



आर. एम. अग्रवाल

अध्यक्ष और प्रबंध निदेशक

R.M. AGARWAL

Chairman & Managing Director

हिंदी केवल एक भाषा नहीं बल्कि हमारी राष्ट्रीय पहचान है।



आईटीआई लिमिटेड  
(भारत सरकार का उपक्रम)

**ITI LIMITED**

(A Govt. of India Undertaking)

Ref: K/NSE&BSE/2020

Date: 18.01.2020

The Secretary  
BSE Limited  
Phiroze Jeejeebhoy Towers  
Dalal Street  
Mumbai- 400 001

The Manager  
National Stock Exchange of India Limited  
Exchange Plaza,  
Bandra Kurla Complex, Bandra (E)  
Mumbai- 400 051

Scrip Code: 523610

Scrip Code: ITI

Dear Sir/ Madam,

Sub: Schedule of the analyst meet

Ref: Regulation 30 and 46 of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015

With reference to the captioned subject, the schedule of the analyst/ institutional investor meetings are as follows:

Date	Venue	Particulars
20.01.2020	Mumbai	Meeting with certain analysts
21.01.2020	Ahmedabad	Meeting with certain analysts

The presentation prepared by the Company is enclosed and also available at the Company Website.

This is for your kind information and records please.

Thanking you

Yours faithfully

For ITI Limited

S Shanmuga Priya

Company Secretary

ITI Limited, Registered and Corporate Office, ITI Bhavan, Doorvaninagar, Bengaluru-560 016, India

आईटीआई लिमिटेड, पंजीकृत एवं निगमित कार्यालय, आईटीआई भवन, दुरवाणीनगर, बेंगलूरु 560 016, भारत

Phone : +(91) (80) 2561 4422, Mobile: +91 72597 87404, Fax : +91 (80) 2561 4400

E-mail : cmd@itilttd.co.in, Website : www.itilttd-india.com

CIN : L32202KA1950GoI000640



**ITI Limited**

**INVESTOR PRESENTATION**

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**January 2020**

*“ITI Limited is proposing, subject to receipt of requisite approvals, market conditions and other considerations, to make a further public offer of its equity shares and has filed a red herring prospectus dated January 17, 2020 (“RHP”) with the Securities and Exchange Board of India (“SEBI”). The RHP is available on the website of the SEBI at [www.sebi.gov.in](http://www.sebi.gov.in) websites of the stock exchanges, BSE Limited and National Stock Exchange of India Limited at [www.bseindia.com](http://www.bseindia.com) and [www.nseindia.com](http://www.nseindia.com), respectively, and on the websites of the lead managers, BOB Capital Markets Limited, Karvy Investor Services Limited and PNB Investment Services Limited at [www.bobcaps.in](http://www.bobcaps.in), [www.karvyinvestmentbanking.com](http://www.karvyinvestmentbanking.com) and [www.pnbisl.com](http://www.pnbisl.com), respectively. Potential investors should note that investment in equity shares involves a high degree of risk and for details relating to such risk, see “Risk Factors” on page 14 of the RHP.*

*The Equity Shares have not been and will not be registered under the U.S. Securities Act of 1933 (“U.S. Securities Act”), and may not be offered or sold within the United States except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the U.S. Securities Act and applicable U.S. state securities laws. Accordingly, the Equity Shares have been offered and sold (i) within the United States only to qualified institutional buyers (as defined in Rule 144A under the U.S. Securities Act, “Rule 144A”) and referred to in the RHP as “U.S. QIBs”, for the avoidance of doubt, the term “U.S. QIBs” does not refer to a category of institutional investor defined under applicable Indian regulations and referred to in the RHP as — QIBs in reliance on Rule 144 A or another available exemption from the registration requirements of the U.S. Securities Act and (ii) outside the United States in offshore transactions in compliance with Regulation S under the U.S. Securities Act and pursuant to the applicable laws of the jurisdiction where these offers and sales occur. Prospective purchasers are hereby notified that the seller of the Equity Shares may be relying on the exemption from the registration requirements of the U.S. Securities Act provided by Rule 144A. The Equity Shares have not been and will not be registered, listed or otherwise qualified in any other jurisdiction outside India and may not be offered or sold, and Bids may not be made by persons in any such jurisdiction except in compliance with the applicable laws or such jurisdiction.”*

ISSUER



ITI Limited

PROMOTER



The President of India, acting through the Department of Telecommunications (“DoT”),  
Ministry of Communications, Government of India

ISSUE TYPE



*Further Public Offering (“FPO”)*

ISSUE SIZE



*Up to 18,00,00,000 equity shares (“Net Issue”) and an additional issue of up to 18,00,000 equity shares constituting 1% of the Net Issue reserved for Eligible Employees of ITI Ltd.*

ISSUE PROCEEDS UTILISATION



- *Funding working capital requirements – INR 642.48 crores*
- *Repayment of Loans – INR 607.29 crores*
- *General corporate purposes – INR [●] crores*

ISSUE PERIOD



*24<sup>th</sup> January to 28<sup>th</sup> January 2020*

PRICE BAND



*INR [●] to INR [●] per equity share of face value of INR 10 each*

BRLMs



LISTED ON



# Presentation Path



**Brief Overview of ITI Ltd**



**Key Business Highlights**



**Business Strategies**



**Annexures**

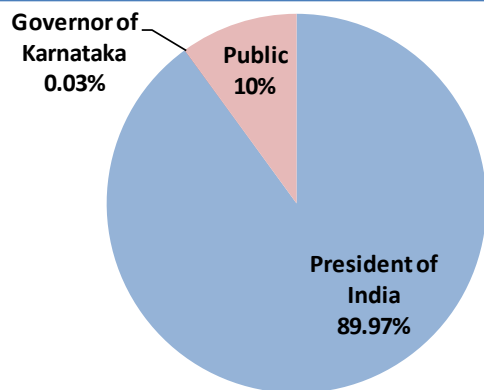


# Brief Overview of ITI Ltd

**Business Overview**

- ITI Ltd, a PSU under Dept. of Telecommunications (DoT), offers diverse suite of products, solutions & services across various industry segments
- ITI has modern manufacturing infrastructure, equipment & technology at its manufacturing facilities located at Bengaluru, Mankapur, Naini, Palakkad & Raebareli; R&D centre in Bengaluru and skill development centres under Pradhan Mantri Kaushal Vikas Yojana (PMKVY) in Bengaluru & Srinagar
- Engaged in Government of India (GoI) projects of national importance such as ASCON, BharatNet, Network for Spectrum, Smart Energy Meters, Space Programs and various E-governance projects
- Strong relations with various PSUs such as BSNL, BBNL, MTNL, EESL; Ministry of Defence, Ministry of Rural Development (MoRD), Ministry of Urban development, Registrar General of India among others
- Strong order book comprising of diversified products & services across various sectors. As on Dec 31, 2019 the order book was INR11,051.12crs
- Skilled workforce comprising of 3,520 employees, including more than 731 employees with technical & professional qualifications as at Dec 31, 2019

**Ownership Structure**



\*Public includes Special National Investment Fund

**Summary Consolidated (IND AS) Financials (INR Crs)**

Particulars	FY17	FY18	FY19	H1FY20
Revenue from Ops	1,548.1	1,484.2	1,668.4	578.8
Other Income	540.6	327.5	336.5	24.6
PAT	266.4	230.6	92.5	(54.4)
Long Term Borrowings	300.0	300.0	300.0	240.0
WC Borrowings	879.2	926.3	958.7	957.7

**Key Products & Services**

- Defence Encryption products & services
- MLLN & STP solutions
- Transmission and terminal end products and solutions
- Optical & data network products & services like GPON technology & passive infrastructure products for telecommunications including OFC & HDPE pipes
- IT products & services including hosting solutions, data centres as well as financial & banking software services including Aadhaar authentication and digital wallet services;
- Electronics & digital products like smart energy meters, smart cards, solar panels, set-top boxes, mini personal computers, 3D printing, security surveillance products & radio modems
- High reliability electronic contract manufacturing services
- Internet of Things (IoT) products & solutions
- Telecom products testing services
- Start-up hub services
- Skill development services
- AMC for defence & telecommunications networks

## Key Events and Milestones

- **1948** → Gol establishes a departmental factory that later became ITI Ltd
- **1950** → ITI was incorporated as a private limited company on January 25, 1950.
- **2000** → Turnkey project for 100,000 lines of GSM cellular mobile equipment for MTNL, Mumbai
- **2001** → Supply of MLLN equipment and supply of goods for wireless local loop (WLL) system for rural application to BSNL
- **2002** → Turnkey project for GSM cellular mobile equipment for BSNL, Gujarat telecom circle
- **2004** →
  - 5 year technical collaboration agreement with Tejas Networks India Ltd for assembly & manufacture of next-gen SDH (Synchronous Digital Hierarchy) products for BSNL & MTNL
  - Collaboration agreement with Giesecke & Devrient (India) Pvt Ltd for manufacturing SIM cards.
  - Commenced project for supply of STM-1 SDH equipment for BSNL
- **2005** →
  - Commenced turnkey project for BSNL for standalone signalling transfer points and associated equipment
  - Turnkey project in 11 districts of Afghanistan – 35,000 subscriber lines of CDMA WLL system
  - Declared as 'sick' under section 3(1)(o) of the Sick Industrial Companies Act, 1985 following erosion of more than 50% of net worth
- **2006** → Commenced project for supply of 32 channel dense wavelength division multiplexing (DWDM) for BSNL
- **2007** → Commenced project for supply of digital circuit multiplex equipment (DCME) for BSNL
- **2008** →
  - Commenced projects for supply of GSM SIM cards for BSNL and MTNL
  - Commenced project for supply of STM-16 MADMs equipment for BSNL
- **2009** →
  - Commenced projects for supply of STM-64 equipment, STM-16 ADMs equipment, ADSL2PLUS type II CPEs for broadband, GPON equipment, GSM products and radio modem equipment to BSNL
  - Set up data centre in the Bengaluru Plant in association with Trimax Data Centre Services Limited
- **2010** →
  - Appointed for undertaking the National Population Register project by the Ministry of Home Affairs, Gol
  - Appointed as the IT implementation agency by Tamil Nadu Electricity Board for implementation of IT infrastructure in 110 towns of Tamil Nadu
  - Turnkey project for supply of active GPON equipment for MTNL Delhi and Mumbai



- **2011** → Commenced solar project in various districts in Uttar Pradesh for the UP police
- **2012** → Project for solar voltaic power systems for BTS sites for BSNL
- **2013** → MoU with TSSC for special focus on skill development in the telecom industry

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- **2014** →
  - Commenced execution of a project for 1.2 million NGN access equipment for BSNL
  - Undertook the project for setting up intelligent fibre optic cable network for defence forces for BSNL
  - CCEA approved the Revival Plan

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- **2016** →
  - Commenced a turnkey project for implementation of a network management system for BSNL broadband network
  - Commenced the turnkey project for GPON products and solar power equipment for Bharat Broadband Network Limited

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- **2017** →
 

**Received orders for →**

  - Deploying of 15 MW solar power project for the Solar Energy Corporation of India Limited
  - Supply of three models of mini personal computers to Mahatma Gandhi University, Kottayam
  - Manufacture and supply of 2.5 million smart meters for Energy Efficiency Services Limited
  - Manufacture and supply of permanently lubricated HDPE from BSNL
  - Supply of CDOT ANRAX control cards to BSNL
  - Providing full screening and re-screening services of Analog Ics from ISRO

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- **2018** →
  - The Palakkad Plant received a certificate of compliance from the RuPay Compliance Program Board for adhering to the RuPay card quality and security standards
  - Undertook a turnkey project for broadband network gateway for BSNL
  - Received an advance purchase order for procurement of multi capacity encryption units (MCEU) for defence networks for BSNL
  - Executed a transfer of technology agreement with Centre for Development of Telematics for manufacture of terabit router
  - Executed a MoU with C DOT and MTNL to, inter alia, address the smart city project
  - Executed a MoU with Tamil Nadu Telecommunications Limited to execute optical fibrecable business
  - Received an order for supply of mini PCs to the University of Calicut

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- **2019** →
  - Executed MoU with Z-COM Inc. and Z-COM India for transfer of technology for manufacturing of Wi-fi access points
  - Set up a telecom testing lab for services like EMC/EMI and a safety lab.
  - Set up a 125 seater start-up hub service called “Vinyas” in the Bengaluru plant.



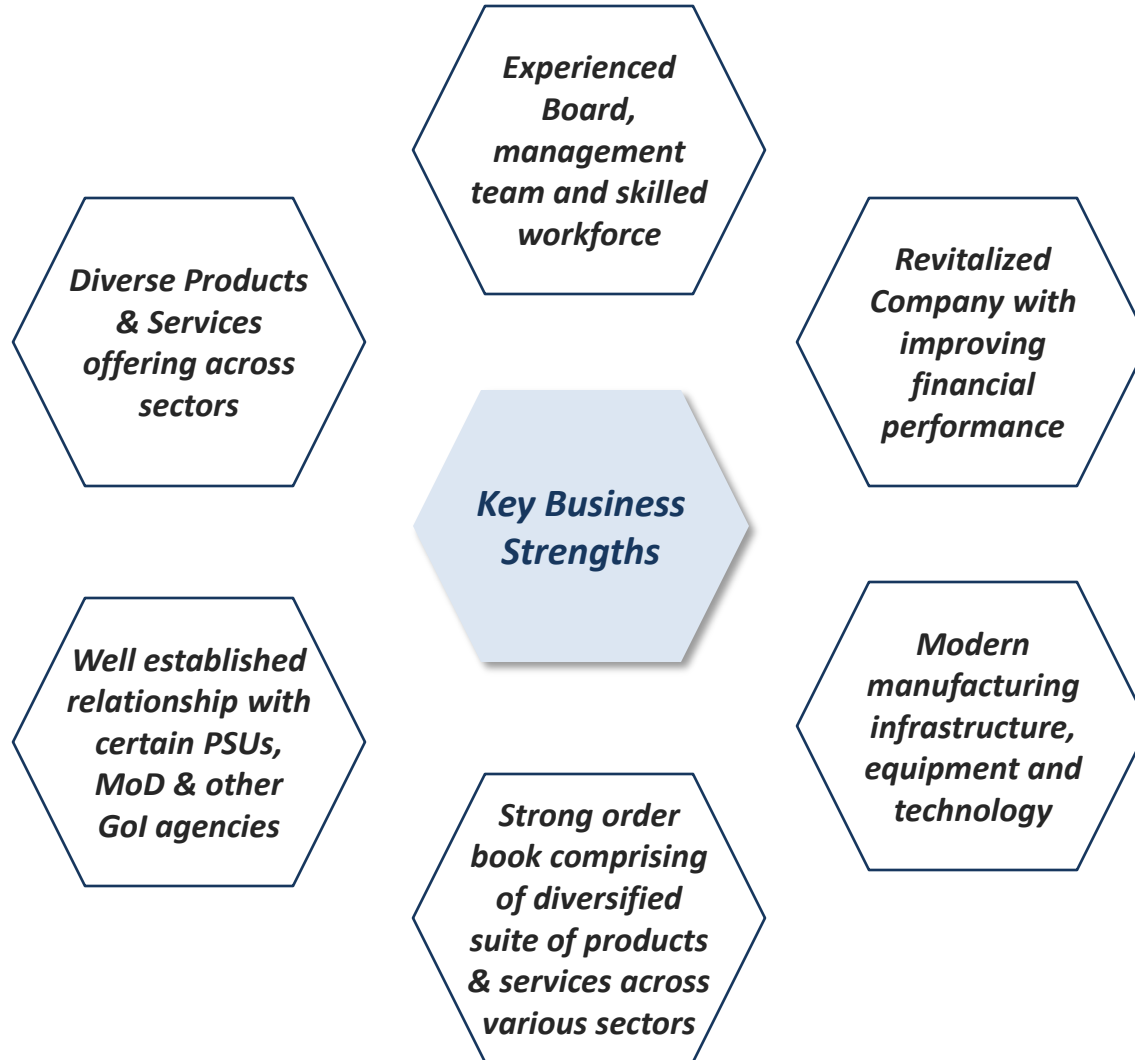
# Key Business Highlights

Defence Communication & Security Encryption Products & Services	Optical and Data Network Products & Services and Passive Infrastructure Products	IT Products and Services	Internet of Things (IoT)
<p><i>Communication network projects for India's defence forces</i></p>	<p><i>End to end portfolio of optical &amp; data networking products</i></p>	<p><i>Hosting services along with a suite of IT &amp; software services</i></p>	<p><i>State of the art infrastructure to manufacture IoT Products</i></p>
<ul style="list-style-type: none"> <li>▪ <b>Communication Projects</b> <ul style="list-style-type: none"> <li>- Designed, manufactured, installed &amp; maintained all three phases of ASCON for the Indian Army</li> <li>- Selected as L-1 by MoD for ASCON Phase IV project – the project is valued at Rs7,700crs</li> <li>- Order for laying OFC under the NFS project for the Indian defence forces in the Eastern and North- Eastern region</li> </ul> </li> <li>▪ <b>Defence Security Encryption</b> <ul style="list-style-type: none"> <li>- BEU encryptors to encrypt and decrypt Internet Protocol (IP) data;</li> <li>- PCM encryptors to encrypt and decrypt various types of data in PCM format.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Broadband Products &amp; Services</b> <ul style="list-style-type: none"> <li>- Turnkey solutions for supply, installation, commissioning, O&amp;M of GPON &amp; associated equipment</li> <li>- Raebareli Unit → Introduced machines for manufacturing GPON equipment viz. 3D automatic optical, X-ray &amp; solder paste inspection</li> <li>- Bengaluru Unit → Upgraded for manufacturing GPON equipment, also provide testing services for GPON cards &amp; equipment as part of AMC with BSNL &amp; BBNL</li> <li>- GPON OLT units &amp; ONTs → Phase I of “Bharat Net”</li> </ul> </li> <li>▪ <b>Passive infrastructure products</b> <ul style="list-style-type: none"> <li>- Optical network, data &amp; voice traffic equipment - HDPE pipes &amp; OFC</li> </ul> </li> <li>▪ <b>MLLN Products and Services</b> <ul style="list-style-type: none"> <li>- Including turnkey solutions for supply, installation, O&amp;M of network equipment to BSNL &amp; MTNL</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Data Centre</b> <ul style="list-style-type: none"> <li>- Tier 3 data centre in Bengaluru set up in collaboration with Trimax Data Centre Services</li> <li>- Hosting &amp; managed services to Govt organizations &amp; private companies → currently has 96% occupancy</li> <li>- Expanding data centre operations by building a Tier 3 plus data centre with 1,000 rack capacity; ITI plans to expand its offering to include end-to-end hosting &amp; managed services</li> </ul> </li> <li>▪ <b>Software as a service (SaaS)</b> <ul style="list-style-type: none"> <li>- Suite of SaaS for financial &amp; banking solutions – Aadhaar authentication &amp; digital wallet services</li> </ul> </li> <li>▪ <b>IT Support Services</b> <ul style="list-style-type: none"> <li>- ITI's SaaS packages are backed by active customer support services</li> </ul> </li> </ul>	<p>Partner with technology cos &amp; start ups to offer various IoT products &amp; solutions. It focuses on products including smart metering, smart health, smart environment, smart surveillance, smart agriculture, intelligent transport, smart e-governance, other similar smart products and solutions</p> <div data-bbox="1595 738 2047 859" style="border: 1px solid black; padding: 5px; text-align: center;"> <p><b>Annual Maintenance Contracts (AMC) and Operation &amp; Maintenance Contracts (O&amp;M)</b></p> </div> <p><i>AMCs for telecommunications and defence networks.</i></p> <ul style="list-style-type: none"> <li>- First three phases of ASCON</li> <li>- OCB exchanges, MLLN &amp; signalling transfer point network of BSNL &amp; MTNL</li> <li>- BTS for GSM network of BSNL in Tamil Nadu, Uttar Pradesh &amp; Uttarkhand for next ten years</li> </ul>

**ITI offers diversified products and services to a wide customer base across various industry segments**

# Diversified suite of manufactured and traded products

Electronic Products	Traded Electronic & Communication Products	Contract Manufacturing Services & Solutions	Telecom Products Testing Services
<ul style="list-style-type: none"> <li>▪ Smart energy meters</li> <li>▪ GPON OLT &amp; ONT</li> <li>▪ PCM multiplexers</li> <li>▪ Electronic push button telephones</li> <li>▪ Ruggedized telephones for defence forces</li> <li>▪ Smart cards &amp; banking cards</li> <li>▪ Handheld terminals for smart card authentication</li> <li>▪ Set top boxes</li> <li>▪ Wi-Fi equipment</li> <li>▪ Multiple types of encryption devices for defence</li> <li>▪ Solar panels</li> <li>▪ Switch mode power supply systems</li> <li>▪ IoT products</li> <li>▪ Radio modems</li> <li>▪ AN rack hardware</li> <li>▪ Mini personal computer</li> <li>▪ Bank automation products</li> </ul>	<ul style="list-style-type: none"> <li>▪ Optical transport network – DWDM</li> <li>▪ Managed leased line network products</li> <li>▪ Signaling point network products</li> <li>▪ IP/MPLS routers &amp; switches</li> <li>▪ Network management system solutions</li> <li>▪ Microwave &amp; satellite communication equipment</li> <li>▪ Next generation network equipment</li> <li>▪ IT products &amp; solutions</li> </ul>	<ul style="list-style-type: none"> <li>▪ Contract manufacturing services include electronic manufacturing at Bengaluru, Palakkad, Raebareli &amp; Mankapur plants; mechanical fabrication services &amp; 3D printing services at Bengaluru plant &amp; electronic PCB manufacturing at Bengaluru &amp; Palakkad plants</li> </ul>	<ul style="list-style-type: none"> <li>▪ Established EMI-EMC &amp; safety test in Bengaluru facility for providing MTCTE testing</li> <li>▪ Establishing security testing laboratory &amp; specific absorption rate (SAR) testing laboratory for testing telecommunication products</li> </ul>
Start-up Hub Services	Space Application Products	Skill Development Services	
<ul style="list-style-type: none"> <li>▪ “Vinyas” – 125 seat start-up hub at Bengaluru plant to encourage Indian start-ups</li> <li>▪ Start-up hub is being expanded up to a 1000 seat capacity along with amenities like dedicated corporate hub meeting room, demo room &amp; highly secure Wi-Fi connectivity</li> <li>▪ Customers can also utilize ITI’s manufacturing facilities like PCB, SMT &amp; 3D printing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Screening electronic components &amp; assembly and testing of various flight packages for Indian space programme as well as electronic contract manufacturing services.</li> <li>▪ Using its SMT &amp; PCB technology, ITI provides contract manufacturing to various customers requiring space applications.</li> </ul>	<ul style="list-style-type: none"> <li>▪ As part of ‘Skill India’ flagship program, ITI offers skill development &amp; capability building training</li> <li>▪ Training for optical fiber technicians, optical fiber splicers; solar module assembly technicians; PCB fabricators; circuit image operator; field technicians in computing &amp; peripherals; pick-and-place assembly operator; through-hole-assembly operators and BSS support engineers</li> <li>▪ Training to graduate engineers, diploma &amp; trade apprentices in various trades under NAPS</li> </ul>	



**With over seven decades of experience in telecommunications technology → ITI is evolving from a Telecommunications Equipment Manufacturer to a Telecommunications Technology Company**

## Diverse product offering to a wide customer base across diverse industry segments

- ITI caters to a wide customer base across various industry segments such as telecommunications, defence, information technology, banks & financial institutions and solar energy
- Diverse suite of products including
  - defence security encryption products;
  - optical and data network products and passive infrastructure products such as GPON, Wi-Fi products, MLLN and signalling transfer point (“STP”) solutions;
  - multi-capacity encryption units, electrical products such as smart energy meters, smart cards, solar panels, set-top boxes and mini personal computers;
  - Internet of Things (“IoT”) products
  - other diverse products such as HDPE ducts, 3D printing and sanitary napkin vending machines.

## Wide range of IT & Software services

- ITI provides wide range of services including IT & software services such as data centre hosting solutions, digital wallet solutions, Aadhaar authentication services
- Cable & optical fiber laying services
- Telecom products testing services
- Start-up hub services
- Skill development services
- Citizen centric services like the NPR & SECC and annual maintenance contracts for its supplied products

## Collaboration with third parties – De-risking Business Model

- ITI’s business model focuses on collaborations with third parties for technology, R&D, as well as utilizing its large and modernized manufacturing capabilities enables it to provide comprehensive and integrated products and service offerings to its customers across sectors thereby de-risking its business model



Diverse products & services has helped forge relations with customers including PSUs such as....

History of high customer retention → Supplied MLLN equipment to BSNL since 2001 & MTNL since 2002



**ITI is engaged in various projects of national importance**

- ▶ **ASCON** – Providing maintenance services for ASCON in its first three phases
- ▶ **BharatNet** – Manufacturing, supplying and installing GPON technology equipment for the Govt's flagship project "BharatNet", which aims to provide high-speed broadband connectivity to over 250,000 Gram Panchayats in India
- ▶ **Network for Spectrum (NFS)** – Laying optical fiber cable under NFS project for Indian defence in Eastern & North-Eastern regions with BSNL
- ▶ **Smart Energy Meters** – Manufacturing and supplying 2.5 million smart energy meters for EESL
- ▶ **Space Programs** – screening of electronic components & assembly and testing of various flight packages for Indian space program
- ▶ **E-Governance Projects** – Manufacturing & supplying products & services for e-Governance projects like the NPR, SECC project and Aadhaar authentication services → ITI is one of the three agencies appointed by Govt for citizen centric projects of the NPR for collecting data

**ITI contributes to a number of campaigns and policy initiatives sponsored by Govt**

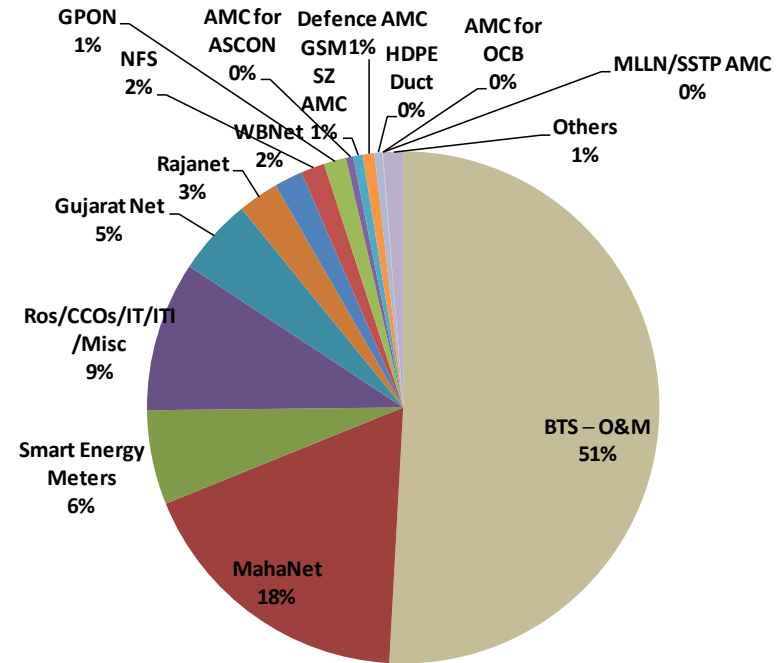
Make in India	Digital India	Skill India – PMKVY	Swachh Bharat	Start-up India
ITI manufactures number of electronic, ICT & encryption products. ITI has invited MNCs to enter into agreements with itself for manufacturing their products in India	ITI's data centre, digital wallet, Aadhaar authentication & smart cards, along with IoT products under the campaign. Also, supplying & installing GPON technology equipment for "BharatNet"	Established skill development centers in Bengaluru & Srinagar plants & plans to set-up skill centers in other manufacturing facilities	Contract to install an IOT based solution to capture real time feedback from community & public toilets in 12 states across India	"Vinyas", a 125 seat start-up hub in Bengaluru plant designed to provide working space & other facilities. ITI plans to expand the start-up hub to a 1000 seat capacity.

**Leveraging Govt's preferential market access policy**

ITI benefits from Govt's preferential market access policy where indigenous manufacturers are given preference in procurement by Govt. agencies. Indian manufacturers with a defined value addition are given preference over foreign/domestic manufacturers not meeting the value addition requirement

# Strong order book comprising of a diversified suite of products and services across various sectors

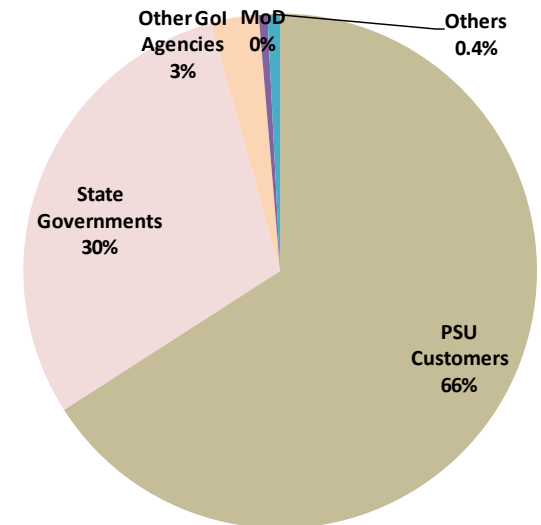
Order Book @ Dec 31, 2019	INR Crs	%
BTS – O&M*	5,621.7	50.9%
MahaNet	1,989.0	18.0%
Ros/CCOs/IT/ITI/Misc	1,046.2	9.5%
Smart Energy Meters	658.2	6.0%
GujaratNet	535.9	4.8%
RajNet	283.6	2.6%
WBNet	197.8	1.8%
NFS	166.5	1.5%
GPON	155.0	1.4%
Others	139.4	1.3%
Defence business/AMC	80.9	0.7%
GSM SZ AMC	66.8	0.6%
HDPE Duct	53.8	0.5%
AMC for ASCON	50.8	0.5%
AMC for OCB	3.8	0.0%
MLLN/SSTP AMC	1.7	0.0%
<b>Total</b>	<b>11,051.1</b>	<b>100.0%</b>



\* BTS – O&M order includes two advance work orders issued by BSNL on 29 Aug '18 for ~INR1783.12crs & INR3838.54crs aggregating to ~INR5621.66crs.

## Order Book as per customer type –

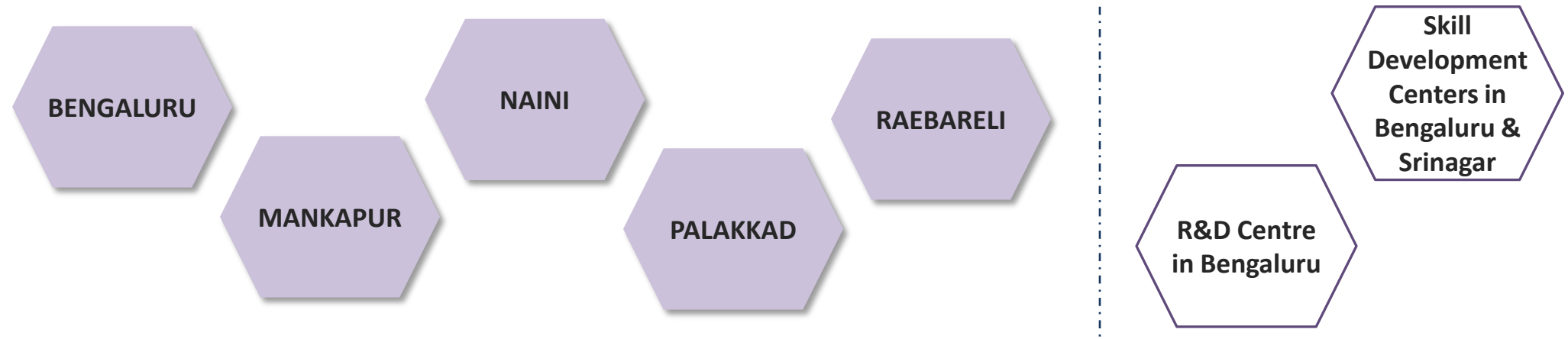
Order Book @ Dec 31, 2019	INR Crs	%
PSU Customers	7,283.0	65.9%
State Governments	3,287.2	29.8%
Other Gol Agencies	333.8	3.0%
Other Customers	87.5	0.8%
Ministry of Defence	59.6	0.5%
<b>Total</b>	<b>11,051.1</b>	<b>100.0%</b>





- **BTS O&M** → Advanced Purchase Orders for O&M of BTS for GSM network of BSNL in Tamil Nadu, Uttar Pradesh & Uttarakhand for next 10 years. Scope of work includes operation and maintenance of passive infrastructure of BTS sites.
- **MahaNet** → Laying of OFC cable, supply of access equipment and other related products as well as maintenance services.
- **RO/CCOs/Misc Products** → ITI's regional offices and area offices are also executing orders received from different agencies like State Governments, PSUs and educational institutions for supply and installation of CCTV surveillance systems, Wi-Fi systems, networking solutions, video conferencing solutions, smart classrooms, online examination systems, GIS base map survey of properties, supply and installation of fiber optic cable.
- **Smart Energy Meters** → Contract to manufacture & supply 2,500,000 smart energy meters for EESL.
- **GujaratNet** → ITI is awarded one of two packages and this project involves establishing a broadband network using GPON equipment between the Gram Panchayats & blocks and connecting the blocks to state headquarters to provide high speed link connectivity to 3,925 Gram Panchayats. It also involves laying of underground OFC to a route length of approximately 16,800 kms and setting up of a Network Operations Centres to manage the network.
- **Rajnet** → Supplying, installation and maintenance of RF links and 40,000 outdoor Wi-Fi access points across Rajasthan state under the BharatNet Phase II Project.
- **WBNet** → Survey, procurement, supplying, trenching, laying, installation, testing and maintenance of OFC, accessories and GPON equipment for the BharatNet Phase-II network in West Bengal. Order is to supply 1,560 kms of OFC and broad band connectivity to approximately 183 Gram Panchayats in West Bengal.
- **NFS Project** → Laying OFC under NFS project for Indian defence forces in the Eastern and North-Eastern regions.
- **GPON Equipment** → Contracts from BSNL and BBNL for a turnkey project to supply and install GPON technology equipment for "BharatNet"
- **GSM SZ** → AMC of GSM equipment previously supplied to BSNL south zone circles including Karnataka, Tamil Nadu, Kerala, Andhra Pradesh, and Chennai.
- **AMC for ASCON** → AMC for maintaining the nodes, OFC and optical terminal and secrecy equipment for the Ministry of Defence's ASCON Phase I, II and III projects.

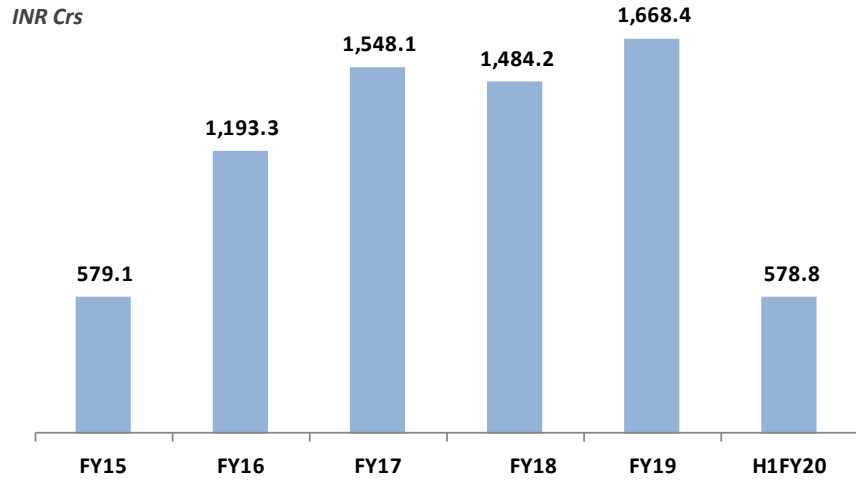
## ITI'S MODERN MANUFACTURING FACILITIES



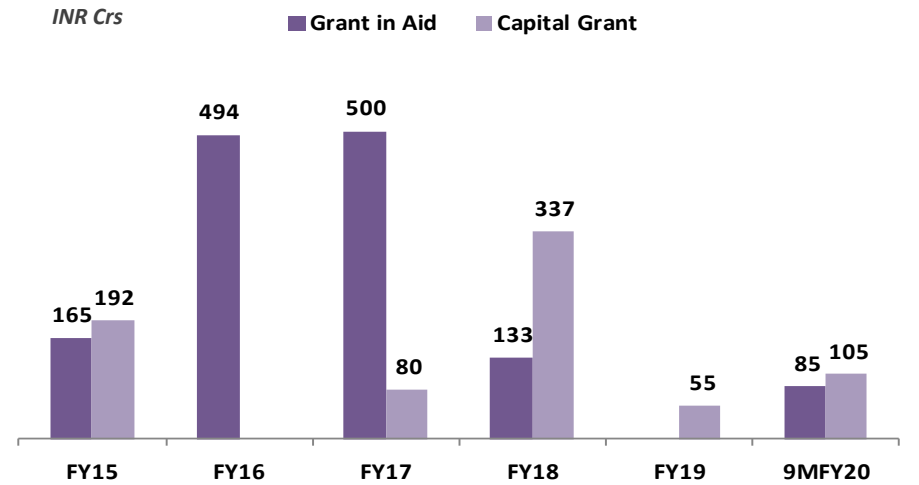
- ITI has upgraded and continues to modernize its manufacturing facilities, infrastructure, machines, equipment and technology, which allows it to offer a diverse product suite, reduce operating costs and drive productivity
- CAPEX –
  - INR 48.9crs in H1FY20
  - INR 127.8crs in FY19
  - INR 189.6crs in FY18
  - INR 76.1crs in FY17
- Raebareli unit capex – added manufacturing capability of GPON products including optical line terminals (OLTs) & optical network terminals (ONTs), OFC and high-density polyethylene (HDPE) manufacturing line
- Palakkad unit capex – established HDPE duct manufacturing lines
- In addition, the electronic manufacturing facilities at Bengaluru, Raebareli, Palakkad and Mankapur plants have been upgraded to manufacture a diverse suite of products –
 

<ul style="list-style-type: none"> <li>✓ optical and data network products</li> <li>✓ defence security encryption</li> <li>✓ IoT products</li> <li>✓ smart energy meters</li> </ul>	<ul style="list-style-type: none"> <li>✓ smart cards</li> <li>✓ solar panels</li> <li>✓ set-top boxes,</li> <li>✓ mini personal computers</li> </ul>	<ul style="list-style-type: none"> <li>✓ 3D printing</li> <li>✓ security surveillance products</li> <li>✓ radio modems</li> <li>✓ other allied product</li> </ul>
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## Growth in revenue from operations (FY15-19)...

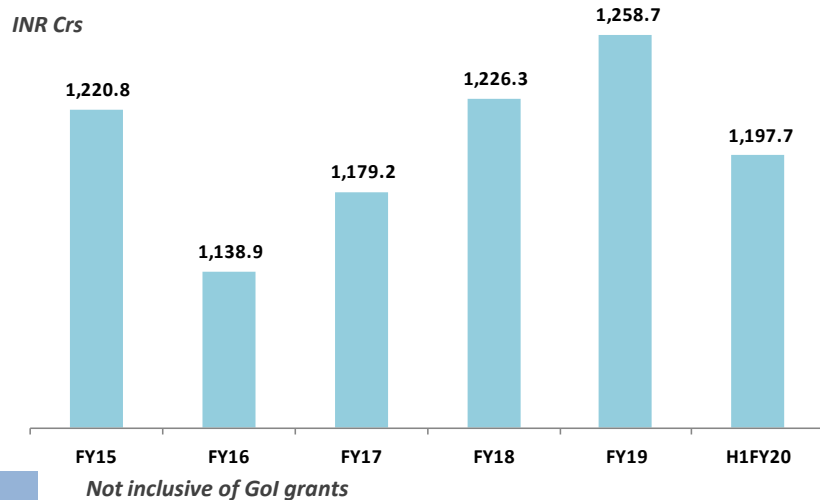


## Govt. grants to meet operational & capex requirements

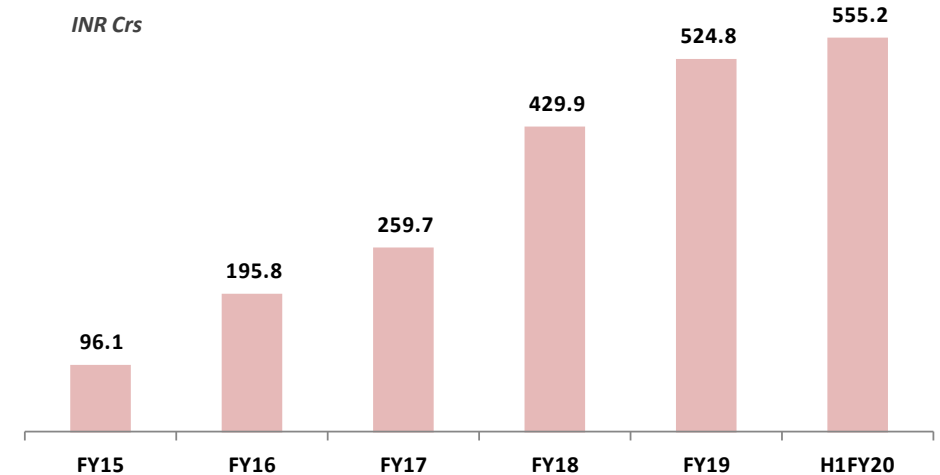


Telecom equipment manufacturer → **Telecom technology**. ITI's strategy of diversification has helped it improve its financial performance

## Growing operating revenues with debts at same level ...



## ...and increasing operating asset block



**ITI's management team is well qualified & experienced in the industry . The combination of ITI's experienced board & management has been key in revitalizing the business & would also enable it to capitalize on further growth opportunities**

**Rakesh Mohan Agarwal, Chairman and Managing Director.** He holds a bachelors degree of engineering in electronics from Madan Mohan Malviya Engineering College, Gorakpur, a masters degree in electronics & communications engineering from University of Roorkee & a MBA from Indira Gandhi Open University. He has over 28 years of experience in policy formulation, standardization planning, O&M of telecom services & was previously the Government Nominee Director

**Shashi Prakash Gupta, Director (Human Resources).** He holds a bachelors in technology in mechanical engineering degree from Kakatiya University, Warangal and a provisional certificate for master's in business administration from the Indira Gandhi Open University. He is also a Fellow with the Intitution of Engineers (India) and a member of the National Institute of Personnel Management, the Indian Institute of Metals and Quality Circle Forum of India. He has previously worked with the Steel Authority of India Limited for over 33 years in various management roles

**Rajesh Sharma, Government Director, Nominee (Non-Executive)**  
He holds a bachelors of engineering in electronics from Devi Ahilya Vishwavidyalaya, Indore and a post graduate diploma in management from Management Development Institute, Gurgaon. He has been working with the Department of Telecommunications, Ministry of Communications for the last 28 years.

**Chittaranjan Pradhan, Director (Finance).** He holds a bachelors and a masters degree in science, and a masters in philosophy from Sambalpur University. He has served over 20 years in the Indian P&T Accounts and Finance Service, Government of India. He has held the post of CCA, Tamil Nadu, Government of India

**D. Venkateswarlu , Director (Production).** He holds a bachelor's and master's degree in chemical engineering from Andhra University. He has been working with our Company since 1985

**Lt. General Rajeev Sabherwal, Government Director, Nominee (Non-Executive)**

He holds a degree of bachelor's in science degree from the National Defence College, Pune, a bachelor's in technology in electronics and communication engineering degree from the Military College of Telecommunication Engineering, Mhow and a master's of science in defence and strategic studies degree from the University of Madras. He has been a paratrooper with the Indian Military Services.

**As at Dec 31, 2019, ITI has 3,520 employees, including more than 731 employees with technical and professional qualifications**

**Asha Kumari Jaswal, Non-Official, Ind Director (Non-Executive)**

She holds a bachelor of arts degree and masters degree in arts from Punjab University. She has over 15 years of experience in the legal profession and in the administrative field. She was the mayor of the Municipal Corporation of Chandigarh and is currently also the councillor of the Municipal Corporation of Chandigarh.

**Dr. K. R. Shanmugam, Non-Official, Ind. Director (Non-Executive)**

He holds a bachelors degree of arts in economics from the University of Madras, a masters degree of arts in economics from the Bharathiar University, a masters degree of philosophy in econometrics from the University of Madras and a doctor of philosophy in econometrics from the University of Madras. He has been working as a Director and Professor with the Madras School of Economics for over 23 years

**Dr. Akhilesh Charan Dube, Non-Official, Ind. Director (Non-Executive)**

He holds a M.B.B.S degree from University of Jabalpur and a Master of Surgery in Othopedics from Devi Ahilya Vishwavidyalaya, Indore. He has previously worked as a Medical Officer with the Primary Health Center of the Birkony District in Chattisgarh.

**Mayank Gupta, Non-Official, Ind. Director (Non-Executive)**

He holds a bachelors degree in technology in electrical engineering from Gobind Ballabh Pant University of Agriculture and Technology. He has also, in the past, been the Director of Eurokids Schools, Roorkee, the President of The Nataraj Group and the President of the Yoganand Vikas Parishad

**Rajen Vidyarthi, Non-Official, Ind. Director (Non-Executive)**

He holds a bachelors degree in commerce from Rohilkhand University and is a member with the Institute of Chartered Accountants of India. He has been a partner of the chartered accountancy firm, R. Vidyarthi & Co for the last 28 years



# Key Business Strategies

**Continuously diversify suite of product and services and leverage relationships with the GoI and PSUs**

- *ITI has been developing and introducing new products in collaboration with its technology partners including optical & data network products, defence security encryption, IoT products as well as other diversified products*
- *In addition, ITI offers a range of services including fiber laying services, data centre hosting solutions, AMC, contract manufacturing services and IT & software services.*
- *ITI plans to continuously upgrade & invest in technology, through acquisition of technology from strategic partners with a specific focus on high growth industry segments.*
- *The Company intends to continue to develop products & services with applications targeting customers across sectors such as telecommunications, defence, IT, banks, financial institutions & solar energy.*
- *ITI, currently implementing numerous GoI projects intends to continue to leverage its relationships with PSUs, MoD & other Government agencies to win large tenders & contracts which ITI believes that it shall benefit from economies of scale, to develop relationships with technology partners and to drive revenue growth.*
- *In addition, the company intends to leverage a new PSU synergy initiative by the DoT to utilize strengths of each PSU and for transfer of technology . ITI also holds regular interactions with stakeholders by conducting conferences.*

**Augment its manufacturing capabilities by upgrading and modernizing infrastructure and technology**

- *ITI has been upgrading its manufacturing facilities, infrastructure, machines, equipment, technology and employee skill sets that has allowed it to enhance its product offerings, reduce operating costs and drive productivity.*
- **ITI's capital expenditure plans include the following –**
  - *upgrading of its electronic and mechanical manufacturing facility;*
  - *expanding its data centre operations by building a Tier 3 plus data centre with 1,000 racks space at Bengaluru;*
  - *setting up radio modem and smart energy meter manufacturing facility;*
  - *building electromagnetic compatibility & interference chambers for testing telecommunication & defence products;*
  - *expanding its defence encryption products and solutions capabilities;*
  - *setting up a solar panel manufacturing facility at Naini plant with 18MW capacity;*
  - *expanding smart card manufacturing; and*
  - *OFC and HDPE duct manufacturing etc*



**Teaming with innovative technology leaders and start-ups**

- Continue executing teaming agreements, MoU & technology transfer (ToT) agreements with technology & telecom companies as well as start-ups for access to new technology & products to expand the Company's offering to customers as well as to drive efforts toward innovation.
- ITI has ToT agreements with various technology & telecom companies for certain technology & products including MLLN & OTN equipment, telecom & IT products such as GPON, Wi-Fi, terabit routers, fixed line & GSM technology
- ITI's teaming partners, include CDAC for IoT solutions; Centre for Development of Telematics for GPON products, Coriant OY for Managed Leased Line Network products, Trimax Data Centre Services for data centre services etc
- ITI intends to continue to build relationships across the communication & technology eco-system with institutions including system integrators, software & hardware companies & network service companies
- ITI believes that this knowledge of both products & the entire product development ethos helps to evolve a product & service development culture that is aligned with its customer requirements, employees & processes
- ITI also engages in discussions with its technology partners to bring opportunities to assist each other to grow and enrich respective understandings of the telecom technology industry & technical knowledge.
- ITI expects to continue to cultivate a cooperative R&D culture with its customers, technology partners & employees

**Reduce operating costs, increase operational efficiencies and improve productivity**

- In order to improve the Company's margins & profitability, ITI endeavors to continue to rationalize costs
- ITI's management strives to place great emphasis on cost control & improving operating efficiencies, especially in light of upgrading of its infrastructure, equipment & technology & its expanded product suite
- ITI intends to drive cost savings by teaming with technology partners through subcontracting & outsourcing; also looking to reduce its social overheads including medical costs, canteen subsidies & transportation expenses
- ITI plans to drive improved productivity per employee by its (i) modernized & upgraded infrastructure (ii) company-wide emphasis on R&D and innovation (iii) continued training & improvement of its employees' skills & training
- ITI intends to monetize its land & property by finding additional & alternative uses, including by offering
  - vacant office space and factory hangers on rental basis to outside agencies
  - vacant sheds and RCC structures for warehousing/logistics purposes
  - the unused auditorium space in the Bengaluru plant for conducting functions or sporting purposes
  - unused community hall at Bengaluru plant for marriage purposes
  - convert existing hospital in Bengaluru manufacturing township into a multi/super specialty hospital
  - open spaces for sporting events, CNG/PNG station and distribution outlets



Particulars (Rs Crs)	FY15	FY16	FY17	FY18	FY19	H1FY20
Revenue from Operations	579.1	1,193.3	1,548.1	1,484.2	1,668.4	578.8
Other Income	84.9	597.0	540.6	327.5	336.5	24.6
<b>Total Revenue</b>	<b>664.0</b>	<b>1,790.3</b>	<b>2,088.7</b>	<b>1,811.6</b>	<b>2,004.8</b>	<b>603.4</b>
Cost of Material Consumed	43.0	41.3	92.6	313.4	283.7	68.3
Purchases of Stock in Trade	142.1	628.2	512.2	232.0	321.6	210.2
Changes in Inventories of FG, WIP & Stock in Trade	2.1	0.4	(17.6)	11.8	(11.3)	9.7
Installation & Maintenance Charges	213.9	318.1	642.1	526.1	783.9	128.6
Employee Benefit Expenses	321.2	332.5	300.9	225.5	204.2	112.5
Interest	157.3	157.2	152.6	153.4	106.5	68.8
Depreciation	15.3	12.9	16.9	24.9	37.1	20.8
Other Expenses	67.2	62.5	122.7	94.0	186.5	38.8
<b>Total Expenses</b>	<b>962.0</b>	<b>1,553.1</b>	<b>1,822.3</b>	<b>1,581.1</b>	<b>1,912.3</b>	<b>657.8</b>
<b>PBT</b>	<b>(298.0)</b>	<b>237.2</b>	<b>266.4</b>	<b>230.6</b>	<b>92.5</b>	<b>(54.4)</b>
Tax	-	-	-	-	-	-
<b>PAT</b>	<b>(298.0)</b>	<b>237.2</b>	<b>266.4</b>	<b>230.6</b>	<b>92.5</b>	<b>(54.4)</b>
<b>Total Comprehensive Income</b>	<b>(299.8)</b>	<b>252.6</b>	<b>302.9</b>	<b>232.0</b>	<b>112.9</b>	<b>(46.2)</b>

Particulars (Rs Crs)	FY15	FY16	FY17	FY18	FY19	H1FY20
<b>ASSETS</b>						
<b>Non-current Assets</b>	<b>143.6</b>	<b>239.0</b>	<b>300.7</b>	<b>473.6</b>	<b>565.9</b>	<b>595.5</b>
- Property, Plant & Equipment	61.9	102.9	157.0	279.5	358.9	372.3
- Capital work-in-progress	33.0	91.7	101.6	149.3	164.8	181.8
- Investment Property	1.1	1.1	1.1	1.1	1.0	1.0
- Investments	45.0	43.1	40.8	37.7	39.8	39.0
- Trade receivables	-	-	-	5.9	1.2	1.2
- Loans	2.5	0.2	0.3	0.2	0.2	0.2
<b>Current Assets</b>	<b>2,881.3</b>	<b>3,284.1</b>	<b>2,904.2</b>	<b>4,232.1</b>	<b>4,097.8</b>	<b>4,066.2</b>
- Inventories	93.3	103.8	142.3	155.9	148.8	144.5
- Trade receivables	2,218.7	2,743.2	2,196.0	3,079.9	2,657.4	2,651.6
- Cash and cash equivalents	45.8	50.0	24.4	41.3	26.7	20.0
- Bank Balances other than above	225.4	71.2	141.9	283.5	176.8	223.2
- Loans	269.2	258.8	333.5	385.5	470.5	612.3
- Unbilled Revenue	-	21.3	36.7	237.2	550.2	362.2
- Other Current Assets	28.8	35.7	29.5	48.8	67.4	52.4
<b>TOTAL ASSETS</b>	<b>3,024.8</b>	<b>3,523.1</b>	<b>3,204.9</b>	<b>4,705.7</b>	<b>4,663.8</b>	<b>4,661.8</b>
<b>EQUITY &amp; LIABILITIES</b>						
<b>Equity</b>	<b>(1,910.5)</b>	<b>(1,637.1)</b>	<b>(1,248.6)</b>	<b>(674.0)</b>	<b>(501.5)</b>	<b>(131.1)</b>
- Equity Share Capital	288.0	288.0	560.0	760.0	897.0	897.0
- Other Equity	(2,198.5)	(1,925.1)	(1,808.6)	(1,434.0)	(1,398.5)	(1,028.1)
<b>Non-current Liabilities</b>	<b>402.3</b>	<b>398.6</b>	<b>495.6</b>	<b>505.2</b>	<b>569.9</b>	<b>503.3</b>
- Government Grants	7.3	2.6	122.9	119.1	118.5	114.3
- Borrowings	300.0	300.0	300.0	300.0	300.0	240.0
- Others	6.3	12.1	14.4	18.2	70.3	68.5
- Provisions	88.7	83.9	58.3	68.0	81.1	80.5
<b>Current Liabilities</b>	<b>4,533.0</b>	<b>4,761.6</b>	<b>3,957.8</b>	<b>4,874.5</b>	<b>4,595.4</b>	<b>4,289.6</b>
- Borrowings	920.8	838.9	879.2	926.3	958.7	957.7
- Trade Payables	2,283.0	2,105.3	1,976.0	2,261.6	1,804.9	1,688.1
- Others	833.8	809.1	723.6	824.1	1,131.1	831.4
- Provisions	352.5	241.9	148.4	120.1	106.1	108.5
- Other Current Liabilities	142.9	766.3	230.7	742.3	594.6	703.8
<b>TOTAL EQUITY &amp; LIABILITIES</b>	<b>3,024.8</b>	<b>3,523.1</b>	<b>3,204.9</b>	<b>4,705.7</b>	<b>4,663.8</b>	<b>4,661.8</b>



*Thank you*



(A wholly owned subsidiary of Punjab National Bank)

# Annexure – Industry Section

*CRISIL Report – “Information & communication technology scenario in India”*

*December 2019*

Indian telecommunications services industry is set to grow at a 12-14% CAGR between FY19 & FY24

Telecom Subscriber Base	FY16	FY17	FY18	FY19 (E)	FY20 (P)	FY21 (P)	FY24 (P)
Wireless subscribers (mn)	1,034	1,170	1,183	1,162	1,145	1,204	1,331
Data subscribers (mn)	322	401	473	614	657	678	849
Data subscriber proportion	31%	34%	40%	58%	68%	70%	80%
2G and 3G data subscriber (mn)	314	269	186	136	89	44	2
2G and 3G data subscriber proportion	30%	23%	16%	12%	8%	4%	0%
4G and 5G data subscriber (mn)	8	131	287	478	568	634	847
4G and 5G data subscriber proportion	1%	11%	24%	41%	50%	53%	64%

**The key industry drivers are the expected increase in the subscriber base and the introduction of 5G technology**

**These will drive investments in the telecommunication equipment industry, as operators incur capital expenditure to improve backhaul (optic fibre, HDPE ducts, wireless access network products and batteries) and to adopt newer technologies (such as 5G)**

**Gol's initiatives, such as "Make in India" and Digital India have provided the impetus for the development of local manufacturing units. Projects such as BharatNet and the Smart Cities Mission have also boosted demand for telecommunication equipment**

**With the increase in the number of local manufacturers, India's dependence on imports will decline Apart from this, foreign companies have set up manufacturing plants and assembly lines in India due to its conducive environment for growth and development. It is expected that continued foreign direct investment growth in the telecommunications equipment industry, leading to an influx of foreign technology**

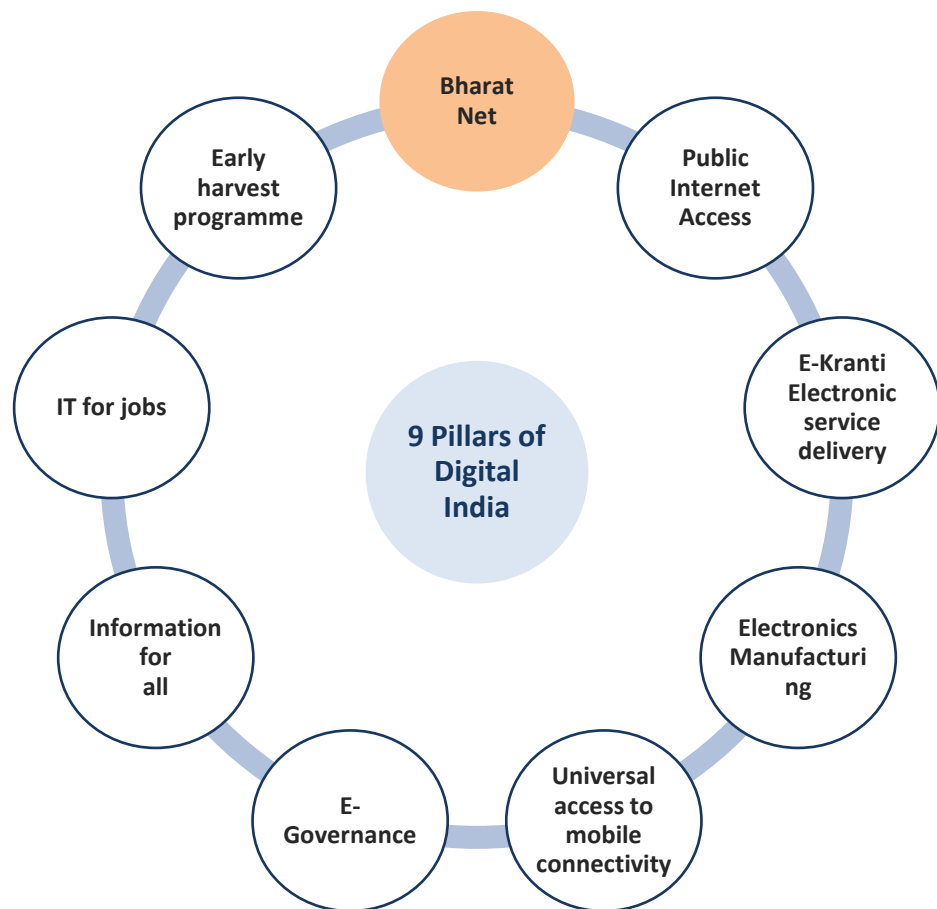
**Indian telecom sector will drive demand in the telecom equipment space → growth in the telecommunications equipment industry will supported by long-term telecom services industry growth, the focus on improving service quality by telecommunications operators and introduction of 5G technology**

## Base Transceiver Stations (BTS)

- The installed BTS ecosystem in the towers industry is set to undergo a change in mix of 2G, 3G, and 4G BTS. The overall BTS numbers will grow at approximately 5% CAGR between FY 2019 (1961 nos of BTS) to and FY 2024 (2371 nos of BTS)
- The number of 2G and 3G BTSs was reduced by operators. This trend will continue as telecommunication service providers encourage subscribers to migrate from 2G and 3G to 4G
- Majority of demand for high-end 4G BTS & single-RAN BTS is fulfilled by imports. ITI manufactures low-power CDOT technology BTS at its manufacturing facility in Mankapur

## Broadband Wireless Terminal (BBWT)

- The primary reason for low-data pickup in India has been the low mobile broadband data speed, which is among the lowest in countries offering 4G services. In India, the majority of data traffic flows through mobile networks that face congestion during peak hours, leading to a poor mobile broadband experience. In addition, low volume capacity also restricts usage.
- Globally, approximately 85-90% of the traffic flows through fixed broadband, including managed IP, which is an enterprise service provided by network operators, managed service providers, and system integrators. It includes IP telephony, IP contact centres, unified communications, application hosting, security and LAN, and desktop management. . This compares with approximately 75-80% in India, of which Wi-Fi caters to 25-30% of demand for FY 2018
- On average, a global consumer spends over 45% of time on the internet on Wi-Fi, compared with an estimated 20% in India. Moreover, most of this is on home Wi-Fi in India. The reason Indian consumers often do not access internet on Wi-Fi outside home is because of the lack of public Wi-Fi hotspots. Currently, there are about 40,000 Wi-Fi public hotspots in India. Under 'Sansad Adarsh Gram Yojna', the Gol proposed to set up 25,000 Wi-Fi hotspots at existing rural exchanges of BSNL
- As of March 2019, rural tele-density in India is 57.50%, compared with urban penetration of 159.66%. With this tele-density gap indicates that there is a great potential in rural India for additional Wi-Fi penetration
- To boost rural connectivity and provide a thrust to the Digital India initiative, the Gol has taken various steps. BharatNet is a Gol initiative aimed at providing broadband connectivity to 250,000 villages (gram panchayats) with a speed of 100 Mbps. The new National Telecom Policy 2018 envisages enabling access to high-quality wireless broadband services at affordable prices for 90% of the population, developing 10 million public Wi-Fi hotspots in the country, and achieving 900 million broadband connections at a minimum download speed of 2 Mbps. Under this policy, the number of Wi-Fi hotspots in India is expected to increase significantly from 40,000 at present to approximately 500,000 over the medium term.



## BharatNet Infrastructure Project

- BharatNet is a key infrastructure project of the GoI, under which the GoI aims to connect 250,000 villages
- The infrastructure is designed primarily to provide for broadband internet in rural areas and remote regions of the country
- To execute BharatNet, GoI has set up a special purpose vehicle called BBNL, which is responsible for management and operation of the network
- **Phase I** → covered 100,000 gram panchayats, has been completed & was implemented by three PSUs: BSNL, RailTel Corporation of India and Power Grid Corporation of India
- **Phase II** → will cover the remaining 150,000 gram panchayats, is currently underway. The GoI has earmarked approximately Rs310 bn for Phase II, which is a significant step-up from approximately Rs115 bn spent for Phase I
- In 2017, the Ministry of Communications announced plans to set up a minimum of one Wi-Fi hotspot per village. GoI has announced a viability gap funding of Rs36 bn to telecom operators for these Wi-Fi hotspots
- The BharatNet infrastructure provides bandwidth and dark fibre between block headquarters and gram panchayats which can be utilised by telecommunication and internet service providers to provide internet in rural areas. The infrastructure utilises GPON technology, which allows for point to multi-point connections. The BharatNet infrastructure is built to act as a key middle layer connecting unconnected areas to existing networks with central network monitoring and with last-mile connectivity being provided by telecommunication players and internet service providers. The GPON architecture utilises a variety of components, namely, optical fibre cable pipes, and optical fibre cables and terminals which transmit and receive information.



**Army Static Switched Communication Network (ASCON)**

Phase	Timeline	Awarded	Comments
I	1987 - 1991/92	ITI	Utilised mainly by the wireless radio technology
II	1995 - 1998	ITI	Utilised mainly by the optical fibre technology
III	2000 - 2006	ITI	Utilised asynchronous transfer mode & Integrated Services Digital Network technology along with a satellite overlay network
<b>IV</b>	<b>2017 - 2021</b>		<b>Utilise a slew of new technologies based on IP/multiprotocol label switching technologies utilising IPv6-capable devices</b>

- ASCON is an Indian Army communications project, which seeks to develop and enhance the army’s communication network across India.
- ITI is currently in negotiations for Phase IV
- ASCON, Phase IV, is a project with the Ministry of Defence that entails the establishment of an optical fiber network for the Indian army, including the supply, installation, and maintenance of the optical fiber network and telecom equipment, mobile terminals, microwave towers, power supply equipment, test instruments and infrastructure.
- The project is to be executed over a period of three years from the date of contract signing followed by 2 years of warranty support and 8 years of AMC support

**Network for Spectrum (NFS)**

- NFS is a strategic communications network project to develop and install an OFC network to be owned and operated by the defence services under the Project Implementation Core Group (PIGC) of the Ministry of Defence
- NFS involves establishing an exclusive OFC-based nationwide optical backbone for 414 defence sites & access networks at 219 army sites
- NFS project comprises all OFC routes, aggregating to 57,015 km, which is divided into seven packages. The NFS project, has been awarded to BSNL with an estimated cost Rs133.34 bn
- The implementation of this project is undertaken jointly by BSNL and PIGC, whereby all essential project monitoring, installation, testing and acceptance will be carried out by joint teams.
- The GoI has allocated Rs30 bn for laying of OFC and procurement of equipment for the project in Fiscal 2018. ITI has an order for laying optical fiber cable under the NFS project for the Indian defence forces in the Eastern and North-Eastern regions.



↑ In 2015, as a part of the Digital India campaign, a centre of excellence for IoT was announced by the Ministry of Electronics & Information Technology

↑ The Smart Cities Mission, which seeks to modernise cities with an emphasis on smart technologies, utilises IoT-based technologies

## Smart City Solutions

➤ *The Indian government launched the Smart Cities Mission in, 2015. A smart city is a designation given to a city using information & communications technology (ICT) to enhance the quality and performance of urban services*

➤ *Under the Smart Cities Mission, each selected city gets central assistance of Rs2 bn in the first year and Rs1 bn per year for the next three years, with a matching contribution from its respective state*

➤ *That total investment of approximately ₹2.05 trillion will be made on smart cities over the next few years. With the Gol and state government funding fixed at ₹5 billion each per city (approximately 45% of envisaged investment), the financial position of each city's union-local bodies (ULBs) is critical, as funding for various projects will significantly depend on the bonds raised by the respective city ULBs. About 5% of total investment (₹60 billion) will be funded through municipal bonds in the coming years.*

➤ *ICT, non-residential development and housing will account for more than 40% of planned investment in the Smart City Mission. The Gol primary focus is to enable local area development by using digital technology and ICT, which represents approximately 16-17% of overall funds. Projects such as data visualisation, intelligent traffic management systems (ITMS), bus-fleet tracking and smart-parking systems, are also gaining importance, as these services enable a city to function properly and efficiently. Under ICT, investment in ITMS to be the at approximately 26%.*

*ITI Ltd is one of the key players providing smart-city solutions in India*

## Smart Energy Meters

- Installation of smart meters has received support from the GoI only in recent years, through policies and programmes such as the **National Tariff Policy**, the **Integrated Power Development Scheme**, the **Ujwal Discom Assurance Yojana** & smart grid pilot projects
- **Ministry of Power (MoP)** – Several policy initiatives to promote smart metering → In 2012, the MoP sanctioned 14 projects for smart grids, with 50% funding to be provided by GoI → 174,000 smart meters have been sanctioned → over 1,00,000 smart meters have been installed
- **Ujwal Discom Assurance Yojana (UDAY), 2015** –
  - Target to install smart meters for consumers with a monthly consumption of more than 500 units by December 31, 2017
  - as of Dec 2019, only 5% of the targeted 5.73 million smart meters had been installed for consumers with a monthly consumption of more than 500 kWh
  - For consumers in the 200-500 kWh category, the achievement was only 4% of the target of 18.45 mn smart meters
  - **Indicating that there is a large potential for the smart meter market**
- **Energy Efficiency Services Ltd (EESL)** – Installing smart meters through the Smart Meter National Programme (SMNP) to reduce discoms' billing inefficiencies. The SMNP aims to replace 250 million conventional meters with smart meters.
  - EESL launched a mega tender to procure 5 mn smart meters in July 2017 on behalf of the Uttar Pradesh and Haryana Discoms for implementing smart-grid projects in these states. The smart meters are planned to be installed over three years
  - ITI has a contract to manufacture and supply 2,500,000 smart energy meters to EESL the value of which is Rs658.2crs representing 5.96% of its order book

## Aadhar Cards

- Aadhaar has grown to be the world's largest biometric ID system, with over 1.25 bn enrolled members as of Dec 2019
- The UIDAI is given a GoI budgetary allocation each financial year. For Fiscal 2020, the UIDAI has been allocated a 8.7% lower budget funds at Rs12.27 billion, compared with Rs13.75 billion in Fiscal 2019. These funds will be used for operations such as replacement of old hardware, upgrading information technology and strengthening overall capacity.
- ITI has ventured into providing Aadhaar-based authentication services based on the SaaS model to address various segments

### Smart Cards

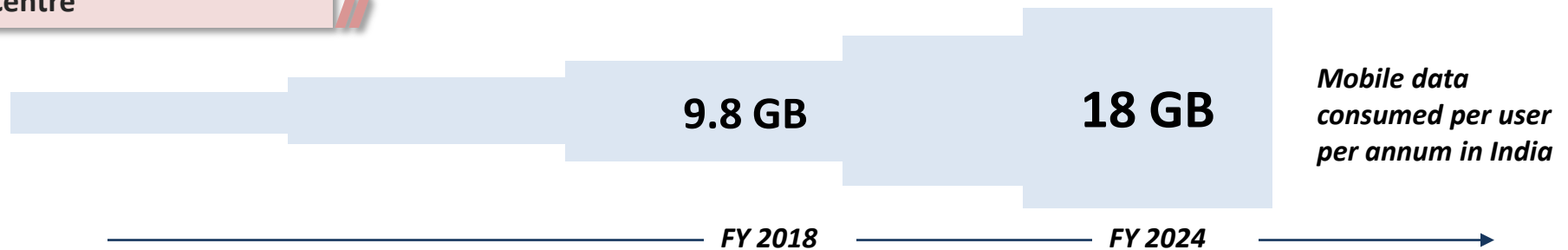
- Smart cards have applications across industries in India, with the key industries being banking, financial services & telecom.
- Main drivers for smart cards are financial inclusion & expansion of wireless telecommunication subscriber base.
- As subscriber identity module (SIM) cards are a key enabler for wireless telecom. India currently has the second-largest wireless telecommunication subscriber base in the world with over 1,162 million subscribers as of March 31, 2019. The number of wireless subscribers are projected to grow at 2% CAGR, from an estimated 1.18 billion at the end of FY2018 to 1.32 billion by the end of FY2024

Industry	Utilisation of Smart Card
Banking	Debit/Credit Cards & other payment cards
Retail	Shopping & reward cards
Telecom	SIM cards
Transport	Fastags, metro rail cards
Government	ID cards, driving licenses, new ration cards

### Set-Top Boxes (STB)

- STB market size at ₹363 billion in Fiscal 2019 after growing at an approximately 21% CAGR between FY2014 and FY2019. STB market is expected to grow at a CAGR of approximately 6% between FY2019 and FY2024
- SD STBs account for more than 90% of the total market in India; however, with the increasing penetration of HDTVs, subscribers are increasingly replacing their STBs with HD STBs → The move to HD STB coupled with increasing TV penetration, will drive growth in STBs

### Data Centre



- India has also seen data volumes growing → ITI has been offering data centre hosting services since 2009. Its existing capacity of 350 racks is now being expanded with 1,000 rack space at Bengaluru