ANNEXURE 1

G20 FRAMEWORK FOR SYSTEMS OF DIGITAL PUBLIC INFRASTRUCTURE

1. Digital public infrastructure represents a promising approach towards digitalisation, which leverages a whole-of-society approach to provide benefits across sectors. Considering the diverse approaches of G20 members to digital transformation, we recognize that digital public infrastructure is an evolving concept that may not be limited to sets of digital systems with these characteristics and could be tailored to specific country contexts and can be referred to with different terminologies. Under the Indian Presidency's initiative, digital public infrastructure is described as a set of shared digital systems, the key idea behind which is designing minimal digital building blocks that can be used modularly by governments, businesses, academia, and civil society to enable society-wide development. The 'public' in digital public infrastructure can refer to public benefit and access, subject to appropriate governance and oversight by public authorities. We recommend consideration of the following elements in the development and deployment of these systems.

    a. Three components: technology, governance, and community.

    b. Suggested principles for (development and deployment).

2. This voluntary and suggested framework is developed as neutral reference that recognizes that choice of technology and models will be determined by country contexts.

a. THREE COMPONENTS: TECHNOLOGY, GOVERNANCE AND COMMUNITY

3. **Technology:** This comprises digital systems and applications (e.g., software codes, protocols, standards) that are interoperable. These building blocks provide a stand-alone, reusable service or set of services. They can be used flexibly for different use cases and sectors. These can be open source and/or proprietary solutions, as well as a combination of both.

4. **Governance:** Governance is critical in facilitating user adoption at scale by establishing trust. Governance frameworks may include rules of engagement governing stakeholder behaviour, cross-cutting and domain specific norms, laws and policies, and governance embedded into digital technologies (for e.g., privacy enhancing technologies). It provides safeguards, including those that promote respect for human rights and protection of personal data, privacy, and intellectual property, as well as accessible and transparent grievance redressal mechanisms. Governance frameworks may also include accountable institutions for maintaining oversight on its design, deployment, and implementation. It may also seek to ensure long-term funding to ensure sustained and uninterrupted operations.

5. **Community:** Vibrant and inclusive community participation can enable value creation. This also comprises private sector and civil society actors who can collaborate to unleash innovation and unlock value.

6. **SUGGESTED PRINCIPLES [5]: TECHNOLOGY, GOVERNANCE AND COMMUNITY**

   a. **Inclusivity:** Eliminate or reduce economic, technical, or social barriers to enable inclusion, empowerment of end-users, last-mile access, and avoid erroneous algorithmic bias.
   b. **Interoperability:** Enable interoperability by using and building on open standards and specifications with a technology neutral approach, wherever possible, while accounting for appropriate safeguards and keeping in view the legal considerations and technical constraints.
   c. **Modularity and Extensibility:** Extensible approach implies a building block or modular architecture to accommodate changes/modifications without undue disruption.
   d. **Scalability:** Use flexible design to easily accommodate any unexpected increase in demand and / or to meet expansion requirements without changing existing systems.
   e. **Security and Privacy:** Adopt an approach that embeds key privacy enhancing technologies and security features within the core design to ensure individual privacy, data protection, and resilience based on standards offering appropriate levels of protection.
   f. **Collaboration:** Encourage the participation of community actors at different stages of planning, designing, building, and operating to facilitate and promote a culture of openness and collaboration. Enable the development of user-centric solutions and facilitate widespread and sustained adoption and allow innovators to develop new services.
   g. **Governance for Public Benefit, Trust, and Transparency:** Maximise public benefit, trust, and transparency while respecting applicable legal frameworks. This means that laws, regulations, policies, and capabilities should seek to ensure that these systems are safe, secure, trusted and transparently governed, and also promote competition, and inclusion, and adhere to principles of data protection and privacy.
   h. **Grievance redress:** Define accessible and transparent mechanisms for grievance redress, i.e., user touchpoints, processes, responsible entities, with a strong focus on actions for resolution.
   i. **Sustainability:** Ensure sustainability through adequate financing and technological support and enhancements to facilitate uninterrupted operations and seamless user-focused service delivery.
   j. **Human rights**: Adopt an approach that respects human rights at every stage of the planning, designing, building, and operating.

[5] The aim of these Principles is to build upon the advancements in this domain, such as the Principles on Identification for Sustainable Development, the CPMI-IOSCO Principles for Financial Market Infrastructures, UN Principles for Responsible Digital Payments, and the Principles for Digital Development.

k. **Intellectual Property Protection:** Provide adequate and effective protection and enforcement of intellectual property rights for the rights-holders of technologies and other materials used based on existing legal frameworks.
l. **Sustainable Development**: Seek to develop and deploy these systems that contribute to the implementation of the 2030 Agenda for Sustainable Development and achievement of Sustainable Development Goals.

ENABLERS OF INNOVATION, GROWTH, AND INCLUSION

7. Leveraging digital technologies for economic activities often necessitates certain basic functions. These can include the ability to identify and authenticate individuals and businesses and secure and seamless flow of money and information. Digital public infrastructure can fulfil these core functionalities through interoperable digital systems, such as: digital ID, digital payment systems, and data sharing mechanisms with consent wherever applicable in line with the principles as described in Para 6 above. Some of these core functions are described below:
    a. Identification: The ability for people and businesses to securely verify their identity, as well as complementary trust services such as electronic signatures and verifiable credentials.
    b. Payments: Easy and instant transfer of money between people, businesses, and governments.
    c. Data sharing with consent wherever applicable: Seamless flow of personal data with consent, wherever applicable, across public and the private sectors, with safeguards for personal data protection as per applicable data governance frameworks.

8. Network effects of these systems can bring transformative changes in the digital economy as well as help countries achieve their developmental goals.