इलेक्ट्रॉनिकी एवं
सूचना प्रौद्योगिकी मंत्रालय
**MINISTRY OF
ELECTRONICS AND
INFORMATION TECHNOLOGY**

NeGD
National e-Governance Division

Consolidated Report on
GLOBAL DIGITAL PUBLIC INFRASTRUCTURE SUMMIT

12 - 13 June, 2023 | Pune

Digital Identities for empowering people

Digital Document Exchange for efficient service delivery

Digital Payments and Financial Inclusion

Digital Education and Skilling

Overview of Digital Public Infrastructure (DPI)

DPI for Judicial Systems and Regulations

Digital Agriculture Ecosystem

Public Key Infrastructure (PKI) for DPI

building the Global DPI Ecosystem

Digital Health and Climate Action

**GL🌐BAL
DPI SUMMIT**

June 12 –13, 2023 | Pune, Maharashtra

KEY THEME

Digital Public Infrastructure for
Ease of Living,
Ease of Doing Business and
Ease of Governance

G20

Digital India
Power To Empower

Azadi Ka
Amrit Mahotsav

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About
the Summit

Under the visionary leadership of India's Presidency, the G20 Digital Economy Working Group has identified DPI as a key priority area. DPI, with its profound impact on social, economic, digital, and sustainable development goals, has emerged as a game-changer for digital economy and its stakeholders. It has opened doors to unparalleled opportunities, fostered innovation, and empowered individuals and communities like never before. While the foundational building blocks of DPI, such as Digital Identity, Digital Payments, and Data Exchanges, have been embraced by many, there is still a global quest for universal adoption of DPI. This journey signifies the diverse perspectives and collaborative spirit of nations working together for a common goal.

The Global DPI Summit arrives as a beacon of hope and progress, shining its light on the way forward. Its grand stage will be set in the enchanting city of Pune, Maharashtra, India place teeming with rich heritage and vibrant energy. Against this backdrop, the summit aims to bring together brilliant minds, creative thinkers, and passionate advocates of DPI from around the globe.

The summit seeks to ignite inspiration, propelling nations to embrace DPI as a catalyst for growth, inclusivity, and citizen's welfare.

The summit constituted two immersive days of thought exchange, ideation and deliberations with global audience and deliberations were made on varied topics and use cases.

Agenda
Day 1

12 June 2023

9.00 am - 9.30 am	**Inauguration of Global DPI Exhibition**
9.30 am - 10.00 am	**SESSION 1: INAUGURAL SESSION**

9.30 am - 9.32 am	Lighting of the Lamp
9.32 am - 9.35 am	Welcome Address and opening remarks by **Mr. Alkesh Kumar Sharma**, Secretary, MeitY and G20 DEWG Co-Chair, Government of India
9.35 am - 9.38 am	Video on Global DPI Summit
9.38 am - 9.42 am	**Signing of MoU between India and Armenia**, followed by Address by **Mr. Gevorg Mantashyan**, First Deputy Minister of HighTech Industry of the Republic of Armenia
9.42 am - 9.46 am	**Signing of MoU between India and Sierra Leone**, followed by Address by **Mr. Tamba Edward Juana**, Permanent secretary, Sierra Leone
9.46 am - 9.50 am	**Signing of MoU between India and Suriname** followed by Address by **Ms. Rishma Nimi Kuldipsingh**, Hon'ble Minister, Suriname
9.50 am - 10.00 am	Address by **Mr. Rajeev Chandrasekhar**, Hon'ble Minister of State in the Ministry of Skill Development and Entrepreneurship; and Electronics and Information Technology, Government of India

10.00 am - 11.15 am	**SESSION 2: OVERVIEW OF DIGITAL PUBLIC INFRASTRUCTURE (DPI)**

In Chair – **Mr. Melford Walter Fitzgerald Nicholas**, Minister of Information Communication Technologies, Utilities and Energy, Government of Antigua and Barbuda

Moderator - **Mr. Abhishek Singh**, P&CEO, National E-Governance Division, MeitY

Mr. Sushil Pal, Joint Secretary, MeitY and G20 DEWG Co-Chair, Government of India

Dr. R. S. Sharma, Chairman, Geo-Spatial Data Promotion and Development Committee

Mr. S Gopalkrishnan, CEO, National Health Authority

Mr. Prabhat Kumar, Special Secretary (Development Partnership Administration), MEA

Ms. Christine Martin Meier, Director, Digital Public Goods Charter

Ms. Keyzom Ngodup Massally, Head of Digital Programmes, UNDP Chief Digital Office

11.15 am - 11.30 am	**Tea Break**

Day 1 (contd.)

11.30 am – 12.45 pm	**SESSION 3: DIGITAL IDENTITIES FOR EMPOWERING PEOPLE**

In Chair – **Mr. Eliud Okech Owalo,** Cabinet Secretary, Ministry of ICT and The Digital Economy, Kenya

Moderator – **Mr. Rupinder Singh**, CEO, UIDAI

Mr. Jonathan Marskell, Senior Program Officer, World Bank

Mr. Vivek Raghavan, Chief AI Evangelist at EkStep, Foundation

Mr. Rene C. Mendoza, Assistant National Statistician for Systems & Information Security Service, Philippine

Ms. Barbara Ubaldi, Acting Head of the Division on Open and Innovative Governments, OECD

12.45 pm – 1.45 pm	**Tea Break**

1.45 pm – 3.00 pm	**SESSION 4: DIGITAL PAYMENTS AND FINANCIAL INCLUSION**

In Chair – **Mr. Mohammed Khamis Abdulla,** Permanent Secretary, Ministry of Information Communication and Information Technology, Tanzania

Moderator – **Mr. Dilip Asbe, MD & CEO**, National Payments Corporation of India

Mr. Pawan Bakhshi, India Lead, Financial Services for the Poor, Bill & Melinda Gates Foundation

Ms. Nilima Ramteke, Senior Financial Sector Specialist, World Bank

Ms. Prerna Saxena, Asia Regional Lead, Better Than Cash Alliance, UNCDF

3.00 pm – 4.00 pm	**SESSION 5: DPI FOR JUDICIAL SYSTEMS AND REGULATIONS**

In Chair – **Mr. Mark Ramkerrysingh**, Chairman (Vice President Rank), Trinidad and Tobago

Moderator – **Mr. Surya Prakash B S**, Fellow and Programme Director, Daksh India, Bangalore, India

Mr. S.K.G Rahate, Secretary, Department of Justice, India

Mr. Ashish J. Shiradhonkar, Registrar (OSD), Technology, Innovation and Planning and Member of E-Committee, Supreme Court of India

Ms. R. Arulmozhiselvi, District Judge on Deputation as Member, eCommittee, Supreme Court of India, India

Dr. Mariagrazia Squicciarini, Director for Social Policies ai and CEO, Social and Human Sciences Sector, UNESCO, France

4.00 pm – 4.05 pm	**Closing Remarks by G20 DEWG Chair / Co-Chair**
4.05 pm – 4.30 pm	**Tea Break and Preparation for Excursion Tour**
5.00 pm – 6.30 pm	**Excursion Tour to Maharshtriyan "Ashadhi Wari" (Palkhi Darshan)**
6.30 pm – 9.30 pm	**Cultural Experience & Event followed by Welcome Dinner at Hotel JW Marriott**

Agenda
Day 2

12 June 2023

9.30 am - 10.45 am   **SESSION 1: DIGITAL DOCUMENT EXCHANGE FOR EFFICIENT SERVICE DELIVERY**

In Chair – **Mr. Gevorg Mantashyan**, First Deputy Minister of High Tech Industry of the Republic of Armenia

Moderator – **Mr. C V Madhukar**, CEO, Co-Develop

Mr. Abhishek Singh, President and CEO, NeGD, MeitY

Mr. Anir Chowdhury, Policy Advisor, A2I, Bangladesh

Ms. Alka Misra, Deputy Director General, National Informatics Center (NIC)

Mr. B G Mahesh, Co-Founder & CEO, DigiSahamati Foundation

10.45 am - 11.00 am   **Tea Break**

11.00 am - 12.15 pm   **SESSION 2: PUBLIC KEY INFRASTRUCTURE (PKI) FOR DPI**

In Chair – **Mr. Moses Kunkuyu Kalongashawa**, Minister, Ministry of Information, Malawi

Moderator – **Mr. Vijayakumar Manjunatha**, SVP, eMudhra and Chair of TSWG, Asia PKI Consortium

Mr. Arvind Kumar, Controller of Certifying Authorities, Government of India

Prof. Satoru Tezuka, Chair, Digital Trust Working Group, Japan

Mr. Nick Pope, Chair, ETSI TC ESI, Europe

Ms. Anne Waweru, Director ICT, KenTrade, Kenya

12.15 pm - 1.15 pm   **SESSION 3: DIGITAL EDUCATION AND SKILLING**

In Chair – **Ms Parvashi D Maharahaje**, Assistant Permanent Secretary, Ministry of Information Technology and Communication, Mauritius

Moderator – **Mr. Shankar Maruwada**, Co-Founder and CEO, EkStep Foundation

Ms. Eunsong Kim, Head of Unit and Programme Specialist, Social & Human Science Unit, UNESCO

Ms. L S Changsan, Additional Secretary (Digital), Department of School Education & Literacy, Government of India

Dr. Buddha Chandrashekhar, Chief Coordinating Officer, AICTE, Department of Higher Education

Day 2 (contd.)

1.15 pm – 2.15 pm	**Lunch**

2.15 pm – 3.15 pm   **SESSION 4: DPI FOR DIGITAL HEALTH AND CLIMATE ACTION**

In Co-Chair – **Mr. Rahaingonjatovo Nirina**, Chief Digital Officer, Ministry of Digital Development, Digital Transformation, Posts and Telecommunications of Madagascar

In Co-Chair – **Mr. Kanaka Dasaratha Herath**, State Minister Of Technology, Ministry Of Technology, Sri Lanka

Moderator – **Mr. Purushottam Kaushik**, Head of the Centre for Fourth Industrial Revolution Network, World Economic Forum

Ms. Martine Bottheim, Acting Ambassador, Norway

Mr. Vikalp Sahni, Founder & CEO, Eka Care

Mr. Suhel Bidani, Lead – Digital, BMGF

3.15 pm – 4.15 pm   **SESSION 5: DIGITAL AGRICULTURE ECOSYSTEM**

In Chair – **Ms. Damchen Zangmo**, Dy.Chief ICT Officer, GovTech Agency, Bhutan

Moderator – **Mr. Rajeev Chawla**, Chief Knowledge Officer, Ministry of Agriculture & Farmers Welfare, India

Mr. Chengal Navin Twarakavi, Senior Digital Agriculture Specialist, Asian Development Bank

Dr ML Jat, Global Research Program Director, ICRISAT, India

Ms. Chen Hattav, Ecosystem Development Manager, GrowingIL, Israel

Dr. Anil Rai, Assistant Director General (ICT), Indian Council of Agricultural Research

4.15 pm – 4.30 pm	**Tea Break**

4.30 pm – 5.30 pm   **SESSION 6: BUILDING THE GLOBAL DPI ECOSYSTEM**

In Chair – **Mr. Walter Eduardo Morales Vega**, Board Advisor, Central Bank of Uruguay

Moderator – **Mr. Abhishek Singh**, President and CEO, NeGD, MeitY

Mr. T Koshy, MD & CEO, ONDC

Dr. Srivatsa Krishna, IAS, Government of Karnataka

Mr. Robert Opp, Chief Digital Officer, UNDP, USA

Ms. Vyjayanti T Desai, Practice Manager, World Bank

5.30 pm – 5.35 pm	**Vote of Thanks**
7.30 pm – 9.30 pm	**Ratri Bhoj Par Samvaad (Dinner) at Savitribai Phule Pune University**

Day 1:
Overview

As the first day of the summit, the inauguration of the event witnessed key speakers and global dignitaries expressing their views on the DPI.

The sessions had an impactful deliberation on various topics and use cases from around the globe and the speakers shared their experiences in implementing various initiatives that have been beneficial for the citizens across the globe. The immersive deliberations led to audience getting a glimpse of how this game changing transformational initiatives play a crucial role in furthering the agenda of Digital Public Infrastructure in delivery of public services.

The session wise deliberations and discussions have been covered here to give glimpses of how the moderator, speakers and in-chair officials explored each of the topics and mesmerized the audience with their valuable insights.

Day 1 Session 1:
Inaugural Session

As the opening session of the summit, this session covered opening remarks from the Hon. Secretary, MeitY and G20 DEWG Co-Chair, Government of India who highlighted the initiatives undertaken by the ministry that focused on improving the ease of interacting with government and public service delivery at large using digital technology offerings.

Other key speakers from the session also highlighted and focussed on the usage of Digital Technology in improving the governance system and how this becomes pivotal for any Government to improve the public perception and accountability. Some of the speakers from the emerging economies emphasised the importance of collaboration with India and participating countries in rolling out offerings covering DPI at large and mass scale.

Hon. Minister of State, MeitY and Skill Development too emphasised the importance of bringing digital revolution and how his ministry is focussing on improving the governance and public service delivery by laying importance on the DPI offerings and Global Digital Public Infrastructure summit | Pune | 12-13 June 2023 is leaving no stone unturned to digitally reach out to each citizen of the country in efficient and transparent manner.

Global DPI Summit
12th-13th June, 2023

Key thoughts shared by the speakers are as follows:

MR. RAJEEV CHANDRASEKHAR

Hon. Minister of State, Ministry of Skill Development & Entrepreneurship and Electronics & IT, GoI

- India serves as a visible beacon and test case for the impact and effectiveness of DPI. Earlier, only a fraction of the intended benefits reached citizens due to high governance costs.

- However, this narrative has now changed in India, and with digital revolution in Government, the full number of benefits is reaching the intended beneficiaries.

- The government has successfully transferred upto $400 billion in subsidies since 2014, vide Direct Benefit Transfer, and that too without any leakages.

- He expressed that with the speed at which digitization is taking shape in the country, by 2025-26, the digital economy in India is expected to constitute 20% of the country's GDP, demonstrating a significant proliferation of digitization in the economic ecosystem.

- India is actively working on establishing multiple frameworks for global standards in cyber law which is need of the hour as well.

- India Stack, as a starting point with the identity layer as Aadhaar, is a comprehensive and evolving digital infrastructure.

- The collaborations and partnerships for the use of artificial intelligence and language models in DPI are mutually beneficial for nations that have are embracing digitization.

- The move towards a global DPI framework emphasizes the inclusivity of technology, ensuring that it benefits all nations, including the less developed and advanced ones. DPI promotes inclusion, transparency, and responsiveness, and it can accelerate progress towards sustainable development goals such as poverty reduction, good health, economic growth, and innovation.

- DPI is about using the power of open source and collaborations to make technology accessible to all without significant costs. It acts as a force multiplier for developing populations and has a catalytic effect on a nation's digital economy, bridging the digital divide and fostering an ecosystem of startups and innovation.

- The implementation of DPI by governments worldwide can address local issues like technology transfers and contributes to the collective future through the 'One Future Alliance.'

- The importance of a global protocol for digital security is widely recognized, and India is willing to share its DPI-related capacities to skill people in other member countries.

- DPIs enable the creation of powerful digital economies, and together, as one family, we strive for a better collective future, embodying the spirit of Vasudhaiva Kutumbakam' (theme of India's G20 Presidency).

- The coming decade is envisioned to be known as 'Techade,' as proposed by the Hon. Prime Minister of India, Shri Narendra Modi Ji.

MR. ALKESH KUMAR SHARMA

Secretary, Ministry of Electronics & IT, GoI

G20 Digital Economy Working Group (DEWG) Co-chair
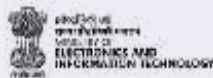
In his welcoming speech, Mr. Sharma introduced the historic city of Pune to the audience, and how it is becoming a place of knowledge and innovation in today's world. Excerpts from his speech are as mentioned below:

- Summit is the opportunity to exchange knowledge base and further Digital Public Infrastructure (DPI) partnership and digital economy at large.

- G20 DEWG has identified Digital Public Infrastructure (DPI) as one of the key priority areas- which is widely recognised across nations as a tool for meeting the digital economy, social, and economic growth objectives around the globe.

- He highlighted about the first summit which was held in February 2023 in Lucknow and second one in Hyderabad which focussed on digital skilling, aiding DPI, and cyber security and how welcoming it has been that the global network envisions to further strengthen the DPI reach to many countries in the world.

- He thanked various partnership countries where Memorandum of Understanding (MoU) were signed between The Ministry of Electronics and Information Technology of the Republic of India and:

  - The Ministry of High-Tech Industry of the Republic of Armenia on Cooperation in the Field of Sharing successful Digital Solutions Implemented at Population Scale for Digital Transformation.

  - The Ministry of Information and Communications of the Republic of Sierra Leone on Cooperation in the Field of Sharing successful Digital Solutions Implemented at Population Scale for Digital Transformation.

  - The Ministry of Economic Affairs, Entrepreneurship and Technological Innovation of the Republic of Suriname on Cooperation in the Field of Sharing successful Digital Solutions Implemented at Population Scale for Digital Transformation.

  - The Ministry of Information and Communication Technology, Utilities & Energy, Government of Antigua, and Barbuda in the DPI space

MR. GEVORG MANTASHYAN

First Deputy Minister, Hi-Tech Industry, Armenia

- India, driven by its commitment to leveraging technology for the betterment of its citizens, has taken up the responsibility of creating positive outcomes in the DPI space. Armenia, sharing the same values and aspirations as India to have a digital economy, has agreed to collaborate with India in accommodating good practices and moving towards digital economy. The aim of the partnership is to collectively work towards creating a brighter future for citizens of the respective nations.

MR. TAMBA EDWARD JUANA

Permanent Secretary, Sierra Leone

- The Memorandum of Understanding (MoU) presents an opportunity for collaboration with India and enables us together to advance the level of digitization. Africa, with a population of 1.3 billion people, 70% of whom are below the age of 30, holds immense potential for growth and transformation in digital space.

- He mentioned that they are inspired by India's remarkable progress in digital transformation and as a developing nation, propelling it to a position alongside some of the world's most advanced countries.

MS. RISHMA NIMI KULDIPSINGH

Hon. Minister, Suriname

- Suriname expressed enthusiasm regarding India's commitment to sharing its knowledge and guiding them in implementing transformative digital solutions for the benefit of their citizens. She highlighted that their ancestors migrated to Suriname, from India, about 150 years ago, resulting in Hindi language being spoken in that country extensively. This connection adds significance to the collaboration between Suriname and India in advancing digital initiatives for the welfare of their people.

Day 1 Session 2:
Overview of Digital Public Infrastructure (DPI)

In the current scenario of our interconnected globe, Digital Public Infrastructure (DPI) emerges as the brush that paints a masterpiece of global empowerment. In this interconnected world, DPI orchestrates a symphony of possibilities, transforming the way people communicate, collaborate, and thrive in today's digital world.

Therefore, a session on DPI as an icebreaker session played an important role. This Session covered an overview of the Digital Public Infrastructure ecosystem and the technology offerings that are gamechanger in the advocacy of the public service delivery in India and across the globe.

The key speakers for the session are as mentioned below:

- **Mr. Melford Walter Fitzgerald Nicholas** (In-Chair)
  Minister of Information Communication Technologies, Utilities & Energy, Government of Antigua & Barbuda

- **Mr. Abhishek Singh** (Moderator)
  P&CEO, National E-Governance Division, MeitY, Government of India

- **Mr. Sushil Pal**
  Joint Secretary, MeitY and G20 DEWG Co-Chair, Government of India

- **Ms. Christine Martin Meier**
  Director, Digital Public Goods Charter

- **Ms. Keyzom Ngodup Massally**
  Head of Digital Programmes, UNDP Chief Digital Office

- **Mr. Prabhat Kumar**
  Special Secretary (Development Partnership Administration), MEA, Government of India

- **Dr. R. S. Sharma**
  Chairman, Geo-Spatial Data Promotion and Development Committee

- **Mr. S Gopalkrishnan**
  CEO, National Health Authority

The discussion points of each of the speakers are as follows:

MR. ABHISHEK SINGH

P&CEO, National E-Governance Division, MeitY,
Government of India

- Mr. Abhishek welcomed all the speakers and highlighted how DPI has made progress in India with some of the uses cases.

- He mentioned that there is a need to take technology to the remotest corner of the nation so as to ensure that intended Government benefits and schemes reach to them.

- • He welcomed the distinguished panel of speakers to discuss and share insights on how global projects have lead to social and economic inclusion and what is G20 thinking in furthering the agenda of DPI in amplifying the impact of these technologies for welfare of humanity.

- He requested Joint Secretary to express his views on the subject and the summit.

MR. S GOPALAKRISHNAN

CEO, National Health Authority

- The healthcare sector is shifting towards a preventive focus, with Digital Public Infrastructures (DPIs) leading the way in facilitating processes such as tracking, screening, testing, and provision of healthcare services.

- A basic framework for establishing a registry of healthcare facilities and doctors is necessary to streamline operations & enhance accessibility.

- It is important to recognize that customization based on country-specific requirements is essential since a one-size-fits-all approach is not viable.

- Collaborative efforts are needed to address privacy policies concerning the involvement of multiple stakeholders in the healthcare sector, eliminating the need for excessive involvement.

- DPIs hold immense potential in the domain of telemedicine and imaging diagnostics, offering opportunities for improved healthcare services.

MS. KEYZOM NGODUP MASALLY

Head of Digital Programmes,
UNDP Chief Digital Office

- There is a growing global momentum towards establishing a common framework and standards for Digital Public Infrastructures (DPIs). The recent Shanghai Cooperation and the joint statement of the Quad reflect a testament to the importance and agenda of DPI.

- Momentum regarding DPI is also evident in the European Union (EU), the United States (US), the African continent, and many other parts of the world.

- It is crucial that we reach a common understanding that DPIs are public means of delivering services for the benefit of people.

- Additionally, a robust grievance mechanism system should be an integral part of DPIs, and each country may adopt a different approach and level of public and private partnership for DPIs. Regulations may also vary from one country and one DPI to another.

- India has consistently addressed the concerns of the Global South, recognizing the significant impact DPIs can have in accelerating their collective goals.

- The global challenges of refugee displacement, inadequate access to quality education for girls, declining Human Development Index, and persistent poverty and hunger continue to pose significant hurdles. Digital Public Infrastructures (DPIs) emerge as powerful tools to address these challenges effectively.

- The United Nations Development Programme (UNDP) is actively engaged in developing innovative approaches, with DPIs playing a critical role in shaping these solutions.

- In addition to fostering support for new and emerging technologies, such as artificial intelligence (AI) and data protection, the focus extends beyond technology itself. It encompasses novel methods of governance and the establishment of a comprehensive global digital ecosystem.

- An essential aspect of this approach is the prioritization of people needs, ensuring that DPI initiatives are inclusive, broad-reaching, and centred around the needs of individuals.

- The objective of DPI is to enhance effectiveness, accountability, and transparency within DPI initiatives, enabling a more impactful response to global challenges.

MR. R.S. SHARMA

Chairman, Geo-Spatial Data Promotion and Development Committee

- The United Kingdom (UK) has invested 135 British Pounds in digital identities whereas India the cost of Aadhaar has been close to 4 US dollars.

- India's Unified Payments Interface (UPI) has achieved the objective of being cost-effective, with each UPI transaction costing approximately 1 US dollar.

- Digital Public Infrastructures (DPIs) must possess the characteristics of being plausible, pluggable, and interoperable.

- DPIs should facilitate development of innovative solutions by providing a minimum set of attributes.

- Aadhaar, with a user base of 1.35 billion in India, has become the universal financial address for Direct Benefit Transfers (DBT), playing a significant role during the COVID-19 pandemic.

- More than 9 billion UPI transactions are taking place every month, with 75 billion Know Your Customer (KYC) verifications being conducted under the Digital Identity Programme envisioned by the Prime Minister.

- The CoWin platform has demonstrated its impact by enabling domain-specific utilities beyond the foundational layers of identity, payments, and data exchange, facilitating over 2.2 billion vaccinations.

- The Ayushman Bharat Digital Mission, with a health stack that includes 400 million identities, is contributing to the advancement of digital healthcare services.

- Consent for data exchange is a fundamental aspect for the operation of DPIs.

- The transition from a platform-centric approach to a network-centric approach is fostering democracy and reducing monopoly of platforms such as Meta.

MR. PRABHAT KUMAR

Special Secretary, MEA, Govt. of India
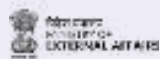
- Referred to the Voice of Global South Summit- wherein 25 countries participated - and global south agreed to share innovations and tech where this is an effort to share on what India has achieved over the last few years in DPI space.

- MEA would engage in active discussion with participants from other countries for mutual collaboration and platform sharing - "good synergy building".

MS. CHRISTINE MARTIN MEIER

Director, Charter for Digital Public Goods

digital
impact
alliance

- Digital Public Goods (DPGs) are customised solutions as defined by the United Nations Secretary-General.

- DPGs play a crucial role in accelerating the progress of Digital Public Infrastructures (DPIs).

- The Charter highlights 3 notable examples of DPGs:

  a. Education in Sierra Leone: Sierra Leone is actively working towards creating an inclusive education system through digital solutions

  b. Digit by eGov Foundation in India: eGov Foundation in India is effectively addressing the issues related to local governance through its digital platform called "Digit."

  c. Africa Fine Maps: Leveraging drones & AI, Africa Fine Maps aims to become creators of technology rather than just users, and they strive to customize systems to suit their specific needs.

- These examples demonstrate the potential of DPGs in supporting DPIs by fostering inclusive education, addressing local governance challenges, and empowering communities to become active contributors to technology development.

- The promotion of DPGs aligns with the vision of accelerating the adoption of DPIs, empowering nations to leverage digital solutions tailored to their unique contexts.

MR. MELFORD WALTER FITZGERALD NICHOLAS

Minister of ICT, Utilities and Energy,
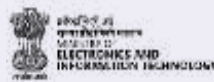Government of Antigua, and Barbuda
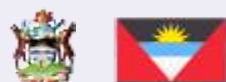
- In 2014, Antigua & Barbuda initiated a digital transformation programme.

- India has not only supported during COVID-19 pandemic (providing vaccines- one of the first regions to be benefitted by India's help), but Govt. of India has also extended help during their natural disasters often faced by the nation

- Look forward to leveraging knowledge and talent in India - the world power on the stage of digital transformation.

- Was impressed with the Global Digital Public Infrastructure Exhibition stall setup to showcase DPI use cases.

MR. SUSHIL PAL

Joint Secretary, MeitY

G20 DEWG Co-Chair,
Government of India

- It's heartening to see the global momentum DPI has generated like notable mentions are the UN Policy brief by UN Secretary General on Global Digital compact that asks global leadership to create common standards and framework for Digital Public Infrastructure.

- Glad to see the endorsements on DPI approach from the Shanghai Corporation and also Joint Statement of Cord in May this year

- We have witnessed EU, US and African Continent and different parts of the world

- He shared thoughts on the India's success story on DPI which will be shared by relevant stakeholders.

- Under India's presidency we are glad to be sharing common dialogue on essential elements and common principles of DPI where much of the discussions were on evolving the framework of DPI drawing largely from the DPI implementation in other nations mainly from the Global South viz. India, Brazil, Singapore, Estonia, Bangladesh, Philippines and Thailand.

- Common elements of technology, governance, and community that underpin a good DPI implementation have been largely discussed with Global South which are based on guiding principles like inclusion, open standards, open specification, scalability, interoperability, privacy and security with a whole of govt. approach.

- DPI is not a simply eGovernance solution designed to solve a particular problem instead most defining feature of DPI is the infrastructure which means that it's a shared means to meet many ends that's modularly designed multiple solutions for various problems.

- Public is DPI refers to access and delivery of services for the benefit of the public that adheres to the human set of principles, right based approaches, safeguards to protect peoples fundamental right of privacy and strong accountable governance with a robust grievance redressal mechanisms.

- Therefore, a DPI approach should not be a country based approach but a principle based DPI approach where regulation and investments would vary from one country to another and from one DPI to another.

- It would be with these principles that DPI would unlock the innovation and entrepreneurship potential in community or the mark

Concluding Remarks

The Moderator thanked all the speaker for their delightful discussion on the various topics related to DPI and induced a food for thought in the minds of audience on how the DPI will be a game changer in the public service delivery in the years to come.

Day 1 Session 3:
Digital Identities for Empowering People

he Digital Public Infrastructure (DPI) for Digital Identity serves as a fundamental framework that is of utmost importance in providing a comprehensive and lifelong online identity for individuals. This DPI plays a pivotal role in delivering identity-related services to the general public, thereby simplifying their lives and enhancing transparency and efficiency in the public service delivery system.

This Session would deliberate on the various nuances of Digital Identity infrastructure in India and globally that would offer possibilities to verify and authenticate the identity of individuals, effectively preventing fraud and ensuring that only eligible beneficiaries receive the benefits and services they are entitled to.

The key speakers for the session are as mentioned below:

- **Mr. Eliud Okech Owalo** (In-Chair)
  Cabinet Secretary, Ministry of ICT and The Digital Economy, Kenya

- **Mr. Rupinder Singh** (Moderator)
  CEO, Unique Identification Authority of India (UIDAI)

- **Ms. Barbara Ubaldi**
  Acting Head of the Division on Open and Innovative Governments, OECD

- **Mr. Rene C. Mendoza**
  Assistant National Statistician for Systems & Information Security Service, Philippine

- **Mr. Vivek Raghavan**
  Chief AI Evangelist at EkStep Foundation

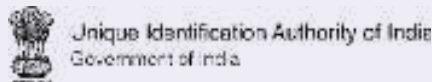- **Mr. Jonathan Marskell**
  Senior Program Officer, World Bank

The discussion points of each of the speakers are as follows:

MR. RUPINDER SINGH

CEO, Unique Identification Authority of India
(UIDAI)

Unique Identification Authority of India
Government of India

- The panellists are a diverse mix of leaders from DPI implemented states & from various countries

- We will focus on how the digital identities be a tool for empowering people

- In India a term Poverty Premium was used which means that if a poor person has to prove his/her identity, he/she needs to visit Government office and spend his/her daily wages for proclaiming the identity

- Before Aadhaar, the earlier IDs were purpose specific like the Passport, Driving License, Ration Card etc. which were issued for a particular purpose

- Only 7% in India have got passport, 13% have Driving License, but now about 100% have got Aadhaar which is a digital identity

- The second side of ID coin is the verifiability of the ID which because of Aadhaar has become online

- The verification helps in access of services like SIM card, Bank Account which has made the process fast & frictionless so much so that 480 Million No-Frill Bank Accounts have been opened using Aadhaar.

- It costs about 1 US Dollar for both generation and authentication of Aadhaar

MR. RENE C. MENDOZA

Assistant National Statistician for Systems & Information Security Service, Philippine

- Mr. Rene C. Mendoza, mentioned about Security Service and elaborated on Philippine Identity System and he explained how creating an ID for the Philippines was a standing challenge for the country.

- For the creation of the ID, they had to contribute about 78.28% and the rest was contributed by Morocco and Ethiopia. Phylsis is the ID for the people of the Philippines, which resulted in low-cost digitalization, low financial inclusion, and provides social protection delivery system.

- He further mentioned only 41 billion people have bank accounts so they decided to introduce bank accounts. The new president planned to give ID to 50 million people. Initially, the president wanted to make an ID on printed papers.

- Printed-out ID cards card were not secure, hence they included a low-resolution QR code. The e-Phyll ID is not temporary, it is a real ID, but they have not reached the target population. In the target population, they want to include old people, kids, and people of all ages.

- Individuals will benefit from e-phill ID which is ongoing printing and distribution. Filipinos will again receive the e-phill ID and to get it done they can use the available printers in the registration centers. House-to-hours distribution using PSA resources.

- He highlighted that there are 1,500+ successful biometric authentication and 300+ successful demographic authentication. Our priority will be financial inclination and social registration. Evolving requirements and conditions required agile strategic thinking.

MS. BARBARA UBALDI

Acting Head of the Division on Open and Innovative Governments, OECD

- She highlighted that OECD adopted at a ministerial level an OECD recommendation on Governance of Digital Identity

- Many OECD member countries are also members of the G20 and collective importance and recognition of the digital identity as a mean to enable people with digital technology.

- Digital Identity is a way forward for people to access and take benefit of the schemes of both public and private entities in a way that such transactions are trusted, inclusive and is fair.

- Even the Ministerial Declaration of G7 that undertook in April 2023 acknowledge the need for Digital Identity and share good examples and solutions with each other to make DPI a reality in many countries

- These solutions are also important for strengthening cooperation and collaboration in way of thinking in how technology can be a mean to provide accessible solutions to the citizens

- Usage of Biometric system makes sense in Global context where proper safeguards are in place

- She echoed the comments and thought of the many speakers in the summits to develop a user centered approach for DPI and understand the needs of the service providers

- It also important to prioritize the elimination of the any form barrier that impedes the access to the solution

- Focus to have inclusive opportunities for a digital identity with trust, governance and security for also enabling cross border cooperation

MR. JONATHAN MARSKELL

Senior Program Officer, World Bank

THE WORLD BANK

- Jonathan thanked the Indian Govt. and the Maharashtra government and then he explained why is ID important.

- They have to borrow money save and make digital payments thanks to the bank account

- ID4D focuses on promoting digital identification systems to improve development outcomes while maintaining trust and privacy. They are working in more than 100 countries, with 75 million dollars contributed together. Technical assistance is given by many countries including the Philippines.

- ID4D publishes case studies, and they work on various movements the result of the momentum was astronomical. They contain the development of the countries, including Pilot registration for Ethiopia, and Indonesia's new digital ID is being piloted.

- Countries have different approaches which include Centralized, Federated, and Decentralized. Jonathan mentioned elaborately Foundational, Integrated into Services, and Digital ID for online transactions. Jonathan added special remarks on how IDs can be enabled in all countries.

- The pillars of having such IDs include Payments, Identity, and data sharing easier. Thailand has Promtpay which was rolled out during Covid which was a huge success during COVID.

- There's an exceptional opportunity for the growth of digital public infrastructure. G20 has an exceptional opportunity to support rights-based inclusive secure and interoperable digital ID operations.

MR. VIVEK RAGHAVAN

Chief AI Evangelist at EkStep Foundation

EkStep | Foundation

- He highlighted the work that has gone into Aadhaar ID generation and has spent considerable time in this area.

- India is one of the unique nations with close to 1.36 billion people and 400 million internal migrants and still when Aadhaar started only about 20% of the population then had bank accounts

- Out of the subsidies that were provided there was a considerable amount of leakage that was happening when it came to its rightful delivery. This paved to way to create a digital ID to cater to the masses in India

- The fraudulent entries, duplicates etc in the purpose based IDs which were not digital in nature was a huge challenge

- In his speech, he also explained in detail the prototype of how identities are supposed to be built. The Aadhaar is not a purpose-based ID, a minimal piece of information is gathered to make an Aadhaar. Aadhaar established two major factors which include who you are and a way to electronic KYC.

Concluding Remarks

The Moderator thanked all the speaker for their delightful discussion on the various topics related to Digital Identity and various nuances of Digital Identity infrastructure in India and globally that would offer possibilities to verify and authenticate the identity of individuals, effectively preventing fraud and ensuring that only eligible beneficiaries receive the benefits and services they are entitled to.

Day 1 Session 4:
Digital Payments and Financial Inclusion

Digital payment solutions have entirely transformed the financial inclusion ecosystem in India and have acted as a powerful catalyst for empowering individuals, businesses, and communities using mobile technology. By providing accessible, convenient, and secure financial services, digital payment systems have unlocked economic opportunities, promoted innovation and entrepreneurship, enhanced financial security, and fostered economic growth.

This Session has covered DPI implementation aspects such as inclusive design of digital payment ecosystem, creation of partner ecosystem, security measures, capacity building of stakeholders, and way forward.

The key speakers for the session are as mentioned below:

- **Mr. Mohammed Khamis Abdulla** (In-Chair)
  Permanent Secretary, Ministry of Information Communication & Information Technology, Tanzania

- **Mr. Dilip Asbe** (Moderator)
  MD & CEO, National Payments Corporation of India

- **Ms. Prerna Saxena**
  Asia Regional Lead, Better Than Cash Alliance, UNCDF

- **Dr. Pawan Bakshi**
  Digital Head, Bill & Melinda Gates Foundation

- **Ms. Nilima Ramteke**
  Senior Financial Sector Specialist, World Bank

GL BAL
DPI SUMMIT
SESSION ON
DIGITAL PAYMENTS
AND FINANCIAL
INCLUSION

The discussion points of each of the speakers are as follows:

MR. DILIP ASBE

MD & CEO,
National Payments Corporation of India

- Over 100 countries have adopted digital payment systems. The World Bank has conducted a study in this regard, and the toolkit resulting from the study is available for aspiring countries to learn from. By leveraging this study, countries can examine the pros and cons of various models and design better payment systems. For example, the Unified Payments Interface (UPI) settles transactions at periodic intervals, while real-time settlement is facilitated through RTGS (Real-Time Gross Settlement). Additionally, hybrid models, such as the one implemented by Mexico, offer the flexibility of being parameterized.

- The World Bank provides technical assistance and financing to support the design and implementation of these payment systems, encompassing a range of activities.

- Education and awareness are continuous journeys that require ongoing efforts from public and private institutions at large. Having aggregated data specifically focused on women's participation is crucial, and it is important for officials to take note of this need. India has made significant progress around complaint and dispute resolution.

- With the help of UPI, efforts are made to resolve every dispute online. The system ensures that pending issues are addressed every two hours. When designing products and services, it is essential to keep women at the centre and prioritize their needs. The core principle should be ease of use, and this is something that the World Bank also considers, emphasizing the importance of simplicity and accessibility. By ensuring that the basic elements are in place, such as access and user-friendly design, the adoption of digital payment solutions will increase.

MS. PRERNA SAXENA

Asia Regional Lead, Better Than Cash Alliance, UNCDF

- The global landscape is witnessing a transformation due to the widespread adoption of digital payments, impacting the financial ecosystem. Nearly two-thirds of adults worldwide are now engaged in making and receiving digital payments. Notably, emerging economies contribute approximately 60% of the total volume of digital payments globally.

- India has taken the lead in promoting initiatives like Aadhar, along with the widespread use of UPI (Unified Payments Interface) and account aggregation services. Other countries such as Bangladesh, Colombia, Mexico, the Philippines, Ghana, and Malawi are also investing in digital payment infrastructure, including DPI (Digital Payment Infrastructure) and digital identity systems, as they move towards a cashless economy.

- India is actively willing to share technical know-how and has plans to host 70 delegates from various countries, through G20 presidency to discuss digital identity initiatives.

- There is a growing interest in India's G20 presidency, particularly from African nations, who are looking forward to collaborating on digital payment adoption and the implementation of a continent-wide digital trade protocol.

- The adoption of DPI holds great potential for enhancing financial inclusion, and countries like the Philippines are implementing initiatives like QRPH (Quick Response Code-based P2P payments). Colombia aims to launch fast digital payment solutions by 2024, while Ghana and other African nations are undertaking similar efforts. However, the financial requirements to achieve these goals can pose challenges for some emerging economies that may not have sufficient confidence in funding or capital frameworks.

- To address these challenges, future alliances and collaborations among donors and multilateral organizations are being advocated for. These alliances can provide support and expertise in areas such as DPI, with a particular focus on micro-enterprises and underserved segments, including women. There are high expectations from India's G20 presidency to address these issues and drive further progress in the global digital payment landscape.

- The last-mile delivery of financial services involves not only the government but also the private sector. There has been significant work in creating incentives, fostering competition, and shaping the market structure to encourage private sector involvement. A key aspect is adding a focus on collaboration, where government departments, major ministries, and stakeholders come together to believe in the vision, which sets the stage for real changes to occur.

- Data-driven policymaking is prioritised, and while there is access to extensive data on digital payments, the need for more disaggregated data based on factors such as gender, region, and user preferences is required.

- Efforts should be made to develop more tailored offerings that meet the specific requirements of underserved segments. Women, who have different financial service needs at different stages of life, often lack specific design considerations. Their contributions, such as unpaid care work and participation in the informal economy, often go unrecognized in terms of GDP numbers or corporate supply chains. Recognizing women as a worthy segment and developing offerings tailored to their needs is essential for long-term success.

DR. PAWAN BAKSHI

Digital Head,
Bill and Melinda Gates Foundation

BILL&MELINDA
GATES foundation

- In India, the focus is on supporting financial services for the poor through three key pillars. Firstly, building a robust ecosystem that includes identity systems, emerging technologies, ONDC (Open Network for Digital Commerce), UPI (Unified Payments Interface), and more.

- The aim in this area is to identify challenges and opportunities and address key issues and will be interesting to witness how UPI can serve not only those with smartphones but also individuals with simple phones. There is work going to ensure that the UI/UX (User Interface/User Experience) of applications is designed to cater to a diverse range of users.

- Secondly, support is being provided to GoI for path of reforms in terms of identification and payment use cases.

- The Gates Foundation is actively engaged in multiple countries, working closely with governments and central banks to address various challenges. They collaborate with their partners to actively engage with relevant stakeholders in each country.

- Four key challenge areas have been identified so far:

  - Building an interoperable Unified Payments Interface (UPI) requires comprehensive support from the government, and integrating payment systems with digital identification can unlock transformative possibilities.

  - Many countries face barriers in formulating national payment strategies and developing the necessary underlying regulations.

  - The adoption of a comprehensive Digital Payment Infrastructure (DPI) approach is often met with hesitancy, as countries navigate the commercial ecosystem.

  - To address this, support and investments in DPI initiatives is provided like assistance was provided in Tanzania, enabling countries to learn from successful implementations and measure their progress.

- Continuous measurement and evaluation are essential to identify what is working and what requires improvement.

MS. NILIMA RAMTEKE

Senior Financial Sector Specialist,
World Bank

THE WORLD BANK

- Highlighted some of the best practices that have been implemented and how stakeholder engagement was undertook in designing the UPI.

- Even though the private sector is taking a lead, its always important to have safety, efficiency, access, interoperability, all to the core of the design aspects

- World Bank has also taken a lot of lead into the areas of Fast Payments / immediate payments

- She highlighted the project FASTT (Frictionless, Affordable, Safe, Timely Transaction) with help of the BMGF and as part of this project, number of knowledge products have been developed which is publicly available in form of a toolkit covering best practises from global perspective

- Also technical notes have been made available which cover aspects like settlement modes, messaging standards etc

- Not only availability but access to payments have accelerated the adoption of UPI globally that meets requirements of all the stakeholders

MR. MOHAMMED KHAMIS ABDULLA

Permanent Secretary,
Ministry of Information Communication and
Information Technology,
Tanzania
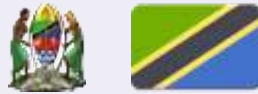
- From the perspective of Tanzania, payment-related issues have not been significant. However, the main challenges lie in ensuring accessibility, particularly in remote areas. For individuals living in remote regions who require access to government services, facilitating their ability to obtain these services becomes crucial.

- Consideration must be given to literacy levels, as some individuals may have never seen a computer before. Access to smart devices is also a factor for consideration, and these devices can turn out to be costly. In urban areas, accessing government services is generally easier for the population. However, problems arise in remote areas due to issues such as limited access to electricity and connectivity.

- Efforts have been made to connect people in remote areas by utilizing the Universal Access Fund, which involves collaboration between the private sector & government, with a 60% contribution from the government and 40% from the private sector.

- Measures have also been taken to improve connectivity through the implementation of 2G and 3G networks, ensuring access to financial payments. Regulatory frameworks, such as data protection acts, have been established, and initiatives like e-government and cybercrime acts are in place.

- Tanzania is making efforts to expand the reach of fibre optics, with 25 out of 32 regions already connected, extending connectivity to district and village levels. While mobile transactions pose no issues in urban areas, the focus must be on enabling individuals in remote regions to participate in the digital future, emphasizing inclusivity and progress for all.

Concluding Remarks

The Moderator thanked all the speaker for their delightful discussion on the various topics related to Digital Payment and Inclusion and the efforts on must take to ensure financial inclusion of the list mile member who has or doesn't have a smart phone but still is able to get the benefits of the services using digital backbone of theGovernment.

Day 1 Session 5:
DPI for Judicial Systems and Regulations

The judiciary system requires reference points to a lot of documentation and interaction with courts, legal professionals, etc. It is, therefore, important that appropriate data is shared digitally to ensure that the flow of information is relevant and made available on a timely basis. The key elements like the identity and data exchange that the DPI provides will enable a smooth flow of the information required to execute the judiciary function.

This Session will cover the details on how the interconnected network of courts and an online document sharing system will enhance the speed of delivering justice in India and across the globe.

The key speakers for the session are as mentioned below:

- **Mr. Mark Ramkerrysingh** (In-Chair)
  Chairman (Vice President Rank), Trinidad and Tobago

- **Mr. Ashish J. Shiradhonkar**
  Registrar (OSD), Technology, Innovation and Planning and Member of E-Committee, Supreme Court of India

- **Ms. R. Arulmozhiselvi**
  District Judge on Deputation as Member, e-Committee, Supreme Court of India, India

- **Mr. Surya Prakash B S** (Moderator)
  Fellow and Programme Director, Daksh India, Bangalore, India

- **Mr. S.K.G Rahate**
  Secretary, Department of Justice, India

- **Dr. Mariagrazia Squicciarini**
  Director for Social Policies ai and CEO, Social and Human Sciences Sector, UNESCO, France

The discussion points of each of the speakers are as follows:

MR. SURYA PRAKASH B. S.

Fellow and Programme Director, Daksh India

- The Moderator, Mr. Surya Prakash introduced the speakers and laid emphasis on the digitization of courts Mission Mode Project (MMP) which is one of the game changer initiatives that any government around the world has undertaken in recent years.

- Mr. Surya Prakash invited Mr. S.K.G Rahate to cover the eCourts MMP in details.

MS. R. ARULMOZHISELVI

District Judge on Deputation as Member,
e-Committee, Supreme Court of India, India

- Ms. R. Arulmozhiselvi discussed on the Capacity Building initiative undertaken by the Judicial System in India to train the users in the courts to start using the eCourts system developed.

- She further elaborated on the eCourts Train the Trainer success story and highlighted how this training in regional languages played a vital role in improving the reach and usability of the system developed.

DR. MARIAGRAZIA SQUICCIARINI

Director for Social Policies ai and CEO, Social and Human Sciences Sector, UNESCO, France

- She highlighted the opportunities and challenges in the DPI for Judicial System viz.

  - Greater & better access to judiciary system

  - Information supply and sharing

  - Improving efficiency of the judiciary system

  - Lower cost – democratization of the judiciary system

 - Lower likelihood of the judiciary oversights and mistakes

  - Improved ability to better screen and access previous decisions

- She emphasised on the right institutions and regulations to be made available for delivering successful DPI in judiciary system

- She also highlighted that Ethical Artificial Intelligence can play a large role in DPI for Judiciary System

- She mentioned the UNESCO principles on Ethics of AI that applied directly to DPI in Judiciary System, some of them are as:

  - Need for human oversight – Accountability and responsibility of the systems for protection of fundamental system

  - AI should not be given legal personality

  - Establish comprehensive approach focussed on AI actors and technology processes

  - AI Governance – That should be inclusive, transparent, multidisciplinary, multilateral and cross-border

- She highlighted that AI Governance should include aspects of anticipation, and effective protection, monitoring of impact, enforcement and redressal.

MR. S.K.G. RAHATE

Secretary, Department of Justice, India

न्याय विभाग
DEPARTMENT OF
JUSTICE
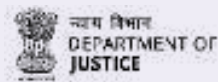
- India has developed impressive IT judicial system as part of the MMP and many eServices have been initiated, covering:

  - Huge population mixes in India.

  - Covering 2/3 of the rural population

  - Vernacular language support and diverse demographic requirements

  - Digital divide

- As India follows a Single Integrated Judicial System and an English Common law which has been effectively covered under the eCourts MMP:

  - Since the implementation of this MMP, many IT initiatives like the Solar Powered court rooms, Video Conferencing facility connecting Jails and Court premises etc have been initiated.

  - This MMP has helped in establishing the National Judicial Data Grid which has digitised large documents pertaining to:

    - Court Cases

    - Judicial judgements and court orders

- eCourts initiative has come a long way where Video Conferencing facility has been implemented in Supreme Court, many High Couts and District courts, so much so that, about 27 million online hearings were made during the COVID time

- Taking the IT initiative forward, currently, virtual courts and epayment systems too have been initiated which forms an integral part of the DPI in delivering Judicial Services

- Digital Transformation in courts has helped in implementing end to end paperless judicial system for increasing ease of justice, thereby,

  - Creating a digital repository of 31 billion records

  - A 25 Peta Bytes of cloud capacity

  - 1000 paperless courts

- Mr. S.K.G Rahate requested Mr. Ashish J. Shiradhonkar to provide details on the eCourts initiatives.

MR. ASHISH J. SHIRADHONKAR

Registrar (OSD), Technology, Innovation and
Planning and Member of E-Committee, Supreme Court
of India

- Mr. Ashish J. Shiradhonkar highlighted that so for in the eCourts module, 7 delivery channels have already been provided and there also has been provision for inter-ministerial integration, integration with land records and criminal justice systems.

- He also emphasised on the creation of the National Judicial Data Grid that has been acknowledged by the World Bank as one of the most innovative initiatives undertaken globally.

MS. R. ARULMOZHISELVI

District Judge on Deputation as Member,
e-Committee, Supreme Court of India, India

- Ms. R. Arulmozhiselvi discussed on the Capacity Building initiative undertaken by the Judicial System in India to train the users in the courts to start using the eCourts system developed.

- She further elaborated on the eCourts Train the Trainer success story and highlighted how this training in regional languages played a vital role in improving the reach and usability of the system developed.

Concluding Remarks

The Moderator thanked all the speaker for their delightful discussion on the various topics related to how DPI will be beneficial for the justice to be delivered in time. With digitization and interlinking of the information required by the judicial system, DPI will play a vital role in ensuring that right information is made available at the right time to the right person to deliver justice and improve the transparency in the entire process.

Day 2: Overview

Day 1 laid strong foundation about Digital Public Infrastructure and had raised the audience expectations the following day. True to the expectations of the global audiences, Day 2 was equally immersive, with six sessions planned for the day.

The session wise deliberations and discussions have been covered here to give glimpses of how the moderator, speakers and in-chair officials explored each of the topics and mesmerized the audience with their valuable insights.

Day 2 Session 1: Digital Document Exchange for efficient service delivery

The session was to deliberate upon the country's experience on rolling out DPIs on Data/Digital Document Exchange and global experts shared their thoughts and experiences on designing, rolling out and maintaining data exchange ecosystems required for such an important initiative.

The esteemed dignitaries and panelists discussed about the challenges surrounding the present data exchange ecosystem across the globe such as data privacy, consent requisition, sharing authority and control and account aggregator regulations. Discussion also touched upon the use case in India, Bangladesh, and Armenia and how the other developing nations can learn from them to implement the same digital solutions in their respective countries.

The key speakers for the session are as mentioned below:

- **Mr. Gevorg Mantashyan** (In-Chair)
  First Deputy Minister of High-Tech Industry of the Republic of Armenia

- **Mr. C V Madhukar** (Moderator)
  CEO, Co-Develop

- **Mr. Abhishek Singh**
  President, and CEO, NeGD, MeITY, India

- **Mr. Anir Chowdhury**
  Policy Advisor, A2I, Bangladesh

- **Ms. Alka Misra**
  Deputy Director General, National Informatics Center (NIC)

- **Mr. B.G. Mahesh**
  Co-Founder & CEO, DigiSahamati Foundation

Global DPI
Summit
12th-13th June, 2023

The discussion points of each of the speakers are as follows:

MR. C.V. MADHUKAR

CEO, Co-Develop

- The session started with touching upon the topic of digital document exchange and how sharing of documents can take place.

- He also stressed upon the importance of knowing what kind of document exchange should take place and what should be the regulations governing it.

MR. B.G. MAHESH

Co-Founder & CEO, DigiSahamati Foundation

- He highlighted about the status of India's account aggregators – where all financial as well as the banking data can be shared.

- He mentioned that an account aggregator is the foundation for credit, insurance, investments, pensions, and cross sectoral digital infrastructure for which every financial institution can build the use case.

- He stressed upon the importance of the data provided and the end users both being regulated entities, while the account aggregator can act as a consent manager for data exchange.

- In India there are 17 account aggregators that are licensed by the Reserve Bank of India, he mentioned. Currently, 1.13 billion bank accounts in India are using the account aggregator facility.

- He also pointed out the challenges with respect to the gap being present due to operational costs. He highlighted the need to ensure that no one is left behind and there is financial inclusion to the remotest level.

- He further added that the Financial Intelligence Units (FIUs) and banks used to face 4% frauds from bank statements alone, but the fraud rate has become zero after using account aggregators.

- For FY'23, loans worth $900 million have been doled out in real-time. The process of receiving loans has also become easier for banks and more than 50% of these loans were for small businesses, he elaborated.

MR. ANIR CHOWDHURY

Policy Advisor,
a2i, Bangladesh

- He took the audience through the premise of building a 'Digital Bangladesh'. He narrated the example of a successful filing system called "Nothi"- which relates to 34 data exchange systems in Bangladesh and is being used by 131 thousand citizens.

- He also informed about the 'MyLocker | MyGov' service which is inspired by India's DigiLocker. It stores health, educational and other digital records for easy access and verification. He mentioned that document exchange services are also being used by 15 million expats across countries.

- Coming to the challenges being faced, he mentioned that services should reach people instead of people having to go to government offices to fetch their documents. Breaking of silos within government and private sectors needs to happen.

MS. ALKA MISRA

Deputy Director General,
National Informatics Centre

- She pointed out that the term 'Digital Document Exchange' is well understood by people in terms of the guidelines such as carrying electronic documents, sharing them with relevant authorities, and its purposeful verification.

- However, India being a diverse country have several language barriers, and needs to leapfrog digital initiatives and leverage technology to derive maximum benefit of this digitization.

- She gave the examples of Indian services such as Aadhaar and Digi Locker which are enabling safe exchange of the documents.

- She also mentioned services like Parivahan Seva and Ayushman Bharat Health Account which are allowing exchange of data through open data platforms.

MR. ABHISHEK SINGH

President and CEO, NeGD, Ministry of Electronics
and Information Technology, India

- He showcased a presentation to share the unique use case of India's 'DigiLocker: Enabling Efficient Services'.

- He mentioned that seamless data exchange and the benefit of the end consumer is at the core of this offering. "I have noticed that people in India have stopped carrying wallets because of the presence of UPI and the 'DigiLocker' digital wallet for all important documents," he reemphasised.

- He added that there is no need any more for people to run to different government offices to fetch their official documents and even the public systems can now talk to each other and exchange documents easily.

- Speaking about the flow of the service and the stakeholders involved. Mr. Singh mentioned that there are three key parts of the ecosystem: The Issuer of the document, who issues; Citizens, who own and consents; and the Requestor, who access the document post verification.

- He also mentioned how DigiLocker has been enabling paper-less governance in India for the last 8 years, adding 3,00,000 users every day. "5.62 billion documents are available for easy access," he highlighted.

- He also spoke about the period during the COVID-19 pandemic, which saw documents required for vaccination and tracing through the Co-Win platform being allowed by API and DigiLocker to be uploaded, verified, and shared leading to proactive delivery of services.

- Mr. Singh concluded that the API layer ecosystem ensures a presence-less, cashless, and paperless governance and service transition through services like DigiLocker.

MR. GEVORG MANTASHYAN

First Deputy Minister of High-Tech
Industry of the Republic of Armenia

- Mr. Gevorg Mantashyan, remarked that how even though the pandemic period accelerated the change and transition in the digital world, organisations are still hesitant to give access to data as they want to keep the monopoly for purposes such as easy tracking etc.

- However, he sounded confident of the next 'techade' saying that the processing will be faster going forward. In fact, henceforth, the question will change to 'Do we need the document at all, if verification is digitized?' he observed.

- The Chair also gave the example of Bangladesh and Armenia's similar mechanism in this space referring to the topics discussed by Mr. Chowdhury.

Concluding Remarks

- To conclude the session, the moderator Mr. Madhukar remarked that there are a few concern areas that can be worked upon on priority.

- He mentioned the issue of verifiable credentials i.e. how will the organisations ensure authenticity.

- Next, he mentioned the idea of privacy and consent and commented that it shouldn't become a burden for the citizens; lastly, he pressed for necessity of the tech and legal elements to progress together, as, a combination approach is necessary to move forward in this direction.

- There was also a mention of the newly launched 'Digi Yatra' facility – a demonstration of which is also being presented at the Global DPI Exhibition on the sidelines of the Global DPI Summit.

Day 2 Session 2:
Public Key Infrastructure (PKI) for DPI

This session deliberated upon the issuance and management of the digital certificates in a secure and scalable environment. Deliberations would be made on the global good practices that will aid in smooth rollout of initiatives for effective public service delivery.

The esteemed dignitaries and panellists discussed about the issuance and management of the digital certificate and digital signatures in a secure and scalable environment. the deliberations touched upon global good practices that will aid in smooth roll out of global mutual recognition framework. Discussion also touched upon the use case in India, Japan, and Kenya.

The key speakers for the session are as mentioned below:

- **Mr. Moses Kunkuyu Kalongashawa** (In-Chair)
  Minister, Ministry of Information, Malawi

- **Mr. Vijayakumar Manjunatha** (Moderator)
  SVP, eMudhra & Chair of TSWG, Asia PKI Consortium

- **Ms. Anne Waweru**
  Director ICT, KenTrade, Kenya

- **Mr. Arvind Kumar**
  Controller of Certifying Authorities, Government of India

- **Mr. Nick Pope**
  Chair, ETSI TC ESI, Europe

- **Prof. Satoru Tezuka**
  Chair, Digital Trust Working Group, Japan

The discussion points of each of the speakers are as follows:

MR. VIJAYAKUMAR MANJUNATHA

SVP, eMudhra & Chair of TSWG,
Asia PKI Consortium

- We aim to enhance the understanding of Public Key Infrastructure (PKI) and its significance in the context of digital transformation.

- PKI has become an integral part of digital transformation, it has evolved and gained prominence over time. It has become a standard

prominence over time. It has become a standard practice, offering advantages such as cryptographic identity providers, secure trust, digital trust, and the ability to conduct remote transactions.

- PKI serves the purposes of identification, authentication, non-repudiation, and ensuring integrity in digital transactions. Legal validity plays a crucial role in PKI implementation, requiring a strong legal background. It has been built upon fundamental layers such as presence-less e-authentication, paperless digital signatures, and e-signatures, and cashless transactions facilitated by UPI.

- India's PKI initiatives are well-established under different layers, including Aadhar, e-KYC, e-Sign, UPI, and Digi Locker, all contributing to a robust PKI framework. It enables secure entity-to-entity transactions in various domains.

- Globalization efforts seek mutual recognition among countries, enabling paperless, borderless digital transactions based on mutual trust in PKI standards.

MS. ANNE WAWERU

Director ICT, KenTrade, Kenya

- A case study on the Single Window Trade System, specifically KenTrade, was presented.

- Kenya is at the forefront for digitizing public goods and services. KenTrade is a state corporation established in 2011 to facilitate international trade & manage the Kenya Electronic Single Window System.

- Prior to Ken Trade, trade processes were costly, lengthy, and lacked proper controls, allowing for easy circumvention of regulatory requirements. Cargo documentation processes were inefficient, and transparency was limited.

- KenTrade brought about a digital revolution by improving service delivery to exporters and importers through the implementation of electronic systems. It follows the guidance of UN CEFACT and WTO recommendations for an electronic single window system.

- The KenTrade platform has 17,000 registered system users and over 40 government agencies registered on it. In 2021, it processed over one million permits and handles approximately 700,000 transactions annually.

- The government of Kenya is actively engaged in discussions regarding digitization, with a particular focus on the importance of Public Key Infrastructure (PKI). PKI is considered an ongoing process for the country, and KenTrade serves as the initial step in this direction.

MR. MOSES KUNKUYU KALONGASHAWA

Minister, Ministry of Information, Malawi

- DPI plays a significant role in Public Key Infrastructure (PKI), particularly in areas such as e-documentation and e-signatures.

- Digitization in PKI has the potential to overcome border barriers, fostering seamless digital transactions.

- India's remarkable progress in DPI within PKI deserves recognition.

- The rise in cyber security issues necessitates attention, especially in African countries with low technology adoption. India's success can serve as an inspiration for other nations.

- It is crucial to discuss the challenges associated with this matter and seek solutions collectively.

PROF. SATORU TEZUKA

Chair, Digital Trust Working Group,
Japan

JDTF

- International Mutual Recognition for achieving Data Free Flow with Trust (DFFT) was discussed. DFFT aims to establish a framework where data can flow freely with trust, driving the new economy and the 4th Industrial Revolution.

- DFFT holds immense significance as it is considered the most value for supporting digital trade. To facilitate digital trade on a global scale, it is crucial to ensure the distribution of up-to-date, accurate, and rich data.

- Japan initiated the EU-Japan Technical pilot and presented a scoping document for DFFT at the G7 digital ministerial meeting.

- The establishment of an International Accreditation Platform (IAP) was discussed as a new channel for mutual recognition. Japan, being a member of both G7 and G20, expressed its willingness to collaborate with India to achieve the global expansion of International Mutual Recognition.

MR. ARVIND KUMAR

Controller of Certifying Authorities, Government of India

Controller of Certifying Authorities
Ministry of Electronics & Information Technology
Government of India

- Indian has secured a trust ecosystem and moving towards mutual recognition. He added that if we need to take DPI across countries, then we need a framework mutually agreed upon across the globe.

- He highlighted the Indian secure Trust system, with PKI (Public Key Infrastructure) is being governed by the IT Act and operated by over 20 service providers.

- The use of PKI in various applications like UPI (Unified Payments Interface) and e-signatures has witnessed significant growth.

- E-signatures have gained recognition throughout India, including foreign certification authorities (CAs) operating outside the regulatory body.

- Efforts are underway to achieve mutual recognition of e-signed documents through a reciprocal framework.

- A draft agreement has been developed, and collaboration with other countries acceptable to all is being pursued.

- Cross-border recognition will facilitate the globalization of Digital Payment Infrastructure (DPI).

Concluding Remarks

- Emphasizing the importance of mutual recognition; there is a need for a common framework to guide the discussions on Digital Public Infrastructures (DPIs) in Key Performance Indicators (KPIs).

- The platform has provided an exceptional opportunity for the exchange of thought-provoking ideas on DPIs in KPIs.

Day 2 Session 3:
Digital Education and Skilling

The session covered universal access to quality education, address diverse learning needs thereby leveraging technology and digital platforms and how these enablers would enhance the accessibility, quality, and reach of education across the country.

The esteemed dignitaries and panelists discussed about the challenges surrounding the skill gap among students in large countries like India. They also discussed the Common Technology Framework that can be leveraged to bridge this gap. Discussion also touched upon the use case in India, Mauritius, Bangladesh, and surrounding countries and how the other developing nations can learn from them to implement the digital skilling.

The key speakers for the session are as mentioned below:

- **Ms. Parvashi D Maharahaje** (In-Chair)
  Assistant Permanent Secretary, Ministry of Information Technology and Communication, Mauritius

- **Mr. Shankar Maruwada** (Moderator)
  Co-Founder and CEO, EkStep Foundation

- **Dr. Buddha Chandrashekhar**
  Chief Coordinating Officer, AICTE

- **Ms. Eunsong Kim**
  Head of Unit and Programme Specialist, Social & Human Science Unit, UNESCO

- **Ms. L. S. Changsan**
  IAS, Additional Secretary (Digital), Department School Education & Literacy, Ministry of Education, Government of India

The discussion points of each of the speakers are as follows:

MR. SHANKAR MARUWADA

Co-Founder and CEO, EkStep Foundation

EkStep Foundation

- The session started with the moderator giving overview of the DPI that India has managed to build for universalization of education.

- He pinpointed the need for developing countries to leverage technology to build open educational resources.

- He also highlighted Indian Educational Policy framework and how it is supporting digital innovation in education sector.

MS. EUNSONG KIM

Head of Unit and Programme Specialist,
Social & Human Science Unit,
UNESCO

UNESCO

- She pinpointed that DPI has immense benefits for students and teachers for providing quality education. She talked about UNESCOs efforts in providing multilateral support for creation digital public infrastructure for making education accessible for all.

- She emphasized that UNESCO has normative frameworks which member countries may utilize to customize and create their own frameworks.

- She also informed the audience about a Global Framework reference indicator that UNESCO has developed which supports information, data literacy, career related competencies and digital content creation.

- She praised India's efforts in digital skilling and how India has deployed technological interventions to provide education to remotest of areas.

- She also highlighted how there is a grave mismatch between education and job. She pointed UNESCOs efforts to create an up-skilling and re-skilling strategy.

DR. BUDDHA CHANDRASHEKHAR

Chief Coordinating Officer, AICTE

- He highlighted Digital Initiatives undertaken by GoI; Higher Education has taken. We understood that tech plays an important role in education during the COVID times.

- He emphasized that every student is unique, and the learning pattern is unique. This is why it is pertinent for us to investigate digital ecosystems to create a robust innovative digital education infrastructure.

- He spoke about India being the youngest country in the world – using technology to bridge the gap between skills & education is of utmost importance.

- He presented case on Digital initiatives undertaken by Government of India for promoting higher education | National Educational Technology Forum - establishing digital public infrastructure, Educational Ecosystem Registry – tracks all the learning patterns and innovations, unique ID covers each student.

- One Nation, One Data Portal – seeks to streamline the regulation assessment processes, real time data collaboration.

- National Internship Portal | Number of registered and verified students and graduates – 17 million registered so far, more than 70,000 recruiters. Students working on real-time basis with the industry, API based platform.

- Online Language applications – language services, integrated ChatGPT

- Digital Skilling Platforms, Study in India, Emerging technology like AI, BI, Cyber Security, Block Chain, 5G, Semiconductor industry

MS. PARVASHI D MAHARAHAJE

Assistant Permanent Secretary,
Ministry of ICT, Mauritius
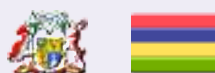
- She mentioned that it was a fruitful conversation and thanked for inviting her to participate in the deliberations.

- She praised DIKSHA platform.

- She expressed her desire for collaboration between India and Mauritius to build digital infrastructure.

MS. L. S. CHANGSAN

Additional Secretary (Digital),
Department of School Education
and Literacy (DoSE&L),
Ministry of Education,
Government of India

शिक्षा मंत्रालय
MINISTRY OF
EDUCATION

- She began by agreeing that DPI is critical for ensuring Universal quality education, access to education for diverse stakeholders.

- She highlighted that India is big, diverse, multilingual, and educationally caters to varied population. Policy framework in India makes a strong case for inclusive Digital Public Infrastructure, she highlighted features from National Education Policy, 2020 which have provisions for digital repository, overcoming language barriers, reaching out to differently abled students and digital innovation in the education sector.

- She pinpointed about India's need to have suitable, scalable, accessible, inclusive and equity promoting digital innovation and infrastructure.

- She explained the use case of PMeVidya-DIKSHA (DPI example in education sector). It has more than 60 billion learning minutes in 33 plus languages, 5.16 billion learning sessions. She also informed the participants that DIKSHA has now been recognized as digital global good by Government of India.

Concluding Remarks

The Moderator thanked all the speaker for their delightful discussion on the various topics related to providing the right education and upskilling in the DPI space. It also emphasised the importance of universal access to quality education, address diverse learning needs thereby leveraging technology and digital platforms and how these enablers would enhance the accessibility, quality, and reach of education across the country.

Day 2 Session 4:
DPI for Digital Health and Climate Action

This Session covered the DPI offerings in improving the healthcare system in India as well as other parts of the globe, using relevant technology offerings which are beneficial for both – the Government and healthcare providers.

The key speakers for the session are as mentioned below:

- **Mr. Kanaka Dasaratha Herath** (In-Co-Chair)
  State Minister of Technology, Ministry of Technology, Sri Lanka

- **Mr. Purushottam Kaushik** (Moderator)
  Head of the Centre for Fourth Industrial Revolution Network, World Economic Forum

- **Ms. Martine Bottheim**
  Acting Ambassador, Norway

- **Mr. Rahaingonjatovo Nirina** (In-Co-Chair)
  Chief Digital Officer, Ministry of Digital Development, Digital Transformation, Posts & Telecommunications of Madagascar

- **Mr. Suhel Bidani**
  Lead - Digital, Bill & Melinda Gates Foundation

- **Mr. Vikalp Sahni**
  Founder & CEO, Eka Care

The discussion points of each of the speakers are as follows:

MR. PURUSHOTTAM KAUSHIK

Head of the Centre for Fourth Industrial Revolution Network, World Economic Forum

- Mr. Purushottam thanked the speakers and gave a brief overview of the DPI in Health domain

- He touched upon various initiatives that have been undertaken globally to cover healthcare for all at affordable prices making use of the technology

- WEF was involved in OCEAN initiative which focussed on inclusivity of smaller countries possibly welcoming the DPI in Health Domain

MR. KANAKA DASARATHA HERATH

State Minister of Technology,
Ministry of Technology, Sri Lanka

- Digital health and climate change will play significant roles within Digital Public Infrastructure (DPI). Their impact extends to human life, animal life, and the overall ecosystem.

- Sri Lankan government's journey is to accelerate digitisation and work towards creating a digital economy.

- The Sri Lankan government has embarked on a journey to expedite digitisation and promote the digital economy with a vision of 2030. Among the key projects, the Universal Digital ID initiative stands out as a mandatory program, showcasing Sri Lanka as a prime example of Digital Public Infrastructure (DPI) implementation. Mr. Herath thanked him for the support he is receiving from the government and Prime Minister.

- Sri Lankan government is actively engaged in collaborating with climate change policies. They are designing a health registry for health services.

- Presently HMIS is installed in many districts in Sri Lanka, and out of 22 million citizens, 8 million are registered.

- Gradually a health atlas is getting created in Sri Lanka.

MR. VIKALP SAHNI

Founder and CEO
Eka Care

eka.care

- Founded in 2020, EKA Care swiftly scaled up as a young startup, harnessing the power of public digital infrastructure within just 2–3 years.

- Eka Care aims to solve the issue of visualizing medical records in a manner like how a country's GDP is graphically represented. When it is about health, nothing else matters.

- Healthcare providers, the doctors, should read that data carefully. How DPI is helping us achieve this. What we believe in Eka care. we are hitting a moment of UPI in healthcare. UPI has taken leaps and bounds and that's what DPI is gearing up to transform healthcare.

- Healthcare providers, particularly doctors, play a crucial role in carefully analysing the data. DPI (Digital Public Infrastructure) in healthcare can support in achieving this and more. India is on the cusp of a transformative moment in healthcare, like the advancements seen with UPI (Unified Payments Interface). DPI is poised to revolutionize the healthcare industry and take it to new heights.

- Like how UPI operates in the country with NPCI as the front-facing application, we can draw parallels to the integration of UHID under ABDM in the healthcare sector.

- This integration allows healthcare service providers to connect to the rails and facilitate the delivery of a wide range of health services. Leveraging the Personal Health Records (PHR) available on different platforms and websites, comprehensive healthcare services can be delivered effectively.

- The architecture is designed in a scale up and secure manner, considering various privacy use cases. It incorporates a unique identifier called ABHA, enabling interaction and integration for specific individuals. This ensures that individuals retain control over their data, allowing them the freedom to share it with whomever they choose.

- The architecture of the system ensures that the ownership of the records lies either with the individual or the hospital/entity where the records are stored.

- During the nascent stage of UPI in 2015-16, it consisted of a provider network, banks, and consumers who could access it on their phones.

- The healthcare industry is much more fragmented compared to fintech, with numerous services amounting to 70,000 million. However, all service providers are now joining the network, allowing innovators to leverage use cases and be part of the network.

- Healthcare startups are actively building innovation within this space.

- Although still in its early stages, like Aadhaar and other initiatives, the healthcare sector will eventually undergo significant transformation.

MS. MARTINE BOTTHEIM

Acting Ambassador, Norway

- Norway is at the forefront of the international high-level panel dedicated to fostering a sustainable ocean economy. This global initiative brings together world leaders to promote effective protection, sustainable production, and equitable prosperity in relation to our oceans.

- Norway plays a significant role in generating weather-related data that benefit many countries, like farmers in Africa. The country shares high-resolution satellite images, which are utilized by the United Nations to monitor climate change, document deforestation, and observe extreme weather events and natural disasters.

- In Norway, digital public goods and infrastructure are being leveraged in the field of climate change, climate adaptation, and climate mitigation.

- In the field of health, DHIS2 serves as the world's largest health information management system. It is a global public good that facilitates the collection, validation, analysis, and presentation of data.

- DHIS2 was initially developed by the University of Oslo, Norway, in collaboration with various partners, and has since been adopted by numerous countries and organizations worldwide.

- During the COVID-19 pandemic, DHIS2 played a vital role in the delivery of COVID vaccines in 42 countries, and it was also utilized for virus surveillance in 44 countries, including Norway.

- In the field of health, DHIS2 serves as the world's largest health information management system. It is a global public good that facilitates the collection, validation, analysis, and presentation of data.

- DHIS2 was initially developed by the University of Oslo, Norway, in collaboration with various partners, and has since been adopted by numerous countries and organizations worldwide.

- During the COVID-19 pandemic, DHIS2 played a vital role in the delivery of COVID vaccines in 42 countries, and it was also utilized for virus surveillance in 44 countries, including Norway.

- Currently, DHIS2, recognised as the largest health management information system (HMIS) platform globally, is being implemented in 76 low and middle-income countries. DHIS2 reaches approximately 3.2 billion individuals residing in countries where it is utilized. Furthermore, DHIS2 is employed in over 100 countries when considering NGO-based programs.

- One notable aspect of DHIS2 is its contribution to capacity building as an open system. Capacity building has been instrumental in strengthening HMIS systems, utilizing the features and flexibility of DHIS2.

- To prioritize climate change, the Norwegian government is focusing on monitoring its impact through health surveillance and data analytics. To further this agenda, a budget of 50 million US dollars has been allocated until 2025.

- Norway plays a significant role in supporting the development of digital public goods and infrastructure for the common good. They actively engage in partnerships with G20 and other nations.

Continued from previous page …
Ms. Martine Bottheim

- Moreover, Norway has participated in the Ocean initiative led by the World Economic Forum, with a strong emphasis on inclusivity, particularly for smaller countries.

- In Norway there has been substantial work in Healthcare DPI infrastructure and goods. Next on priority is work on nature climate energy.

- The approach towards addressing the challenges of climate and nature needs to be expanded. It is crucial to cease investments in closed proprietary solutions that have limited applications and instead prioritize investments in resilient, robust, and openly accessible infrastructure.

- A DPI-based approach and adherence to best practices are essential in the design of the climate and nature data infrastructure. Norway has taken the first step towards implementing a DPI approach by initiating the "Open Earth Platform" initiative, which involves calling for proposals for the pilot and prototype phases. The aim is to establish a robust and accessible infrastructure that spans various domains.

- The OpenEPI initiative operates on open principles, ensuring that all datasets, services, and solutions meet the standards of digital public goods. Additionally, the OpenEPI stack is designed as a platform-agnostic set of services, focusing on creating aggregate services across datasets that are easily reusable. The initiative is open for participation until the 20th of June, one can visit the website for further details and to get involved.

MR. SUHEL BIDANI

Lead - Digital,
Bill and Melinda Gates Foundation

BILL & MELINDA
GATES foundation

- Health ecosystem with a DPI approach will work as seen in India with ABDM we are moving in the right direction however, the pace can be accelerated.

- In India we are lagging in key health indicators. Citing the example of the key indicators like MMR and IMR. India's progress from 2010 until now has seen a decrease from around 45,000 to 37,000 live births in 2015, and now to 26,000 live births. According to WHO, it should be less than 5000 live births within less than 7 years from now. This presents a challenging task, and as of 2023, there is a need to double up the effort, to meet the health indicators.

- We observe poor performance on these indicators across most of the States except Kerala and Goa which have achieved levels below 5000 live births. Developed countries have been able to leverage DPI significantly, while many disadvantaged countries struggle.

Continued from previous page ...
Mr. Suhel Bidani

- Eka Care serves as an example of the innovation ecosystem's potential when strong DPI layers are deployed in the country. Aadhaar, consent architecture, and data sharing play fundamental roles in this. Almost every component relies on these layers.

- It is a long journey that requires substantial investment and commitment from the government, providers, and the ecosystem. It is crucial that consumers, patients, or beneficiaries also take responsibility. It will be interesting to know how many individuals have created ABHA. Each one of us has a role to play and cannot rely solely on the government.

- Climate tech innovation encompasses various aspects, and the significance of a solid business model cannot be overstated. It serves as a driving force behind overall innovation in the field, providing the necessary impetus for progress. Business models play a crucial role.

- State assistance is indispensable in facilitating climate tech innovation, encompassing, both financial and non-financial support.

- AI translators play a vital role by effectively communicating the problems they tackle using AI, enabling greater comprehension and collaboration. Climate-related advancements can be greatly fuelled by behavioural changes, as the climate sector necessitates such transformations on a larger scale. Educating individuals about the potential impacts of climate change and fostering cooperation is essential in paving the way for innovators.

- The belief in the tangible benefits of Digital Public Infrastructure (DPI) stems from the successful outcomes witnessed in various countries over time. However, numerous challenges arise within the context of DPI and Digital Public Goods (DPG).

- Enhanced collaboration is imperative to extract maximum gains from investments. A prime example is the sub-Saharan region where mapping efforts were conducted last year.

- More than 800 digital health apps were active, but less than 50% were effectively scaled up. Interestingly, most of these apps, approximately 70%, received funding from donor agencies and multilateral organizations. It is crucial to foster collaboration to maximize the returns on these investments.

- The Norwegian government has taken a leading role among countries by supporting Digital Public Infrastructure (DPI) through various initiatives. They have been a strong advocate for DPI, DPG, and other related endeavours, emphasizing the need for collective collaboration.

- Recognizing that fragmentation is a persistent challenge, the Norwegian government emphasizes the importance of joining forces to address this issue effectively.

- Digital Public Goods (DPG) offer multiple options for adoption, but what is lacking is a robust local ecosystem to support them. One notable example is DHIS2, which has been successfully implemented across the world. In India, the largest implementation of DHIS2 is observed in Uttar Pradesh (UP).

- However, the government currently faces challenges in efficiently procuring a vendor who can effectively manage and sustain the platform. There are only one or two organizations in India that possess familiarities.

MR. RAHAINGONJATOVO NIRINA

Chief Digital Officer,
Ministry of Digital Development,
Digital Transformation, Posts and
Telecommunications of
Madagascar

- Madagascar is also on the way to digitization. All citizens have a unique ID.

- Vaccine was dispensed through digitisation.

- Telemedicine is available for all citizens in the country.

- Wise men learn from the experiences of others, in the same context Mr. Nirina thanked the PM of India and welcomed his support in DPI implementation.

- Sri Lankan unique id is a live example of DPI adaptation in Sri Lanka. The primary procurement process has been started and is expected to go live by the end of 2024.

Concluding Remarks

The Moderator thanked all the speaker for their delightful discussion on the various topics related to how DPI would improve the healthcare system in India as well as other parts of the globe, using relevant technology offerings which are beneficial for both – the Government and healthcare providers.

Day 2 Session 5:
Digital Agriculture Ecosystem

This Session covered various technological systems, platforms, and tools like mobile applications, sensor-based technologies, precision farming, weather forecasting, market information dissemination, access to financial services, etc. which will have a lasting impact on improving the agriculture output.

Through this session the distinguished speakers and panellist deliberated upon the need of accurate data for building digital public infrastructure in the field of agriculture. They also discussed about adopting new approaches for bringing in innovative ecosystem in the agriculture sector.

The key speakers for the session are as mentioned below:

- **Ms. Damchen Zangmo** (In-Chair)
  Dy. Chief ICT Officer, GovTech Agency, Bhutan

- **Mr. Rajeev Chawla** (Moderator)
  Chief Knowledge Officer, Ministry of Agriculture & Farmers Welfare, India

- **Dr. M. L. Jat**
  Global Research Program Director, ICRISAT, India

- **Dr. Anil Rai**
  Assistant Director General (ICT), Indian Council of Agricultural Research, India

- **Mr. Chengal Navin Twarakavi**
  Senior Digital Agriculture Specialist, ADB, Philippines

- **Ms. Chen Hattav**
  Ecosystem Development Manager, GrowingIL, Israel

The discussion points of each of the speakers are as follows:

MR. RAJEEV CHAWLA

Chief Knowledge Officer, Ministry of
Agriculture Farmers Welfare, India

कृषि एवं किसान
कल्याण मंत्रालय
MINISTRY OF
AGRICULTURE AND
FARMERS WELFARE

- He highlighted the demarcating the difference between the DPI and IT system. How they are different – IT project is monolithic in nature on the other hand DPI has interoperability, accessibility, data standardization and scalability.

- He highlighted that the Agri stack Project of GoI – Can we have DPI where Govt's role is confined to data provision, Unified Farmers Service Interface.

- Foundational question – phase 1 farmers holding land, 750 billion parcels of land, coordinates of those land and what kind of crops grow. All three registry to be provided by government. Problem is it is a State Subject. Various State Governments should form the foundational registries.

- Speaking about the DPI in agriculture sector he mentioned the need-to-know weather, soil, satellite, financial records of the farmer to provide digital services as a service provider.

- Agri data exchange is marketplace where this data will be shared in collaboration with other stakeholders.

- Fund foundational layer of agricultural stack that is data.

- Constant funding from government and multi-government organizations

- Play catalytic role and create foundation for DPI in agriculture.

- Good regulations must be come and deal with farmers.

DR. ANIL RAI

Assistant Director General (ICT), Indian Council of Agricultural Research, India

Indian Council of Agricultural Research

- Digital infrastructure farmers program in 2021 – Kisan Sarathi. It's not DPI but developed by India for transmission of technologies developed by ICRISAT institutes.

- Farm science center through them to the local farmers in their language

- Agri is very localized and very local problems, will connect with other departments also in addition with our department.

- Plan to create Farm Registry – Agri stack, we are in the initial phase and accuracy will come later.

- Good quality data is important. Kisan Sarathi data source from farmers directly

- DPI – consent-based data sourcing from farmers which is authenticated by the farmers directly.

- Who is entitled to get the benefit under the scheme for farmers. How do you verify that it has gone to the expected person.

- Some categorisations should be made basis various parameters but require authenticated data.

- Technology has plus points but must be careful about the implementation of technology in agricultural sector. Should have risk mitigation framework has to be there.

MS. CHEN HATTAV

Ecosystem Development Manager, GrowingIL, Israel

GrowingIL
Agri Culture Community

- She began by saying that she is excited to bring in our approach in agricultural sector which she in DPI to India. DPI has lot of potential in agriculture.

- Farmers, Government and private start-ups, Data regulators all form an innovative ecosystem for agriculture in India.

- Most countries have Agricultural extension services but digitalizing these services matter to foster innovation in agriculture. For eg. Farmers in Israel – creating an ecosystem that fosters innovation.

- Data has crucial role in agriculture field. Farmers today data driven decision makers, so need data technology related which can provide data related to agriculture.

- To sum up DPI and data is the backbone of agriculture.

MS. DAMCHEN ZANGMO

Dy. Chief ICT Officer
GovTech Agency, Bhutan

- It is important to have harmonized data, collaboration, is important for the system in agriculture

- She highlighted few digital initiatives in Bhutan viz.

  - National Digital Identity

  - Digital School where elearnign platforms are being provided

  - Integrated Citizen services systems

  - Grass root level fibre connectivity

- Few Agricultural initiatives that Govt of Bhutan are undertaking:

  - Epest surveillance systems to report pest

  - Plant Protection Product Information Management System (PPPIMS)

  - Agriculture Market Information System – 26 Markets and 40 Products information system is tagged

  - eCrop Advisory App – Learning platform for youth interested in farming

- Usage of DPI should be undertaken to promote productivity and efficiency in the agriculture sector

DR. M. L. JAT

Global Research Program Director, ICRISAT

- India while dealing with agriculture, is dealing with many actors & sectors where DPI comes in picture.

- Right information at right time during climate change will help farmers. DPI has a bigger role to play in agriculture. Data standardization, interoperability will create opportunity for farmers in data exchange.

- DPI will facilitate community of practitioners around the innovative agricultural ecosystem. DPI can facilitate time efficiency, digitization is important.

- Data is new currency - lot of mushrooming happening, no regulated or harmonized system available to cover agricultural data. Interoperability between the countries related to farmer is also important.

- Can not develop things overnight, so we need to develop phased approach- DPIs must be co-created, farmer centric approach must be adopted for maximization of societal benefits.

MR. CHENGAL NAVIN TWARAKAVI

Senior Digital Agriculture Specialist, ADB,
Philippines

ADB ASIAN DEVELOPMENT BANK

- Inspired by farmer's needs, open standards, innovation, and research by the private sector.

- Satellite data and sentinel open data started to use when they adopted open standards, every other start up depends on that data, remote-sensing data is available.

- DPI interesting – ground stakeholders play to their strength but there are challenges.

- Idea of digital identity – make farmer data accessible but how does the consent layer work with other layers.

- There is lack of open data – nexus between agriculture, climate change and data.

- Knowledge delivery – how to ensure models developed are right.

- Lack of startups in the sector of logistics, warehousing, how to change the barrier of competition.

- Shift from data hoarding to data democratization – shift need to happen.

- Building trust and transparency – must be concerned about the potential challenges to build trust.

- To ensure proper redressal mechanism in place if the services does not work for him.

- DPI provides new opportunity for us to bring down the financial stress, revisit the problem, can we bring more steady income.

- Small-holders, women farmers, minor population – digital divide especially in the rural areas so this digital divide needs to address.

- Federated approach – centralized by motivation and decentralized by responsibilities.

- Farmers are inherently very social; they learn more from peer-to-peer interaction.

Concluding Remarks

The Moderator thanked all the speaker for their delightful discussion on the various topics related to how DPI would dwell upon various technological systems, platforms, and tools like mobile applications, sensor-based technologies, precision farming, weather forecasting, market information dissemination, access to financial services, etc. which will have a lasting impact on improving the agriculture output. He also emphasised that more and more use of technology would enable the farmer in bettering the produce with timely inputs regarding the quality of soil, weather, and market linkages etc.

Day 2 Session 6:
Building the Global DPI Ecosystem

This session covered the digital ecosystem that would act as an enabler in Public Service Delivery space. Deliberations were made on topics like data storage in secure environment, identity management and levering mobile technology for effective public service delivery.

The DPI, being the emerging technology offering that provides multiple use cases for various public and private initiatives, proves to be an important area to focus upon. Various areas like data security inter-operability, scalability and most importantly, open architecture was discussed in the session.

The key speakers for the session are as mentioned below:

- **Mr. Walter Eduardo Morales Vega** (In-Chair)
  Board Advisor, Central Bank of Uruguay

- **Mr. Abhishek Singh** (Moderator)
  President and CEO, NeGD, MeitY, India

- **Mr. Robert Opp**
  Chief Digital Officer, UNDP

- **Dr. Srivatsa Krishna**
  IAS, Government of Karnataka

- **Mr. T. Koshy**
  MD & CEO, ONDC

- **Ms. Vyjayanti T Desai**
  Practice Manager, World Bank

The discussion points of each of the speakers are as follows:

MR. ABHISHEK SINGH

P&CEO,
National E-Governance Division, MeitY, Government of India

- We have a lot to hear from the eminent speakers on how to take DPI forward with what next having discussed the challenges and issues.

- There is so much of interest and demand globally in trying to improve trust, governance, delivery of services using technology.

- UN, World Bank, Multilateral Agencies etc too are wanting to support the DPI initiatives globally for governance reforms and Bangladesh Estonia too are coming forward with implementation of various projects in DPI space which improves supply of projects and use cases in DPI.

- This helps in collaboration, adaption and easy adaption of the projects with strategic partnership to ensure that DPI journey moves forward across globally.

MR. T. KOSHY

MD & CEO, ONDC

- He pointed out that a complete transformation of e-commerce ecosystem is in the works.

- 'Every product and every service belonging the ecosystem will showcase their catalogue thorough an open network using an open protocol to the entire population as one single market. Multiple investments will be made in such an accessible environment/ecosystem.

- He spoke of four big elements in this regard:

  - Design must be inclusive, inter-operable and foster widespread innovation- Take into practical considerations of innovations.

  - Implementation will fall into the flow of the system.

  - Orchestration and not control, enabler role.

  - Significant amount of evangelisation

MS. VYJAYANTI T. DESAI

Practice Manager, World Bank

THE WORLD BANK

- Countries recognized the importance of delivering solutions even before COVID-19, particularly regarding ID payments and data sharing, which are crucial for job growth and overall data development.

- Singapore's examples, such as Signpass and Myinfo, demonstrated the significance of digital solutions, with 97% of the population transitioning to digital transactions during the pandemic.

- Support was provided across social sectors in 85 countries, including Sri Lanka, Bangladesh, and Nigeria.

- Despite progress, approximately 850 million people still lack proper identification, highlighting the urgent need for capacity building.

- There is an opportunity for knowledge and capacity building which is supported by world bank, given the various instruments available for digital solutions.

- 'Invest Africa' an initiative by world bank brings together people and government officials from different countries to collaborate on finding suitable solutions, emphasizing the importance of learning from one another.

- Global convening and collaborative platforms are crucial for addressing challenges and driving progress in digital solutions.

DR. SRIVATSA KRISHNA

IAS, Government of Karnataka

- "By 2048, an average $1200 will have the power of all the human brain power!"

- "We have moved from the big tech into an era where the cost of technology has gone down significantly."

- "India has done something at population scale- a scale of 1.4 billion people, and it works!".

- How can we think of placing DPIs in countries which are not even using the internet?" 1/3rd of the global population is not connected, yet.

- Gave the example of Bangladesh which has a Digital Centre model-entrepreneur run digital centres.

MR. ROBERT OPP

Chief Digital Officer, UNDP

Q&A Insights

During the Q&A section, Mr. Anir Chowdhury (from Bangladesh) spoke about the COVID-19 period being an accelerator for this change. He expressed how in November 2019, for 84% of the country's private sector which is into the business of exports and comprises mostly women, only 40% had digital wallets; but, by the middle of 2020 it touched 100%- i.e., 3 million mobile wallets! He specifically mentioned how his govt. bailed out the industry by sending wages when orders worth billions of dollars were getting cancelled during the pandemic.

- He also however, mentioned that the issue of 'digital divide' is real and persistent. "Discussion about access should be at the heart of the DPI discussion," he remarked.

- Ms. Desai chimed in with the thought of DPI also meaning to re-imagine the way designs are made for it. That is, focusing on the human-centric design aspect and approach.

- Here Mr. Singh chipped-in with the point of process re-engineering and democratising practices.

- Mr. Koshy: "Commerce is about democratisation and equal opportunities to everyone. As an orchestration body, ONDC takes it as an important lead- to make the product available across countries."

- "Orchestrating agency must be minimalistic. We must provide for the last man standing."

- Mr. Srivatsa: "Leadership changes need to be made."

- "U.S. has a Social Security No. system, but they don't talk to each other; open it up and put on it a whole bunch of APIs and a 'TECH STACK' can be created from/out of it- which will solve this problem."

- Mr. Chowdhury: "Equal systems to unequal's is not equality."

- 'Adverse digital incorporation' - DPI discussion must be about humans.

Concluding Remarks

- To conclude the session, the moderator Mr. Abhishek Singh enquired what would be the 1 aspiration from the esteemed panellist in the DPI.

- He highlighted the important India will play in achieving far flung business and uses case of DPI and will even lead many of the global initiatives.

- Next, he mentioned the idea of privacy and consent and commented that it shouldn't become a burden for the citizens; lastly, he pressed for necessity of the tech and legal elements to progress together, as, a combination approach is necessary to move forward in this direction.

He thanked all the participating countries, esteemed speakers and all the members who have worked tirelessly in making DPI summit happen. He concludes the DPI summit with a vote of thanks to all.

Concluding
Remarks

Last two days and all the sessions deliberated upon the Digital Public Infrastructure and how they impact various services, empowering people, helping governments reach closer to the people with Health, Education, Agriculture, Financial Inclusion, Identities, Data Sharing and Judiciary Services have been discussed in great details.

Mr. Abhishek Singh, P&CEO, NeGD thanked all the participating countries, esteemed speakers and all the members who have worked tirelessly in making DPI summit happen. He concludes the DPI summit with a vote of thanks to all.

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