

LTTS



- Market Cap: 17,346 Cr.
- Current Price: 1,656
- 52 weeks High / Low 1855.00 / 1156.00
- Book Value: 238.33
- Stock P/E: 22.05
- Dividend Yield: 0.95 %
- ROCE: 37.86 %
- ROE: 29.58 %
- Sales Growth (3Yrs): 12.69 %

- Return on capital employed: 37.86 %
- Sales growth 3Years: 12.69 %
- Profit growth 3Years: 17.65 %
- Promoter holding: 78.88 %
- Pledged percentage: 0.00 %
- Debt to equity: 0.03
- Price to Sales: 3.4
- Net worth: 2,479 Cr.
- Price to Free Cash Flow: 52.79

- Price to Cash Flow: 41.93
- Enterprise Value: 17,262 Cr.
- Return on equity: 31.58 %
- Number of equity shares: 10.40
- Current ratio: 2.75
- Quick ratio: 2.75
- NPM last year: 13.50
- Working Capital Days: 138.72

WHAT PROPELS US FORWARD



Our Vision

- To be technology explorers, engineering better products, services, and life.
- To be amongst the top 10 global engineering services companies in the world.



Our Mission

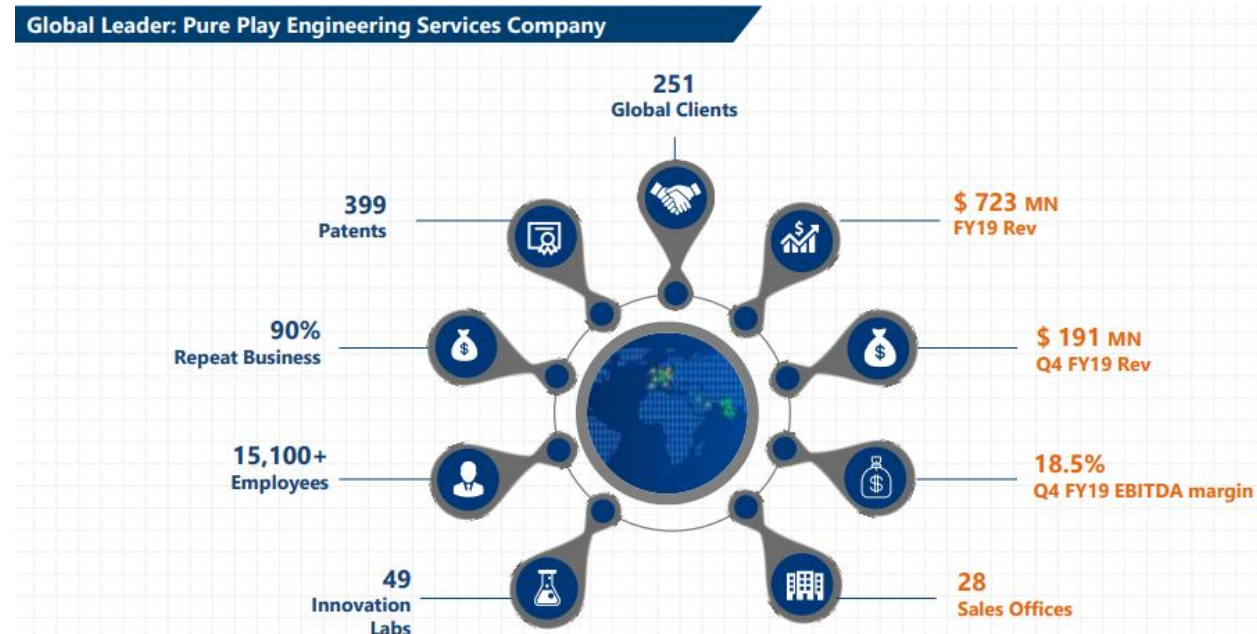
- We aim to be the best, lead the curve, nurture brilliance, obsess about customer delight and become the only partner of choice for our stakeholders.



Our Values

- Ethical and professional organisation with respect for individual and diversified global talent.
- Social harmony and peaceful existence.

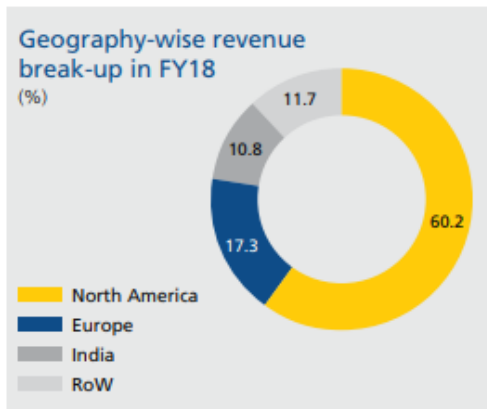
ABOUT THE CO



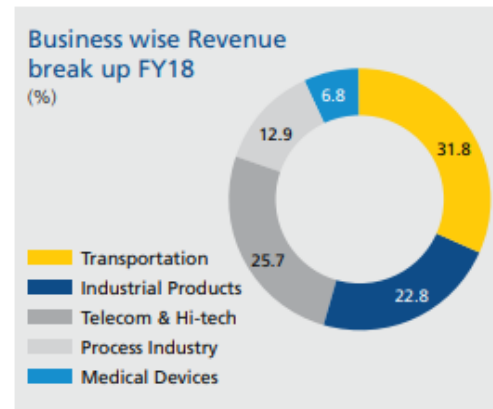
L&T Technology Services Limited (LTTS) is a leading global Engineering Research & Development (ER&D) company offering consultancy, design, development and testing services across the product and process development life cycle. LTTS is committed to engineering the change with disruptive new age technology solutions.

We offer a portfolio of engineering services across industries. We closely follow the technology trends in the ER&D industry and have focused on key technology areas that impact the various verticals in which we operate. These include (but are not limited to) digital engineering, mobility and augmented reality, IoT (including IIoT and NBIIoT), automation of knowledge, robotics, autonomous & near-autonomous vehicles, energy efficiency and imaging and video. We are the only Indian pure play engineering R&D Company of its kind to offer ER&D services and solutions to all major industries viz. Transportation, Industrial Products, Telecom & Hi-Tech, Medical Devices and Process Industry.

Consolidated



Consolidated



1: **Transportation:** The Company offers engineering services and solutions over the complete spectrum of the transportation industry, that includes OEM and Tier 1 suppliers in automotive, trucks and off-highway vehicles, aerospace and rail industries. The segment delivers end-to-end services from concept to detailed design through manufacturing, testing, aftermarket and sourcing support helping OEMs and Tier 1s develop products in a cost-effective manner. The Company also helps its clients develop cutting-edge transportation technologies such as autonomous driving, electric vehicle and drones.

2: **Process engineering:** The plant engineering practice provides end to end engineering services for leading plant operators across the globe. The Company provides services in E/EPCM, engineering reapplication and global rollouts, plant sustenance and management, regulatory compliance engineering along with chemical, consumer packaged goods (FMCG) and energy and utility sector clients. The Company specializes in traditional engineering procurement construction management (EPCM) and operational maintenance projects, as well as contemporary digital engineering enterprises. The Company is advancing its engineering footprint to encompass the digital sphere and working with customers on 'Smart Manufacturing' technologies such as automation, IoT, analytics, and augmented reality (AR).

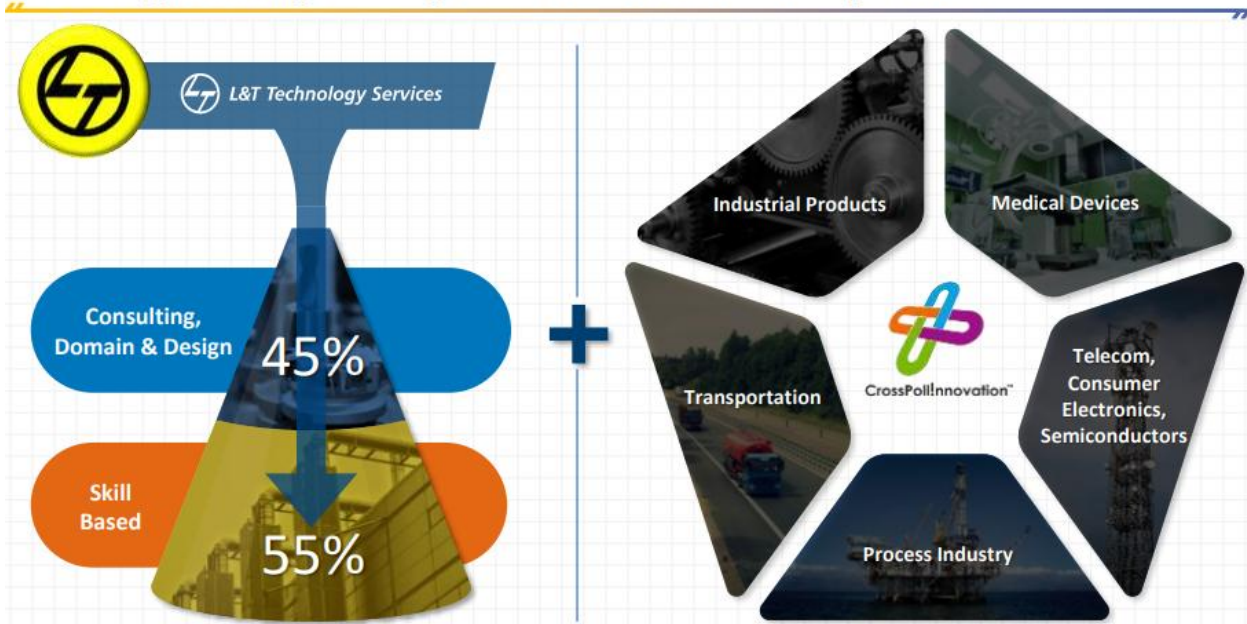
3: **Industrial products:** Industrial products practice helps original equipment manufacturer (OEM) customers across building automation, home and office products, energy, process control and machinery. The Company's expertise in engineering industrial products helps customer drive innovation and efficiency, and retain a competitive edge. The Company helps streamline the product development value chain, enabling customers spearhead business growth. This Industrial Products segment offers end-to-end product development counsel, leveraging expertise spanning software, electronics, connectivity, mechanical engineering, industrial networking protocols, user interface/user experience (UI/UX), test frameworks and enterprise control solutions

4: **Medical devices:** The Company's domain expertise, supported by robust technological capabilities, helps medical device OEMs address industry challenges, accelerate time to market, and optimize costs. The Company focuses on delivering solutions in diagnostics, patient mobility services, musculoskeletal services, life sciences, surgical services, cardiovascular, home healthcare and general medical.

5: **Telecom:** The Company's expertise in digital engineering such as the cloud, internet of things (IoT), artificial intelligence, data analytics and other areas in telecom domain enables its partners to leverage the right telecommunications strategy. With expertise in product variant development, 5G capabilities, simulations and automation, and product and mid of life support, the Company is a one stop-solution for the clients. It also provides futuristic solutions and IP Cores that address some of the pressing needs of the semiconductor industry. The Company's narrow band IoT (nBloT) solution provides the complete IoT device management designed with low memory and low power footprint enabling easy integration to custom target platforms.

LTTs offers design and development solutions throughout the product development value chain and provides solutions in the areas of mechanical and manufacturing engineering, embedded systems, software engineering and process engineering. LTTs provides services and solutions in the areas of New Product Development, Product Lifecycle Management, Engineering Analytics, Power Electronics, M2M Connectivity and IoT.

Our Engineering heritage and multi-domain capabilities...



HOW WE SUCCEED

Our ER&D services help customers reduce time-to market for their end products and services, innovate to create new products and solutions, reduce the cost of development and meet increasing regulatory requirements more effectively . Our offerings are delivered to our customers using flexible business models like build, operate, transfer, end to end managed R&D services, fixed price, time & material and outcome-based pricing including risk reward, transaction-based pricing, and revenue share.

WHERE WE OPERATE

North America constitutes our largest market with 57.6% of revenue share followed by Europe and India with 18.6% and 11.7% share respectively. Rest of the world contributes 12.1% of our global revenues.

OFFERING AND VALUE PROPOSITION

LTTS' multi-sectoral presence and domain expertise enables cross-pollination of ideas and best practices leading to differentiated engineering solutions for the world's top R&D Houses. The Company has a robust horizontal technology practice comprising of Embedded Systems, Mechanical Engineering and Digital Manufacturing Group, which together provide design and development solutions across the entire value chain of product development. These technology lines also facilitate LTTS' go-to-market strategy.



Embedded Systems & Applications: We help customers to engineer and launch ingenious innovations to the market with our exhaustive portfolio of solutions in embedded design, application software and field testing. Our strength as an ideal design partner in the embedded systems space is vindicated by us receiving the Zinnov Zones 2017 Product Engineering Services ratings.

Mechanical Engineering: Technology dependent OEMs, ODMs, and Tier 1 and Tier 2 suppliers rely on our mechanical engineering services for driving business success. We bring efficiency and innovation to our customer's product design and development strategies with customised solutions that span the product lifecycle. Our advanced, end-to-end services combine aesthetics and functionality for ensuring faster time to market at optimal costs.

Digital Manufacturing Group: Our integrated smart manufacturing services facilitate real time visibility of plant operations along with timely insights. This leads to leaner and faster processes, quicker and informed decision-making, better quality products and improved plant

safety. Key offerings include Digital PLM, Integrated Manufacturing Services, Engineering Application Software and Asset Data Management Services.

To boost innovation and incubate new technologies & platforms, LTTS has set up a CTO Organization. As we foray deeper into the digital world, the CTO Organization would be incubating and building the Digital Business by focusing in the areas of Cloud Practice, AI/Analytics, Security, IoT and Digital Transformation. The CTO Organization is also responsible for increasing the penetration of digital business among existing and prospective customers and driving LTTS' go-to-market strategy to grow in the digital space.

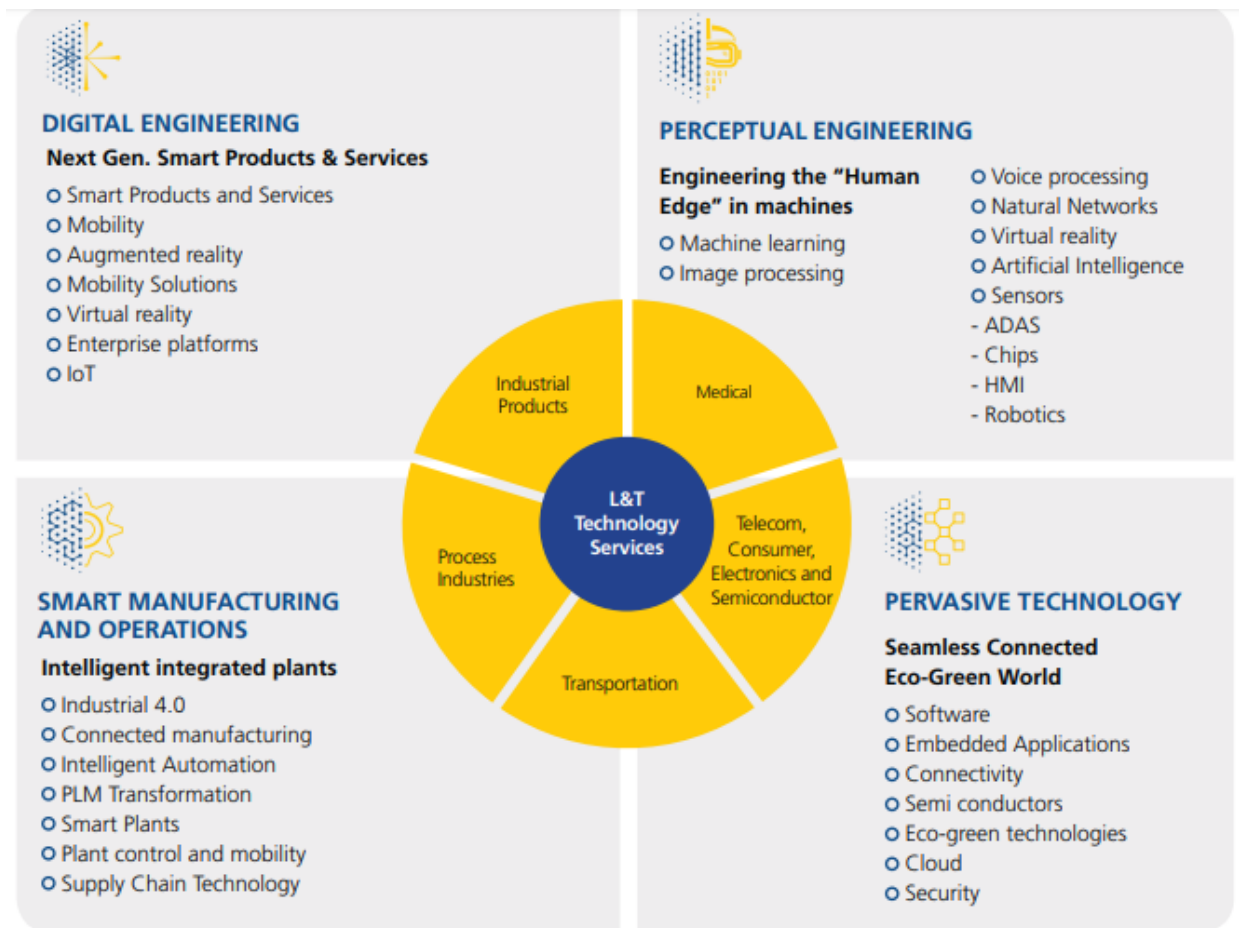
 Awards & Recognition <ul style="list-style-type: none">○ Recognised by CII as one of the most innovative Indian companies○ Golden Peacock Innovation Award 2018 for smart campus solution i-BEMS™○ Recognised by NASSCOM as a prominent player for capabilities to reskill, upskill and cross-skill across Digital Technologies○ Rated as a leader across 10 major industries in the Zinnov Zones 2017 Product○ HfS Positioned L&T Technology Services in 'Winner's Circle' for IoT Services○ LTTS featured in HfS 'Winners Circle' for Automotive Engineering Services○ Businessworld bestowed HR Excellence Awards○ Positioned as IoT Services Leader by NelsonHall	 Strategic Alliances <ul style="list-style-type: none">○ Partnered the Government of Israel for launching a Centre of Excellence (CoE) in Jerusalem (Israel)○ Partnered with Microsoft to host flagship LTTS solutions on Azure○ Global partnership with PTC to provide next-generation of Smart Digital Solutions & Services to shared enterprise customers worldwide○ Strategic partner for CoE-IoT- a joint initiative of Government of India (Department of Electronics and Information Technology or DEITY), NASSCOM and ERNET○ Partnered the US-based Purdue University and the Indian Institute of Science, Bangalore for futuristic technologies like robotics and nanotechnology	 Certifications <ul style="list-style-type: none">○ CMMI Level 5 certified since 2003, which is the benchmark in Quality Standards○ ISO 9001:2015 by Llyod's Register Quality Assurance for engineering solutions in the CAD and CAM domains○ AS 9100 D○ ISO 13485: 2016○ CMMi – DEV 1.3, Maturity Level○ ISO/IEC 27001:2013○ ISO 14001:2015○ BS OHSAS 18001: 2007
--	--	--

Engineering the Change

In line with our mission and vision we have devised the Lakshya 2021 framework which is LTTS' five year strategy plan that envisions LTTS transforming its end customers products and services using new age technology and digital engineering. This mission is also reflected in our Company's brand positioning 'Engineering The Change' or ETC.

At LTTS, ETC is all about envisaging industrial and technological developments of the future and acting ahead to usher a new era of innovation, analytics and productivity for our customers. Our ability to draw insights and learnings from several verticals is our most valuable asset, enabling us to think two steps ahead and enhance our offerings continuously.

THE FOUR-PILLARS OF TRANSFORMATION From an engineering and R&D standpoint, there are four futuristic technologies, 4Es or 'four-pillars' which are expected to disrupt traditional ways of doing business and are crucial to shaping innovation. These technologies, namely digital engineering, smart manufacturing and operations, pervasive engineering, and perceptual technologies are enhancing the value proposition to the end-users at a rapid pace.



As a strategic decision to capitalize on the disruptions and digitalization wave in India today, we are investing in building solutions around new age, sustainable and go green initiatives.

VANGEN (Video Annotation Generator) - Allows easy data collection and labelling to train autonomous vehicles to read data. For example, the platform can train autonomous cars to distinguish and find the correct lane through images.

AiKno™ - Cognitive intelligence framework which combines contextual intelligence and AI, enabling customers to develop a range of digital virtual agents, problem solving applications and robotic process automations.

UBIQWeise™ - LTTS' proprietary IoT platform that supports data acquisition from IoT devices, aggregation at the gateway, storage in the cloud and easy retrieval by applications.
ENGINEERING THE CHANGE THROUGH DISRUPTIVE SOLUTIONS

WAGES - Cloud based application for monitoring and optimizing Water, Air, Gas, Electricity & Steam for manufacturing plants. It measures data on-site, conducts analysis, site auditing, produces assessments and reports.

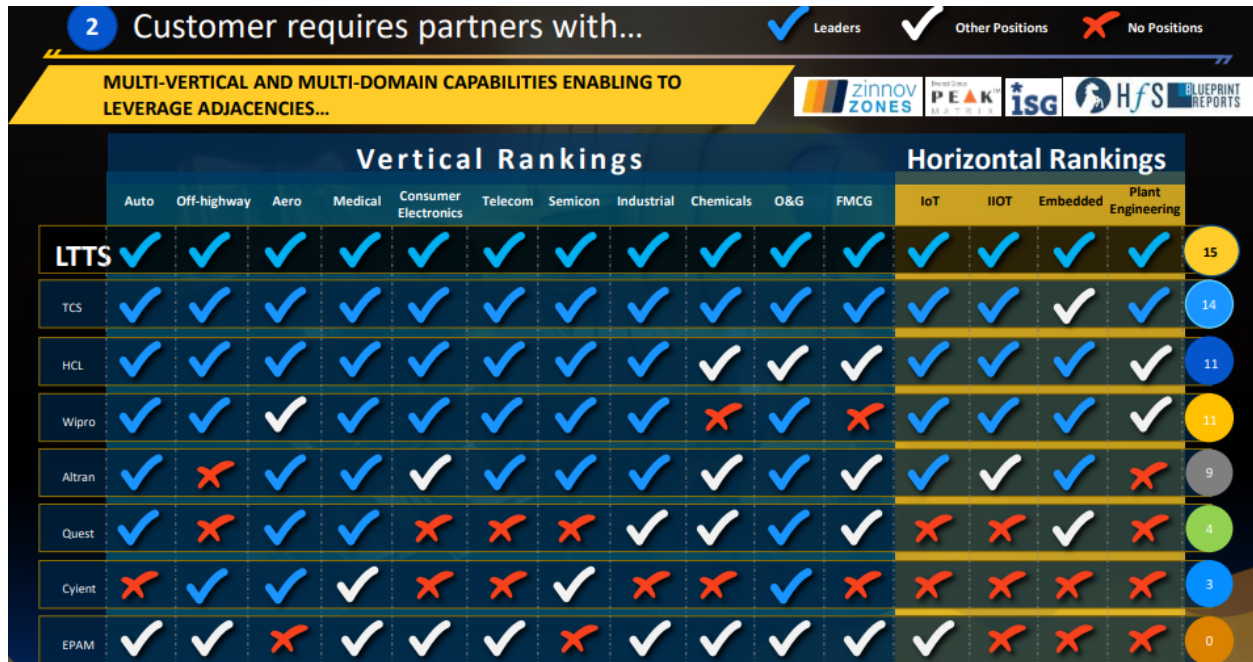
iBEMS™ - Intelligent building energy management system based on cloud for managing and monitoring building operations to minimize energy consumption. Facilitates management of energy consumption, heating, ventilation and air conditioning, elevators and escalators, building safety and lighting.

nBon - A Narrow Band IoT (NB-IoT) solution that provides Wide Area Network connectivity at low power. Specifically designed for indoor coverage, at low cost with long battery life and high connectivity and easy integration into target platform

Service IQ - Mobile solution that connects customers to enterprises in real-time and even in offline mode. Facilitates quick and easy resolution of issues being faced by end users.

DT ROBO™ - Multiplatform framework for handheld devices, networking equipments such as telephones, routers and vehicle infotainment systems. Allows testing the devices on various performance parameters such as display, battery life, calling, connectivity and audio quality

WHY LTTS?



20:20:20 VISION As part of our 5-year Lakshya strategy, we have drawn up an organization wide roadmap termed as the 20:20:20 vision. This blue print envisions a sustainable 20% annual topline growth, complemented by healthy EBITDA margins of 20% and 20 new technology patents annually, which will achieve the momentum necessary to drive growth to \$1 billion by 2021.

Ramping up accounts: To ramp up its large accounts, LTTS is following a two pronged strategy. This involves providing a portfolio of new & emerging technology offerings to top customers while expanding its footprint across various divisions and geographies for existing clients. Over the next 3 years this will enable LTTS to ramp up its current large accounts which are in the range of USD 20 to 30 million, to over 50 million USD in size.

Incubating disruptive technologies: As mentioned previously, LTTS is focusing on four transformative technology areas, including digital engineering, smart manufacturing & operations, perceptual engineering and pervasive technologies, which are expected to disrupt traditional ways of doing business and are crucial for our customers to remain ahead of the curve. Many of these futuristic technologies centred around NBIoT, Human Machine Interface and nano technologies, are currently being incubated in our R&D labs and centers of excellence.

Focus on IP led solutions: In addition to incubating new solutions, LTTS is currently in talks with various industry players for monetizing some of these patents and generate a steady stream of high margin non-linear revenues. The company's future growth trajectory will be propelled by innovations in specific verticals such as telecom and hi-tech, automotive and medical devices which are seeing an increase in demand from the end consumer.

Improve quality of revenue: LTTS is moving towards a consulting led business model with higher margins to move further up the pyramid. We are also using technology and automation tools to obtain higher productivity, explore newer ways of customer engagement and look at business deals with an investor lens so that margin dilutive projects can be consciously ignored.

FY 19 PERFORMANCE



Amount in ₹ million			Amount in ₹ million		
Balance Sheet	FY18	FY19	Cash Flow Summary	FY18	FY19
Assets			Net cash provided by operating activities	4,092	8,061
Property and equipment	1,251	1,443	Capex	-511	-885
Intangible Assets and Goodwill	5,843	6,356	Free Cash Flow	3,581	7,176
Accounts Receivable	9,623	10,643	Free Cash Flow to Net Income (%)	71%	94%
Unbilled Revenues	2,154	2,421			
Investments	2,207	5,749			
Cash and Cash equivalents	1,542	2,051			
Other current assets	3,080	2,851			
Other non-current assets	1,351	2,124			
Total Assets	27,051	33,638			
Liabilities and Shareholders' Equity					
Shareholders' Funds	19,366	24,792			
Short term borrowings	702	702			
Other current liabilities	6,933	7,919			
Other non-current liabilities	47	194			
Minority Interest	3	31			
Total Liabilities	27,051	33,638			

- Cash and bank balance approx 485 cr
- Very good free Cash flow to net income
- High ROCE and ROE 36% and 30.9% respectively

INDUSTRY OUTLOOK

Technology has evolved over the past decade at such a rapid pace that the present times can be considered as the era of What You Perceive is What You Get (WYPIWYG). Devices have become smart, and customers expect them to become smarter by the day. Only the organizations that evolve with technology can succeed in this new world of unlimited possibilities. ER&D service providers need to identify opportunities and evolve technologies to “Build the New” and “Renew the Old” thus creating value proposition. Intelligent Products-Sensor enabled IoT platform with analytics coupled with Digital Engineering is the key to evolution from old to new

There is increased wallet spending on Digital Engineering because of crucial factors like Technology Innovation, Business Model Innovation and growth of tech giants and Start-ups. The world will see increased R&D activity in Machine Learning, Human Machine Interface, Artificial Intelligence, Collaborative Robotics, etc. In order to become ‘the architect’ of disruptive technologies that will help customers be ahead of the curve, **LTTS has strategically decided to invest across futuristic technological areas namely - Digital Engineering, Smart Manufacturing, Perceptual Engineering and Pervasive Technologies.**

- LTTS is focusing and investing in Digital Engineering areas like Industrial IoT, Augmented Reality, Smart Supply Chain & Logistics, Power Electronics, Connected Vehicles, Imaging Algorithms & Edge Detection and Video Surveillance.

- LTTS has taken big strides in smart manufacturing with cutting edge projects that make a plant connected and intelligent. One of LTTS' recent smart manufacturing projects involved integrating a new model into existing manufacturing lines using virtual simulation of robotic welding, PLC programming and HMI design.
- Perceptual Engineering is another key focus area where machines are made intelligent enough to interact with the five senses. LTTS has developed Machine Learning & Deep Learning technology for smarter solutions and deploying them into a variety of industries -- Security & Surveillance, Robotics, Natural Language Processing and Image and Video Analytics Annual Report 2017-18 101-28 Corporate Overview 229-116 Statutory Reports 3117-229 Financial Statements
- Pervasive technologies use sensor fusion which combine sensors to produce data and signal computing. This helps to analyse and connect systems enabling businesses to transform to digital service-led models. Recognizing the power of the embedded sensor, LTTS has made a head-start in this area by undertaking some interesting projects for customers.

The above-mentioned areas are the 4 pillars of modern day Industrial Digital Evolution which will lead the way for the Company in pushing the frontiers of innovation. These four are not mutually exclusive, they are in fact interconnected threads of technology with considerable overlaps. Through these technology pillars, LTTS will be relevant today, tomorrow and the day after to become the global leader in engineering services in the years to come.

GLOBAL CORPORATE ENGINEERING SPEND

According to Zinnov, in 2017 corporations spent more than USD 1 Trillion on ER&D activities such as product and process development, manufacturing engineering and other allied engineering. Of this, the 500 biggest corporate spenders in ER&D globally (G500 ER&D spend) contributed nearly 60% i.e. USD 665 Billion.

It is expected that global ER&D spend will reach USD 1,341 Billion by 2022. This momentum is majorly affiliated to growth in sectors like Automotive, Pharmaceuticals, Software & Internet, Semiconductor and Consumer Electronics. Corporates are expanding in various areas to be competitive and relevant. Corporates are building onshore labs /centre of excellence, developing new IPs, engaging in M&A activities for expansion.

MANAGEMENT TEAM

A.M. NAIK Chairman Mr. A.M. Naik is the Chairman of L&T Technology Services. He was instrumental in carving out the company from what was earlier a part of the Embedded Services business of Larsen & Toubro. Mr. Naik has been associated with Larsen & Toubro for over five decades, and at the helm of the Company for the last two. Appointed CEO in 1999, Mr. Naik became Chairman in 2003 – the first employee to be elevated to the high post. Mr. Naik served as the Group Executive Chairman of L&T from 2012 to 2017. Effective October 2017, he has stepped aside from executive responsibilities, and is focusing on business portfolio rationalisation, mentoring of next generation leadership and expanding the outreach of CSR. He continues to provide counsel to the CEO & MD, as and when needed.

S.N. SUBRAHMANYAN Vice Chairman Mr. S.N. Subrahmanyam is Vice Chairman of L&T Technology Services. He is the Chief Executive Officer and Managing Director of Larsen & Toubro. In addition, he is Vice Chairman on the Board of Larsen & Toubro Infotech Limited (LTI) and Non-Executive Chairman of L&T Metro Rail (Hyderabad) Limited. Mr. Subrahmanyam has over 30 years of experience in the infrastructure and construction industry.

DR. KESHAB PANDA CEO & MD Dr. Keshab Panda is the Chief Executive Officer and Managing Director of L&T Technology Services. Dr. Panda has over 31 years of global industry experience in research, conceptualizing, creating, operationalizing and turning around complex technology and engineering services businesses. He has obtained a graduate degree in aeronautical engineering from Anna University, Chennai, and a post graduate degree in aerospace engineering from Indian Institute of Science, Bangalore. He obtained his Doctor of Philosophy from the Indian Institute of Technology, Bombay in Aero Servo Elasticity – (Control system fly by wire aircraft). He also holds an advanced management degree from the Aresty Institute of Executive Education. The Wharton School, University of Pennsylvania.

He started his career as a research scientist in Indian Space Research Organization and worked at the Aeronautical Development Agency, Ministry of Defence, Government of India, as a scientist/engineer for over 8 years. Dr. Panda joined the L&T Group as Chief Executive of L&T IES in 2009. After L&T IES was rechristened as L&T Technology Services in 2013, Dr. Panda was appointed as the Chief Executive Officer and Managing Director of L&T Technology Services on January 21, 2016.

Dr. Panda led L&T Technology Services through a high profile Initial Public Offering (IPO) in India National Stock Exchange and the Bombay Stock Exchange. He has transformed L&T Technology Services into a company focused on innovation and new technology, leading the CII to recognise L&T Technology Services as one of the most innovative Indian companies in the Services category. Dr. Panda was recognized as CEO of the Year by news channel ET NOW as a result of his distinguished contributions to the engineering and technology sectors over the past 3 decades. The Business Leader of the Year Awards Committee has also recognized Dr. Panda as CEO of the Year. Dr. Panda is based out of New Jersey, USA. His past leadership roles

include President – Americas, Mahindra Satyam & Head of Europe Operations, Satyam Computer Services Limited.

AMIT CHADHA President Sales and Business Development & Whole-Time Director Mr. Amit Chadha is President, Sales and Business Development and Whole-time Director, L&T Technology Services Limited. Amit is part of the management team providing business leadership, market direction and strategic vision to the company. In his current role as President, Sales and Business Development, Amit is responsible for helping global R&D customers and Fortune 500 companies leverage L&T Technology Services' digital engineering offerings for their strategic differentiation and product development.

Amit joined L&T Technology Services in 2009, as its Business Head of Americas. Over the years, he has progressively taken on increased responsibility for the company's business worldwide and helped in its growth, both organically and via acquisitions. Amit is a core member of the executive team that led L&T Technology Services through a high profile Initial Public Offering (IPO) in India and successfully listed the company on the National Stock Exchange and the Bombay Stock Exchange. Prior to joining L&T Technology Services, Amit headed the Manufacturing Sector across North America at Mahindra Satyam (earlier Satyam).

BHUPENDRA BHATE Chief Operating Officer & Whole-Time Director Mr. Bhupendra Bhate is a technologist with a blend of business acumen with over 30 years of experience in the field of engineering, product development and software. Bhupendra has been driving cutting edge technology projects and research & development for global clients and has been managing multi-million dollar businesses, leading distributed development teams of over 8000 engineers across the world.

He holds a Bachelor's degree in electrical engineering from Mumbai University, with executive business management program from Harvard Business School and senior executive program at London Business School.

BY RACHIT PANDEY