



ICT SECTOR IN INDIA STATUS AND CHALLENGES

**ITU ASIA PACIFIC REGIONAL WORKSHOP ON IDI
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Demographic Profile

- **Population** : 1295 million (2nd)
- **Geographical area** : 3.28 million sq km (7th)
- **GDP** : \$ 2.439 Trillion-nominal
: \$9.446 trillion -PPP
- **States/ provinces** : 29
- **Union Territories** : 5
- **Coastline** : 7516Km
- **Languages** : 23
- **Spoken Languages** : 325 **Dialects** : 1652



Core Philosophy-Inclusive Development

- India's Philosophy -**“sabka saath sabka vikas”** (Development for All with involvement of All).
- Approach resulted into BB penetration 15 Mn in 2012 to 325 Mn in 2017.
- Internet consumption data from 1 Mn TB in Sep 2015 to 5.6 MnTB in Sep 2107 and currently highest in the world.
- Heavy investment made by Govt through BharatNet program to connect 250,000 Gram panchayat covering 600,000 villages-Connecting the unconnected.
- Indian approach for Technologies has always been inclusive and will be inclusive, and India believes leveraging ICT for inclusive development of masses for solving social, economical and environment of society.



ICT in India - Stakeholders

- **Ministry of Communications**
 - Industry Associations-COAI, TEMA, ISPAI, IAMAI, NASSCOM, etc.
- **Regulatory and Appellate Bodies**
- **National Statistical Office (MoSPI)**
- **Ministry of Human Resource Development (MHRD)**

Ministry of Communications



- **National Telecom Policy**
- **Issue of Licenses**
 - Access service
 - National Long Distance & International Long Distance
 - Internet services
 - Infrastructure Provider , VSAT service etc.
- **Allotment of Spectrum**
- **Universal Service Obligation**
 - BharatNet, NFS, Hilly Areas, Islands

Ministry of Communications



S.N.	Service Area	S.N.	Service Area
1	Andhra Pradesh	12	North East
2	Assam	13	Odisha
3	Bihar	14	Punjab
4	Gujarat	15	Rajasthan
5	Haryana	16	Tamil Nadu
6	Himachal Pradesh	17	Uttar Pradesh (East)
7	Jammu & Kashmir	18	Uttar Pradesh (West)
8	Karnataka	19	West Bengal
9	Kerala	20	Kolkata
10	Madhya Pradesh	21	Delhi
11	Maharashtra	22	Mumbai

Regulatory and Appellate Bodies



- **Telecom Regulatory Authority of India (TRAI)**
 - Recommendation to Ministry on policy issues
 - Interconnect Agreement between TSPs
 - Tariff-Regulation and Directions
- **Telecom Dispute Settlement and Appellate Tribunal (TDSAT)-**
 - Adjudicate matter involving Licensor, Licensee, Regulator and Group of consumers

Ministry of Statistics and Program Implementation- (MoSPI)



Lays down and maintains norms and standards in the field of statistics, involving concepts and definitions, methodology of data collection, processing of data and dissemination of results;

- **Central Statistical Office (CSO)**
 - National Account
 - Social Statistical Division
 - Economic Statistical Division
- **National Sample Survey Office (NSSO)**
 - Survey design
 - Data collection
 - Data processing
 - Publication

Ministry of Human Resource Development (MHRD)



Collects data on various indicators on education for Policy making on primary, secondary and tertiary education and sending statistics to UNESCO. ITU takes data directly from UNESCO website.

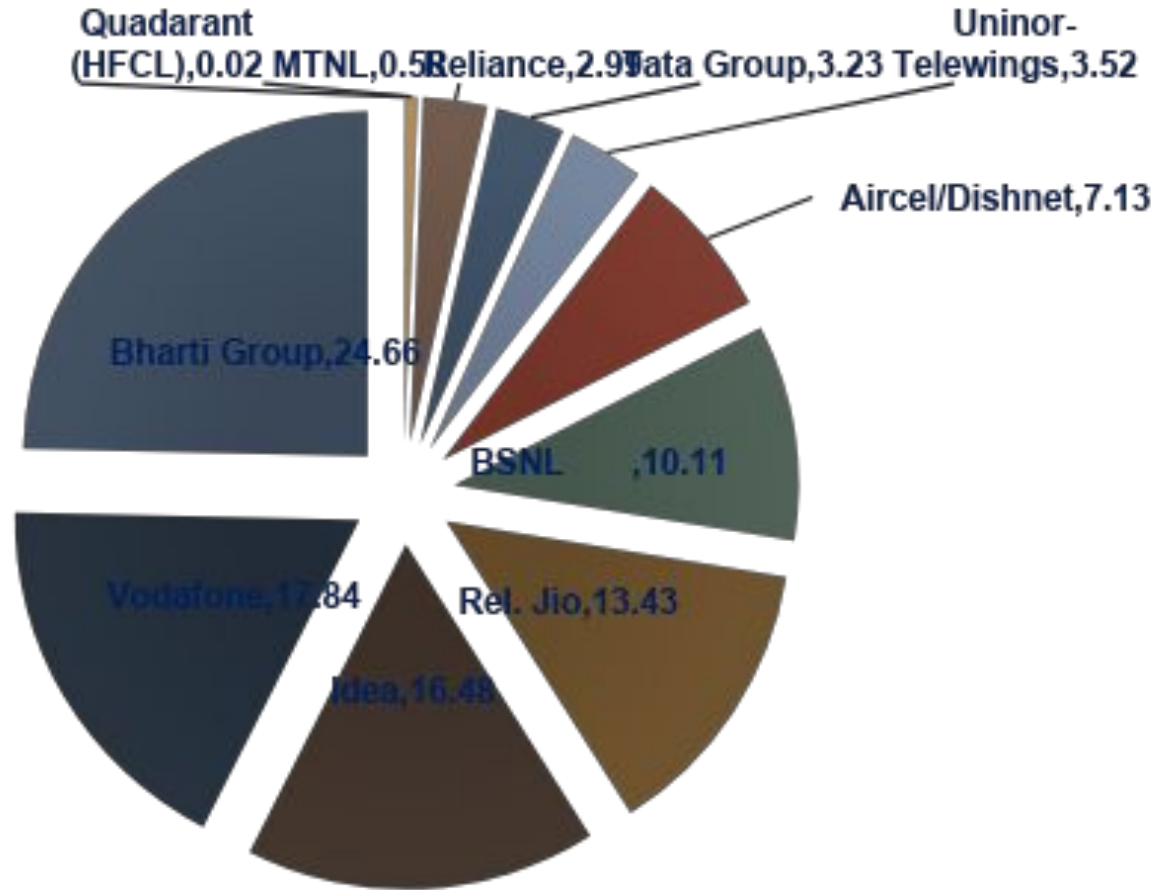


Indian Telecom Scenario

- **Telecom Subscriber base – 1192.14 million**
 - **Wireless : 1168.90 million (98.05%)**
 - **Wireline : 23.23 Million (1.95%)**
 - **Urban telephones : 689.43 Million (57.83%)**
 - **Rural telephones : 502.71 Million (42.17%)**
 - **Public Sector : 127.45 Million (10.69%)**
 - **Private Sector : 1064.68 Million (89.31%)**
- **Tele-density – 92.01%**
 - **Urban teledensity : 168.26%**
 - **Rural teledensity : 56.75%**
- **Internet Subscriber – 429.23 Million (Sep 2017)**
 - **Broadband :324.89 Million**
 - **Wireless Internet :407.88 Million**
- **Internet subscribers per 100 population – 33.12**
- **Monthly Internet data usage – 5.6 Million TB (Highest)**



Market Share





Measurement of ICT Data

- ❑ **Individual access and Use collected by MoC & TRAI from Telecom operators and Industry Associations**
 - **Subscription data- wireline, wireless, internet**
 - **Teledensity-Urban, Rural**
 - **Telecom financial data**
 - **Usage and Revenue**
 - **Data usage of mobile users**
 - **Cable and Broadcasting data**
 - **Quality of Service indicators**

- ❑ **Trade in ICT goods by DGCI&S - Import , Export**

- ❑ **Trade in ICT services by RBI- Import, Export**



Measurement of ICT Data

- ❑ **Household Surveys – conducted by NSSO**
 - Access to computers, internet by households; Use of internet by individual; ICT Skill etc.
 - Latest data–2014(71st round): 75th round in progress
- ❑ **Annual Survey of Industries & Economic Censuses conducted by CSO**
 - Use, Access and Skill of computers, internet by establishments
 - Latest data – 2014-15 (ASI); 2013-14 (EC)

Measurement of ICT Data



MHRD Collects data on various indicators on education for Policy making on primary, secondary and tertiary education and sending statistics to UNESCO. ITU takes data directly from UNESCO website. Data for IDI skill (proxy indicators) are as under:

- **Mean years of Schooling**
- **Gross secondary enrolment ratio**
- **Gross tertiary enrolment ratio**
- **ICT skill**



Coordination

Ministry of Communication, being nodal agency for ICT indicators, coordinates with

- **National Statistical Office –household data**
- **Ministry of Human Resource Development- skill data**

A committee proposed to be set up under NITI Aayog, to coordinate with various agencies for ICT indicators



Legal Framework

- **The Indian Telegraph Act 1885**
 - **License Terms and Conditions, Audit of TSPs**
- **Telecom Regulatory Authority of India Act 1997**
- **The Collection of Statistics Act 1953**
- **Various Acts under MHRD**



Issues and Challenges

- **Size - Population, Geographical Area**
- **Difficult terrains- Mountains & Deserts**
- **Diversity - Language, Culture**
- **Digital Divide – Urban vs Rural**
- **Lack of dedicated surveys and Periodicity**
- **Decentralized systems – not integrated**



Way Forward

- **Technology based solution for survey so as to get timely and good quality data**
- **Core group on various futuristic indicators like Cyber security, Artificial Intelligence, M2M/ IoTs, OTT, Spectrum, 5G etc.**



सत्यमेव जयते



Thank You