



ICT Standards Enabling SDGs

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26/04/2023



Strategies and Directions

- Trigger 1 : Top Priorities & Achievements
 - Achievements
 - Priorities
- Trigger 2 : Top Challenges and Suggestions
 - Challenges
 - Suggestions
- Trigger 3 : How to enhance global cooperation?
 - Collaborations across the Standards Development Cycle





Agenda – ICT Standards Enabling SDGs

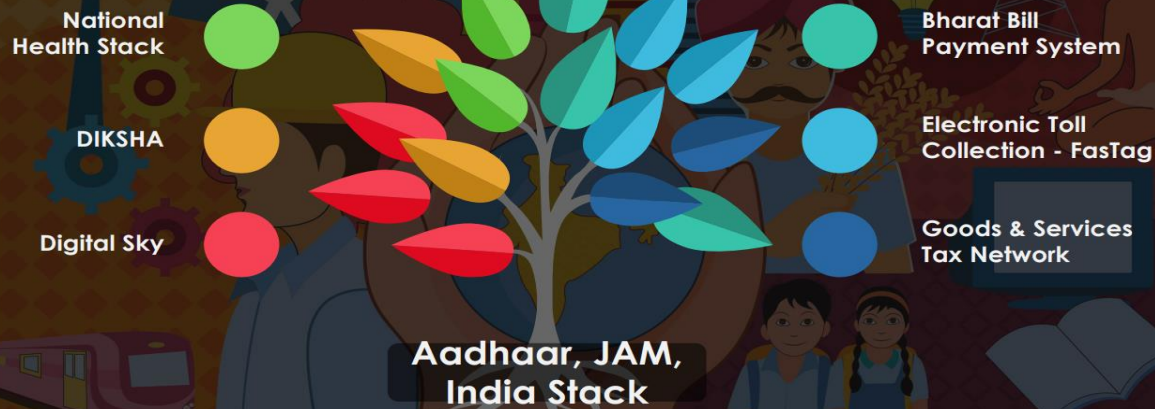
- Trigger 1: Top Priorities & Achievements
 - Achievements :
 - JAM Trinity & India Stack
 - LMLC and 5Gi; Cloud Interoperability & Portability
 - 5G Deployments & 100 5G Use Case Labs
 - Priorities :
 - 6G Vision / Mission
 - Priority Verticals :
 - Health care, education, e-governance
 - Financial Inclusion, Agriculture
 - Energy Efficiency, Affordability & Ubiquitous Connectivity

- Trigger 2: Top Challenges and Suggestions
 - Challenges :
 - Suggestions :

- Trigger: How to enhance global cooperation?
 - Collaborations across the Standards Development Cycle

Achievements: Financial Inclusion- India Stack, JAM Trinity, Interoperability

India is laying digital infrastructure across domains with individuals and small businesses at the center



... and thus, accelerating formalization



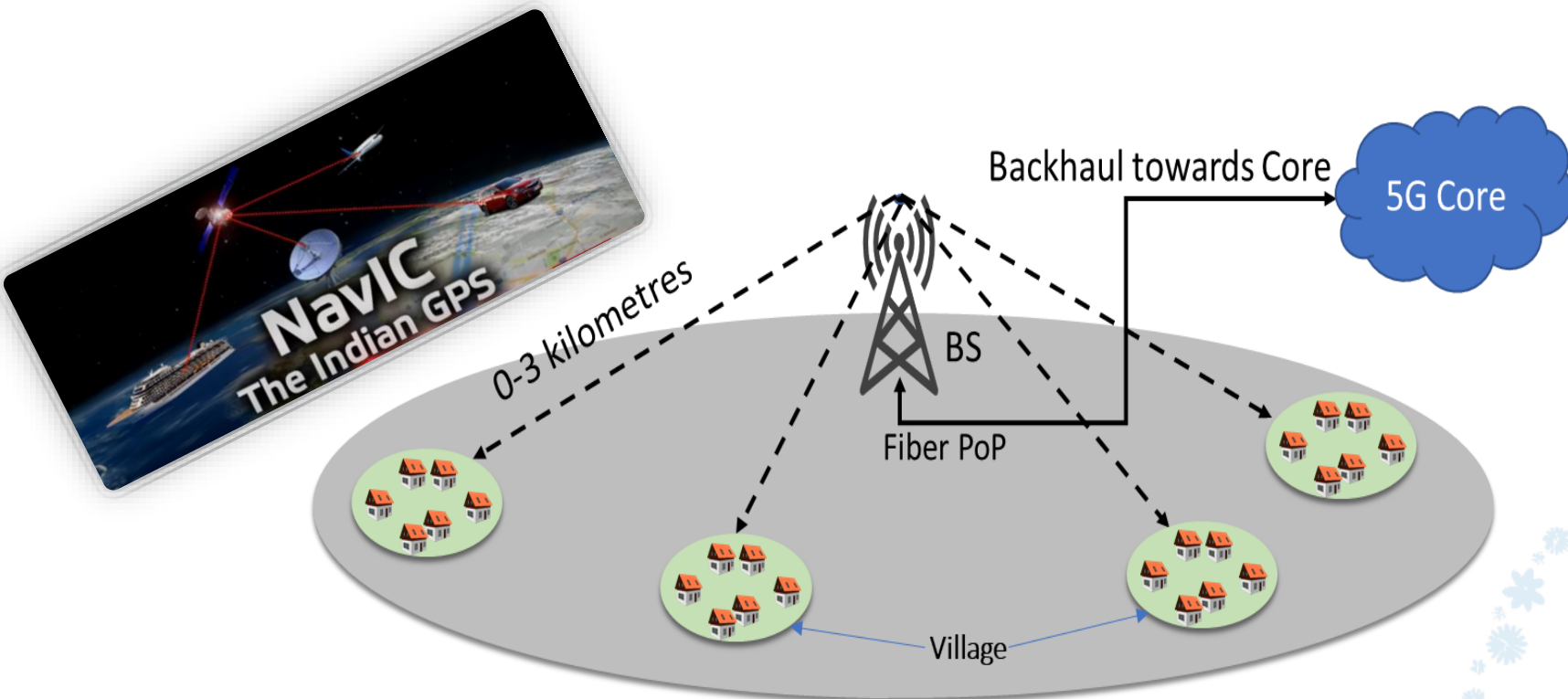
One INDIA STACK, many innovative & inclusive solutions



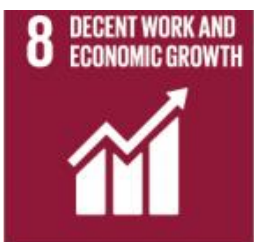
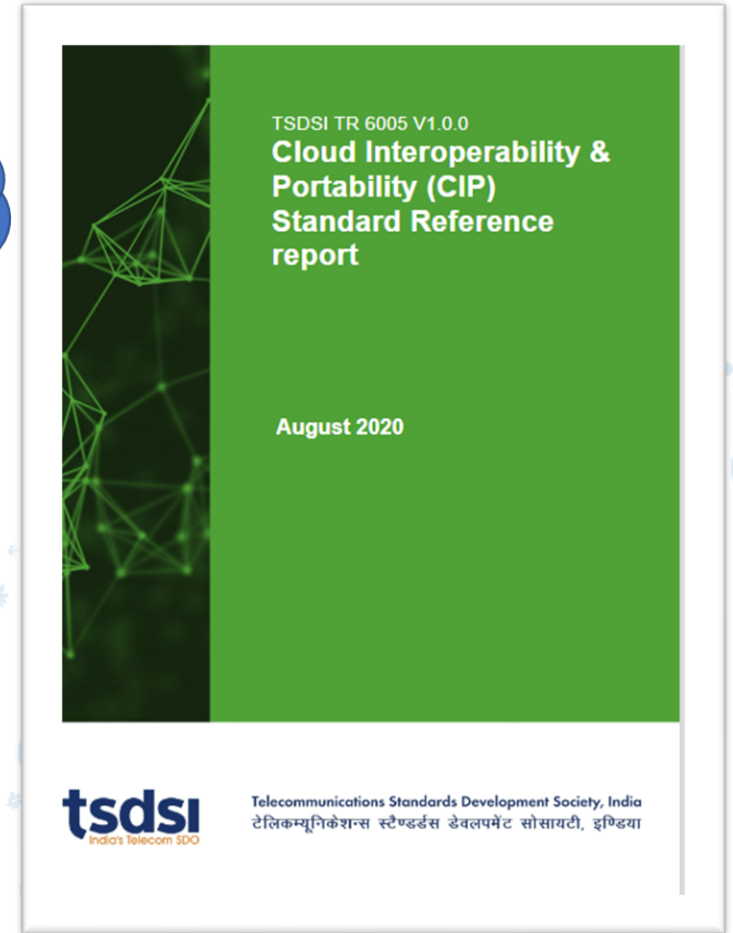
India is laying digital infrastructure across domains with



Achievements- LMLC, NavIC, Cloud Interoperability & Portability



Courtesy : "A Case for Large Cells for Affordable Rural Cellular Coverage", Saidhiraj Amuru, Radha Krishna Ganti et al.



Achievements: 5G Deployments and 100 Use Case Labs



100 5G Labs

Dept. of Telecom
empowering
higher education
institutions with
5G use case labs

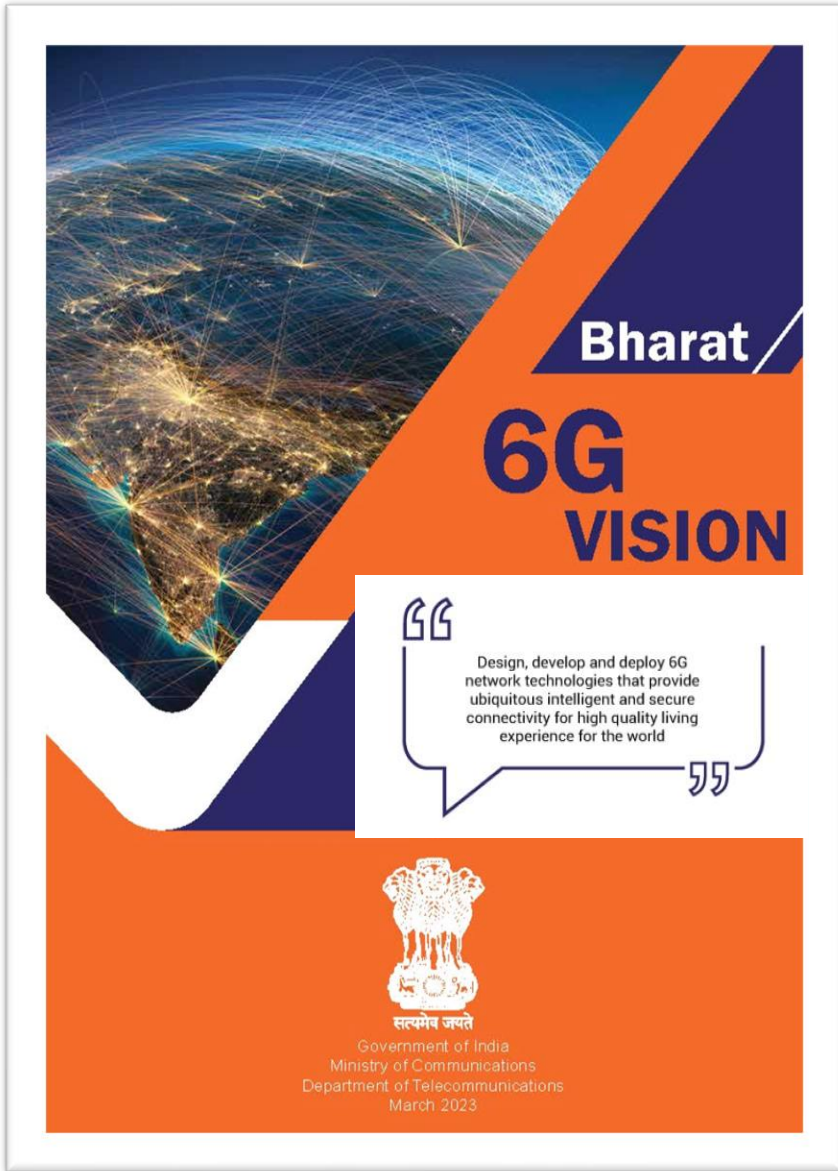
Last Date to Apply: 24th April 2023

India 5G launch 1 Oct 2022

2 Apr 2023 - 140,710 5G BTS Installed

The labs will cover, among others, applications such as smart classrooms, precision farming, intelligent transport systems, and health care applications.

Priorities: Bharat 6G Vision & Mission



Objectives of 6G Mission:

- Facilitate and finance Research and Development, design and development of 6G technologies by Indian Startups/Companies/Research bodies/Universities
- Enable India to become a leading global supplier of IP, products and solutions of affordable 6G telecom solutions
- Deploy 6G technologies to act as a powerful force multiplier for India@2030
- Enable inclusive and significant enhancement in quality of living experience of citizens in India and across the world

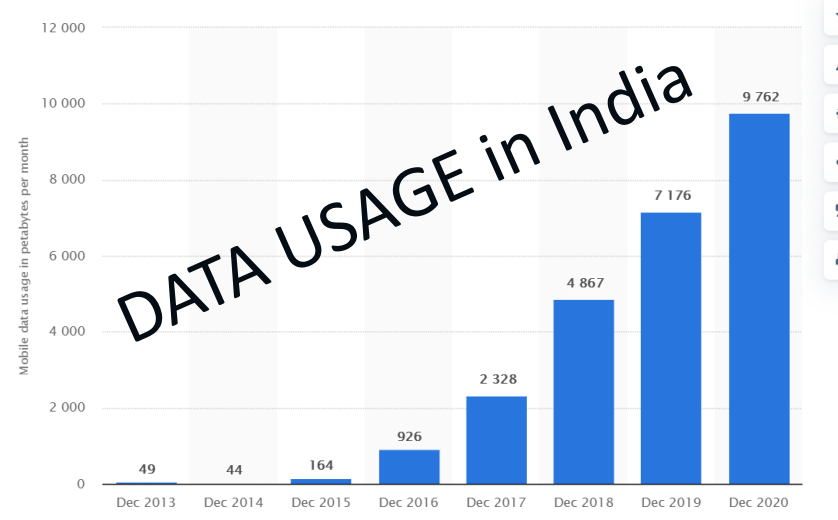


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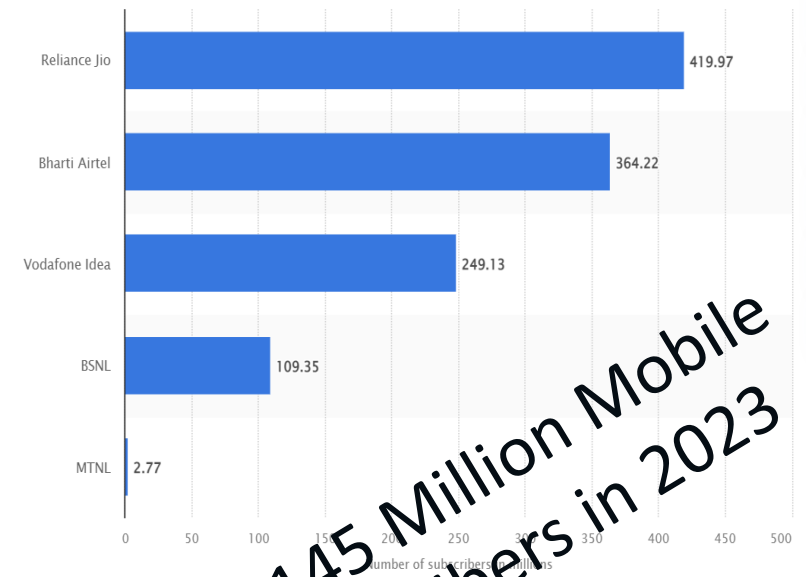
- Trigger 1 : Top Priorities & Achievements
- Trigger 2 : Top Challenges and Suggestions :
 - Challenges (& Opportunities) :
 - Coverage – Rural and remote, High density urban
 - Diversity – Languages, socio-economic, geographical
 - Accessibility
 - Suggestions :
 - KPI's and Metrics – Based on first principles of Standardisation & SDGs
 - Focus on the underserved and unserved
- Trigger : How to enhance global cooperation?
 - Collaborations across the Standards Development Cycle



Challenges & Opportunities - Trends in India tsdsi India's Telecom SDO



- 19.5 GB per user/month in 2023 >> 50GB in 2027
- 65-75% video >> 90% in regional languages
- 90% devices sold in 2017- 4G
- 750 million Internet Users 50



1,145 Million Mobile Subscribers in 2023

Opportunities



Focus Domains

- Financial Inclusion (SDG 1),
- Agriculture (SDG 2),
- Health (SDG3),
- Education (SDG 4),
- Energy efficient networks, data centers, CPEs (SDG 7 & 13),
- Broadband for rural communities (SDG 9),
- e-Governance (SDG 16)



Relevant work happening in TSDSI :

- Common user profile to promote accessibility in audio visual media (SI 76 NIP239)
- Rural Broadband Services & Architecture [SI 85 NIP255]
- A local language repository as an enabler for financial workflows [WI1-NIP 279]



Suggestions: KPI's & Metrics- Going back to First Principles of Why Standards



Suggestions: TTDD 2022 - Focus on the underserved and unserved; Voice of Customer; Energy efficiency



The poster for the TTDD 2022 Conference (5th Edition) features a dark blue background with a grid of white icons representing various telecommunications and technology concepts. The text is in white and yellow. The TSDSI logo is at the top left. The main title 'TECH DEEP DIVE' is in large, bold, white letters. Below it, 'TTDD 2022 CONFERENCE (5th EDITION)' is written in smaller white text. A quote, 'STANDARDS FOR SUSTAINABLE DEVELOPMENT', is in yellow. The dates '7-10 November 2022' are in a white box. At the bottom, 'Media Partner COMMUNICATIONS TODAY' is written in white.

tsdsi
Telecommunications Standards Development Society, India
India's Telecom SDO

TECH DEEP DIVE

TTDD 2022 CONFERENCE
(5th EDITION)

"STANDARDS FOR SUSTAINABLE DEVELOPMENT"

7-10 November 2022

Media Partner
COMMUNICATIONS TODAY

- **Digital inclusion** in underserved/unserved areas is marked by High BW applications to serve use cases in concentrated areas (e-education, e-health etc.) AND low BW applications in “far” areas (IoT based agritech etc.).
 - XR based Digital technologies can help make Persons with varying range of abilities “independent”. **Accessibility** (especially for PwD) by Design is essential for persons with diverse physical and literacy competence levels.
 - Strategies for providing broadband connectivity to Rural and Remote areas at affordable costs in different countries
 - Satellite based technologies are emerging as a strong contender for levelling the rural-urban digital divide.
- **Energy efficiency and sustainability** should be included as critical KPIs in 6G and not as an afterthought. Standards for UEs are also required.
 - Even as IoT opens new frontiers - **energy efficiencies across entire end to end IoT systems needs to be focussed on. Interoperability and portability by design are essential.**
- Need standards that cater to end-user(localized) requirements. (Inclusion)



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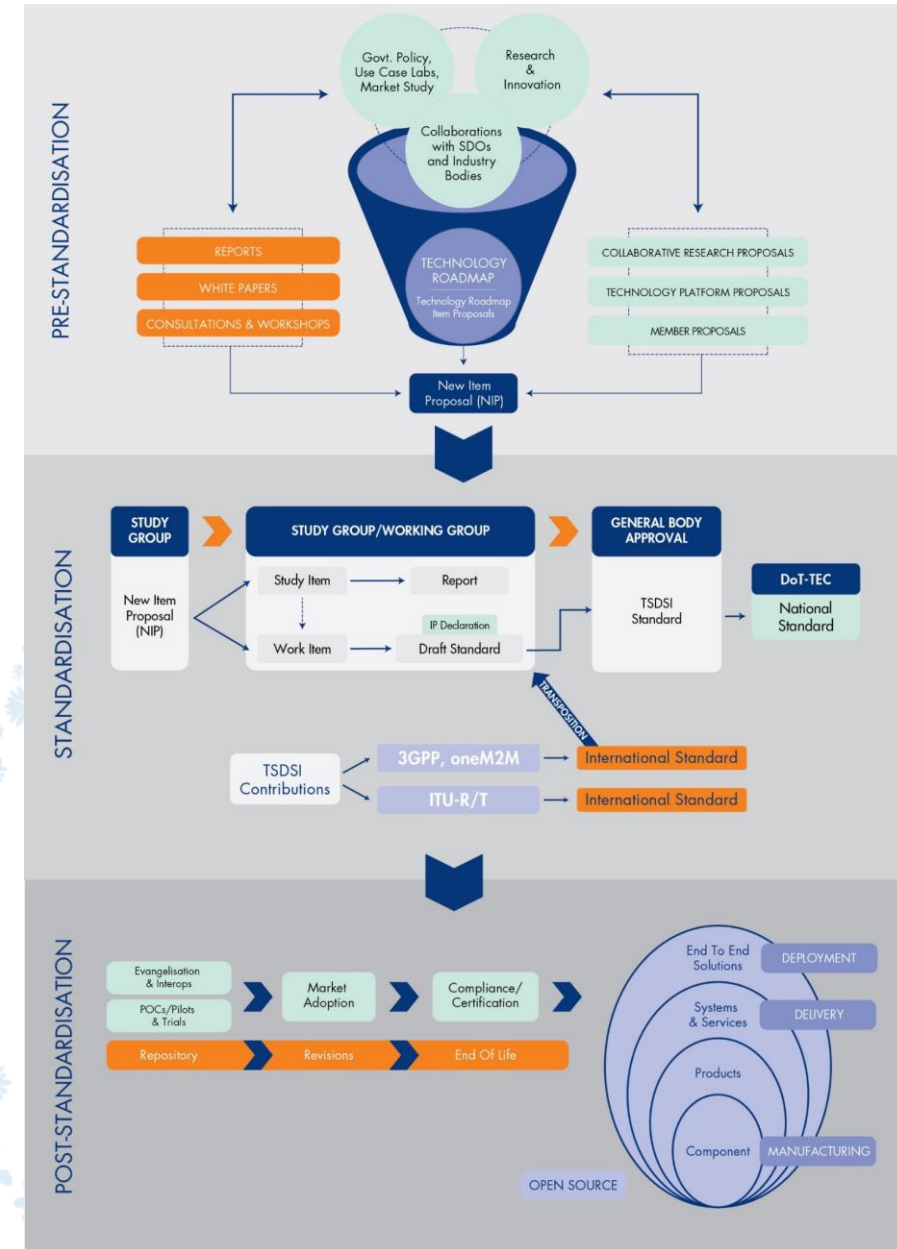
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 - Collaborations across the Standards Development Cycle
 - Pre-Standardisation Collaborations
 - Standardisation Collaborations
 - Post-Standardisation Collaboration

How to enhance Global Cooperation for ICT Standards enabling SDGs



Bilateral or Multi-lateral Collaborations across the Standards Development Cycle :

- Pre-Standardisation Collaborations
 - 6G Alliances, Standards Driven Research Projects, Use Case Labs & PoCs
- Standardisation Collaborations
 - Offline Harmonisation(what are the barriers); Testbeds, InterOps & Plugfests
- Post-Standardisation Collaboration
 - Experience sharing, Pilots and Trials





Thank you for your attention

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Any further questions?

Contact me:

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