

Moderator: Kashyap Chanchani, Managing Partner, The Rainmaker Group

13:20-14:30 Lunch & Think Tank Forum

14:30-14:35 Keynote: Contours of Building an EU-India Trade and Technology Council

The European Commission, earlier this year, announced a Trade and Technology Council (TTC) with India to encourage compatible standards to boost technical collaboration and deepen cooperation in trade and security. The council is being envisioned to provide the necessary structure to operationalize political decisions and coordinate technical work to ensure sustainable progress of European and Indian economies.

- *What will the contours of India-EU TTC look like and how will it help with ongoing free trade agreement negotiations?*
- *How will the existing regulatory differences and potential trade barriers impact the success of the TTC?*

Speaker: Margrethe Vestager, Executive Vice-President, European Commission for a Europe Fit for the Digital Age and Co-chair, Trade and Technology Council (virtual)

14:35-15:10 Panel: Technology & Trade: Opportunities and Challenges

Recent advancements in digital technologies have the potential to create novel products and open new markets. Such advancements are changing the composition of trade in services and goods and redefining intellectual property rights in trade. These technological changes are also slowly bringing the developing countries to play a major role in global trade. Acknowledging the rising volume of digital transactions in the economy, several countries, including India, are now updating their foreign trade policies to have a dedicated section for e-commerce.

- *How do new technologies transform international trade, create new opportunities for a more inclusive trading system, and affect international trade costs?*
- *How can international trade cooperation help governments harness digital technologies and seize new trading opportunities for small, medium, and large enterprises?*

Speakers: Representative from Amazon

Anita Prakash, Senior Policy Advisor for International Economic Cooperation, Economic Research Institute for ASEAN and East Asia (TBC)

TBD

TBD

Moderator: Evan Feigenbaum, Vice president for Studies, Carnegie Endowment for International Peace

15:10-15:35 Conversation:

Speaker: Sahil Kini, Co-founder, Setu

Moderator: Michael Nelson, Senior Fellow, Technology & International Affairs Program, Carnegie Endowment for International Peace

15:35-16:30 Panel: Creating Public Infrastructure for an Open Digital Economy: The Indian Experience

Like all markets, markets in the digital economy call for creating public infrastructure that can help reduce transaction costs, bridge information gaps, and foster competition. India is looking to make the most of the digital revolution by developing infrastructure that enables development of digital markets. From the identity platform Aadhaar to the unified payment interface (UPI), to the Open Network for Digital Commerce (ONDC), which seeks to make ecommerce more open, India has taken many initiatives to enable the development of secure and open digital markets with low costs for participants. While these are bold initiatives, they carry some risks in terms of crowding out private initiative, the mechanisms for regulating these initiatives, the economics of developing and maintaining digital public infrastructure, and so on.

- *Considering this, what are the technological, economic, regulatory, and organizational aspects of digital public infrastructure being developed in India?*
- *What are the suitable roles for the government and private sector in the development, operation, and regulation of digital public infrastructure?*

Speakers: T Koshy, Chief Executive Officer, Open Network for Digital Commerce (TBC)
Sharad Sharma, Co-founder, iSPIRT
Rohini Srivathsa, National Technology Officer, Microsoft India

Moderator: Suyash Rai, Deputy Director & Fellow, Carnegie India

16:30-16:40 Coffee Break

16:40-17:10 Conversation: National Quantum Mission

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

Moderator: TBD

17:10-17:30 Talk:

Speaker: Nivruti Rai, Country Head, Intel India

17:30-18:25 Panel: Bridgital USP: Building Unique Semiconductor Partnerships

Semiconductors are the fourth most-traded product after crude oil, refined oil, and cars, and are the backbone of the digital economy. Disruptions in semiconductor supply chains have given rise to a global chorus of calls for self-reliance among countries. India's new semiconductor policy focusing on both chip fabrication and chip design, introduced in December 2021, is also aimed at attracting investment from major global semiconductor firms.

- *Given that the global semiconductor production capacity is still largely concentrated in a few countries, how are attempts to establish new foundries in India being perceived by leading semiconductor fabrication firms themselves?*
- *Has India been able to leverage its considerable workforce in the chip design ecosystem to its advantage? What role can foreign fabless companies play here?*

Speakers: Randhir Thakur, Senior Vice President, and President of Intel Foundry Services

Chris Miller, Assistant Professor, International History, The Fletcher School, Tufts University (virtual)

Jason Hsu, Senior Research Fellow, Ash Center for Democratic Governance and Innovation, Harvard Kennedy School

Anku Jain, Managing Director, India, MediaTek (TBC)

Moderator: Vrinda Kapoor, Co-founder, 3rditech

18:25-18:35 Talk

Speaker: Matt Sheehan, Fellow, Carnegie Endowment for International Peace

18:35-19:30 Panel: Responsible AI: A Strategic Imperative

The economic potential of artificial intelligence (AI) is being widely recognized by policymakers, technologists, academics, and civil society across the world. While AI is being deployed in different sectors such as agriculture, health, and education, ethical dilemmas such as lack of transparency, gender and ethnic bias, threats to privacy, and the danger of mass surveillance are also growing. Recognizing this, the 193 member states at UNESCO adopted the first global standard on the ethics of AI to guide countries that are building legal frameworks to ensure that AI is developed in a responsible manner and is deployed for public good.

- *How can the industry and government work together to draft broad principles that are imperative to responsible management of AI?*
- *Once these principles are developed, how can the government and industry implement them to practice?*

Speakers: Mariano-Florentino Cuellar, President, Carnegie Endowment for International Peace (TBC)

Samantha Hoffman, Senior Analyst, Australian Strategic Policy Institute

Anna Roy, Senior Adviser, NITI Aayog

Sarah Kemp, Vice president, Intel Corporation (TBC)

Moderator: Matt Sheehan, Fellow, Carnegie Endowment for International Peace

19:30-19:35 Closing Remarks

18:30-20:00 Closed-door Discussion: Principles for Digital Health Architectures: India's Road to G20

Global investment and development in digital health architectures have escalated, particularly since the COVID-19-caused pandemic, in order to address current and potential future public health emergencies. For instance, India started the Ayushman Bharat Digital Health Mission (ABDM) to digitize the delivery of healthcare services. Stakeholders in the global healthcare ecosystem are consistently working towards developing digital healthcare tools and solutions that deliver healthcare in a user-friendly, affordable, reliable, and accessible way. This discussion will seek to explore:

- *How are nations leveraging technology to reimagine healthcare delivery in order to reach even the remotest person, particularly in the wake of coronavirus-caused emergencies?*

- *What high-level principles, best practices, or flagship solutions can nations adopt as they build their nation-specific digital health architectures?*
- *As India assumes the G20 presidency, what role can India play to foster progress in the digital health space?*

19:45 onwards Vijay Gokhale's Book Launch & Dinner

Day 3: December 1, 2022

Sub-theme: Fragmentation and Its Effects

08:00-10:00 Closed-door Discussion: Safeguarding Modern Science and Biotechnology Innovation: India's Road to G20

Bioscience and biotechnology advances hold incredible promise for fighting disease, protecting the environment, and promoting economic development. However, these innovations also contribute to the risk of accidental misuse or deliberate abuse with potentially catastrophic consequences. Governments are key to safeguarding the life sciences by providing oversight, but they have struggled to keep pace with rapid technology advances. The scientific community and the private sector have endeavored to be responsible stewards of the tools of bioscience and biotechnology, so they are not exploited by nefarious actors, but critical biosecurity gaps remain. Furthermore, with rapid advances in biology and associated democratization, changes in the bio risk landscape seem to be outpacing current risk reduction approaches. Additionally, there is no existing international entity that has dedicated its primary mission to reducing biotechnology-related risks by upholding biosecurity norms and strengthening best practices for life science research oversight. With India taking the G20 presidency later this year, this meeting seeks to answer the following:

- *Biotechnology is increasingly used by scientists and researchers around the world to develop diagnostics, vaccines, and other medical countermeasures—including in response to the coronavirus pandemic. Considering this, what is the value of bioscience and biotechnology governance in building robust and secure public health systems within G20 countries?*
- *What are the most effective approaches for reducing emerging biological risks associated with advances in technology? Do we need stronger norms? Practical tools and approaches? Considering that there are multiple stakeholders involved throughout the bioscience and biotechnology research and development life cycle, how should they be involved in informing the future of biosecurity governance and oversight?*
- *Although the coronavirus pandemic encouraged countries to review their national biosecurity systems, the issues encompassed by biosecurity with respect to plant, animal, or human health are traditionally handled by different ministries or departments with each drafting its own regulatory framework. Can G20 countries create a new engagement group that brainstorms ideas to bring together experts from different sectors to propose a holistic biosecurity approach that addresses the risks across the three sectors?*

09:00-09:10 Opening Remarks

09:10-09:35 Conversation: G20 Troika: Indonesia, India, and Brazil (virtual only)

Indonesia, India, and Brazil, a group of three developing countries will form the troika of the preceding, current, and succeeding presidencies later this year. Considering the implications of the disruption

caused by the pandemic and thereafter the Russia-Ukraine crisis, Indonesia during its presidency focused on three priority issues including global health architecture, digital transformation, and sustainable energy transition.

- *Recognizing the value of the emerging-world troika, what should be the long-term priorities for both India and Brazil to ensure there is continuity in the agenda, as set by Indonesia?*
- *How have the G20 countries contributed to sustainable development goals so far and how can India and Brazil align their priorities in accelerating sustainable development across the globe?*

Speakers: Amitabh Kant, India's G20 Sherpa (virtual)

Representative from Indonesia (TBC)

Sarquis José Buainain Sarquis, Brazil G20 Sherpa (virtual)

Moderator: Sachin Chaturvedi, Director General, Research and Information System for Developing Countries (TBC)

09:35-09:45 Ministerial Address

Speaker: Ashwini Vaishnav, Minister of Railways, Communications and Electronics & Information Technology, Government of India (TBC)

09:45-09:55 Ministerial Address

Speaker: Josephine Teo, Minister for Communications and Information, Ministry of Communications and Information, Singapore (virtual)

09:55-10:40 Panel: Save the Data: Localization as Democratization?

Speakers: Jayantha Fernando, General Counsel, Information and Communication Technology Agency of Sri Lanka (TBC)

Melinda Claybaugh, Privacy Policy Director, Legislation, Meta

Ralf Sauer, Deputy Head, DG Justice and Consumer's Unit for International Data Flows and Protection, European Commission

Kate Charlet, Director, Data Governance, Google (TBC)

Audrey Plonk, Head of Division, Digital Economy Policy, The Organization of Economic Cooperation and Development (OECD)

Rahul Matthan, Partner, Trilegal

Moderator: Anirudh Burman, Associate Research Director and Fellow, Carnegie India

10:40-10:50 Ministerial Address

Speaker: Sanae Takaichi, Minister of Economic Security of Japan (virtual)

10:50-11:45 Panel: Lessons from the War in Ukraine

Technology in the defence sector has been increasing rapidly for a few years. But the recent Russia-Ukraine crisis is the first conflict that deployed a combination of kinetic and digital weapons to gain supremacy. Rapid advancements in artificial intelligence, facial recognition technology, commercial

satellite imaging, 3D printing, unmanned aerial vehicles made it easier for everyday citizens, private companies, and civilian institutions to become an active part of the crisis. While many of the technologies used by Russia and Ukraine are not entirely new, their deployment in the recent crisis might place emerging tech into the military mainstream.

- *With technology playing an increasing role in military operations, how does one measure the balance of forces in a war?*
- *What international standards or cooperation mechanisms can be developed to ensure technologies are not deployed to cause global instability?*

Speakers: Raj Shukla, Member, Union Public Service Commission

Joshua T. White, Non-resident Fellow, Foreign Policy, Brookings

Lauren Kahn, Research Fellow, Council on Foreign Relations (virtual)

Manpreet Sethi, Distinguished Fellow, Centre for Air Power Studies

Ashley J. Tellis, Tata Chair for Strategic Affairs and Senior Fellow, Carnegie Endowment for International Peace (TBC)

Moderator: Ravi Agrawal, Editor-in-chief, Foreign Policy

11:45-12:15 Conversation: Waste to Wealth

Speaker: Nitin Gadkari, Minister of Road Transport and Highways, Government of India (TBC)

Moderator: Anirudh Suri, Non-resident Scholar, Carnegie India

12:15-13:10 Panel: Promoting Sustainability: Transitioning to a Net-Zero Economy

As countries around the world make efforts to meet their zero-emission targets, investment in green technologies such as wind and solar power, electric mobility, and green hydrogen is slowly gaining traction. In addition to governments pooling in money and resources to transition to greener technologies, a lot of private actors have also announced their net-zero ambitions over the last year.

- *As both governments and companies worldwide pledge to achieve net-zero emissions of greenhouse gases, what would it take to fulfil the ambition?*
- *How can G20 countries coordinate their efforts to spur investments and share knowledge and best practices to create reliable supply chains to support its transition to a net-zero economy?*

Speakers: Sassoon Grigorian, Vice President, Government Affairs & Public Policy, APAC & Japan, Salesforce

Ashutosh Chadha, Group Director and Country Head, Government Affairs and Public Policy, Microsoft

Neeraj Sinha, Senior Adviser (Science & Technology), NITI Aayog

Sandeep Chakravorty, Joint Secretary (Europe West), Ministry of External Affairs, Government of India

Varad Pande, Partner, Omidyar Network India

Sharmila Barathan, President-Corporate Affairs & Policy, General Electric South Asia (TBC)

Moderator: Anirudh Suri, Non-resident Scholar, Carnegie India

13:10-14:00 Lunch

14:00-14:15 Ministerial Address

Speaker: Meenakshi Lekhi, Minister of State for External Affairs and Culture of India

14:15-14:35 Conversation: Building Technologies for a Sustainable Global Food Chain

Food value chains across the world are built at the intersection of quality and yield. The sole determinant of fairness, transparency and traceability of the world's food yield is hinged on the axis of 'quality'. Yet globally, the measurement of quality from farm to fork is more speculative than science.

- *What role can technology play in ensuring a more sustainable global food chain?*
- *What are some of the potential benefits agri-technology could bring for stakeholders in the global food ecosystem?*

Speaker: Taranjeet Singh Bhamra, Founder and Chief Executive Officer, Agnext

Moderator: Kunal Bhardwaj, Partner, The Rainmaker Group

14:35-15:15 Panel: Geopolitics: Diaspora and the Power of Indian Cinema

Speakers: Sumit Seth, Joint Secretary (Policy Planning & Research), Ministry of External Affairs, Government of India (TBC)

Gaurav Gandhi, Vice President, Prime Video

Moderator: Smita Prakash, Director, Asian News International (TBC)

15:15-16:10 Panel: Architecture for Biosafety

Speakers: TBD

Moderator: TBD

16:10-16:25 Ministerial Address

Speaker: Rajkumar Ranjan Singh, Minister of State for External Affairs and Education of India

16:25-16:45 Keynote

Speaker: Rajesh Bansal, Chief Executive Officer, Reserve Bank Innovation Hub

16:45-17:40 Panel: Open-Network Technologies: A Driver of Financial Inclusion

Public and private sector banks across the world are deploying digital technologies to offer financial services for financially underserved and excluded population. Despite the rapid progress in leveraging digital technologies to enable inclusion, more than a billion people remain unbanked, with a large fraction of them being women. To bridge this gap, several countries are building digital public infrastructures that enable delivery of financial services. In India, innovations like Aadhar, UPI, and

account aggregator have changed the way financial services are provided. Moreover, fintech and big tech companies are now competing with banks and other incumbents across a range of markets.

- *How can the Indian financial ecosystem leverage the full potential of its digital public infrastructure to serve its customers better?*
- *Can interoperable solutions and open standard protocols play a role in expanding access to safe and affordable digital financial services to all?*

Speakers: Steven Haley, Director, Market Development and Partnerships, Mojaloop Foundation
Kamya Chandra, Advisor, Digital Financial Inclusion, Ministry of Finance, Government of India (virtual)

Nanjira Sambuli, Fellow, Technology and International Affairs Program, Carnegie Endowment for International Peace

Siddharth Tiwari, Former Chief Representative for Asia and the Pacific, Bank for International Settlements (virtual)

MG Vaidyan, Senior Advisor, Financial Inclusion, Tata Trusts

Moderator: Priyadarshini D, Associate Fellow, Technology & Society Program, Carnegie India

17:40-17:50 Video Message

Speaker: Gina Raimondo, U.S. Secretary of Commerce (TBC)

17:50-18:30 Panel: TBD

Speakers: TBD

Moderator: TBD

18:30-18:50 Conversation: (virtual only)

Speaker: Siddhartha Mukherjee, Assistant Professor of Medicine, Columbia University & Pulitzer Prize Winning Author (TBC)

Moderator: Kiran Mazumdar-Shaw, Chairperson, Biocon (TBC)

18:50-19:00 Concluding Remarks

16:00-17:30 Closed-door Discussion: Principles and Best Practices for Privacy in Digital Architectures

Governments increasingly seek to utilise recent technological developments to deliver basic public services and facilitate administrative processes. The ambition to do so has accelerated after the experience of delivering many such interventions during the Covid-19 pandemic. As countries around the world work towards developing their domestic digital architectures to provide their citizens with services such as legal identities, access to financial systems and welfare programs, and healthcare, a common concern of protecting the personal information of the individual remains. India, for example, is developing a variety of digital public architectures like Aadhar, the Unified Payments Interface, and the Unified Health Interface. At the same time, it has not yet put in place a data privacy framework, though plans to do so are afoot. In this context, this discussion will seek to explore:

- *Are there any commonly agreed upon high-level principles or best practices for ensuring privacy of the individual when they make use of digital architectures?*
- *What are some of the approaches taken or technical solutions that have been developed around the globe to enhance privacy and data protection in digital architectures?*
- *As India takes presidency of the G20, what role can it play in standard setting for privacy in digital architectures?*

19:30 onwards Ashley's Book Launch & Dinner