



**LARSEN & TOUBRO**

**INTEGRATED REPORT 2019-20**



**Technology for  
sustainable growth**



# Technology for sustainable growth



Technology is a major growth enabler in the world in which we operate, and we, at Larsen & Toubro Limited (L&T) are at the forefront of it. Our strategy is to use our technology platforms and innovation techniques to make lives better and sustainable for all. From enhancing operating efficiencies, building connected teams and businesses, supporting communities and local authorities to strengthening analytics and governance — technology is deeply embedded in everything that we do. Even in a year eclipsed by uncertainty, we accomplished a creditable performance and registered growth in key performance parameters; and our technology prowess continues to serve as a reliable springboard to sustain our leadership across high-potential markets.

Despite major headwinds in the operating environment, we continue to be strong with enduring relationships with customers and partners, robust scale and footprint, a diversified business mix, and a resilient business model. We are identifying material issues that are core to our business sustainability through continuous engagement with stakeholders and leveraging technology to build industry-next systems and processes.

Sustainable growth for us is also about fostering a rich culture of caring, trust and continuous learning to succeed together with all stakeholders in the new world order. In the following pages, we report on our wide-ranging initiatives to enable our stakeholders make an informed assessment of our ability to create value for all.

## TECHNOLOGY TAKES US FARTHER

Our big data engine is called Alchemy, the proverbial practice that attempts to extract gold out of base metals. In the same spirit, the digital data generated by connected machinery go to 'Alchemy' for processing, so that it can provide rich insights into our operations. These include productivity trends of machines, identification of machines to be de-hired or moved to another project site, identifying anomalies in weigh bridge measurements and fuel consumption, among others.

## FY20 GROUP HIGHLIGHTS

\*During FY20 \*\*As on March 31, 2020

ORDER INFLOW	EBITDA
₹ 1,864 Billion** Δ 9%	₹ 163 Billion** Δ 7%
ORDER BOOK	PROFIT AFTER TAX (PAT)
₹ 3,039 Billion** Δ 4%	₹ 95 Billion** Δ 7%
REVENUE	RETURN ON NET WORTH
₹ 1,454.52 Billion** Δ 8%	14.8%*
VALUE OF GREEN PRODUCT PORTFOLIO	CSR BENEFICIARIES
₹ 324.92 Billion*	1.38 Million*

## Contents

About the report	2
<b>Message from the Group Chairman</b>	<b>4</b>



### 01 SUSTAINABLE WAY FORWARD

L&T overview	6
Businesses	8
Presence	12
Marquee projects	14
Message from the CEO and MD	16

### 02 INTEGRATED AT EVERY STEP OF THE WAY

Value creation model	18
Governance	20
Organisation hierarchy	26
Messages from the senior leadership team	28
Strategy, business model and resource allocation	34
Sustainability roadmap	40
Managing capital trade-offs	42
Stakeholder engagement	44
Materiality assessment	48
Risk management	50



### 03 SHARPENING OUR CAPITAL STRATEGY

Financial capital	54
Manufactured capital	68
Intellectual capital	78
Human capital	92
Natural capital	104
Social and relationship capital	120

### 04 RESILIENT AND FUTURE-READY BUSINESSES

Construction	140
Power	168
Heavy Engineering	172
Defence	176
Electrical & Automation	182
Hydrocarbon	188
L&T Realty	194
L&T Valves	197

Awards and accolades	199
Sustainable Development Goals (SDGs)	201
GRI Standards Content Index	205
United Nations Global Compact	213
Independent Assurance Statement	214

# About the report

## Report scope

Now, more than ever, investors and shareholders measure an organisation's performance based on factors other than financials. They analyse an organisation's conversion efficiency across myriad capitals such as financial, manufactured, intellectual, human, natural and social and relationship. This shift in the perspective of the stakeholders' perspective led to the publishing of this Integrated Report (IR). It will provide our stakeholders with a more cohesive, efficient, relevant and decision-enabling communication, focusing on value creation over the short, medium and long term. As a seasoned sustainability reporter, we have retained all relevant disclosures of a Sustainability Report and added on those prescribed in the International Integrated Reporting <IR> Framework, including a detailed business model, six capitals, governance, risk management, outlook and strategy.

An annual reporting cycle has been maintained for our Sustainability Reports since 2008, which are available on our website at [www.lntsustainability.com](http://www.lntsustainability.com).

Our second Integrated Report, 'Led by Technology, Equipped for Growth' was released in a pdf as well as print version.

 <https://www.lntsustainability.com/integrated-report/>

This is our third IR and the 13<sup>th</sup> consecutive year of sustainability disclosures. We have a mature system for compiling and reporting our sustainability performance. A data-management software certified by GRI is used, along with techniques comprising actual measurement, computation and estimation (specified).

This Integrated Report of Larsen & Toubro Limited (L&T, 'the Company') is published according to the <IR> Framework prescribed by the International Integrated Reporting Council (IIRC).

This Report has been prepared in accordance with the GRI Standards: Comprehensive option. It encompasses L&T's environment, economic and social performance between April 1, 2019 and March 31, 2020. The report was released on October 31, 2020.

The data presented in this report is verified through systematic internal and external assurances. The data for economic performance has been extracted from L&T's Annual Report 2019-20.

## Reporting boundary

This report is for the Larsen & Toubro standalone and key subsidiary companies. The reporting scope encompasses our manufacturing locations, project sites, offices across India and overseas projects managed from India.

Listed subsidiaries and concession business of Nabha Power Limited, Power Development Limited, L&T Infrastructure Development Projects Limited, L&T Special Steel and Heavy Forgings Private Limited (LTSSHF), other non-material subsidiaries and those Subsidiary and Associate (S&A) and Joint Venture (JV) companies whose performance is consolidated at Profit After Tax (PAT) level, have been excluded from this Report.

## Restatement

The changes, if at all, are mentioned on the respective pages as notes.

## Queries may be directed to

**Mr. Anup Sahay**  
Head Corporate Strategy and Special Initiatives

Larsen & Toubro Limited  
Saki Vihar Road, Powai Campus,  
Mumbai 400072, India  
[sustainability-ehs@larsentoubro.com](mailto:sustainability-ehs@larsentoubro.com)

## Assurance

This report is externally assured by Bureau Veritas, India. The limited assurance was conducted in accordance with International Standard on Assurance Engagements (ISAE) 3000 and Type 2 Moderate Level of the AA1000 Assurance Standard 2008, covering qualitative and quantitative information. The assurance statement is included in this report.

 **Read more on page 214**

## NAVIGATION ICONS

### Capitals

-  Financial capital
-  Manufactured capital
-  Intellectual capital
-  Human capital
-  Natural capital
-  Social and relationship capital

### Navigation

-  Page reference
-  Online download reference
-  Weblink reference

### Strategies

- S1** Ensuring efficient conversion of the order book into healthy margins
- S2** Driving growth of the services businesses
- S3** Maintaining an optimum mix between domestic and international business
- S4** Managing financial resources for the growth of the businesses and strong financial health
- S5** Incubating new businesses to tap future growth opportunities
- S6** Engaging with start-ups to access innovations to enhance capabilities and develop new offerings
- S7** Unlocking capital from non-core businesses and assets earning sub-par returns
- S8** Leveraging digital solutions and analytics across various parts of businesses
- S9** Focus on businesses contributing to environment sustainability
- S10** Thrust on opportunities linked to achieving the Sustainable Development Goals (SDGs)

## LOCATIONS REPORTED

### Corporate locations

L&T House at Ballard Estate and L&T Campus at Powai in Mumbai  
Leadership Development Academy (LDA) – Lonavala,  
Chennai Headquarters  
Knowledge City, Vadodara

### Infrastructure Business

Projects, campuses and India-based support processes under our infrastructure business include the businesses of Buildings & Factories, Heavy Civil Infrastructure, Transportation Infrastructure, Power Transmission & Distribution, Water & Effluent Treatment, Smart World & Communication, and Metallurgical & Material Handling

### L&T Power

L&T Power project sites at Malwa Phase-II and Khargone (Madhya Pradesh), Nuclear Power Corporation of India Ltd (NPCIL), Rajasthan Atomic Power Project (RAPP) 7 & 8 (Kota, Rajasthan), Darlipali (Odisha), Tanda (Uttar Pradesh), FGD-Lara (Chhattisgarh) & FGD-Vindhyachal (Madhya Pradesh), Bibiyana-III (Bangladesh) and Bibiyana South (Bangladesh)

### Heavy Engineering

Powai, Ranoli and Hazira

### Defence

Talegaon, Coimbatore, Visakhapatnam, Bengaluru, Powai, Hazira and shipbuilding facility at Kattupalli near Chennai

### Electrical and Automation

Powai, Mahape, Ahmednagar, Mysuru and Coimbatore

### L&T Hydrocarbon Engineering

Offshore and onshore projects worldwide; offices within India in Powai, Vadodara, Bengaluru and Chennai; and modular fabrication facilities in Hazira, Kattupalli and Sohar (Oman)

### L&T Valves

Two manufacturing facilities at Kancheepuram and Coimbatore

### L&T Realty

Offices and project sites in India

### Domestic Marketing Network (DMN)

17 offices in India

Leadership Development Academy (LDA) – Lonavala

# Message from the Group Chairman

**Right from the onset of the pandemic, Larsen & Toubro (L&T) has accorded the highest priority to the well-being of its people and stakeholders, adopting stringent safety measures across all its workplaces. As 'Work from Home' became the new normal, our employees responded willingly to the circumstances and soon sought ways to increase efficiency.**

**A. M. Naik**  
Group Chairman

## Resilient response to the COVID-19 challenge

### Dear Stakeholders,

The COVID-19 pandemic has put to severe test the sustainability of organisations, institutions and indeed the entire global business ecosystem. It has compelled companies to rejig their modes of operations while conforming to the health and safety protocols issued by the administration.

Right from the onset of the pandemic, L&T has accorded the highest priority to the well-being of its people and stakeholders, adopting stringent safety measures across all its workplaces. As 'Work from Home' became the new normal, our employees responded willingly to the circumstances and soon sought ways to increase efficiency as they conferred with each other and interacted online.

### Sustaining morale through communications

Recognising that uncertainty and lack of information can worsen a crisis, we took active measures to keep communication lines open all through the period of the lockdown. Regular messages from the top



management eliminated the spread of rumours and helped to sustain employee morale. We have held numerous remote conferences, video meetings and webinars and remained in continuous touch with colleagues and customers through the months of the lockdown.

L&T has always considered measures for social good as essential for sustainability. At the group level, L&T contributed ₹ 150 Crore for the PM CARES fund in FY 20 including a ₹ 19 Crore contribution from our employees who rose to the occasion by donating their two day's salary. Further, we have donated medical equipment, including Personnel Protective Equipment (PPE), worth ₹ 40 Crore to states across the country.

### Caring for contract workers

Amid widespread concerns about the plight of daily wage earners, we took it upon ourselves to ensure that the 1,60,000 contract workmen at our project sites received good care. We continued to pay them their wages, and provide food, shelter and medical assistance while maintaining the prescribed COVID-19 preventive and containment protocol. This involved an outlay of approximately ₹ 500 Crore per month.

### Restarting operations

As the government announced the gradual easing of restrictions and began a phased process of 'Unlock', we actively participated in measures to restart the economy. Many of our projects have resumed operations. Normalcy is being gradually restored and the workforce increased significantly. We expect it to stabilise at the pre-COVID levels early in the second quarter of FY21.

### Economic performance

In a year overshadowed by uncertainty, your Company turned in a creditable performance and registered growth across key performance parameters. Order inflows which enable the core Engineering Procurement and

Construction (EPC) business to flourish and grow, expanded by 9% over the previous year. Revenues that demonstrate the ability of the Company to execute and deliver customer commitments grew by 8%. Shareholder value was delivered through healthy PAT, which stood at ₹ 9,549 Crore, representing a growth of 7% over the previous year. The total order book of ₹ 303,857 Crore as on March 31, 2020, grew by 4% over the previous year-end and provides multi-year revenue visibility to the Company. Revenue growth in the core business was provided by Infrastructure, Hydrocarbon, Heavy Engineering and Defence Engineering segments. Businesses in the IT and Technology Services Segment, which smoothly transitioned to a 'work from home' environment during the pandemic, grew significantly, aided by inclusion of revenues from an acquisition made in FY20. The Financial Services business also registered modest growth, even while grappling with constraints of tight liquidity, stoppage of disbursements towards the end of March 2020 and the dominant risk-averse sentiment of the lending community.

### Sustainable development

Your Company takes a 360-degree view of sustainable development that encompasses the social, economic, governance and financial aspects of an organisation. Our approach covers a wide spectrum – ranging from progressive reduction of carbon emission intensity at our campuses and project sites, water conservation at the locations we operate in and the phased induction of alternative and recycled substitutes in our operations.

Wherever we are and whatever we do, we make sure that the communities around us see a tangible and durable benefit from our presence. They see it in the shape of better access to potable water, an improved level of sanitation, and facilities for health, education and skill building. We believe each of these steps contributes to building a happier community, which in turn will lead to a happier society.

Total spends on CSR initiatives in FY20 by your Company amounted to ₹ 145 Crore under eligible items, as defined in the Companies Act. This translates to 2% of the average annual net profits of the Company over the last three years.

### Outlook

The world has recognised that the COVID-19 virus is a threat to all of humanity and has tried to forge a united front against the pandemic, with increased international cooperation in the search for vaccines and cures. One hopes that this spirit of unity extends to other areas where we currently witness divisiveness and insularity. The world's experience with COVID-19 should also accelerate its efforts to move towards a more inclusive and equitable economy.

There is also a strong groundswell of anti-China sentiment in India and across the world for Beijing's role in tracing the origins of the pandemic and alerting the world to the threat remain shrouded in secrecy. We hope that the humanitarian crisis which the world has had to contend with will push countries to adopt more open systems with far greater transparency. Further, excessive concentration of economic activity in a particular geography and over-dependence on a single source of supply are clearly unsustainable. It makes supply chains vulnerable to political pressures and distorts the free play of market forces. It is hoped that global industry sees the wisdom in diversifying their sources of supply and locations of manufacture.

This Integrated Report (IR) holds a mirror to our performance across multiple critical parameters. As always, we welcome your inputs on our performance and our IR across multiple parameters.

# L&T overview



For over eight decades, L&T has continued to strengthen its business across multiple verticals, demonstrating growth on all key performance parameters.

Our expertise spans critical sectors such as technology, engineering, construction, infrastructure projects and manufacturing.

Our customers are at the epicentre of everything that we do; and we strive to delight them by providing them best-in-class offerings. Blending cutting-edge technology in our businesses and staying true to our high standards of professionalism and corporate governance, we are engineered for a smarter and sustainable future.

**VISION**

**L&T shall be a professionally-managed Indian multinational, committed to total customer satisfaction and enhancing shareholder value.**

**L&T-ites shall be an innovative, entrepreneurial and empowered team constantly creating value and attaining global benchmarks.**

**L&T shall foster a culture of caring, trust and continuous learning while meeting expectations of employees, stakeholders and society.**

We continue to expand our global footprint with focus on high-potential markets. Our strategy to diversify our presence across geographies and sectors helps us leverage opportunities and optimise our risk exposure in an ever-evolving operating environment.

Backed by decades-rich experience, strong culture of customer engagement and a ceaseless quality pursuit, we have strengthened our presence in technology, EPC, manufacturing and financial services domains with extensive global operations.

Over the years, we have progressively integrated our capabilities to provide 'concept-to-commissioning' solutions to a growing fraternity of customers worldwide. We hold ourselves to high standards of professionalism and corporate governance and are guided by the principles of integrity, excellence, teamwork, commitment and sustainability.

We also have several international offices and a supply chain that touches high-potential global markets. Our overarching business strategy reflects our legacy and continuing commitment to meet the requirements of customers and communities through innovation and entrepreneurship.

We are the frontrunners in nearly every sphere of our businesses and we continue to foster a culture of caring, trust and learning.

**CONSOLIDATED REVENUE**

**₹ 1,454.52 Billion\***

**PRESENCE**

**30+ countries\*\***

\* During FY20  
\*\*As on March 31, 2020

# Businesses

Our projects address crucial requirements of the economy, enrich the quality of life in varied ways and deliver long-term profitable growth to all our stakeholders.



**BUILDINGS & FACTORIES (B&F)**



**HEAVY CIVIL INFRASTRUCTURE (HCI)**



**TRANSPORTATION INFRASTRUCTURE (TI)**

**Project/product categories**

Residential buildings, airports, IT parks, institutional spaces, hospitals, stadiums, hotels, affordable housing complexes, factory buildings

Metros, nuclear plants, hydel projects, ports, special bridges, tunnels, defence infrastructure

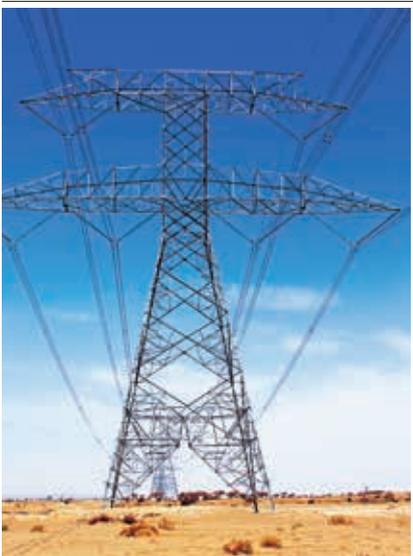
Roads, elevated corridors, runways (airside infrastructure), railway construction, railway electrification and systems, light rail transport

**Differentiators**

- End-to-end solutions around 'Design-Build-Commission' stages
- Advanced systems such as Building Information Modules
- Global supply chain
- Unrivalled project management expertise

- Building structures that are resilient to future challenges
- Comprehensive range of design and construction services

- Capability to implement complex projects across the entire spectrum



**POWER TRANSMISSION & DISTRIBUTION (PT&D)**



**WATER & EFFLUENT TREATMENT (WET)**



**SMART WORLD & COMMUNICATION (SWC)**

**Project/product categories**

Transmission lines, substations, underground cable networks, distribution networks, power quality improvement projects, solar photovoltaic (PV) plants, battery energy storage systems, mini-/micro-grid projects

Urban and rural water supply, water treatment plants, wastewater treatment and collection network, industrial water and effluent treatment, lift irrigation projects, 'unaccounted for water' projects to monitor water loss

Security solutions, telecommunications and networks, smart infrastructure

**Differentiators**

- Setting new benchmarks in capacity, complexity and speed of execution
- Offering integrated solutions for a broad range of power projects
- An established contractor of choice in industrial project electrification and instrumentation and control systems (including communication projects)

- Leader in developing and providing water infrastructure in India
- Over four decades of experience and expertise in this business
- Fiscal prudence in the entire project lifecycle

- Various businesses put together can capitalise on the smart cities/ infrastructure opportunity in India

## Businesses



**METALLURGICAL & MATERIAL HANDLING (MMH)**



**DEFENCE**



**HEAVY ENGINEERING (HE)**

### Project/product categories

Mineral beneficiation, iron and steel making; aluminium, zinc and copper refiners and smelters; specialty conveyors; stockyard equipment; crushing systems and equipment; surface miners, sand manufacturing plants

Guns and armoured systems, missiles and aerospace systems, military communication systems, unmanned systems, frontline warships, auxiliary vessels, special naval platforms, submarines and underwater platforms, weapon and engineering systems, radar systems

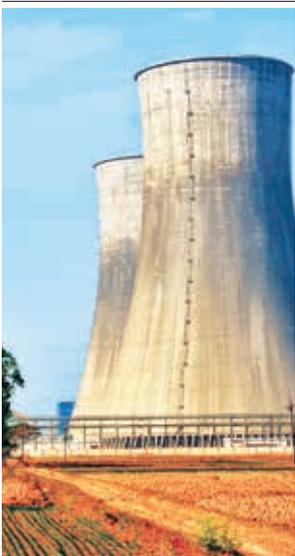
Hydrocracker, ethylene oxide and clean fuel reactors, Fluid Catalytic Cracking (FCC) reactors and regenerators, ammonia and methanol, converters and urea reactors, Waste heat boiler package, HP heat exchanger, coke drums, nuclear equipment, critical piping

### Differentiators

- Market leader in India in EPC of metallurgical projects
- One-stop solution provider for ferrous and non-ferrous sectors

- Experience of over 30 years
- Offers specialised turnkey defence construction solutions
- Seamless integration of solutions through our IT business

- Manufactures and supplies custom designed equipment and critical piping to various industries



**POWER**



**HYDROCARBON ENGINEERING (LTHE)**



**REALTY**



**L&T VALVES**

**Project/product categories**

Turnkey solutions for coal-based power plants, turnkey projects for gas-based power plants, supercritical turbine generators, supercritical boilers, enviro solutions, power block auxiliaries, heat recovery steam generators, steam turbines, engineering services, construction services, other critical systems

Offshore, onshore, modular fabrication, engineering services, construction services

Residential buildings, affordable housing, retail spaces, office spaces

Gate valves, globe valves, check valves, ball valves, butterfly valves, plug valves, control valves, automation solutions, after-market business

**Differentiators**

- First company to execute a project with 'F-technology' gas turbine of 250 MW class
- Strong track record of implementing projects globally

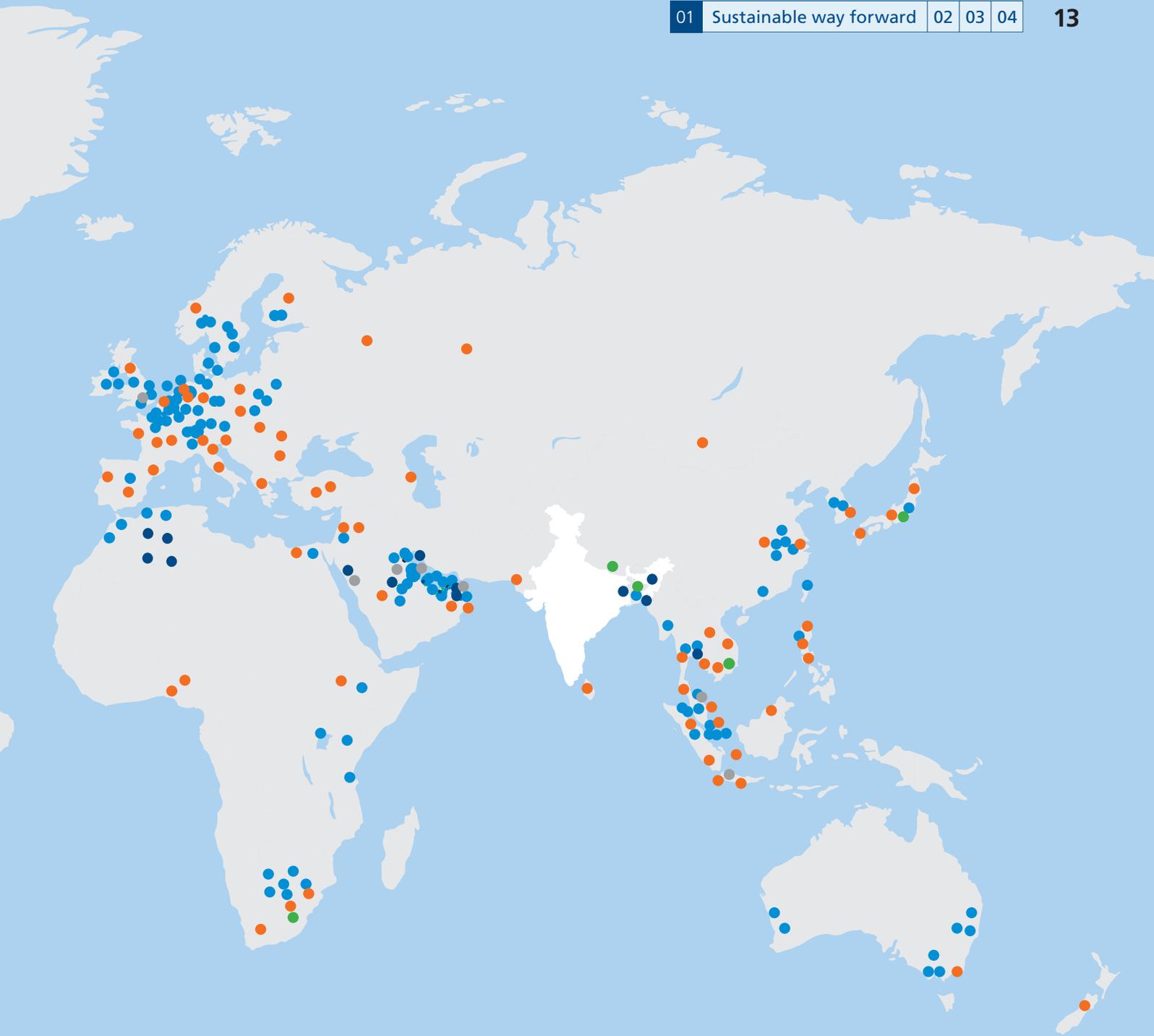
- Delivers 'design to build' engineering and construction solutions across the hydrocarbon spectrum
- Over three decades of experience
- High cost competitiveness

- Our properties embody a sustainable design philosophy and focus on developing integrated communities with stronger bonds of trust
- We have put in place best-in-class systems such as Building Information Modules
- Industry-leading expertise in construction

- Over six decades of manufacturing excellence
- Caters to diverse sectors such as oil and gas, defence, nuclear and aerospace, power, petrochemicals, chemicals, water and pharmaceuticals in India and overseas

# Presence





- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li>● Offices</li> <li>● Engineering and Construction Projects</li> <li>● Product &amp; Equipment Supply</li> <li>● Manufacturing / Fabrication Facilities</li> </ul> | <ul style="list-style-type: none"> <li>● Agents</li> <li>★ Registered Office</li> <li>■ Campus*</li> <li>■ Power Plant</li> <li>■ Shipyards</li> </ul> | <ul style="list-style-type: none"> <li>■ Knowledge City</li> <li>■ Leadership Development Academy</li> <li>■ Corporate Technology and Engineering Academy</li> <li>■ Construction Skills Training Institutes#</li> </ul> |
|--|--|--|

\* 'Campus' denotes facilities for design and manufacture | # Part of L&T's Corporate Social Initiatives

# Marquee projects

## Paving the way for cleaner energy

### India's largest floating solar PV project

Tirupati, a city often referred to as the 'Spiritual Capital of Andhra Pradesh', also has a first-of-its-kind Floating Solar PV (FSPV) Project located in a reservoir nearby. Apart from supplementing the city's electric supply, the plant is expected to prevent evaporation of approximately 2.8 Crore litres water annually and reduce the Tirupati Smart City Corporation Limited's monthly electricity bill by approximately ₹ 7 Million

**12 acre**  
Panel area

**4 MWp**  
Annual output



## Managing crowds the smart way

### at the world's largest congregation

The Kumbh Mela in 2019 attracted some 23 Crore people to the city of Prayagraj in Uttar Pradesh. L&T set up a holistic and integrated video surveillance system with AI-based crowd management solutions; an intelligent traffic management system, other smart elements such as a solid waste management system, emergency call boxes, smart parking, transit management system, environmental sensors and a variety of digital messaging systems to help the city authorities manage crowds in a 100+ sq km area, over a two-month period.

**25 Crore**  
Visitors

**2 months**  
Turnaround

**0 incidents**



## Paying a mega tribute to sports

### the world's largest cricket stadium

L&T has conceptualised, designed and built the world's largest cricket stadium at Motera, Ahmedabad that will seat over 0.1 Million spectators. Using the latest precast technologies, the sleek, elegant structure is both aesthetically appealing as well as functionally ideal. The stadium is replete with a clubhouse, a swimming pool of Olympic standards, an indoor cricket academy, presidential and special corporate boxes and a podium level to give spectators an uninterrupted viewing opportunity.

**100,000+** spectators



## Delivering strength for peace through innovation and indigenisation

L&T Defence is currently executing an order for the 'K9 VAJRA-T' 155mm/52 calibre tracked, self-propelled Howitzer guns program — the largest contract awarded to an Indian private company by the Ministry of Defence, through global competitive bidding. The Company has put in sustained efforts and innovation in both indigenisation and customisation of the 'K9 VAJRA-T' for India-specific conditions – including developing over 14 critical systems in-house.

**75%**  
Indigenisation at the programme level

**13,000+**  
Components sourced locally



## Powering higher efficiency with India's first ultra-supercritical power plant

L&T has commissioned India's first ultra-supercritical power plant in Khargone, Madhya Pradesh for NTPC Limited. Ultra-supercritical units operate on higher steam and pressure parameters than sub-critical and supercritical power plants – delivering higher efficiencies, with lower coal consumption and emission levels. This prestigious plant has been built by L&T on a complete EPC basis.

**2x660 MWp**  
Generation capacity



## Scaling up execution excellence on Saudi Arabian shores

L&T Hydrocarbon Engineering is executing its first large-scale petrochemical complex project in Saudi Arabia on an Engineering Procurement Construction Commissioning (EPCC) basis. The n-Paraffin and Linear Alkyl Benzene greenfield facility in Yanbu (KSA) for Farabi Petrochemicals Company is an incredibly challenging and complex undertaking, covering an area of 0.77 Million sq m, and designed to deliver a range of hydrocarbon products. The project is currently under progressive commissioning.

**19**  
Process units

**16**  
Facility units



# Message from the CEO & MD



**As the 'builder of the nation', the Company looks forward to opportunities to collaborate in missions and projects of national significance.**

**S.N. Subrahmanyam**  
CEO & MD

## Operation 'Bounce Back' Revive, recoup and power ahead

Dear Stakeholders,

**COVID-19 is the ultimate black swan event. It was unexpected even by those who make it their business to forecast the future; its debilitating impact has been felt across the globe and has exposed the fragility of much that the industry and society took for granted.**

It is in such times of extreme crisis that the true resilience of an organisation and the spirit of its people come centre stage. Fortunately for L&T, we have faced and continue to weather the storm with a potent mix of resolve and optimism.

### Financial performance

L&T's Integrated Report (its third edition) covers FY20, almost entirely falling in the pre-COVID era. The Company turned in a creditable performance and registered growth across key performance parameters. Order inflows expanded by 9% over the previous year, while revenues grew by 8%. Profit After Tax (PAT) at ₹ 9,549 Crore, represents a growth of 7% over the previous year. The total order book of ₹ 303,857 Crore as on March 31, 2020, grew by 4% over the previous year-end, providing multi-year revenue visibility.

### Bouncing back

Governments across the world are addressing the twin objectives of protecting lives while safeguarding livelihoods. At L&T, we have secured success on both fronts. Stringent safety measures have been adopted Company-wide, across all our projects, plants and offices. When the Government of India announced a phased unlock, we were among the first to adapt to 'the new normal' and resume operations. Currently, almost all our project sites are active. We developed

new methods to re-mobilise by arranging to transport labour to sites, including, by flying them in, in some cases.

### Balancing our business portfolio

The COVID-19 crisis has served to underscore the importance of the strategic balance we have been inducting into our business portfolio. Our increasing emphasis on tech-driven services businesses has insulated the Group, to some degree, from the fallout of the pandemic for it is obviously far easier to switch to remote working. In the period under review, L&T completed the acquisition of Mindtree Ltd., an IT-enabled services company, further consolidating our offerings in this space. Going forward, we plan to reduce debt by about ₹ 30,000 Crore in FY21 by selling our stake in L&T Infrastructure Development Projects and Nabha Power. We also intend to transfer our stake in the Hyderabad Metro to an Infrastructure Investment Trust (InvIT).

### Government – Industry collaboration

Across the world, nations have sped up the growth curve when both the government and industry realised that they are on the same side of the equation and recognised that their goals have a high degree of commonality. L&T's history talks about multiple instances where we have actively aligned ourselves with national missions and helped in advancing towards the shared objective of inclusive growth. As the 'builder of the nation', the Company looks forward to opportunities to collaborate in missions and projects of national significance.

### The power of digital

For out-of-the-ordinary results, you need out-of-the-box thinking. We are increasingly developing and implementing newer ways of doing things. For instance, to counter the steady rise in material costs, the Company been forging and fostering long-term relationships with global suppliers. E-sourcing and smart logistics ensure timely delivery of material and components, enabling projects to be completed on or before schedule.

The pandemic has opened new opportunities to innovate, automate, digitalise and optimise. Over 50 digital solutions are either in production or

being deployed at hundreds of project sites. Our teams have real-time visibility into machine operations with over 11,000 construction equipment being connected. Meanwhile, new mobile apps have digitalised processes relating to safety, quality, activity completion and materials, while geospatial technologies such as drones, Light detection and Ranging (LiDAR), 3D scanning and photogrammetry enable quicker and more accurate collation of geographic information. These solutions are also playing a part in improving workmen safety and productivity.

We are now moving into the next phase of marketing the capabilities we have developed. We are building public-facing platforms that will become valuable digital properties when they go into production and scale up in a couple of years. The platforms will serve two distinct purposes – grow into a digital marketplace and provide education solutions. In the coming years, we see the Company emerging as a major player in the digital technology space.

### Strong businesses are community assets

Environment conservation and community development are not the optional 'extra' that companies take up after taking care of business. We believe they are an intrinsic and inalienable part of a company's operations. At L&T, environmental and social considerations have always been part of our strategic vision. Our core competencies and nationwide presence place us in the position of being able to transform disadvantaged communities into empowered havens of productivity and fulfilment.

During the lockdown, we ensured that some 165,000 workmen and their families at our project sites continued to receive essential supplies. Their habitations were regularly sanitised and COVID-19 protocols were strictly followed.

L&T implements many initiatives to minimise its carbon footprint and its green portfolio enables clients to move on to the low-carbon path. Well-entrenched CSR programmes focus on areas that align with the global matrices of development – water and sanitation, health, education and skill-building.

We have built over 25 million sq ft of certified green buildings, several of which are Platinum and Gold rated by the Indian Green Building Congress (IGBC). As the foremost builders of metro and light transit rail systems, we offer people a faster and greener commute option. We have constructed all the major international airports in the country and these are among the 'greenest' of their kind. Our water business is helping the 'green' cause too. The business saves unaccounted water, converts wastewater and meets the needs of millions. Our 'green' water portfolio comprises 7,100 MLD of water, wastewater and effluent treatment plants and 7.3 Lakh hectares of land under irrigation. In the power segment, we have built Extra High Voltage (EHV) corridors with secured power transmission. Soon, digital substations will become integrated hubs with renewables connected to the grid, making distribution more cost-efficient.

Backed by a track record of more 2 GWp of solar plants, we are now moving towards battery-based sustainable energy. Recently, we commissioned India's first large-scale solar PV cum plant and 16 MW/U MWh Battery Energy Storage System (BESS) in the Andamans. Both in India and in geographies like Africa and the Middle East, we are seeking to drive green energy initiatives by partnering global players in the fields of synthesis gas generation, hydrogen generation plants, synthesis gas value chain products and carbon capture utilisation and storage.

Our total spends on CSR initiatives in FY20 amounted to ₹ 145 Crore under eligible items, as defined in the Companies Act. This translates to 2% of the average annual net profit of the Company over the last three years.

### Road ahead

Forecasting the future is a chancy business at the best of times. In a world reeling under a pandemic, we can only say with a measure of confidence that we expect the green shoots of recovery to be visible by the latter half of the year ahead.

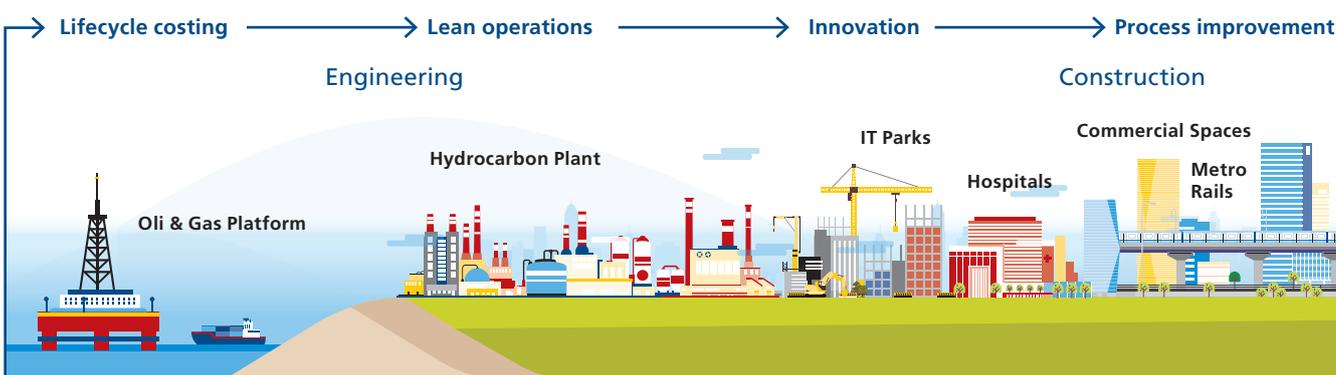
We count on the support and guidance of all our stakeholders on the challenging journey ahead.

# Value creation model

₹ FINANCIAL CAPITAL	MANUFACTURED CAPITAL	INTELLECTUAL CAPITAL
<b>Inputs</b>		
Order book ₹ 3,038.57 Billion**	Project sites 1,350*	R&D spend ₹ 225.40 Million*
Net current assets ₹ 355.78 Billion**	Offices/ manufacturing locations 118**	Patents filed 54*
Net fixed assets ₹ 469.64 Billion**	Safe man-hours 1,210 Million hours	R&D engineers 1,412**
Gross debt-equity ratio 1.85:1**	Materials consumed ₹ 668,820 Million*	Active consortiums 18,193**
Read more on page 54	Read more on page 68	Read more on page 78

**VISION** Page 7

## BUSINESS HORIZONTALS



<b>Outputs</b>		
Turnover ₹ 1,454.52 Billion*	Building infrastructure created 67.25 Million sq ft*	Patents granted 51**
PAT ₹ 95.49 Billion*	Water treatment solutions 1,073 MLD*	Value engineering projects 2,346**
Dividend paid ₹ 25.27 Billion*	HE, PT&D and Shipbuilding factory output 1,50,280 tonnes*	Revenue from new/emerging businesses ₹ 9,491 Million*
Return on equity 14.80%*	Electrical & Automation products	Employees covered under leadership development programmes 239**
	Linear infrastructure created 51,827,735 **	
	• Roads 4,946 lane km*	
	• Railways 720 track km*	
	• Transmission lines 8,652 km*	
	• Water pipelines 35,519 km*	

<b>Outcomes</b>		
<ul style="list-style-type: none"> <li>Consistent financial performance</li> <li>Superior value to shareholders</li> <li>Trusted by marquee, reputed institutional investors</li> </ul>	<ul style="list-style-type: none"> <li>Creation of best-in-class infrastructure assets across businesses</li> <li>Setting new standards across businesses</li> <li>Deploying technology to optimise overall efficiencies</li> </ul>	<ul style="list-style-type: none"> <li>Significant number of patents granted</li> <li>Rapid growth in new and emerging businesses</li> <li>Thriving team of expert R&amp;D professionals</li> </ul>

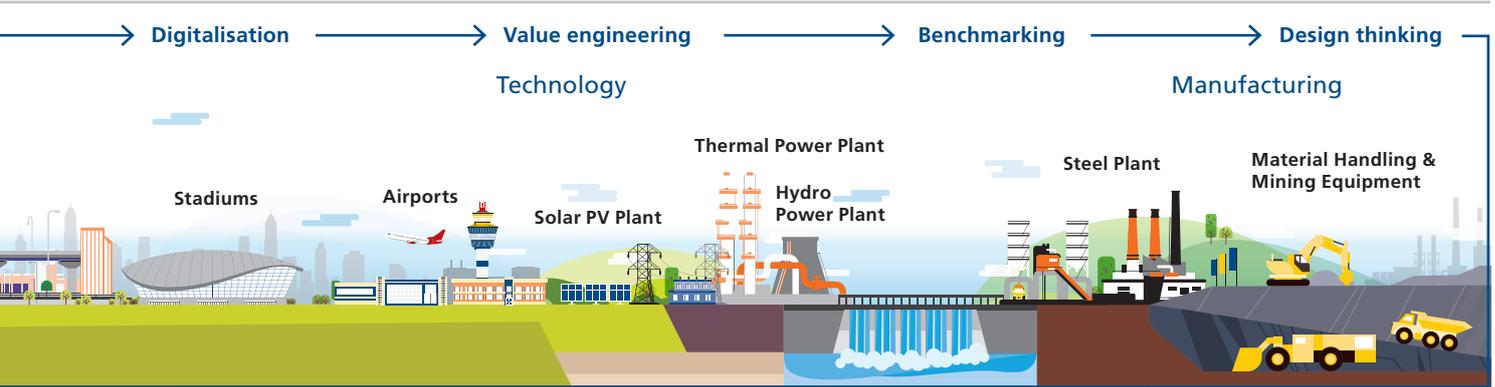
<b>SDGs impacted</b>		

\*\* As on March 31, 2020 | \* During FY20 | \* At standalone (Larsen & Toubro Limited) entity level. All other information is at Group level.

Detailed GRI mapping is available on 205-212

 <b>HUMAN CAPITAL</b>	 <b>NATURAL CAPITAL</b>	 <b>SOCIAL &amp; RELATIONSHIP CAPITAL</b>
Permanent employees <b>48,823**</b> Engineers <b>36,422*</b> Contract labourers <b>2,46,502**</b> Total staff cost <b>₹ 231.14 Billion*</b>   Read more on page 92	Specific water consumption <b>82 m<sup>3</sup>/workforce*</b> Specific energy consumption <b>6,157 GJ*</b> intensity / ₹ Billion revenue Spend on environment <b>₹ 94.5 Million*</b> Green portfolio <b>₹ 324.92 Billion*</b>   Read more on page 104	CSR spend <b>₹ 1,452.90 Million*</b> CSR partners <b>94*</b> New suppliers and contractors <b>7,015*</b> MSME suppliers <b>3,746**</b>   Read more on page 120

<b>RISKS AND OPPORTUNITIES</b>  Page 50	<b>STAKEHOLDER ENGAGEMENT</b>  Page 44
--	---



Revenue per employee <b>₹ 29 Million*</b> Median age of staff <b>32 years***</b> Staff with tenure >10 years <b>21.33%***</b> Total training hours imparted <b>&gt;7 Million man-hours*</b>	Water positive <b>24 campuses**</b> Savings in energy (cumulative) <b>118 Million units*</b> GHG emission intensity / ₹ Billion revenue <b>616.6 tCO<sub>2</sub>*</b> Material reused/ recycled (cumulative) • Steel <b>6,664 tonnes*</b> • Zinc <b>479 tonnes*</b>	CSR beneficiaries <b>1.38 Million**</b> Contribution to exchequer <b>₹ 92.84 Billion*</b> Total safety training <b>&gt;5.1 Million man-hours**</b>  Vendors/dealers/ sub- contractors trained <b>4,40,553**</b>
--	--	---

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>• High levels of employee retention</li> <li>• Among the best companies to work for</li> <li>• Strong employer brand equity</li> <li>• A thriving, upskilled and expert workforce</li> </ul> | <ul style="list-style-type: none"> <li>• Reducing our carbon footprint</li> <li>• Driving better utilisation of scarce resources such as water and energy</li> <li>• One of the prominent recyclers of steel and zinc</li> </ul> | <ul style="list-style-type: none"> <li>• Significant participant in uplifting the communities around us</li> <li>• Long-standing, trusted relationships with vendors, dealers, suppliers and sub-contractors</li> <li>• Contributing to nation-building</li> <li>• High emphasis on training employees</li> </ul> |
|---|--|---|



# Governance

**At L&T, our core values pivot around the principles and ideals based on independence, transparency, accountability, responsibility, compliance, ethics and trust.**

Many governance practices that we as an organisation follow today were voluntarily adopted before they were mandated by law. Being a professionally managed enterprise, and in the absence of any promoter-shareholders, the business is run by professionals with rich expertise in their respective areas of operations – and they are required to continually demonstrate high governance standards.

The widely dispersed nature of its shareholdings as well as the far-reaching impact that the business has on various stakeholders, necessitates strong norms

of governance. This is one of the key tenets followed in letter and spirit by the Company in the course of conducting its affairs. A robust governance charter enables the organisation to conduct its affairs in a trustworthy manner, while creating value for all stakeholders.

Governance in the conduct of business is achieved through a formal management structure and a set of policies, procedures and guiding principles that are designed to ensure system-based compliance with governance standards. These governance standards have evolved and matured over time.

**Governance in the conduct of business is achieved through a formal management structure and a set of policies, procedures and guiding principles that are designed to ensure system-based compliance with governance standards.**





## Governance architecture

The Company operates through a 4-tier management structure, which enables functioning of the business in an orderly manner with two-way feedback and communication methods established between different levels. The governance structure helps ensure greater management accountability and credibility, and facilitates enhanced business autonomy, performance discipline and development of business leaders.



### Board of Directors

The Board's composition conforms to the provisions of the Companies Act, 2013 and SEBI regulations. At the apex level, the Board formulates a strategy through a consultative process, and reviews the affairs of the Company regularly.

 Read more on pages 70-191 of the Annual Report 2019-20

During FY20, the Board met on five occasions. It also functions through different Board Committees that oversee specific areas of operations on behalf of the Board — the terms of reference of different committees are either governed by statute or defined by the Board. The Board Committees are chaired by Independent Directors, except for the Stakeholders' Relationship Committee, which is chaired by a Non-executive Nominee Director of Life Insurance Corporation of India (LIC).

 Read more on pages 98-107 of the Annual Report 2019-20

### Board Committees currently in force

Name of the Board Committee	Number of meetings in FY20
Audit Committee	8
Nomination and Remuneration Committee	4
Stakeholders' Relationship Committee	4
Corporate Social Responsibility Committee	3
Apex Risk Management Committee	6

### Executive Committee (ECOM)

The ECOM represents a top management review and decision-making body that collectively evaluates both strategic and operational functioning of businesses across the Group. The Committee has representation from all important businesses and functions. The members usually meet at least once a month, and more frequently in case of matters requiring attention at this level. All important matters requiring collaborative guidance and direction across the enterprise are reviewed by the ECOM.

### Independent Company (Business) Boards

These are apex bodies at the business level and primarily focus on strategic, tactical and operational matters related

to the business verticals that they superintend. While most verticals are not legal entities, they are expected to operate in an independent manner so that each business functions in a manner managed by the Board. The Business Boards comprise senior people with deep domain expertise in their respective fields. The external Board members who are industry level experts also form part of these Boards.

### Strategic Business Groups (SBGs)/ Strategic Business Units (SBUs)

SBGs and SBUs represent the fourth tier of the governance structure and are designed to function in an autonomous manner. Each SBG/SBU is periodically reviewed for outcomes on all key performance parameters – both financial and non-financial.

## Governance



# Policies, procedures and guiding principles

Formalisation and operation of the governance model is achieved through a wide-ranging set of policies, procedures and process-driven systems that have been institutionalised across the Group.

Awareness of corporate governance is widely cascaded across the organisation through a series of workshops that are periodically conducted within business verticals and corporate departments.

These workshops are designed to clarify principles of governance, explain prevailing governance structures within the organisation and focus on various compliance aspects.

Noteworthy policies, procedures and directives are summarised below:

### **DIRECTOR'S FAMILIARISATION PROGRAMME**

**Our Company has a structured mechanism to familiarise Independent Directors about the fiduciary roles and responsibilities of directorship.**

Regular communication with Board members takes place through circulation of newsletters and press releases, augmented by site/factory visits that are arranged periodically.

Presentations are regularly made to the Board as well as the various sub-committees of the Board, where Directors get an opportunity to interact with the senior managers within the Company on relevant matters of business, strategy, performance parameters, policies and processes.

## 355

**Training hours were collectively imparted to Independent Directors during FY20**

### **BOARD EVALUATION**

**The performance of the Board, its Committees, Chairman and the individual Directors is evaluated through a procedure using an external third-party IT tool (owned and administered by a specialist external agency).**

The evaluation programme is led by an Independent Director in his capacity as the Chairman of the Nomination and Remuneration Committee.

Each Director is given relevant feedback and the overall evaluation outcome is discussed at a Board meeting once every year.

**Read more page 77 of the Annual Report 2019-20.**

### **WHISTLE-BLOWER POLICY**

**This policy was formulated in 2004 and has matured and evolved, based on experience as well as statutory requirements of the Vigil Mechanism introduced by the Companies Act, 2013.**

The Company has a Whistle Blower Investigation Committee (WBIC) comprising five senior executives (Chief Financial Officer, Company Secretary, Corporate HR Head, Chief Internal Auditor and a senior executive) to manage both identified and anonymous complaints.

The WBIC is responsible for the investigation and resolution of all complaints and uses external agencies with forensic expertise wherever required.

Under the policy, whistle-blowers are assured of protection from any type of harassment or victimisation.

During FY20, a total of 55 complaints were received through by the WBIC, of which 54 complaints were resolved through appropriate action, and one complaint is in the process of being resolved.

A separate whistle-blower policy has been extended to suppliers and channel partners – these policies are available for download at

<https://investors.Larsentoubro.com/CorporateGovernance.aspx>

**Read more on pages 78, 79 and 108 of the Annual Report 2019-20.**

## PROTECTION OF WOMEN AT THE WORKPLACE

The Company has formulated a policy on 'Protection of Women's Rights at Workplace' in line with statutory provisions covering sexual harassment of women at offices and other establishments, where employees are located.

The policy is administered by two Committees whose jurisdiction is demarcated by the geographical areas that the Company operates in.

Awareness programmes are conducted across the Company to sensitise employees on the importance of treating women colleagues with respect and dignity, and to inculcate awareness about the ambit of the term 'sexual harassment'.

# 104

Such programmes were conducted in FY20

## CODE OF CONDUCT (CoC)

The Company has a formal Code of Conduct (CoC) applicable to the Board members and senior officers. You can read about it at

<https://investors.larsentoubro.com/CodeOfConduct.aspx>

Another detailed CoC applicable to all supervisors, executives and management personnel is in force, which includes a detailed escalation matrix and procedures to deal with breaches of the CoC.

The Code has also been extended to all unlisted Group companies.

The CoC incorporates principles of ethical behaviour and all designated people are required to give annual declarations on compliance.

Periodic training is conducted for relevant stakeholders.

The Company is committed to such behaviour that is in consonance with the principles of honourable and fair business practices and affirms that it will not be party to any acts that compromises ethical values.

Read more page 26 of the Annual Report 2019-20.

## CODE OF CONDUCT FOR VENDORS

The Company has extended a separate CoC for vendors and service providers.

It covers the need for compliance with environmental regulations, health and safety, labour practices, human rights aspects, minimum wages, freedom of association, collective bargaining, prohibition of child labour, forced and compulsory labour, ethical behaviour, transparency in business processes and environment conservation.

All new vendors / service providers need to sign this combined CoC as part of the initial empanelment process.

# 43,000

Vendors have signed the Code of Conduct so far

## STAKEHOLDER ENGAGEMENT

The Company engages with multiple stakeholders (shareholders, customers, employees, vendors, government bodies, communities, NGOs, and debt financiers, among others) on an ongoing basis through multiple business/official channels as well as structured stakeholder engagement programmes.

The Investor Relations Department has a structured process of engaging regularly with capital market participants.

In FY20, the department engaged in 281 such meetings (covering 495 institutions) through a combination of one-on-one and group meetings in investor conferences, non-deal roadshows, meetings at the Company's offices and through audio-video channels.

The Company has consistently won global accolades over the last 10 years consecutively for its best-in-class Investor Relations Programme.

The Company also has a dedicated Corporate Brand Management and Communications Department, which facilitates an ongoing dialogue between the Company, media channels and citizens.

Read more on page 31 of the Annual Report 2019-20.

## INTERNAL CONTROLS

The Company has a robust framework of internal controls at the entity level as well as the process level, which is largely designed on the COSO model.

This framework ensures that adequate safeguards are built into processes through a control system that embeds governance into the multitude of transactions that take place in a decentralised manner across the organisation.

The framework is documented and covers both operational and financial controls (including IT and cyber security controls) and spans the whole range of processes across the organisation.

Design and efficacy of these controls are regularly tested by the Corporate Audit Services Department, the Corporate Internal Controls Department and the Statutory Auditors.

Reports on processes, exceptions and remedial measures are placed before the Audit Committee on a quarterly basis.

Read more on pages 334 and 335 of the Annual Report 2019-20.

## PREVENTION OF INSIDER TRADING

The Company complies with guidelines issued by the SEBI from time to time on the prevention of insider trading.

- This includes systems for orderly disclosure of Unpublished Price Sensitive Information (UPSI) in accordance with statutory regulations.
- Internal norms relating to disclosure practices are disseminated to all 'Designated Persons' and appropriate disciplinary action is taken even for minor infractions.

There were no cases of insider trading during FY20.

## Governance

### ANNUAL BUSINESS RESPONSIBILITY REPORT (BRR)

The Annual BRR, which was introduced through the legislation in 2015, embodies the essence of governance practices across the organisation.

- The BRR essentially covers, inter alia, aspects of sustainability and various features of governance, including ethics, transparency, accountability, stakeholder grievance redressal mechanisms, well-being of employees and human rights.
- The BRR also affirms that the policies are aligned with the principles of National Voluntary Guidelines (NVG) and conform to the international standards of ISO 9001, ISO 14001, OHSAS 18001 and the principles of the International Labour Organization (ILO).

 Read more on pages 22-43 of the Annual Report 2019-20.

### RELATED PARTY TRANSACTIONS (RPT)

Our Company engages with related parties (as defined under different statutes) in the normal course of business.

- To ensure that there is no conflict of interest and that such business is conducted on an arm's length basis, all such transactions are authorised through formal authorisation matrices designed at an apex level and also documented in line with statutory requirements.
- The audit Committee gives prior approval for all proposed and probable RPT and subsequently reviews the actuals on a quarterly basis.
- Statutory auditors also comment on RPT compliance in their annual Audit Report.
- The monetary quantum and nature of all RPT (including transactions with subsidiaries and JVs) are also disclosed in the annual financial statements

 Please refer to Note 47 of the Financial Statements on pages 422-439 of the Annual Report 2019-20

- The RPT policy is also available for download under the Governance and Compliance on the Company's website

 <https://investors.larsentoubro.com/CorporateGovernance.aspx>

### GOVERNANCE CERTIFICATION (CEO/ CFO AND INDEPENDENT AUDITORS), COMPLIANCE SYSTEM

- The CEO and the CFO periodically certify to the Board (on a quarterly basis) that both of them jointly accept responsibility for establishing and maintaining Internal Controls on Financial Reporting (ICFR), that no instances of fraud have occurred in the period under reporting, that the financial statements do not contain any materially untrue statements and that those statements present a true and fair view of the state of affairs of the Company.
- A similar certification system has been institutionalised and cascaded to all levels where quarterly financial statements that undergo audit / limited review by Statutory Auditors are also signed by Business Heads and Finance Heads.
- The Statutory Auditors also furnish an annual 'Independent Auditors' Certificate' on compliance with the governance norms prescribed by SEBI.

 Read more on page 120 of the Annual Report 2019-20

- The Company has also institutionalised a formal compliance system whereby business heads and heads of corporate departments certify compliance with the various statutes applicable to them.
- A summary of the compliance certifications is also presented to the Board quarterly.

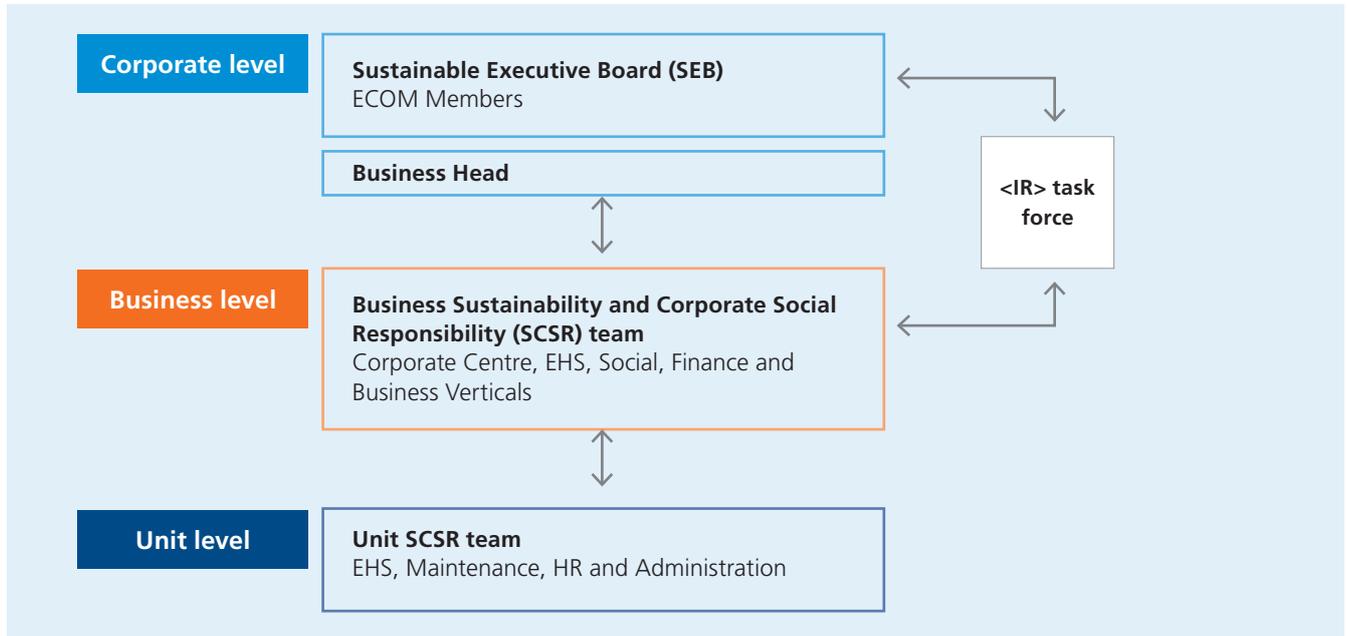
### RISK MANAGEMENT

The Company first formulated a Risk Management Policy in 2005, following the issuance of statutory amendments to listing agreements prescribed by the SEBI.

- The policy has subsequently evolved and matured over the years into a strong framework that cuts across business, operational, financial, geographical, IT and cyber security, brand and reputation protection, geopolitical, and talent management risks.
- The Company's risk policy and administration rests within a pyramid comprising a Board Risk Management Committee (a Board level Committee with two Independent Directors and one Non-executive Director); an Apex Risk Management Committee comprising the CEO, CFO and a Non-executive Director; a Corporate Risk Department headed by the Chief Risk Officer (CRO), and Risk Committees at the business vertical (Business) level.
- A feedback mechanism has been institutionalised, which extends to the Board level.
- The Company's Corporate Risk Management initiatives have won recognition and accolades in multiple fora over the years.

 Read more on pages 50-53

## INTEGRATED REPORTING AND SUSTAINABILITY STRUCTURE

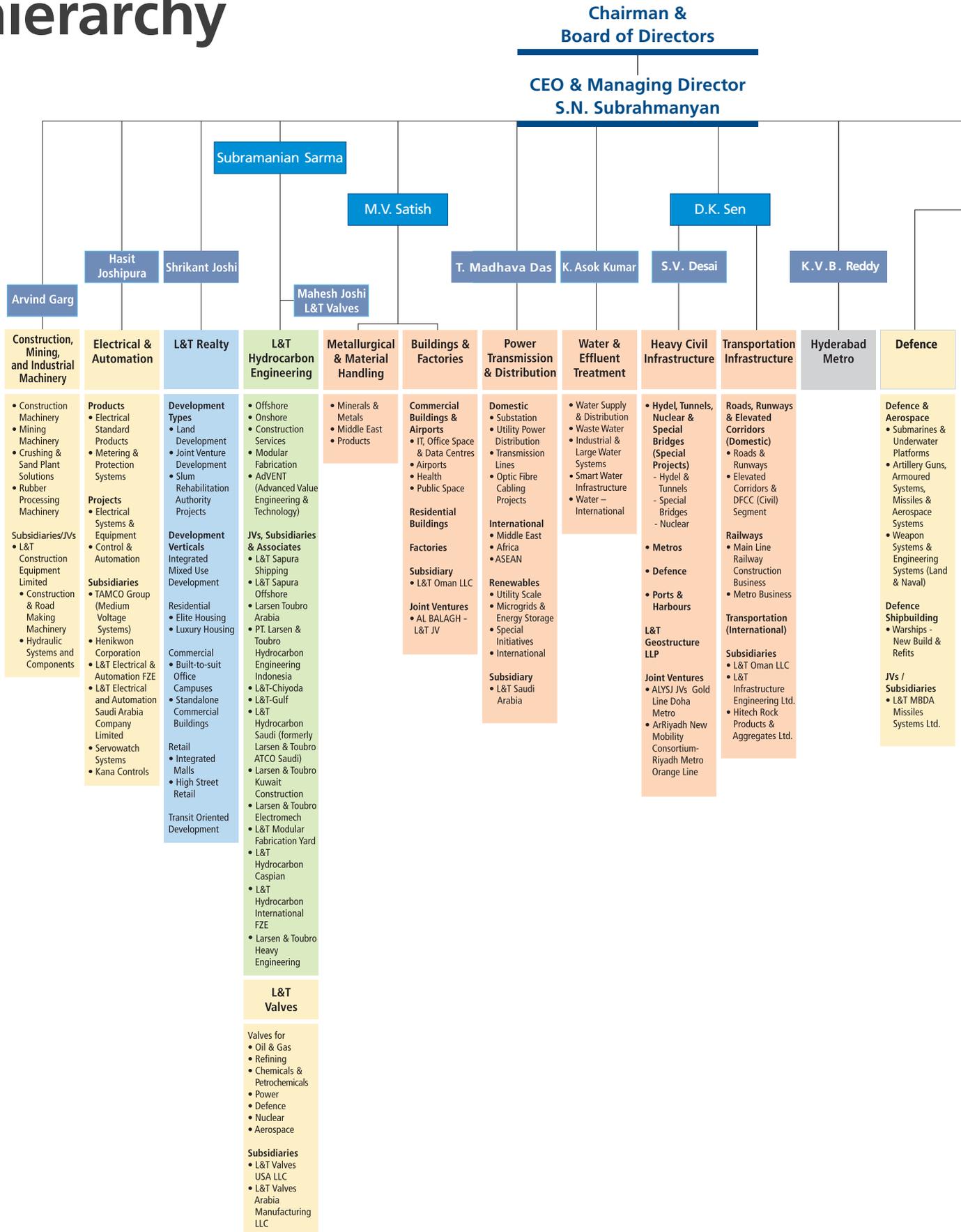


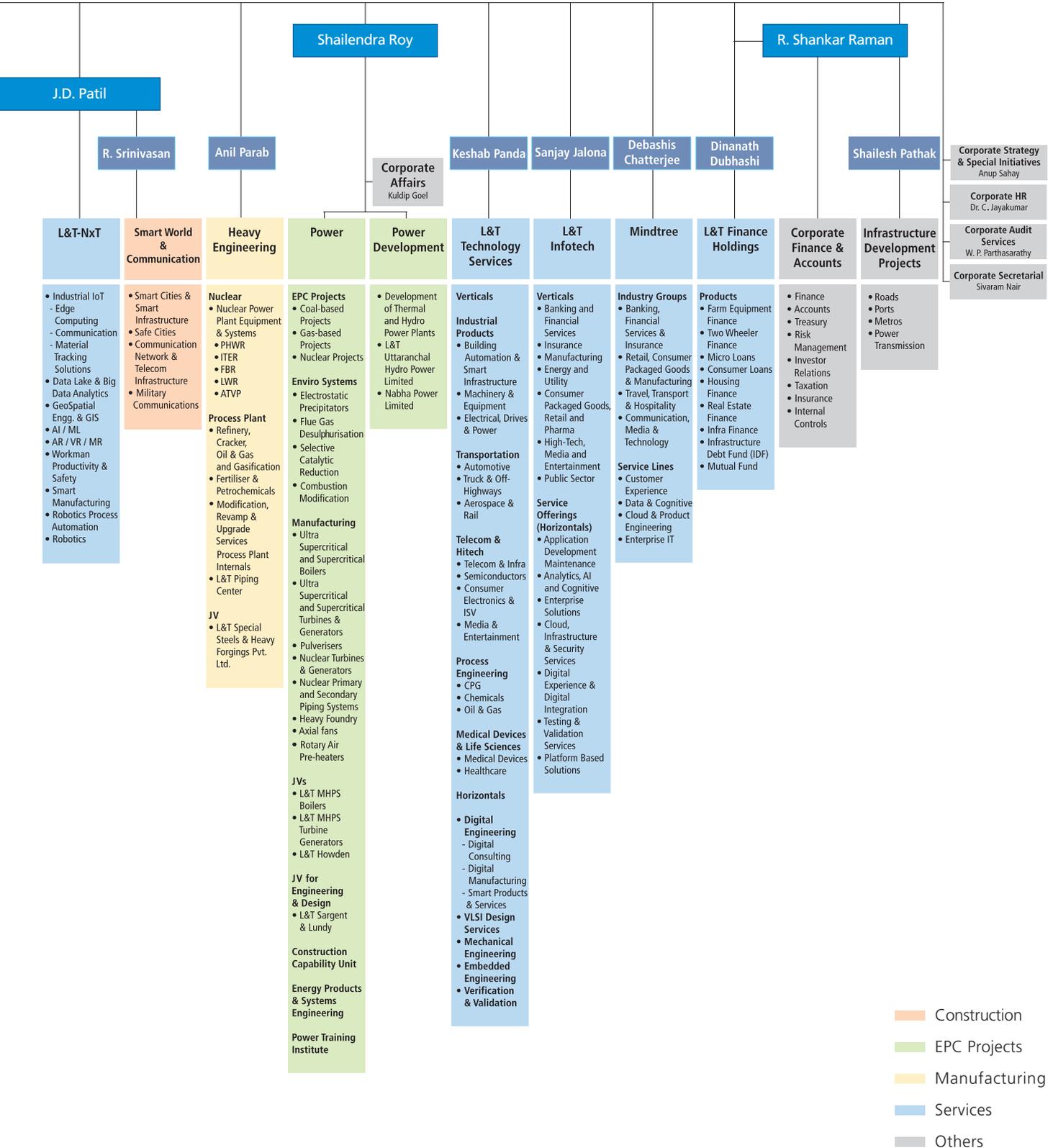
## Commitment to external initiatives, guidelines and directives

We support, follow and demonstrate our commitment to the following initiatives:

- Global Reporting Initiative (GRI) standards
- United Nations Global Compact Network India (GCNI)
- Applicable International Labour Organisation (ILO) conventions
- The National Voluntary Guidelines (NVG), India
- Sustainable Development Goals (SDGs)
- Other United Nations (UN) directives that comprise:
  - Statutory and regulatory compliance
  - Business ethics
  - Fair and equal opportunity to all employees
  - Employee development through training
  - Labour camps at construction sites
  - Medical facilities at units, offices and project sites
  - Steps to measure, monitor and conserve materials and energy

# Organisation hierarchy





# Messages from the senior leadership team

## Thriving in an ESG-focused world

FY20 witnessed growing concerns around the global impact of the climate change. In the backdrop of tepid economic progress registered by most countries during the year, the focus on sustainable development has registered a welcome uptick and it is now widely recognised that a greener and cleaner planet is essential for the long-term survival and development of mankind. Events such as the Global Climate Change Strike and meetings under the aegis of the UN Climate Change Conference are aiding efforts on this front.

Signs of deteriorating climate change in the recent years have been all too evident. Starting from rising sea levels to global warming to melting of polar ice caps to increase in atmospheric levels of CO<sub>2</sub> and other Greenhouse Gases (GHGs) to the increased carbon footprint of large and populous countries – these ominous indicators of worsening planet conditions have now started seeping into the consciousness of the world powers.

The financial world is also witnessing a transformative change. Environment, Social and Governance (ESG) has now permeated the investment domain. FY20 has seen a sharp increase in the number of investment managers who closely examine sustainability and governance practices in businesses that they have invested in or intend to invest in. These winds of change will surely induce companies to adopt sustainable business and governance practices in a more wholesome manner.

L&T adopted sustainability as a way of life over more than a decade ago when it first set up organisation structures in 2008 to facilitate balanced and enduring growth. The DNA of the Company has, over the years, internalised sustainability and governance into decision making and business processes at multiple levels. The Company has also demonstrated

its steadfast commitment to the environment and the society over the years. From a robust CSR programme institutionalised within the Company well before CSR spends were mandated by the legislation, to stepping forward in times of natural calamities, to doing its part during the recent COVID-19 pandemic, L&T has always cared for the environment and the communities surrounding its places of work and has generously contributed to worthy causes. At a Group level, L&T contributed ₹ 150 Crore to the PM Cares Fund in FY20 in addition to spending ₹ 145 Crore on CSR activities during the year.

In FY18, L&T transitioned from Sustainability Reporting to the Integrated Reporting framework, which adds multiple overlays to Sustainability Reporting in the areas of governance, strategy and resource allocation, business model, value creation, interconnectedness between the six capitals (financial capital, social and relationship capital, manufactured capital, human capital, intellectual capital and natural capital) and the reporting of financial metrics. Progressing year on year, the report for FY20 incorporates exhaustive disclosures, particularly in the areas of the governance structure and policies that are currently embedded in the Company.

During FY20, the Company's sustainability parameters have improved, including significant reduction in energy consumption intensity, sizeable increase in the green portfolio order book and a noteworthy growth in training hours imparted during the year. Our CSR initiatives have touched the lives of almost 1.38 Million individuals through interventions related to water and sanitation, education, health and skill building, thereby contributing to the development of social infrastructure in the various



**Mr. R. Shankar Raman**

Whole-time Director and Chief Financial Officer

states. The Company has also brought 43,000 vendors and suppliers under its sustainability umbrella and made the effort more inclusive.

On financial sustainability, the Company has maintained a strong balance sheet, including liquidity buffer as shock absorbers. The Company continues to pursue plans for divestment of its non-core businesses. The Company remains focused on optimising capital allocation and conserving working capital. Improving Return on Equity remains an overarching goal that incorporates various facets of the Company's strategy on shareholder value creation.

As an acknowledgement of the Company's efforts towards dissemination of relevant information, the Company has been awarded with ASRA in Integrated Reporting in the area of Community Reporting. The Company reaffirms its commitment to provide meaningful insights into its ESG and business functioning while adding value to stakeholders who rely on this report for decision making and awareness.

## Pursuing growth through operational leadership

The financial year gone by has been yet another eventful one for L&T Hydrocarbon Engineering (LTHE) in many ways, despite strong headwinds in the global hydrocarbon sector in terms of poor market sentiments, an oil price collapse and stalled economic activity in the wake of the COVID-19 pandemic.

During the year, we secured the largest single contract ever awarded in the domestic refinery segment and continued to win offshore projects from two of our major customers. We also expanded our modular solutions capability and added new customers. Our pursuit of innovation and use of technology at our sites and yards helped us better navigate the resource challenges in these increasingly uncertain times.

With our relentless focus on performance, the business successfully delivered seven major projects, and clocked 102 Million safe man-hours at a stretch. As we continue our forward march towards process improvement and performance efficiency, our digital operational excellence journey becomes even more important in taking our operations to the next level.

Beyond business, we continued to uphold L&T's vision of 'Building India's Social Infrastructure' as our CSR teams and army of volunteers worked tirelessly in the key areas of education, health, water and sanitation, and skill building. A testimony to these efforts was LTHE being awarded the prestigious ICC Social Impact Award for its education interventions under the 'Mega Project' category.

While we always strive hard to surpass the expectations of our clients, partners and stakeholders, we have also endeavoured to make LTHE a better workplace for our employees. To this end, we continued to invest in our bespoke employee-focused initiatives, which have been instrumental in creating a collaborative and empowered work environment for LTHE-ites everywhere.

As we enter FY21, we remain on guard against the many uncertainties dogging the global hydrocarbon industry. And while the outlook may appear challenging, we are aptly primed to grab new opportunities and strive for profitable growth in this ever-evolving landscape.



**Mr. Subramanian Sarma**

Non-Executive Director, L&T  
CEO & Managing Director  
(L&T Hydrocarbon Engineering)

## Messages from the senior leadership team

### Building sustainably for the future

Among the core tenets that drive business strategies in the corporate world, sustainability has always featured at the top of the list. This is all the more critical in the construction business, which has a widespread impact across the country.

At L&T, we believe that we are currently in the first phase of a green technology revolution, which will help address the need to reduce our carbon footprint. As a responsible corporate citizen, the Company has always contributed to technologies and initiatives that ensure environmental and social sustainability.

L&T Construction's Buildings & Factories vertical has developed engineering capabilities in environment-friendly design and has a large portfolio of energy-efficient green buildings. Our campuses house some of the most widely recognised energy-efficient office spaces in the country, and we have recently commissioned one of the largest office-cum-research parks in India – with a Platinum rating by the Indian Green Building Council (IGBC).

As a market leader in the construction business, we have been leveraging new-age technologies such as precast

and prefabricated construction in a bid to improve the control and efficiency levels of project execution. We are exploring futuristic concepts such as Design for Manufacturing & Assembly and offsite manufacturing that will involve fabrication of building modules in a controlled factory environment – ensuring reduced levels of pollution and optimum utilisation of resources. These innovative solutions will help enhance the environmental sustainability of not just the structure but the process of construction as well.

As we are witnessing a crisis of unprecedented proportions which has impacted communities across the globe, the priorities of businesses and organisations are undergoing a major realignment. This is also a great opportunity for organisations to regroup and develop a sustainable value chain with a greener outlook for the future. L&T intends to continue on the path of sustainable development and offer solutions that empower our customers in settling into the 'new normal'.



**Mr. M.V. Satish**

Whole-time Director and Senior Executive Vice President (Buildings, Minerals & Metals)

## Strengthening the pillars of sustainability

The COVID-19 pandemic has had a major impact on all of L&T's businesses, including the 'infrastructure' business. Project slowdowns or stoppage, financial stress and the need to care for the workmen at our project sites all needed to be addressed. These factors made the focus on sustainability and technology all the more relevant.

We have implemented a variety of initiatives to reduce the environmental impact of our projects and processes. These include procurement of local materials with lesser carbon footprint, alternate sourcing, optimising transportation of material at each project, increasing consumption of alternate materials such as the use of fly ash GGBS partially in place of sand and cement, manufactured sand instead of river sand, including using by-products from our quarrying operation. Moreover, initiatives such as optimising diesel usage through a digital dispensing platform, using plastic waste to reduce bitumen consumption road building and adopting solar energy and bio-fuel usage have helped meet the objectives of ensuring low carbon generation. We also design optimal structures with enhanced design life, which is pivotal to achieving sustainability.

We are a people-focused organisation and are one of the highest spenders on employment and training of

our workforce. We offer a wide range of training options across the employee spectrum and also enhance employability of rural and semi-urban youth through our dedicated skilling institutes [Construction Skills Training Institute (CSTI)] as well as project-site based training centres to train local workmen. L&T also offers one of the widest range of Artificial Intelligence (AI) and Machine Learning (ML) enabled courses through its digital learning platform Any Time Learning (ATL Next).

Innovation and R&D have always been at the forefront of our business, driving our endeavour to continuously provide 'radically unique' ideas to our clients.

The implementation of digital initiatives such as machine control system (3D) and Internet of Things (IoT) empowered construction offer us an immense opportunity to improve resource utilisation, reduce rework and control the wastage of resources. These initiatives make project execution faster, and safer and upgrade workforce skillsets to international levels.

All these diversified efforts are centrally planned, synced and monitored. Most importantly, the sustainability agenda is continuously sensitised, communicated and encouraged internally and with the clients. This brings unique synergy and commitment in delivering sustainability through the complete project life cycle.



**Mr. D.K. Sen**

Whole-time Director and Senior Executive Vice President (Infrastructure)

## Messages from the senior leadership team

### Powering self-reliance through talent and technology

L&T Defence has been built on the ethos of Atmanirbhar Bharat, conforming to the spirit of L&T, leveraging the technological base of L&T, built through decades of R&D. The motto of self-reliance has transformed L&T Defence into being the leading private sector industry partner to our armed forces. It is a unique distinction and matter of pride that L&T has designed and realised almost 300 equipment, systems and technologies for the armed forces.

At the core of these achievements are our technologically matured human resources, capable of converting user requirements into concepts and basic designs, and taking them through the various stages of analytical engineering, simulation, 'Engineering for manufacture', integration through Industry 4.0 practices to delivery, and complete through life support.

As a business model, L&T Defence focused on developing an ecosystem of tiered partners, primarily MSMEs/SMEs, to remain investment efficient and agile to innovation by leveraging the ecosystem's strengths.

Given the people focus, we have enhanced our role in Environment, Health and Safety (EHS) to beyond the boundaries of L&T, extending to customer locations, covering the work centres of business partners and user training in their establishments (e.g., naval dockyards and training establishments).

All the dedicated production campuses of L&T Defence have maintained focus on green operations and nil fatalities, and report among the lowest accident frequency and severity rates. Energy conservation has been a mantra and personnel across locations are sensitised periodically through internal communication/portals, and all of us re-commit to the value system.

Our impetus on delivering inclusive growth through CSR initiatives continues. During the financial year, we reviewed the systems and processes at our skill training centre at Visakhapatnam for better output in terms of skilled workforce. We implemented skill-building initiatives through Technical Apprenticeship Scheme (TAS) programme in three of our campuses, doubled our intake of apprentices to train and release skilled resources to tiered industry partners. We have also upgraded the quality of education and infrastructure in pre-primary and primary schools in adopted villages around our dedicated campuses through education and sanitation initiatives, helping create a technical orientation of school-going children to create a sustainable and better tomorrow for all our stakeholders.



**Mr. J. D. Patil**

Whole-time Director &  
Sr. Executive Vice President  
(Defence & Smart Technologies)

## Integrating and innovating to combat new challenges

The world is witnessing rapid disruptive changes, with the COVID-19 pandemic adding to issues such as climate change, inclusive development and availability of natural resources – making the economic scenario even more complex. Businesses will now have to respond by reimagining operations, products and business models if they are to grow in this unpredictable scenario.

The Electrical & Automation (E&A) business has been doing this through an integrated approach, within the framework of key SDGs, which are material to our operations. Our priority was to drive operational excellence to optimise resource utilisation, thereby being cost competitive in the market.

Fostering a culture of innovation has been crucial to our success. Our in-house R&D has generated over 80 patents and introduced new products and variants, which provide a wider basket of feature-rich products to our customers. Employees are provided with online and offline platforms enabling them to share breakthrough ideas on value-enhanced products and services.

We have also adopted a range of new digital technologies across key areas of business – from sourcing, manufacturing and sales operations to maintenance and safety training. Some of these technologies, along with other

best practices, have been extended across our network of channel partners and after-sales providers, enhancing the relationship and capacity alike.

Our focus on Total Quality Management has resulted in two verticals of the business being awarded the coveted Deming Prize – the highest award in quality. E&A is the first switchgear company outside Japan to receive this prestigious award.

We are committed to a low carbon growth trajectory. Since 2016, our GHG intensity has reduced by over 20% and the water intensity by over 27%. On the CSR front, we continue to build close relationships with our communities, particularly schools, where we have introduced smart classrooms, digital learning and introduced them to experiential learning in Science, Technology, Engineering and Mathematics (STEM).

Our approach of addressing the concerns of stakeholders, building on our current strengths, adopting innovative new technologies and integrating them with SDGs will help us to continue to remain resilient as we face an ambiguous future.



**Dr. Hasit Joshipura**

Sr. Vice President &  
Head Electrical & Automation

# Strategy, business model and resource allocation



## FORMULATION

**Business strategy formulation seeks to set long-term goals and aspirations that help our Company in exploiting its strengths, identifying and realising new opportunities and building new capabilities.**

This is enabled through three plans with time horizons ranging from long-term (7-10 years) to medium-term (5 years) to short-term (annual). Each plan dovetails into the next.

In FY20, we embarked on the development of a **Perspective Plan**, with a long-term view of 7-10 years. The process started with the identification of emerging megatrends and potential disruptions in current businesses. This was followed by a call for ideas for new businesses as well as adjacencies and growth areas, conducted through Group-wide exercises, large-scale interactive

processes, brainstorming sessions and interactions with experts. Ideas were filtered based on certain criteria. Some ideas went through a stage-gated assessment and a few were selected for pursuing further. The exercise culminated in a future outlook for the Group along with seeding of potential new businesses in digital platforms such as the B2B marketplace and skilling platform, among others. The insights garnered from the Perspective Plan exercise, tweaked for the changed circumstances of the pandemic, would be used for creating the next 5-year strategic plan.

The **strategic plan**, which runs for a period of five years, is developed through a collaborative and consultative process across the organisation. Formulating the plan involves a lookback analysis of performance against the previous plan, scanning market opportunities, outlook on investment and identification of critical areas to be addressed. The outcomes of the exercise are priorities for growth, key initiatives at business unit and corporate levels, talent and leadership

pipeline plan, financial resources plan, and broad financial targets for each business. The ensuing year (FY21) is the terminal year of the current 5-year strategic plan '**Lakshya 21**'. We would be undertaking the development of the next 5-year strategic plan 'Lakshya 26', which would lay down the strategic guideposts for our Company from FY22 to FY26. Changes in various industry segments as well as new areas of business, would get factored into 'Lakshya 26' after considering the impact of the recent COVID-19 pandemic. The strategic plan is usually reviewed after three years for mid-course correction, if any.

While the 5-year business outlook and broad financial goals are embedded as an overarching strategic plan, the annual operating plan is formulated before the commencement of every financial year. This helps provide flexibility in tailoring annual operating and financial budgets to the changing circumstances while keeping the 5-year strategic plan in view.

### PERSPECTIVE PLAN (7-10 YEARS)

#### Objectives

- Long-term business vision
- Assessment of global megatrends
- Assessment of emerging technologies and new growth opportunities
- Identification of relevant growth initiatives

#### Scope

- Business portfolio
- Geographical business strategy
- Investments in emerging businesses
- Organisation structure
- Leadership pipeline
- Long-term capex outlay

### 5-YEAR STRATEGIC PLAN

- Mid-long term business outlook
- Assessment of the global and domestic macro environment
- 5-year business plan
- Key strategic initiatives

- Detailed growth plan
- Assessment of investment environment and competition
- Medium-term opportunities
- Talent management and leadership development
- Strategic partnerships
- Portfolio assessment

### ANNUAL PLAN

- Annual business plan
- Financial KPIs: Order wins, revenues, profits, working capital and RoE targets
- Operational KPIs: Productivity targets

- Annual budgets
- Order prospect pipeline
- Bid management policies
- Key account management
- Order book execution plan
- Capex and liquidity plan
- Resource allocation



## Business model

Value creation by the Group is enabled by leveraging its four business models



### EPC

Our Company focuses on its proven core competencies of conceptualising, executing and commissioning large, complex infrastructure projects in the areas of roads and bridges; power transmission and distribution, thermal/hydel/solar/nuclear power plants; water and irrigation infrastructure; residential, commercial, institutional and factory buildings; airports; metro and conventional railways; onshore and offshore hydrocarbon facilities and metallurgical projects.



### MANUFACTURING

Manufacturing is mainly concentrated on defence & shipbuilding, heavy custom-built equipment catering to process industries, electrical products and systems (made-to-stock and made-to-order), material handling equipment, and industrial products and machinery. Our Company has extensive manufacturing facilities at Navi Mumbai, Hazira, Vadodara, Ahmednagar, Talegaon, Chennai, Coimbatore and Kattupalli in India and Oman, the UAE, Saudi Arabia and Malaysia in international geographies.



### SERVICES / ALLIED

The services and allied businesses cater to sectors of IT (through LTI and Mindtree), technology services (through LTTS and Smart World and Communication), real estate and financial services (through LTFHL).



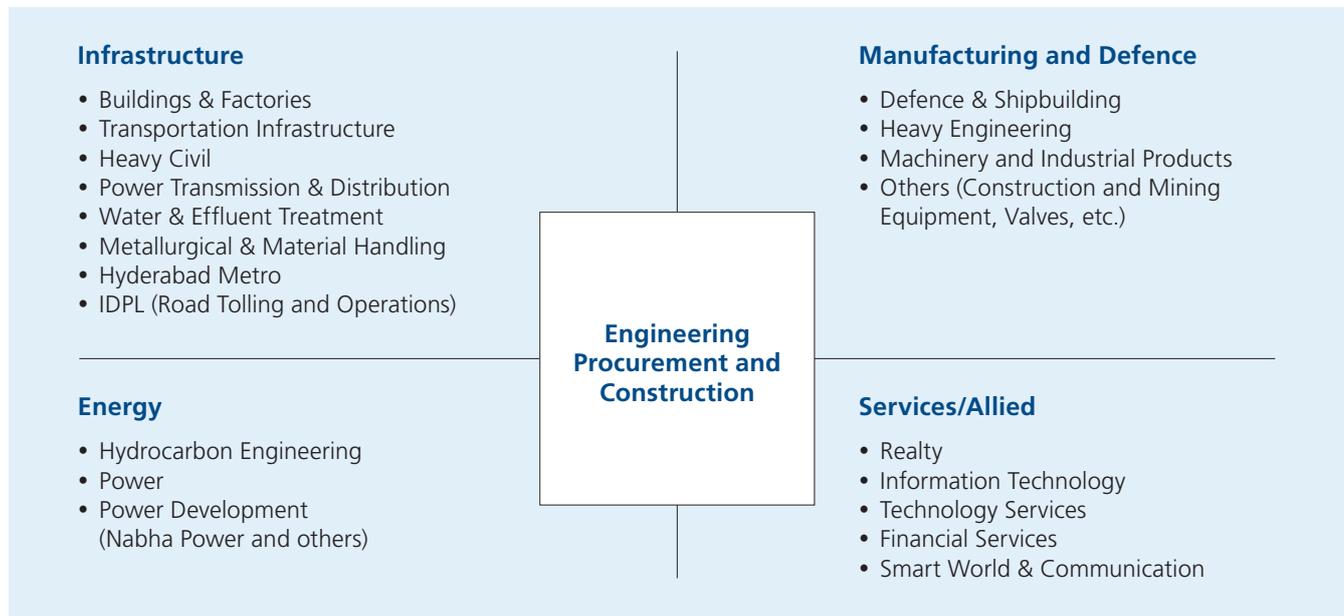
### DEVELOPMENT

Our Company has also undertaken development projects such as the Hyderabad Metro, road operations and tolling [through Infrastructure Development Projects Limited (IDPL)], Nabha Power and Uttaranchal Hydel Power, among others.

## Strategy, business model and resource allocation

### BUSINESS PORTFOLIO SCHEMATIC

The Group is present in various business segments, which are shown below:



### PORTFOLIO STRATEGY

The portfolio strategy aims to de-risk the revenue while improving profitability in the pursuit of growth.

This strategy focuses on:

- **Complementing the mature businesses with growth-stage businesses, matrixed with a focus on asset-light, capex-light and high-margin businesses:** The Group is also steadily reducing exposure to asset-heavy businesses in a calibrated manner. Businesses requiring periodic capital infusion, such as Financial Services, will be reassessed from time to time in the context of emerging strategic significance.
- **Well-balanced and geographically diversified businesses across domestic and international markets:** Over 35% of the business comes from international markets (primarily the Americas, Middle East and Africa and Europe). To further de-risk the

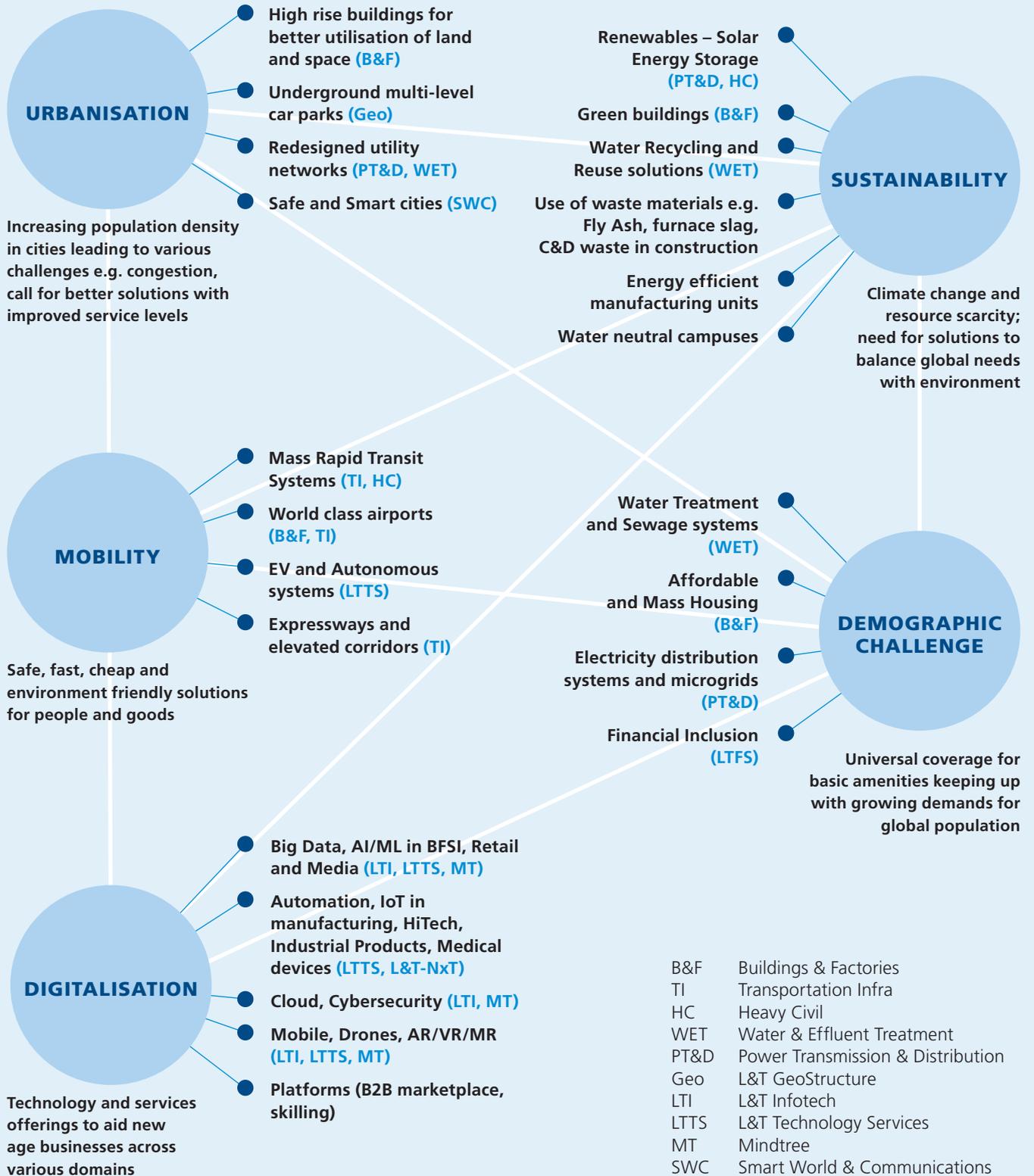
geographical concentration and pursue new growth opportunities, the focus on few more high-potential countries in Africa and the ASEAN region is being enhanced.

- **Balancing the cyclical nature of the EPC business through a portfolio of manufacturing and services businesses:** The services' business contributes over 25% of the Group's revenues. With the aim of better profitability and a stable revenue profile, the Group intends to step up the proportion of services business while factoring the growth in the traditional EPC and manufacturing businesses. The acquisition of Mindtree Limited was a step in this direction.

- **Supplementing the standalone offerings with partnerships:** For the EPC and manufacturing businesses, our Company has partnered with several large global process and technology licensors, and for the IT and technology services businesses, the Group has extensive partnerships with established global software product and technology companies. These engagements enable the Group to offer a bouquet of value-added services to customers in different businesses.

Businesses and offerings are closely linked to global megatrends and our Company continues to build on these to address future challenges.

# Our business offerings backed by megatrends



## Strategy, business model and resource allocation

### STRATEGIC THRUST AND DIRECTION

The focus of the Group's strategy is to create economic value for its shareholders, investors and clients while generating social and environmental value for its employees and other societal stakeholders.

This is enabled by:

**S1**

Ensuring efficient conversion of the order book into healthy margins through execution, operational excellence and digitalisation initiatives

**S2**

Driving growth of the services businesses which have a higher RoE profile

**S3**

Maintaining an optimum mix between domestic and international business

**S4**

Managing financial resources for the growth of the businesses and strong financial health to facilitate access to capital markets, as and when required

**S5**

Incubating new businesses to tap future growth opportunities

**S6**

Engaging with start-ups to access innovations to enhance capabilities and develop new offerings

**S7**

Unlocking capital from non-core businesses and assets earning sub-par returns

**S8**

Leveraging digital solutions and analytics across various parts of its businesses, spanning areas such as remote asset management, material tracking, employee productivity enhancement, safety and procurement, among others

**S9**

Focus on businesses contributing to environment sustainability such as solar, energy storage, water reuse and recycling

**S10**

Thrust on opportunities linked to achieving the Sustainable Development Goals, such as access to clean water for everyone, reduction in consumption of virgin material in construction and energy efficiency solutions, among others

The Group retains its thrust on improving RoE.



## Resource allocation

Our Company has a well laid-out plan of resource allocation to meet its strategic goals, which includes:

- Maintaining adequate liquidity on the balance sheet to exploit growth opportunities and fund emerging and high-growth businesses. The pandemic has necessitated an increased focus on building adequate liquidity buffers till economic activity revives to near-normal levels after the sharp worldwide growth contraction caused by this black swan event.
- Prudent allocation of resources (capex and working capital) to fund growth in different businesses. Financial resources are monitored and directed at a central level with mandates for control at a local level.
- Attracting and retaining a robust and thriving talent pool through employee engagement programmes, monetary and non-monetary incentives, leadership development initiatives, offering professional development opportunities and fostering a conducive organisation climate. The Company has evolved a series of structured HR policies to enable this resource allocation.
- Long-term lasting engagements with labour sub-contractors to ensure a steady augmentation of resources at project sites.
- Long-term engagement with vendors of services, materials and equipment to provide adequate resources for business growth in various business verticals.
- Maintaining strong financial health to facilitate raising of resources from capital markets as and when required.
- Ensuring judicious allocation of manpower and monetary resources to Company-wide sustainability and growth initiatives such as CSR, digitalisation and operational excellence programmes.



# Sustainability roadmap

**Our sustainability journey started many years ago. Over the years, we have reviewed and fine-tuned our sustainability priorities on the basis of evolving business realities in India and other global markets where we operate. We had kickstarted our ongoing Sustainability Roadmap back in 2016. It is the third such sustainability target that we have set, after successfully achieving all our previous targets.**

We set measurable targets after in-depth consultation with all stakeholders. Our approach is to analyse meticulously the progress of all businesses, and conduct materiality analysis and benchmarking before reaching a conclusion. The current sustainability roadmap was formulated after taking cognisance of past learnings, peer analysis and stakeholder inputs.

Our progress in the reporting year vis-à-vis set targets is provided.

## GREEN PORTFOLIO

### Target

Maintain green products and services portfolio at 25% of total revenue\*

### Status

**Green products and services portfolio contributed 31.05% (₹ 324.92 Billion) of the revenue within the scope of this report\***

[Read more on page 112](#)

\* Revenue of the companies within the scope of this report

## ENERGY CONSERVATION

### Target

Increase energy conservation by 10% y-o-y

### Status

**Energy conservation by changing to CFL and LED increased by 69% over FY19**

**Our energy conservation efforts continue in line with our overall goals**

**Saved 26,739 GJ of energy during the year**

[Read more on page 107](#)

## WATER CONSERVATION

### Target

Reduce water consumption intensity by 10% (KL/workforce)

### Status

**There was a 45.4% reduction in specific water consumption (m3/employee) with respect to the baseline year FY16**

Increase water conservation and recycling by 5%

**In FY20, we recycled 76.5% of the total wastewater, which is 1.97% increase over FY19**

[Read more on page 109](#)

## ENERGY CONSUMPTION

### Target

Reduce total energy consumption intensity per year turnover by 5% (GJ/ ₹ Billion)

### Status

**Total energy intensity decreased by 8.56% with reference to FY19 and 3.3% with reference to FY16**

[Read more on page 107](#)

## CARBON EMISSIONS

### Target

Reduce direct GHG emission intensity by **5% (direct CO<sub>2</sub>/ ₹ Billion)\***

### Status

**There was a 9.3% decrease in direct GHG emission intensity with respect to FY19**

[Read more on page 108-109](#)

## MATERIAL MANAGEMENT

### Target

Increasing recycling and use of recycled material by **5%**

### Status

**There was a 5.5% increase in the total use of recycled materials (steel and zinc) with respect to FY16**

[Read more on page 110](#)

## CORPORATE SOCIAL INITIATIVES

### Target

Reach **3 Million** beneficiaries

### Status

**Reached out to 1.38 Million beneficiaries in FY20**

Increase employee volunteering base to **5,000**

**7,122 employees participated in the volunteering programme and worked for various social causes in 2018**

[Read more on page 120-131](#)

## SAFETY

### Target

Working towards the goal of zero accidents

### Status

**Increasing incidents on the safety front have led to synchronised process changes such as workers participation in hazard reporting, strengthening of root-cause analysis, introduction of an EHS App, Rapid Learning App, Incident Investigation Software, HSE Heatmap, digitalisation of historical and predictive data, behaviour-based Safety Program, 'Attention Required' Cards on shop floors and focused risk management for masonry walls under construction. These were supplemented by a 20% increase in safety training (from 4.1 Mn. man-hours in FY19 to 5.1 Mn. man-hours in FY20). The Company is confident that these additional measures, along with earlier safety processes already in place (Tunnel Safety Program, training through virtual reality, etc) is likely to lead to better safety consciousness and compliance at all levels.**

[Read more on page 98-100](#)

# Managing capital trade-offs

**As we operate in a largely volatile economic and industry landscape, where the availability of capitals is constrained and challenging at times, our objective is to optimise trade-offs to make our business sustainable for the long term. Balancing consistent growth with sustainability remains our priority.**

Our key strategies in FY20 demonstrated our integrated thinking, while managing capital trade-offs.

## Acquiring a majority stake in Mindtree Limited

### Explaining the trade-offs

In sync with our strategic focus on growing our services business, we acquired a majority stake in Mindtree in July 2019.

This decision entailed upfront investments having a short-term impact on our financial capital. We also faced consolidation-related challenges, especially around managing and retaining talent as well as customers.

### Capitals deployed

₹ ₹

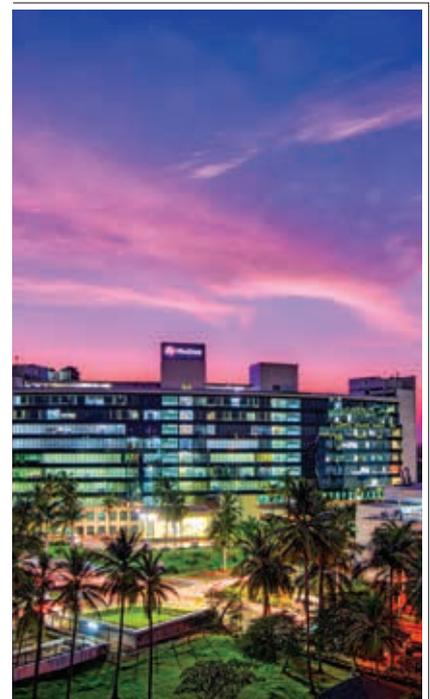
### Capitals impacted

₹ 💡 👤 🗨️

### Managing the trade-offs

In FY20, Mindtree contributed about 27% to our IT & Technology services revenues. Consequently, the share of this business in our consolidated revenues grew by 400 basis points to 15%.

Owing to our people-centric policies, we have managed to retain a high retention rate of Mindtree's employees as well as customers.



## Divesting non-core assets and businesses

### Explaining the trade-offs

During FY20, we received approval to divest our electrical and automation business to Schneider Electric, a global player in energy management and automation.

This decision is a part of our strategy to unlock capital from non-core businesses. The key trade-off in such decisions is to continue the momentum in these businesses till the time they are hived off and to ensure that they are sustained, responsibly.

### Capitals deployed

₹ ₹

### Capitals impacted

₹ ⚙️

### Managing the trade-offs

While such decisions help us enhance our financials, we do not shy away from making the requisite investments to keep the business on track. While parting with non-core businesses and assets, we seek to join hands with like-minded organisations that operate in a responsible and sustainable manner.



## Ensuring judicious utilisation of resources

### Explaining the trade-offs

Our operations range from infrastructure to hydrocarbons and result in the creation of manufactured capital for various stakeholders.

However, our resource-intensive operations utilise scarce natural resources. Our endeavour is to minimise our environment footprint. Being a project-based company, sometimes our ability to use recycled material is restricted as customers prefer using virgin materials.

### Capitals deployed



### Capitals impacted



### Managing the trade-offs

Our aim is to optimise our resource utilisation and contribute to a greener and more sustainable environment.

We promote the use of recycled materials, fly ash and granular blast furnace slag to blend with cement at our construction sites.

### Key capitals

- Financial capital
- Manufactured capital
- Intellectual capital
- Human capital
- Social and relationship capital
- Natural capital



## Focusing on sustainable businesses

### Explaining the trade-offs

We are looking to ramp up businesses that contribute to the environment positively. These include solar energy, energy storage, water reuse and recycling projects.

These projects may require high investments initially, but have significant benefits over the medium to long term.

### Capitals deployed



### Capitals impacted



### Managing the trade-offs

We undertake detailed due diligence before commencing these projects to ensure their feasibility. We also monitor their progress regularly, to take corrective actions as and when required.



# Stakeholder engagement

Regular engagement with members of the stakeholder fraternity helps us stay focused on our priorities. In this section, we present our process of stakeholder outreach, identifying their concerns to find lasting solutions.



## SHAREHOLDERS AND INVESTORS

### Engagement modes

- Quarterly calls, financial reports and presentations
- Annual General Meeting (AGM)
- Annual Reports
- Business Responsibility Reports (BRRs) and Integrated Reports (IRs)
- Regular announcements and filings with the stock exchanges

### Concern areas

- Business performance
- Improved Return On Investment (ROI)
- Effective financial and non-financial risk controls
- Fair business practices

### Our response

- Transparency of business plans to investors
- Regular dividend and improving Return Ratios
- Showcasing performance on non-financial disclosures in <IR> and BRR



## CUSTOMERS

### Engagement modes

- Regular customer meets
- Workshops and conferences
- Exhibitions and trade fairs
- Advertising campaigns
- Bulletins and news
- One-on-one interactions
- Periodic reviews
- Annual reviews
- Customer satisfaction surveys
- Feedback forms

### Concern areas

- Timely completion of projects
- Confidentiality
- Competitive contract price bid
- Innovation and state-of-the-art engineering techniques
- High safety standards
- Transparency in energy, water and GHG emissions performance

### Our response

- On-time project completion
- Deeper 'customer connect' at multiple levels
- Customer satisfaction survey
- Tighter project monitoring and control
- Increased after-sales support
- Regular monitoring of Project KPIs – Safety, water, material management, energy and GHG emissions, among others



## EMPLOYEES

### Engagement modes

- Internal magazines highlighting the achievements of employees and teams
- Regular email communications around new contracts bagged and updates on major projects
- Town halls, departmental meetings and success story competition
- HR connect sessions where employees voice their ideas and concerns
- Enterprise-wide employee portal called 'L&T Scape'
- Annual Engagement Survey
- Leadership Development Academy

### Concern areas

- Career growth
- Employee benefits
- Skill development
- Effective/high-quality training programmes

### Our response

- Attracting and retaining talent
- Promoting employee wellness
- Functional and soft-skill development programmes
- Leadership development programme to hone leadership skills
- Continuous improvement in programmes for structured learning and development of workforce



## Stakeholder engagement

### SUPPLIERS/CONTRACTORS

#### Engagement modes

- Periodic partner meets
- E-tendering and e-procuring
- Supplier meets

#### Concern areas

- Timely payments
- Repeat orders
- Price reduction
- Different purchase processes by businesses as per the project/ establishment's requirements

#### Our response

- Regular visits to suppliers' and contractors' facilities
- Cost-effective price negotiations
- Combined Environmental & Social CoC for suppliers as part of the supplier agreements
- Screening, assessment and audits related to quality and EHS aspects are conducted, providing support to implement resource conservation initiatives at select suppliers' premises
- Cost-effective price negotiations



### COMMUNITIES

#### Engagement modes

- CSR initiatives
- Volunteering activities
- Quarterly review of our integrated community development projects
- Continuous engagement with village panchayats and local authorities

#### Concern areas

- Expectation of livelihood creation
- Improvement in overall living standards
- Water and sanitation
- Development of community infrastructure

#### Our response

- Ten Construction Skills Training Institutes (CSTIs) impart training in formwork, carpentry, bar-bending, steel-fixing, masonry, construction, electrician skills, welding and CCTV installation training
- Education, health and skill development for communities around L&T establishments and project sites
- Access to drinking water and sanitation in water-stressed regions
- Implementing integrated community development programmes



## GOVERNMENT

### Engagement modes

- Regular interaction with regulators and local governments
- Member of important industry associations
- Active participation in policy formulation and economic forums

### Concern areas

- Any inefficiency while practising fair and ethical business trade in all spheres – economic, environment and social

### Our response

- Continual improvement to ensure transparency in the triple bottom-line (people, planet and profit) disclosures through various mandatory and non-mandatory formats such as BRR, DJSI and CDP



## MEDIA

### Engagement modes

- Regular press meets
- Periodic media visits

### Concern areas

- Providing transparent stakeholder communication

### Our response

- Regular media updates
- Sharing critical information through press releases and feeds to social media (LinkedIn, Facebook and L&T website)
- Media briefings and presentations
- Economic, environmental and social disclosures in the public domain



# Materiality assessment

Materiality assessment at L&T is done to identify critical sustainability issues that can impact our business and/or stakeholders, especially when we operate in diverse markets and has exposure to various sectors. Materiality assessment tries to take the key insights from all our stakeholders in India and overseas.

The assessment is conducted across each business vertical and the outcome is condensed into a list of material topics.

## MATERIALITY ASSESSMENT INPUTS

- Focus on significant sustainability challenges
- Strategic sustainability roadmap development
- Structured internal assessment of risks and opportunities
- Feedback from customers, supply chain partners and employees
- Business strategy and market insights
- Parameters as evaluated by third party

## MATERIALITY MATRIX

Consolidated for the Company



## Key capitals

- ₹ Financial capital
- ⚙️ Manufactured capital
- 💡 Intellectual capital
- 👤 Human capital
- 🌿 Natural capital
- 🤝 Social and relationship capital

## DESCRIPTION OF MATERIAL ISSUES

Material topics	Relevance of topic, boundary and limitations to the boundary (if any)	Capitals associated	Strategies
<b>Occupational health and safety of employees and contractors</b>	We strive to provide an accident-free workplace to our people and comply with relevant regulatory requirements for this purpose. Our preventive measures are built around the philosophy of embracing safety as a 'way of life'.		<b>S8 S10</b>
<b>Project risk management, quality of construction and EPC services</b>	We are predominantly in the 'projects' business and face challenges such as land acquisition and Right Of Way (ROW), clearances from government agencies, working in difficult/harsh weather conditions/terrains and skilled workforce availability, among others. This makes it critical to manage project risks and maintain construction quality and delivery of EPC services.		<b>S1 S8</b>
<b>Water management</b>	Water is critical for our business and we are committed to use it prudently. Accordingly, we have turned our facilities 'water positive' with 'zero wastewater discharge'.		<b>S9 S10</b>
<b>Natural resource conservation</b>	Our business essentially depends on natural resources such as sand, aggregates and cement, including ferrous and non-ferrous materials. The judicious utilisation of such resources strengthens our efforts to reduce our carbon footprint, while improving productivity and profitability.		<b>S9 S10</b>
<b>Material sourcing</b>	Our focus is to enhance local sourcing of materials needed for our projects. Besides providing opportunities for economic development of local communities, this approach enables us in driving efficiencies by saving on logistics-related costs.		<b>S1 S8 S10</b>
<b>Climate change mitigation and GHG emissions</b>	We believe, business sustainability and competitiveness are ultimately linked to the low-carbon economy. Progressively, we continue to invest in products and processes that promote sustainable growth, enhancing energy efficiency and developing low-carbon technologies for infrastructure development.		<b>S9 S10</b>
<b>Talent attraction and retention</b>	Our intervention requires expertise and high engineering skills, and we are proactive in engaging and retaining the best talent. We nurture talent, enhance productivity and efficiencies, and build a robust leadership pipeline.		<b>S8 S10</b>
<b>Adoption of renewables</b>	We are increasingly using renewable energy at our campuses and project sites. Thereby widening our green cover.		<b>S8 S10</b>
<b>Energy efficiency</b>	Depleting energy sources is detrimental to long-term business objectives. Growing energy savings translate to reduced power cost and fuel, and thus less operational cost and enhanced profitability.		<b>S9 S10</b>
<b>Supply chain management</b>	Suppliers are our strategic partners in delivering timely performance. Significant supplies at our project sites are from the local suppliers. We encourage suppliers to partner our sustainable growth. Implementing sustainability practices in the supply chain helps improve their economic, environmental and social performance.		<b>S8 S10</b>
<b>Labour management</b>	Our comprehensive CoC ensures that we follow best-in-class practices to protect human rights (no child labour, no forced labour, and so on). In addition to sensitising our workforce on these topics, we also make sure that our subcontractors adhere to this CoC. Our subsidiaries and associate companies are encouraged to follow our corporate HR policy.		<b>S8 S10</b>
<b>Local supply base development</b>	We undertake constant training and awareness campaigns to ensure that our suppliers understand our sustainable ways of working and embed them in their business. We also train them on key aspects of the business to partner them in their growth.		<b>S8 S10</b>

# Risk management

**The business landscape in which we operate is fraught with predictable and unpredictable risks that are meticulously reviewed, and a robust response mechanism is formulated.**

The Company has an institutionalised Enterprise Risk Management (ERM) framework, which is continuously reviewed and benchmarked with industry best practices. The Audit Committee and the Risk Management Committee are two Board Committees that oversee the adequacy and effectiveness of the risk management framework and processes. Each business vertical has its specific policies, structures and procedures, which are also aligned with the overall ERM framework.

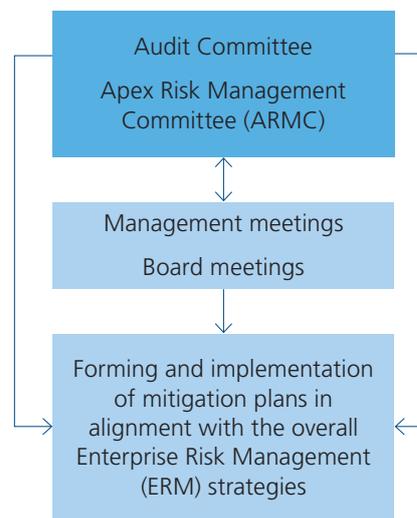
During the year, an ERM system for digitalising the risk management processes for business operations was developed and implemented. This system enables monitoring risks across projects in various geographies of operation, provides aggregate risk-weighted portfolio views of businesses and shares learnings across the organisation. An integrated knowledge centre portal has also been developed and provides access

to information on risks emerging from economic factors, geo-political happenings and financial markets, among others. It also provides a platform for assessment of counter-party risks and feeds useful updates to enable informed, fact-based decision-making.

The Company's emphasis on continuous learning has led to the creation of several programmes for improving the risk awareness across the organisation. These include workshops, knowledge sessions, embedded risk management modules in project management / leadership development programmes and training content deployed on online learning platforms.

Once again, in FY20, our Company has won CNBC TV18's prestigious 'Firm of the Year Trophy - 2019' for best Risk Management Practices for Frameworks and Systems in two categories – Conglomerate and Technology.

## RISK MANAGEMENT FRAMEWORK



The top enterprise-wide risks for the Company and their mitigation measures are summarised below:

Risk description	Mitigation measures	Capitals impacted
------------------	---------------------	-------------------

### 1 Pandemic

COVID-19, declared a pandemic by the World Health Organization (WHO) in March 2020, posed a risk to health and safety. It also has had various implications on businesses in terms of slowdown of new orders, delays in execution of existing orders and supply disruptions.

A task force comprising members from the leadership and risk management team was formed to assess and develop suitable mitigation strategies to address the impact of the pandemic. The Company is following all the lockdown restrictions imposed by the Government of India. Construction sites were closed and Work From Home for employees was enabled with appropriate data security controls. Standard Operating Procedures (SOPs), including safety precautions and social distancing norms, were put in place to resume operations once the lockdown restrictions are progressively lifted. To mitigate the risk of supply disruptions, alternative procurement strategies have been considered. The Company is also exploring various contractual remedies to deal with the situation. The above steps, taken along with other measures, will help the organisation to be resilient and help weather any major shocks.



## Key capitals

₹ Financial capital    ⚙️ Manufactured capital    💡 Intellectual capital    👤 Human capital    🌿 Natural capital    🗨️ Social and relationship capital

Risk description	Mitigation measures	Capitals impacted
<p><b>2 Geopolitical risks</b> These include sanctions, trade barriers, protectionist policies and conflicts.</p>	<p>We focus on reducing geographic concentration, driving strategic sourcing options, undertaking regular monitoring of international sanctions and other economic measures.</p>	
<p><b>3 Slowdown in economy</b> There has been a slowdown in various sectors such as infrastructure, hydrocarbon, power, defence, metals and minerals and realty, among others. This is due to several factors, such as budgetary allocation, funding issues, decline in oil prices, slow pace of decision-making, lack of investment demand, green initiatives and delays in environmental clearances. Due to the COVID-19 pandemic, there will be further stress on the resources available with central and state governments.</p>	<p>Our diversified revenue model helps us mitigate the risk of slowdown in some sectors by compensating growth in certain other sectors such as water, airport construction, renewable energy, metro network and health infrastructure, among others.</p> <p>The Company will continue to seek opportunities and take appropriate measures to offset the impact of the slowdown and the pandemic. We are also analysing various sectors to identify areas of growth and reallocate resources accordingly.</p>	
<p><b>4 Worsening terms of trade</b> Over the years, terms of trade have become more restrictive and stringent both in terms of aggressive timelines as well as contract clauses such as payment terms, among others.</p>	<p>Various mitigation strategies are undertaken by us, such as negotiating with the customer for equitable terms with better value offerings. We also enter into back-to-back arrangements with vendors and sub-contractors.</p>	
<p><b>5 Competition</b> Due to the overall slowdown and limited opportunities, there has been aggressive bidding from various foreign and domestic players in the past few years.</p>	<p>The Company's competitive strength is derived from its engineering expertise, excellence in executing projects, particularly the large and complex ones, reputation for quality, usage of technology, project management expertise and strong resource base, including the balance sheet strength. We have also taken various initiatives such as digitalisation and cost-optimisation via value engineering, and these have helped win new orders.</p>	
<p><b>6 Reputation and brand</b> Our Company has a presence across sectors in various geographies, and the size and scale of projects being prospected/executed is of increasing magnitude and high visibility. Hence, maintaining its reputation/brand is paramount.</p>	<p>A robust corporate governance framework and delivering projects on time and in conformity with the contracted quality of deliverables help us address the potential risk of erosion of reputation and brand value.</p> <p>We have put a compliance policy in place, mandating adherence to the CoC and internal controls, which is complemented by regular knowledge sharing across the organisation.</p> <p>The Corporate Brand Management &amp; Communications department also protects and bolsters the brand in Indian and international markets through a wide range of online and offline media.</p>	

## Risk management

Risk description	Mitigation measures	Capitals impacted
<p><b>7 Cyber security</b> In the emerging global inter-connected business environment, cyber security has become a key concern for governments, businesses and society in general.</p>	<p>We have undertaken multiple steps to strengthen our cyber security posture.</p> <p>These include enterprise-wide cyber security framework design and rollout, awareness campaigns to educate teams across hierarchies and technology implementations to enforce detective and preventive controls.</p>	
<p><b>8 Execution challenges</b> We encounter diverse execution challenges such as geological surprises, availability of workforce, land acquisition and Right Of Way (ROW), pending approvals and clearances from government agencies, working in difficult weather conditions, among others.</p>	<p>We closely analyse crucial risks for each project to drive timely mitigation.</p>	
<p><b>9 Counter-party risks</b> In the course of our business, we partner different contractors (JVs / consortium projects), based on technical requirements / local market conditions. Our partners' performance and financial strength remain crucial for the project's success and sustainability.</p>	<p>Learnings from preceding projects are incorporated in the inter-se agreement with the partners and clauses on liability of each partner are carefully drafted after a legal due diligence.</p> <p>On a periodic basis, the Company carries out a financial assessment of its key counter parties and appropriate measures are adopted based on the outcome of the analysis.</p>	
<p><b>10 Working capital challenges</b> Project slowdowns and adverse contractual payment terms may lead to increased working capital requirements.</p>	<p>Guidelines have been issued to monitor and manage working capital, both at the project level as well as the business level. We also deploy specific cashflow management strategies at both client and vendor levels, to mitigate working capital challenges on a case-to-case basis.</p>	
<p><b>11 Claims management</b> The EPC business has an inherent risk of timely and acceptable settlement of claims due to dependency on various stakeholders for approval and clearances.</p>	<p>We maintain a strong documentation and follow-up protocol with various stakeholders for any claim management and to ensure timely and equitable settlement of such claims. Documentation in relation to COVID-19 / force majeure is being reviewed on a project-to-project basis and is being suitably taken up with all stakeholders.</p>	

## FINANCIAL RISKS

India's inflation remained benign in the first half of FY20, which eventually picked up in the second half. This happened primarily due to the rise in food prices, driven by supply concerns. Additionally, economic growth remained a challenge amidst follow-on concerns on domestic credit growth, corporate deleveraging cycle and lack of pick-up in private consumption. The US dollar remained strong during the reporting year, mainly on the back of strong growth divergence between the US and the rest of the world, including emerging markets.

Acute slowdown in manufacturing challenged countries from Europe to China, and various emerging markets in the year's first half. During the second half of the year, risks pertaining to trade disputes and Brexit temporarily abated. Liquidity infusion by central banks and corporate tax cuts provided thrust to various asset classes.

The last quarter of the reporting year witnessed elevated financial market volatility, primarily due to the emergence of COVID-19. Disruption in economic activity, periodic lockdowns and closure of customer offices, non-completion of certification inspections and the Company's inability to generate invoicing resulted in a significant amount of collections not being realised within the financial year.

This has led to a sharp increase in working capital levels in the current year, which, for the last three years, had been on a targeted improvement path. This is a temporary impediment, and the Company expects to achieve satisfactory working capital levels in the next year or two.

### Capital structure, liquidity and interest rate risks

The Company maintains a conservative capital structure. Low gearing levels equip the Company to balance business stresses on one hand and raise growth capital on the other. This policy provided the Company the required flexibility for fund-raising at

a short notice to deal with the sudden worsening of working capital due to the lockdown and build-up a liquidity buffer as FY20 ended.

The Company continues to invest capital into subsidiaries as scheduled and optimise the overall Group interest costs. It also completed the acquisition of the shares of Mindtree Limited from a few of the existing shareholders of Mindtree Limited and the Open Offer, which demonstrated an overwhelming subscription resulting in the acquisition of over 60% stake in Mindtree Limited.

Despite the lower liquidity environment in FY20 on the back of risk aversion (post defaults by some large entities in the NBFC sector) by both retail and institutional investors, slower consumer demand and the sluggishness around investments in the private sector as well as disruption caused due to the COVID-19 outbreak, the Company managed to meet its fund requirements. It also managed to add to the cash and cash equivalents from its ₹ 7,588 Crore at the end of December 31, 2019 to ₹ 9,998 Crore on March 31, 2020.

The Company plans to maintain adequate liquidity on the balance sheet to deal with the unprecedented health and humanitarian crisis and downturn in economic conditions. With the implementation of RBI's Large Exposure Framework guidelines from April 1, 2019, the banking limits sanctioned by domestic banks to any of the Group companies will need to fit within 25% of Tier 1 capital of banks vis-à-vis 40% of Tier 1 and Tier 2 capital prevalent till now. This is likely to constrain the availability of bank limits (fund-based and non-fund-based) and impact its pricing for the Group, unless regulatory relaxation is granted. It may also have some adverse impact on the Group's growth plans.

The Company judiciously deploys its surplus funds in short-term investments in line with the corporate treasury policy. It constantly monitors the liquidity levels, economic and capital market conditions and maintains access

to the lowest cost means of sourcing liquidity through banking lines, trade finance and capital markets.

Given the extra liquidity buffer planned to be kept on the balance sheet due to the COVID-19 scenario, both the debt and investments on the balance sheet are likely to remain elevated in FY20. The Company dynamically manages interest rate risks through a mix of various products (fund-raising, investments and derivatives) across maturity profiles and currencies within a robust risk management framework.

### Foreign exchange and commodity price risks

The Company's businesses are exposed to fluctuations in foreign exchange rates and commodity prices. Additionally, it has exposures to foreign currency denominated financial assets and liabilities. The business-related financial risks, especially those involving commodity prices, by and large, are managed contractually through price variation clauses, while the foreign exchange risks and residual commodity price risks are managed by treasury products.

The disclosure of commodity exposures as required under Clause 9(n) of Part C of Schedule V of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 in the format specified vide SEBI Circular dated November 15, 2018 is given separately in another section of this Integrated Report.

The Company's financial risk management is governed by the risk management framework and the policy approved by the Audit Committee and authorised by the Board. Financial risks in each business portfolio are measured and managed by the corporate treasury. Despite currency weakness and heightened financial market volatility, the Company's robust financial risk management processes ensured that financial costs remain under control.

# Financial capital



Our financial capital is the lifeblood of our organisation and serves as a strong foundation to counter economic volatilities and sector-specific headwinds. We believe that our balance sheet strength, along with our experience and expertise across multiple sectors, with strong linkages to economic growth, can help India reduce external dependencies and enhance self-reliance.

Our strategy is to maintain a conservative capital structure to minimise risk exposure in a largely uncertain business environment. Our low gearing levels equip us to balance business challenges on the one hand and raise growth capital on the other.

Despite a low liquidity environment following risk aversion by both retail and institutional investors, sluggish consumer demand as well as disruption caused by the COVID-19 outbreak, we managed to meet our fund requirements during FY20 and add to the cash and cash equivalents of our Company.

## KEY HIGHLIGHTS OF FY20

\*Growth over FY19

### NEW ORDERS

9.10%\*

### GROUP REVENUE

7.57%\*

### INTERNATIONAL ORDERS

33.20%\*

### GROUP PAT

7.20%\*

### STRATEGIC OBJECTIVES

S1

S3

S4

S7

### SDGs IMPACTED



### MATERIAL ISSUES

- Project risk management, quality of construction and EPC services
- Natural resource conservation
- Material sourcing
- Talent attraction and retention
- Energy efficiency
- Supply chain management



### CASE STUDY

## Trenchless projects unfold new opportunities

Our team at the WET Business undertook a trenchless activity at Ghatampur and Aliyapur Toll Plaza by replacing the traditional methods. This activity led to significant cost savings and invaluable learnings for our team. This process can be replicated in all projects and all scales where trenchless activities are to be conducted.

 [Read more on page 59](#)

## Financial capital

**During FY20, our financial performance reflected the strength and resilience of our capital structure and liquidity buffer. The year saw us accomplish 7.23% growth in Group PAT at ₹ 95.49 Billion vis-à-vis the preceding year.**

Notwithstanding challenges, we won fresh orders worth ₹ 1,863.56 Billion, recording 9.10% growth. The order book stood at a robust ₹ 3,038.57 Billion and grew by 4.50% over FY19.

During the year, we established our presence in Gulf Cooperation Council (GCC) countries, predominantly in the Infrastructure and Hydrocarbon sectors.

The unexecuted order book from international markets stood at ₹ 750.38 Billion, contributing 24.7% to the total order book.

The Group Revenue stood at ₹ 1,454.52 Billion, which grew by 7.6% during FY20. Factors such as execution impediments related to the lockdown in the last few weeks of March, delayed clearances, Right of Way (RoW) constraints and the review of awarded tenders by a few state governments leading to the stoppage of work in the Infrastructure segment led to lower-than-expected growth in revenue.

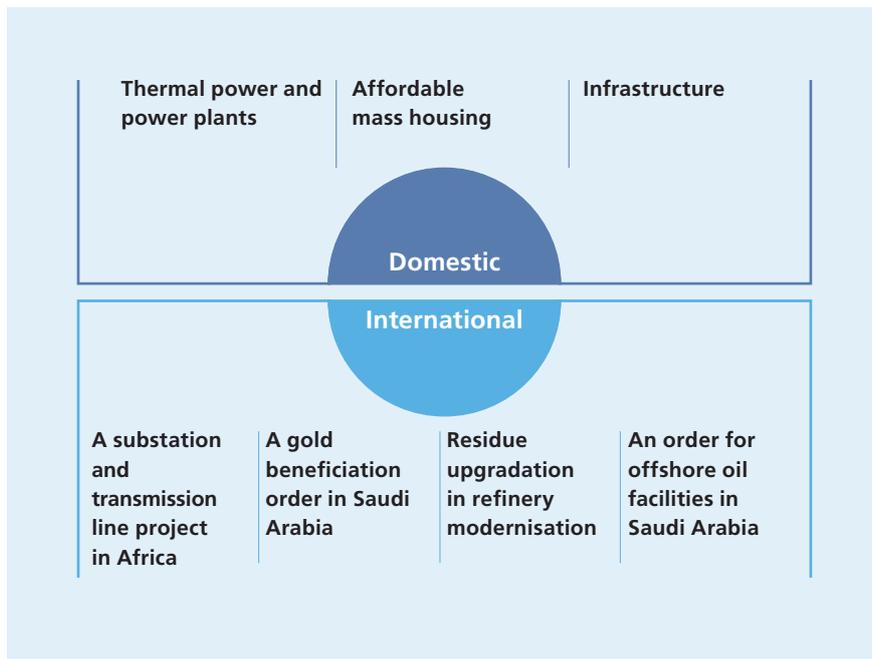
We continue to engage with India's strategic sectors and critical areas of infrastructure development for margin-accretive projects and higher revenue momentum.

Despite challenges in the operating environment in FY20, the Company has continued its legacy of rewarding all shareholders. The Board of Directors has recommended a dividend of ₹ 18 per share to reward all shareholders.

### Revenue mix by geography FY20



### SEGMENTS DRIVING THE ORDER BOOK IN FY20



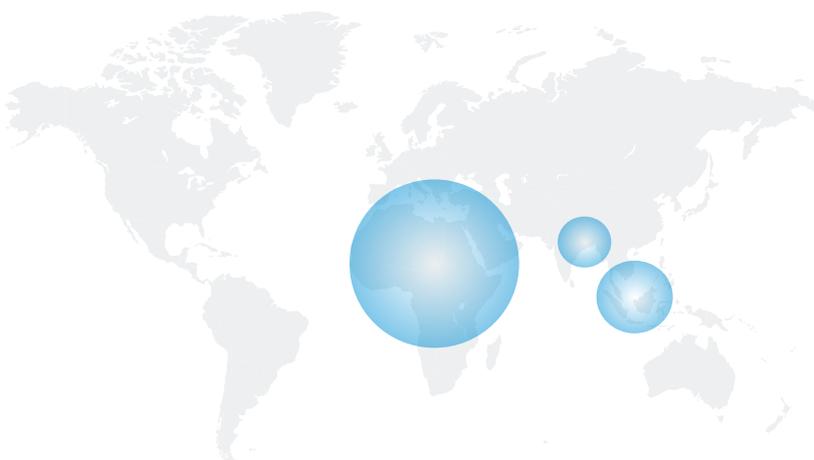
### ROAD AHEAD

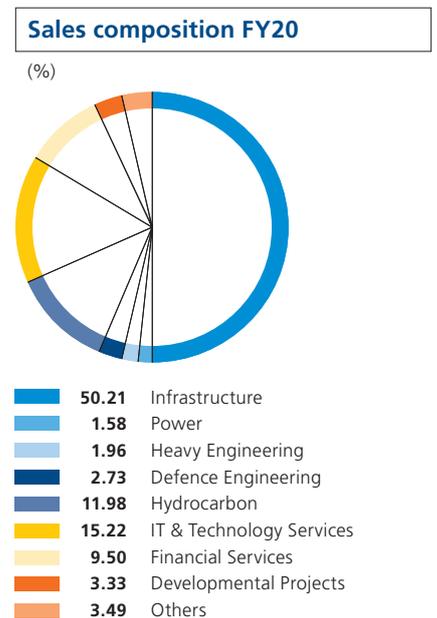
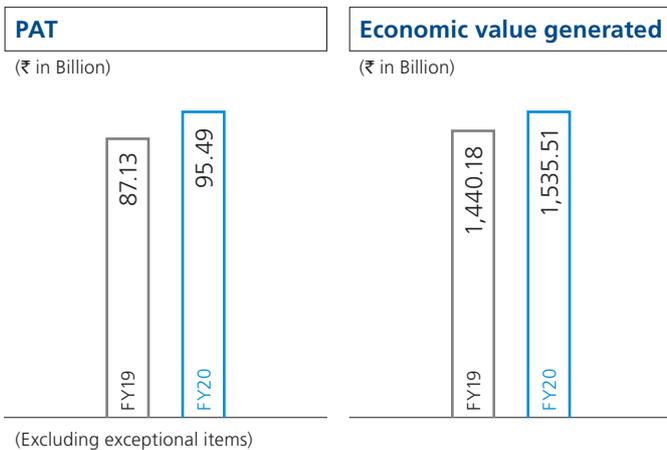
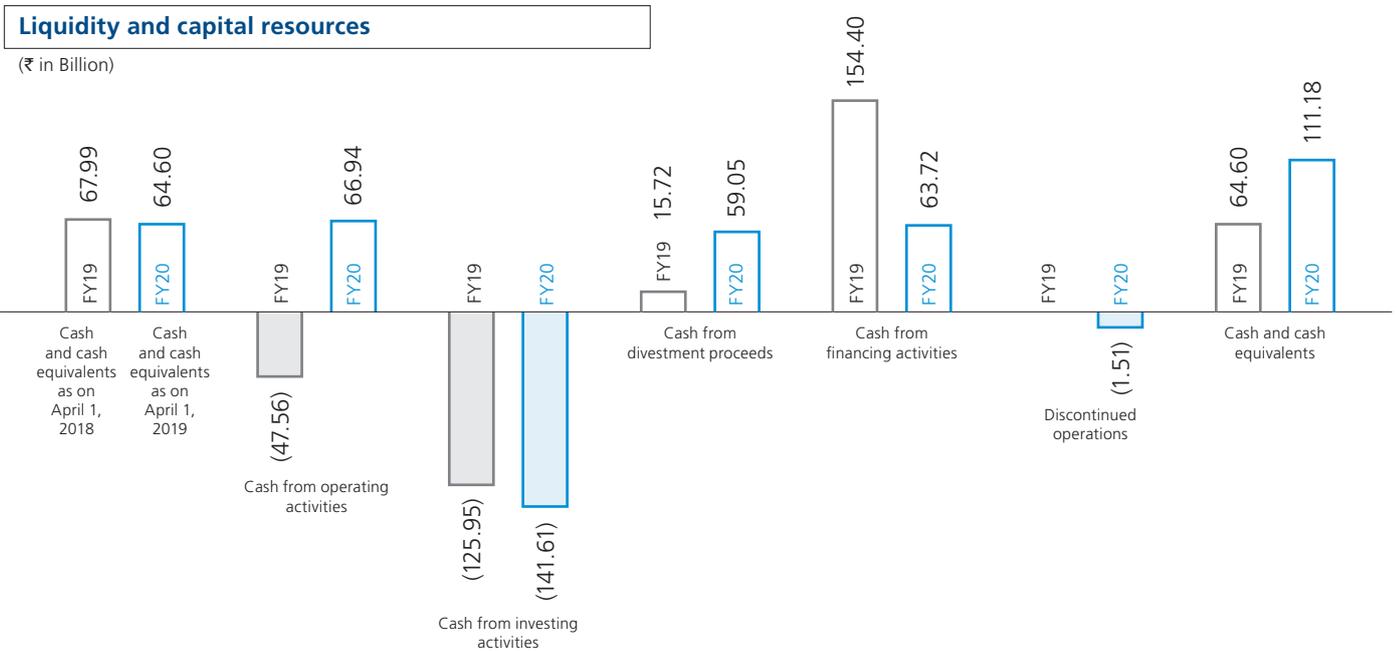
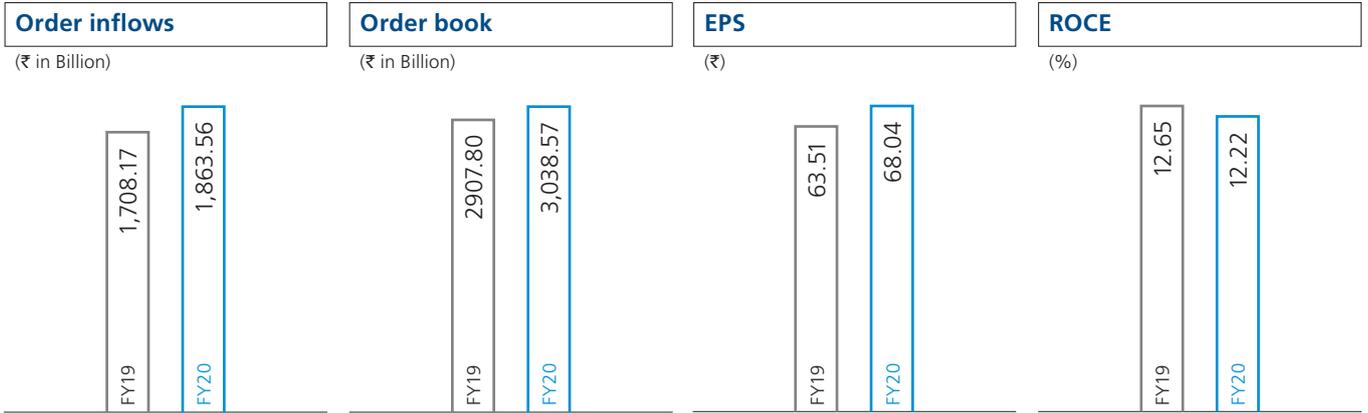
Our sound capital structure and liquidity buffer enable us to leverage growth opportunities in multiple sectors such as defence, aerospace, thermal and nuclear energy. We have embraced digitalisation as a core pivot to thrive in the new normal. Also, a major programme to automate processes is underway in our construction business. It will be progressively extended across the organisation to improve efficiencies, and drive revenue momentum and profitability.

Concurrently, we will continue to pursue international business opportunities in select countries to diversify geographic concentration risks.

**We are evaluating attractive prospects in North Africa, East Africa and countries such as Myanmar, Malaysia and Vietnam.**

### EXPLORING PROSPECTS INTO NEWER MARKETS





## Financial capital

### ECONOMIC VALUE GENERATED AND DISTRIBUTED (₹ in Billion)

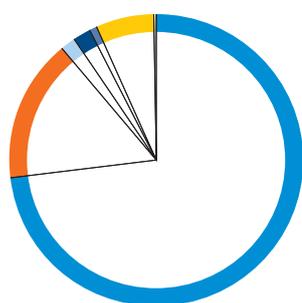
#### A Value generated

₹ 1,535.51 Billion Total income for FY20

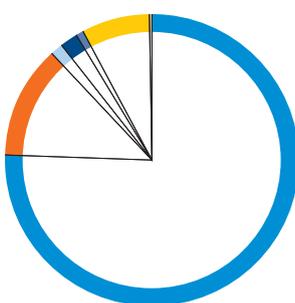
₹ 1,440.18 Billion Total income for FY19

#### B Value distributed

FY20



FY19



#### A - B Value retained

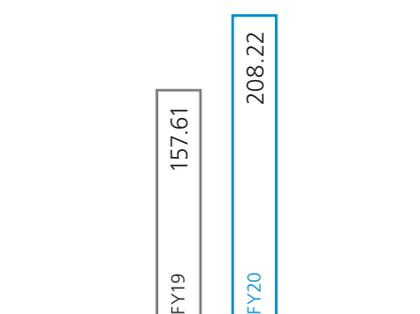
₹ 60.12 Billion FY20

₹ 58.61 Billion FY19

	FY20	%	FY19	%
Manufacturing, construction & operating expenses	1,081.85	73.32	1,041.81	75.40
Employee wages and benefits	231.14	15.66	174.66	12.64
Payments to providers of capital				
- Interest	27.97	1.89	18.03	1.30
- Dividend	25.27	1.71	25.25	1.82
- Minority shareholders	13.45	1.00	13.11	0.94
Payment to the exchequer	92.84	6.29	107.04	7.47
Community investments (CSR spend)	2.87	0.19	1.67	0.12

### EMPLOYEE COST AND BENEFITS (₹ in Billion)

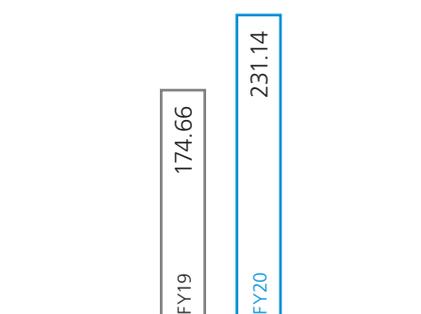
Cost towards wages/salaries (A)



Other benefit costs (B)



Total personnel cost = (A)+(B)



## CASE STUDY

## Trenchless projects unfold new opportunities

**Our team at the WET Business undertook a trenchless activity at Ghatampur and Aliyapur Toll Plaza by replacing the traditional methods. This activity led to significant cost savings and invaluable learnings for our team. This process can be replicated in all projects and all scales where trenchless activities are to be conducted.**

### THE OBJECTIVE AND THE CHALLENGE

Our task was to lay 1,100 mm ductile iron pipes in Kanpur Water Carrier System in the Ghatampur area of Kanpur through an open-cut method. Since Ghatampur is a crowded area with a daily traffic flow of 3,000+ trucks, this method entailed an enormous wastage of time. To complete this project in a timely manner, we proposed the client to go for 2 km MS pipeline of 1,100 mm diameter using the trenchless method.

### INITIATIVES UNDERTAKEN

After much persuasion, the client was convinced to implement our idea and eventually awarded us additional trenchless work in May 2019. The manufacture and procurement of MS pipes took us two months, which meant we had just three months to complete the project, keeping in mind the deadline of November 7, 2019.

Without wasting time we formed a special taskforce, headed by the site in-charge and three engineers, and developed a strategy to execute the work for both day and night. To commence the work in August 2019, a special MS shoring was designed at the site and a list of resources was arranged for every pit. With a well-defined plan and close monitoring, we achieved the desired productivity of 22 Running Metre (RM) per day. The pushing activities were so perfectly done that pipes from two pits matched accurately.

### BENEFITS

The successful completion of this project bolstered the confidence of our client in our abilities and in December 2019, we bagged another similar project of 250 RM near the Aliyapur Toll Plaza. The project provided our people with the experience and insight into the nature of such work.

### ACHIEVEMENT

Return Cost Value (RCV)  
increased by

₹ 33.5 Crore



## Financial capital

## Consolidated balance sheet

as at March 31, 2020

(₹ in Crore)

Particulars	Note	March 31, 2020	March 31, 2019
<b>ASSETS</b>			
<b>Non-current assets</b>			
Property, plant and equipment	2	10,103.79	10,889.56
Capital work-in-progress	2	3,224.91	2,483.56
Investment property	3	3,714.72	4,254.56
Goodwill	4	8,011.40	1,826.91
Other intangible assets	5	19,596.98	4,222.91
Intangible assets under development	5	86.18	11,435.93
Right-of-use assets	61(c)(iii)	2,226.49	-
<b>Financial assets</b>			
Investments in JVs and associates	43(e)	2,851.01	2,642.29
Other investments	6	4,496.72	4,318.64
Loans towards financing activities	7	58,589.36	57,788.88
Other loans	8	1,522.33	1,481.08
Other financial assets	9	638.15	1,144.05
		68,097.57	67,374.94
Deferred tax assets (net)	51(d)	3,846.58	3,418.93
Other non-current assets	10	6,541.62	5,648.62
<b>Current assets</b>			
Inventories	11	5,746.65	6,413.93
<b>Financial assets</b>			
Investments	12	12,699.75	13,946.17
Trade receivables	13	40,731.52	36,845.87
Cash and cash equivalents	14	11,324.57	6,509.49
Other bank balances	15	3,793.21	5,216.75
Loans towards financing activities	16	41,723.42	42,530.82
Other loans	17	716.00	626.69
Other financial assets	18	2,927.87	2,551.25
		113,916.34	108,227.04
Other current assets	19	58,659.69	52,143.06
Group(s) of assets classified as held for sale	45(d)	43,67.21	7.41
<b>Total assets</b>		<b>308,140.13</b>	<b>278,347.36</b>
<b>EQUITY AND LIABILITIES</b>			
<b>Equity</b>			
Equity share capital	20	280.78	280.55
Other equity	21	66,442.44	62,094.25
Equity attributable to owners of the Company		66,723.22	62,374.80
Non-controlling interests		9,520.83	6,826.11

(₹ in Crore)

Particulars	Note	March 31, 2020	March 31, 2019
<b>Liabilities</b>			
<b>Non-current liabilities</b>			
Financial liabilities			
Borrowings	22	82,331.33	74,120.79
Lease liability		1,741.60	-
Other financial liabilities	23	901.14	354.83
		84,974.07	74,475.62
Provisions	24	708.67	556.84
Deferred tax liabilities (net)	51(d)	1,453.04	311.13
Other non-current liabilities	25	31.09	0.55
<b>Current liabilities</b>			
Financial liabilities			
Borrowings	26	35,021.02	29,223.84
Current maturities of long-term borrowings	27	23,654.77	22,210.54
Lease liability		424.95	-
Trade payables			
- Due to micro enterprises and small enterprises		479.51	261.12
- Due to others	28	43,164.42	42,733.69
Other financial liabilities	29	4,923.23	4,622.78
		107,667.90	99,051.97
Other current liabilities	30	30,816.67	31,166.55
Provisions	31	2,750.85	2,443.43
Current tax liabilities (net)		1,509.62	1,137.16
Liabilities associated with group(s) of assets classified as held for sale	45(d)	1,984.17	3.20
<b>Total equity and liabilities</b>		<b>308,140.13</b>	<b>278,347.36</b>
<b>CONTINGENT LIABILITIES</b>	32		
<b>COMMITMENTS (CAPITAL AND OTHERS)</b>	33		
<b>NOTES FORMING PART OF THE FINANCIAL STATEMENTS</b>	1 to 64		

In terms of our report attached  
**For DELOITTE HASKINS & SELLS LLP**  
Chartered Accountants  
Firm's Registration No.117366W/W-100018 by the hand of

**S.N. SUBRAHMANYAN**  
CEO & MD  
(DIN 02255382)  
Chennai

**SANJIV V. PILGAONKAR**  
Partner  
Membership No. 39826  
Mumbai

**R.SHANKAR RAMAN**  
Whole-time Director & Chief Financial Officer  
(DIN 00019798)  
Mumbai

**M.M. CHITALE**  
Independent Director  
(DIN 00101004)  
Mumbai

**SIVARAM NAIR A.**  
Company Secretary & Compliance Officer  
M. No. FCS 3939  
Mumbai

## Financial capital

## Consolidated statement of profit and loss

for the year ended March 31, 2020

(₹ in Crore)

Particulars	Note	FY20	FY19
<b>Continuing operations</b>			
<b>INCOME</b>			
Revenue from operations	34	145,452.36	135,220.29
Other income	35	2,360.90	1,836.53
<b>Total income</b>		<b>147,813.26</b>	137,056.82
<b>EXPENSES</b>			
<b>Manufacturing, construction and operating expenses:</b>	36		
Cost of raw materials, components consumed		15,548.66	14,771.56
Construction materials consumed		30,316.12	31,230.44
Purchase of stock-in-trade		841.09	887.87
Stores, spares and tools consumed		2,184.46	2,812.31
Sub-contracting charges		26,454.05	26,011.91
Changes in inventories of finished goods, work-in-progress, stock-in-trade and property development		647.70	(731.11)
Other manufacturing, construction and operating expenses		13,328.71	13,264.43
Finance cost of the Financial Services business and finance lease activity		8,041.88	7,385.63
Employee benefits expense	37	23,114.00	17,466.40
Sales, administration and other expenses	38	8,646.71	6,791.21
Finance costs	39	2,796.66	1,802.55
Depreciation, amortisation, impairment and obsolescence		2,462.27	1,923.03
<b>Total expenses</b>		<b>134,382.31</b>	<b>123,616.23</b>
<b>Profit before exceptional items and tax</b>		13,430.95	13,440.59
Exceptional items (net)	48	-	294.75
<b>Profit before tax</b>		<b>13,430.95</b>	<b>13,735.34</b>
Tax expense	51(a)		
Current tax		3,564.58	4,402.95
Deferred tax (net)		(301.38)	(335.86)
		3,263.20	4,067.09
<b>Net PAT from continuing operations</b>		<b>10,167.75</b>	<b>9,668.25</b>
Share in profit/(loss) after tax of JVs/associates (net)	43(f)	71.96	(21.00)
<b>Profit for the year from continuing operations</b>		<b>10,239.71</b>	<b>9,647.25</b>

(₹ in Crore)

Particulars	Note	FY20	FY19
<b>Discontinued operations</b>			
Profit from discontinued operations	45(e)	883.25	845.57
Tax expense of discontinued operations	51(a)	228.68	276.24
<b>Net PAT from discontinued operations</b>		<b>654.57</b>	<b>569.33</b>
<b>Net PAT from continuing operations and discontinued operations</b>		<b>10,894.28</b>	<b>10,216.58</b>
<b>Other comprehensive income</b>			
<b>A. ITEMS THAT WILL NOT BE RECLASSIFIED TO PROFIT OR LOSS</b>			
Equity instruments through other comprehensive income		(386.05)	–
Income tax (expenses)/income on equity instruments through other comprehensive income		–	–
		(386.05)	–
Gain/(loss) on remeasurements of the net defined benefit plans		(205.94)	(30.47)
Income tax (expenses)/income on remeasurements of the net defined benefit plans		50.60	10.98
		(155.34)	(19.49)
Share in other comprehensive income of joint ventures/associates (net)		27.75	24.52
<b>B. ITEMS THAT WILL BE RECLASSIFIED TO PROFIT OR LOSS</b>			
Debt instruments through other comprehensive income		115.22	(63.01)
Income tax (expenses)/income on debt instruments through other comprehensive income		(19.46)	7.61
		95.76	(55.40)
Foreign currency translation reserve		43.60	(34.83)
Income tax (expenses)/income on foreign currency translation reserve		4.45	(3.25)
		48.05	(38.08)
Effective portion of gains/(losses) on hedging instruments in a cash flow hedge		(1,281.83)	(275.64)
Income tax (expenses)/income on effective portion of gains and losses on hedging instruments in a cash flow hedge		334.42	106.69
		(947.41)	(168.95)
Cost of hedging reserve		(29.18)	26.65
Income tax (expenses)/income on cost of hedging reserve		8.14	(9.31)
		(21.04)	17.34
Share in other comprehensive income of JVs/associates (net)		23.62	10.18
<b>Other comprehensive income for the year (net of tax)</b>		<b>(1,314.66)</b>	<b>(229.88)</b>

## Financial capital

## Consolidated statement of profit and loss

for the year ended March 31, 2020

(₹ in Crore)

Particulars	Note	FY20	FY19
<b>Total comprehensive income for the year</b>		9,579.62	9,986.70
Profit for the year attributable to			
Owners of the Company		9,549.03	8,905.13
Non-controlling interests		1,345.25	1,311.45
		<b>10,894.28</b>	<b>10,216.58</b>
Other comprehensive income for the year attributable to			
Owners of the Company		(1,032.83)	(273.99)
Non-controlling interests		(281.83)	44.11
		<b>(1,314.66)</b>	<b>(229.88)</b>
Total comprehensive income for the year attributable to			
Owners of the Company		8,516.20	8,631.14
Non-controlling interests		1,063.42	1,355.56
		<b>9,579.62</b>	<b>9,986.70</b>
<b>EPS of ₹ 2 each from continuing operations</b>			
Basic earnings per equity share (₹)	55	63.38	59.45
Diluted earnings per equity share (₹)	55	63.29	59.35
<b>EPS of ₹ 2 each from discontinued operations</b>			
Basic earnings per equity share (₹)	55	4.66	4.06
Diluted earnings per equity share (₹)	55	4.66	4.05
<b>EPS of ₹ 2 each from continuing operations &amp; discontinued operations</b>			
Basic earnings per equity share (₹)	55	68.04	63.51
Diluted earnings per equity share (₹)	55	67.95	63.40
<b>Face value per equity share (₹)</b>		2.00	2.00
<b>NOTES FORMING PART OF THE FINANCIAL STATEMENTS</b>	1 to 64		

In terms of our report attached  
**For DELOITTE HASKINS & SELLS LLP**  
Chartered Accountants  
Firm's Registration No.117366W/W-100018 by the hand of

**SANJIV V. PILGAONKAR**  
Partner  
Membership No. 39826  
Mumbai

**S.N. SUBRAHMANYAN**  
CEO & MD  
(DIN 02255382)  
Chennai

**R.SHANKAR RAMAN**  
Whole-time Director & Chief Financial Officer  
(DIN 00019798)  
Mumbai

**M.M. CHITALE**  
Independent Director  
(DIN 00101004)  
Mumbai

**SIVARAM NAIR A.**  
Company Secretary & Compliance Officer  
M. No. FCS 3939  
Mumbai

## Consolidated statement of cash flows

for the year ended March 31, 2020

(₹ in Crore)

Particulars	FY20	FY19
<b>A. CASH FLOW FROM OPERATING ACTIVITIES</b>		
Profit before tax (excluding non-controlling interests and exceptional items) from		
- Continued operations	13,430.95	13,440.59
- Discontinued operations	883.25	845.57
<b>Profit before tax including discontinued operations (excluding non-controlling interest and exceptional items)</b>	<b>14,314.20</b>	<b>14,286.16</b>
Adjustments for		
- Dividend received	(101.60)	(236.91)
- Depreciation, amortisation, impairment and obsolescence	2,462.27	1,923.03
- Exchange difference on items grouped under financing/investing activities	5.69	(97.48)
- Effect of exchange rate changes on cash and cash equivalents	(88.14)	7.40
- Expenditure on share buyback	–	17.38
- Finance costs	2,796.66	1,802.55
- Interest income	(829.07)	(894.99)
- (Profit)/loss on sale of property, plant and equipment and investment property (net)	33.28	(590.36)
- (Profit)/loss on sale/fair valuation of investments (net)	(733.84)	(65.33)
- (Profit)/loss on sale of stake in subsidiary of developmental projects segment	–	(415.61)
- (Gain)/loss on derivatives at fair value through profit or loss	(13.19)	21.81
- Employee stock option-discount forming part of employee benefits expense	190.84	151.00
- Non-cash items related to discontinued operations	49.44	166.92
- Business combination expenses	84.28	–
- Impairment of debt instruments	350.59	–
- Impairment loss recognised on non-current assets held for sale	3.93	–
- (Gain)/loss on de-recognition of lease liability/right-of-use assets	(1.85)	–
- Interest expenses/(income) related to discontinued operations	1.33	(2.10)
<b>Operating profit before working capital changes</b>	<b>18,524.82</b>	<b>16,073.47</b>
Adjustments for		
- (Increase)/decrease in trade and other receivables	(11,278.83)	(9,240.98)
- (Increase)/decrease in inventories	353.19	330.58
- Increase/(decrease) in trade payables and customer advances	3,134.23	6,819.06
- Cash generated from operations before financing activities	<b>10,733.41</b>	<b>13,982.13</b>
- (Increase)/decrease in loans and advances towards financing activities	6.92	(13,855.16)
- Cash generated from operations	<b>10,740.33</b>	<b>126.97</b>
- Direct taxes refund/(paid) [net]	(4,046.45)	(4,882.80)
<b>Net cash (used in)/from operating activities</b>	<b>6,693.88</b>	<b>(4,755.83)</b>
<b>B. CASH FLOW FROM INVESTING ACTIVITIES</b>		
Purchase of fixed assets	(3,436.82)	(4,307.38)
Sale of fixed assets (including advance received)	137.39	807.97
Purchase of non-current investments	(1,870.64)	(1,862.44)
Sale of non-current investments	2,245.29	653.36
(Purchase)/sale of current investments (net)	2,065.74	(3,032.80)
Change in other bank balance and cash not available for immediate use	1,439.82	(3,988.12)
Deposits/loans given to associates, JVs and third parties	(115.21)	(88.67)
Deposits/loans repaid by associates, JVs and third parties	17.69	43.75

## Financial capital

## Consolidated statement of cash flows

### for the year ended March 31, 2020

(₹ in Crore)

Particulars	FY20	FY19
Interest received	837.54	726.80
Dividend received from JVs/associates	12.53	19.44
Dividend received on other investments	101.60	236.91
Settlement of derivative contracts related to current investments	13.19	(21.81)
Consideration received on disposal of subsidiaries (including advance received)	–	67.00
Consideration received on disposal of JV	43.16	–
Consideration paid on acquisition of subsidiaries	(9,895.93)	(309.86)
Cash and cash equivalents acquired pursuant to acquisition of subsidiaries	210.72	33.05
Cash and cash equivalents (of subsidiaries) classified as held for sale (other than discontinued operations)	(14.34)	–
Consideration paid on acquisition of additional stake in a joint venture	(48.00)	–
<b>Net cash (used in)/from investing activities</b>	<b>(8,256.27)</b>	<b>(11,022.80)</b>
<b>C. CASH FLOW FROM FINANCING ACTIVITIES</b>		
Proceeds from issue of share capital (including share application money)	17.56	11.31
Proceeds from non-current borrowings [Note 50]	42,587.43	24,181.62
Repayment of non-current borrowings [Note 50]	(33,685.03)	(14,081.42)
Proceeds from other borrowings (net) [Note 50]	4,915.20	7,765.14
Payment (to)/from non-controlling interest (net) (including sale proceeds on divestment of part stake in subsidiary companies)	(60.05)	2,884.85
Settlement of derivative contracts related to borrowings	308.29	308.95
Dividends paid	(3,929.61)	(2,243.18)
Additional tax on dividend	(621.72)	(403.93)
Repayment of lease liability [Note 50]	(258.03)	–
Interest paid on lease liability	(162.79)	–
Interest paid (including cash flows on account of interest rate swaps)	(2,739.70)	(2,983.17)
Net cash (used in)/from financing activities	6,371.55	15,440.17
Net (decrease)/increase in cash and cash equivalents (A + B + C)	4,809.16	(338.46)
Cash and cash equivalents at the beginning of the year	6,460.23	6,798.69
Cash and cash equivalents for discontinued operations (classified as held for sale)	(151.44)	–
<b>Cash and cash equivalents at the end of the year</b>	<b>11,117.95</b>	<b>6,460.23</b>

## Notes:

- Statement of cash flows has been prepared under the indirect method as set out in the Indian Accounting Standard (Ind AS) 7 "Statement of Cash Flows" as specified in the Companies (Indian Accounting Standards) Rules, 2015.
- Purchase and sale of fixed assets represents additions and deletions to property, plant and equipment, investment property and intangible assets adjusted for movement of (a) capital work-in-progress for property, plant and equipment and investment property and (b) Intangible assets under development during the year.
- Cash and cash equivalents included in the Statement of Cash Flows comprise the following

(₹ in Crore)

Particulars	FY20	FY19
(a) Cash and cash equivalents disclosed under current assets [Note 14]	11,324.57	6,509.49
(b) Other bank balances disclosed under current assets [Note 15]	3,793.21	5,216.75
(c) Cash and bank balances disclosed under non-current assets [Note 9]	273.82	290.07
<b>Total cash and cash equivalents as per balance sheet</b>	<b>15,391.60</b>	<b>12,016.31</b>
Add: (i) Unrealised exchange (gain)/loss on cash and cash equivalents (reflected in statement of profit and loss)	(116.39)	(28.25)
Add: (ii) Unrealised exchange (gain)/loss on cash and cash equivalents (reflected in other comprehensive income)	(90.23)	(21.01)
Less: (iii) Other bank balances disclosed under current assets [Note 15]	3,793.21	5,216.75
Less: (iv) Cash and bank balances disclosed under non-current assets [Note 9]	273.82	290.07
<b>Total cash and cash equivalents as per statement of cash flows</b>	<b>11,117.95</b>	<b>6,460.23</b>

4. Previous year's figures have been regrouped/reclassified wherever applicable.

In terms of our report attached  
**For DELOITTE HASKINS & SELLS LLP**  
Chartered Accountants  
Firm's Registration No.117366W/W-100018 by the hand of

**S.N. SUBRAHMANYAN**  
CEO & MD  
(DIN 02255382)  
Chennai

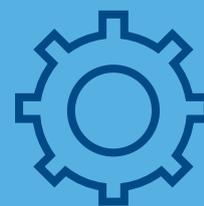
**SANJIV V. PILGAONKAR**  
Partner  
Membership No. 39826  
Mumbai

**R.SHANKAR RAMAN**  
Whole-time Director & Chief Financial Officer  
(DIN 00019798)  
Mumbai

**M.M. CHITALE**  
Independent Director  
(DIN 00101004)  
Mumbai

**SIVARAM NAIR A.**  
Company Secretary & Compliance Officer  
M. No. FCS 3939  
Mumbai

# Manufactured capital



We are a major frontrunner in almost all our business segments across geographies and our technology-driven manufacturing capabilities provide us a big competitive advantage.

We utilise all our resources prudently in line with global best practices. Also, innovation is integral to the manufacturing expertise that we have honed over the years. Consistent focus on innovation helps us operate and deliver high-quality products and services at competitive prices, maximising returns for all stakeholders.

## KEY HIGHLIGHTS OF FY20

\* During FY20 \*\*As on March 31, 2020

### PROJECT SITES

1,350\*

### MATERIAL CONSUMED

₹ 668,820 Million

### FACTORY OUTPUT

150,280 T\*

### OFFICES/ MANUFACTURING LOCATIONS

118\*\*

### STRATEGIC OBJECTIVES

S2

S5

S6

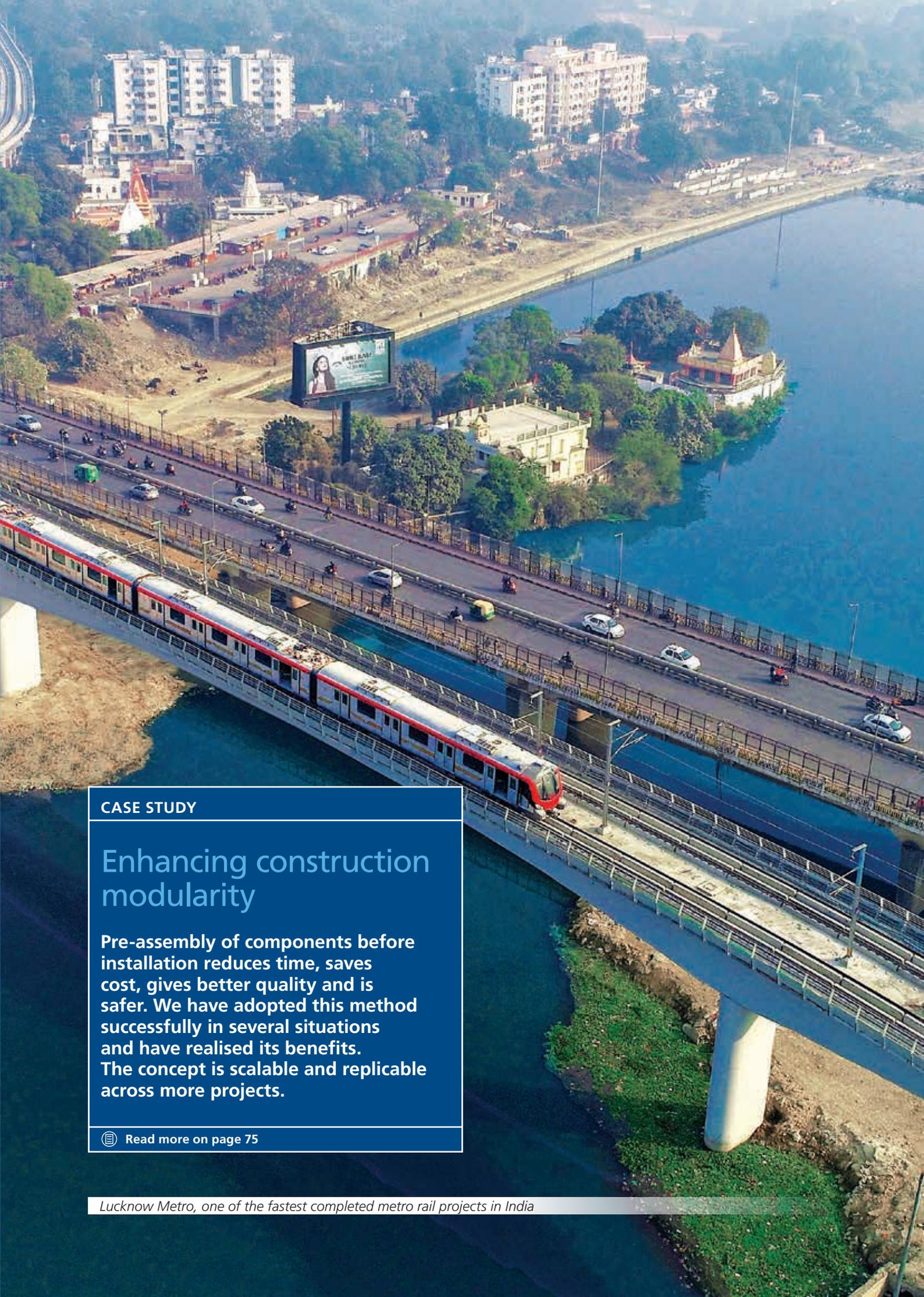
S9

### MATERIAL ISSUES

- Project risk management, quality of construction and EPC services
- Natural resource conservation
- Material sourcing
- Climate change mitigation and GHG emissions
- Adoption of renewables
- Energy efficiency

### SDGs IMPACTED





## CASE STUDY

# Enhancing construction modularity

Pre-assembly of components before installation reduces time, saves cost, gives better quality and is safer. We have adopted this method successfully in several situations and have realised its benefits. The concept is scalable and replicable across more projects.

 [Read more on page 75](#)

## Manufactured capital

# Our facilities

Our manufacturing facilities conform to best-in-class systems and processes that enable us to operate safely and sustainably.



## Heavy Engineering Manufacturing & Fabrication

### HAZIRA MANUFACTURING COMPLEX, SURAT

- Globally benchmarked, state-of-the-art, fully integrated manufacturing facility
- Possesses mega construction capabilities and captive 'Load-on' and Roll-on/Roll-off (RO-RO) jetties
- Provided Pressurised Heavy-water Reactor (PHWR) steam generators, end shields and fast breeder reactor vessels for India's nuclear power plants

- Home to one of the world's largest nuclear-grade forging facilities
- Has made L&T one of the few companies with end-to-end capabilities that extend from the making of steel to the manufacturing of finished products

**At our Hazira Manufacturing Complex, we manufactured the world's largest ethylene oxide reactor, the biggest coke drum and the largest coal gasifier**

### POWAI, MUMBAI

- Manufactures heat transfer equipment that has remained an unrivalled industry benchmark
- Specialises in manufacturing critical heat exchangers and pressure vessels
- Dedicated to the fabrication of process plant internals and equipment made of stainless steel and exotic metals

### RANOLI, VADODARA

- Dedicated to the fabrication of process plant internals and equipment made of stainless steel and exotic metals





## Electrical & Automation (E&A)

### MAHAPE

#### 'Unnati' building houses:

- A fully equipped systems assembly area and a separate air-conditioned systems-integrated Factory Acceptance Test (FAT) area
- Technology Centre
- Customer Service Centre
- Quality Assurance department
- A 24x7 Offshore Development Centre (ESS) with Green Card certification from Software Technology Parks of India (STPI)

#### 'Pragati' building houses:

- Modules for the manufacture of C-power and U-power Air Circuit Breakers (ACBs)
- Switchboards
- Shops for press working, moulding and tooling
- A 170 seating capacity dining hall
- An occupational health centre

### AHMEDNAGAR SWITCHGEAR WORKS (ASW), AHMEDNAGAR

- Houses factories of two business units – Electrical Standard Products (ESP) and Electrical Systems & Equipment (ESE)
- These factories manufacture a host of low and medium voltage switchgear products and customised electrical systems

### MYSURU

- Comprises a manufacturing facility and warehouse of E&A's Metering & Protection Systems (MPS) business unit

### COIMBATORE

- The engineering centre meets the requirements of electrical equipment and systems business
- The precision machining centre facilitates concurrent product development activity

- Has high-end automatic Computerised Numerical Control (CNC) turret punch presses, press brakes, roll forming, powder coating plant and a well-equipped testing facility

### VADODARA

- Houses modules for assembly lines for Air Circuit Breakers (ACBs) and Moulded Case Circuit Breakers (MCCBs), and shops for press working, moulding and tooling
- All critical-to-quality steps have error-free assembly
- The lines are equipped to produce circuit breakers of different frames and several ratings from 16A to 6300A

### TAMCO, MALAYSIA

- Produces reliable and high performance switchgear equipment



Mahape office

## Manufactured capital



### Defence

#### POWAI, MUMBAI

- Caters to the precision equipment manufacturing needs of the aerospace and defence industries
- Has a dedicated unit for design, simulation, prototyping and testing of various defence systems and software
- The Product Technology & Development Centre (PTDC, based in the Powai campus) has a multi-skilled workforce, with specialists spanning diverse technology domains
- The Submarine Design Centre undertakes extensive design and provides necessary support for submarine construction

#### HAZIRA, SURAT

- Among the world's top five best manufacturing complexes
- L&T's Hazira Manufacturing Complex (HZMC) is a state-of-the-art facility that combines cutting-edge manufacturing capability and system integration technology for an array of large and heavy equipment
- Uses niche technology to build submarine hulls and undertake outfitting and system integration of vessels
- A special steels and heavy forgings facility [JV with NPCIL in Public-Private Partnership (PPP) mode], one of its kind in India, caters to special steel for nuclear power plants, reactor pressure vessels and defence applications

#### Facilities in the ASC:

- 320 m long bays of 30 m and 15 m shops
- In-house robotic hull and turret welding, CNC machining, system assembly and integration, and a special purpose mobility test track facility to roll out the entire armoured platform from the complex
- ASC undertakes activities of complex assembly of optics, electronics, mobility systems, hydraulic systems, structural members and precision components, among others

#### Highlight of FY20

**HZMC's newest facility is the Armoured Systems Complex (ASC), a 50-acre, state-of-the-art greenfield manufacturing facility created to manufacture, integrate and test advanced military armoured platforms such as self-propelled howitzers, air-defence systems, infantry combat vehicles, future-ready combat vehicles and battle tanks.**

#### VISAKHAPATNAM

- We operate this facility under the Government Owned Contractor Operated (GOCO) model for a strategic programme

#### KATTUPALLI

- Designed for modular construction and repair of a wide range of defence ships and submarines
- Houses our warship design centre
- Equipped with automatic blasting and priming line, plasma-cutting machine and advanced hydraulic press / forming machines and large assembly workshops with heavy material handling facilities

#### TALEGAON

- Our Strategic Systems Complex (SSC) is a state-of-the-art facility at Talegaon (Pune) in Maharashtra
- One of the finest facilities for realisation of series production and proto versions of strategic weapon platforms, sensors and military engineering systems
- Specially designed to undertake manufacturing, assembly, integration and testing of a wide range of complex defence products

#### COIMBATORE

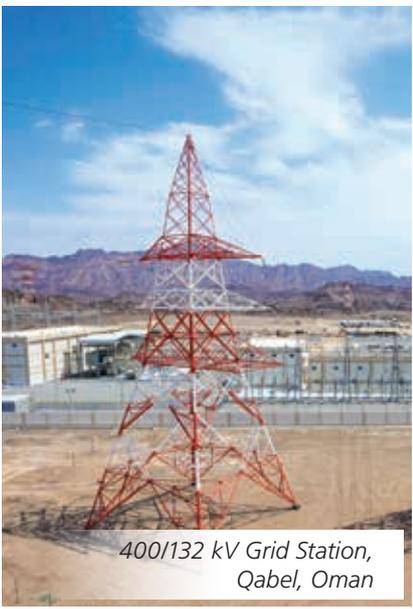
- Our Precision Manufacturing Systems Complex (PMSC) was created in 2010 to cater to the exacting and growing demands of precision products in the defence and aerospace sectors
- Addresses needs for missiles, Unmanned Aerial Vehicles (UAVs), aero-structures and space-related subsystems

#### Manufacturing facilities at Coimbatore

- The precision machining, fabrication, electro mechanical integration and testing facility is capable of serially producing and testing missile subsystems
- The two heavy precision shops are capable of fabrication, machining, heat treatment and painting of motor casings for diameter 2.8 m class and 3.2 m class of rockets
- Specialises in the manufacture of light alloy structures such as heat shields, inter-stages and base shrouds for all space vehicles launched in India
- The composite and aero-structure assembly shop is used to build composite airframes, aero-structures, including wings for fighter aircraft, as well as airframes for hypersonic vehicles
- The facility operates on a unique model called 'The PMSC Production System', which combines key insights from Theory Of Constraints (TOC), lean manufacturing and Six Sigma
- Using a flow and inventory management software (Symphony), the facility has demonstrated accelerated conversion of 'projects to products'
- L&T MBDA Missile Systems (LTMMMSL) has set up a dedicated missile integration facility in the SEZ area at Coimbatore for assembly, integration and testing of the missile launcher and missile subsystems
- This best-in-class facility addresses all requirements for missile integration, spanning 4 acres, including climate-controlled space



## Power Transmission & Distribution (PT&D)



400/132 kV Grid Station,  
Qabel, Oman

### PITHAMPUR, MADHYA PRADESH

- Capacity of 100,000 MTPA
- Produces galvanised steel components (both angles and plates) for a range of power transmission line towers
- Equipped with the latest CNC lines for fabrication of towers and microprocessor-based, temperature-controlled eco-friendly systems for galvanisation of tower members
- Has one of the biggest (13 x 1 x 1.5 m) galvanising baths in the industry

**100,000 MTPA**

Capacity at Pithampur,  
Madhya Pradesh

**40,000 MTPA**

Rolling mill at Puducherry

### PUDUCHERRY

- Manufactures standard steel components and timber beams for all formwork applications, including slip form and tunnel forms
- Manufactures all components required for Alufo — aluminium-pannelled modular formwork
- Houses one of our 50,000 MTPA transmission line tower works
- Equipped with the latest CNC lines for fabrication of towers and microprocessor-based, temperature-controlled eco-friendly systems for galvanising tower members
- Has one of the biggest (10 x 1.2 x 2 m) galvanising baths in the industry
- Houses a 40,000 MTPA capacity rolling mill to ensure availability of quality raw material for angles, channels and re-bars
- Certified with ISO 9001, ISO 14001 and OHSAS 18001 and accredited with the energy management certification — ISO 50001



## L&T Valves

### MANUFACTURING UNIT IN MALUMICHAMPATTI, COIMBATORE

- Occupies 24.66 acres and houses R&D offices, labs and facilities to manufacture gate, globe, check, ball, butterfly and plug valves
- Provides customised solutions for nuclear, defence and aerospace industries
- Operates Valves School, a training facility for customers
- Is a zero-discharge unit
- Meets the requirements of ISO 14001:2015 and ISO 45001:2018

### KANCHIPURAM

- Spans 18.93 acres and houses R&D offices and facilities to manufacture gate, globe, check, ball and butterfly valves
- Manufactures large-size valves
- Is a zero-discharge unit
- Meets the requirements of ISO 14001:2015 and ISO 45001:2018



### Highlight of FY20

**India's largest triple-offset butterfly valve – 100 inches – was manufactured in the Kanchipuram plant.**

## Manufactured capital



### L&T Hydrocarbon Engineering (LTHE)



Six Gas Production Modules and two mega Tie-in Platforms (7000 MT each) for Hasbah II fabricated at LTHE's Oman Facility

#### Modular fabrication facilities

- Located strategically at Hazira (on India's west coast), Kattupalli (on India's east coast), and Sohar (Oman)
- Have a combined annual capacity of over 200,000 MT
- Well-equipped to deliver complex modules, duly tested / pre-commissioned prior to delivery

#### Highlight of FY20

LTHE recently opened a new integrated manufacturing facility at Jubail in Saudi Arabia to cater to the local market

- Offers modular engineering, procurement and fabrication solutions for offshore and onshore projects, primarily in the oil & gas sector
- Fabricates and supplies modules and static equipment for the offshore oil & gas fields, refineries, petrochemical plants and fertiliser complexes
- Equipped to supply foundations and substation modules for offshore wind farm projects
- Provides year-round and on-time delivery with robust QHSE performance and zero punch list
- Delivers static equipment such as pressure vessels and columns for refineries, petrochemicals, fertiliser projects and other process industries
- Pre-qualified by major International and national oil companies, process licensors and technology companies and functions as a one-stop destination for module fabrication requirements



### Metallurgical & Material Handling

#### KANSBAHAL WORKS, ODISHA

- Has facilities for fabrication, machining, assembly, casting foundry and under carriage works
- Is an ISO-certified unit accredited with ISO: 9001-2008, ISO: 14001-2004 and OHSAS 18001-2007 certifications by DNV
- Manufactures a wide spectrum of critical industrial products for core sectors such as cement, steel, paper, power, mineral and railways

#### L&T'S ENGINEERING WORKSHOP (LTEW), KANCHIPURAM

- An ISO 9001-2008 certified workshop
- Undertakes fabrication and supply of plant and equipment, including sophisticated, custom-designed equipment components for core industries such as steel, power and refinery, among others
- Has been accredited with ASME U2 stamping for fabricating high-pressure vessels



Finishing Mill for Rourkela Steel Plant

## CASE STUDY

## Enhancing construction modularity

**Pre-assembly of components before installation reduces time, saves cost, provides better quality and is safer. We have adopted this method successfully in several project sites and have realised its benefits. The concept is scalable and replicable across more projects.**

### THE OBJECTIVE AND THE CHALLENGE

- Erection of 10 m long truss to support TG deck formwork
- Fabrication of trusses at the fabrication yard
- Site transportation to be placed in position
- Rebar work could be started only after completing the work of vibro-isolator
- Severe space constraint to assemble (36,32,25 diameter) rebar as the slab is at an Elevation Level (EL) of +16 m
- Installation of Penetration, Pre-stressing (PT) duct supports in business wall liner panel
- In the reactor building, octagonal wall around the cavity is lined by Stainless Steel (SS) liner welded to modules embedded in concrete
- Traditionally backing members (modules) are assembled into segments and installed before concrete, after concreting liner panels (50 nos. of 4 m height and 1.5 m width) are welded to the backing members at site

### INITIATIVES UNDERTAKEN

- A set of five trusses was assembled using bolts on the ground at the fabrication yard and lifted into position using a heavy duty crawler crane available at site
- Beam rebar cages in E-W direction, which are 13.7 m long and weigh about 18 MT, were assembled on the ground and lifted into position using the crawler crane with the help of strong back
- In Kudankulam Nuclear Power Plant (KKNPP) 3 and 4, the penetration and supports are installed as per approved drawings in the shop or outside the building and placed in position
- In reactor building #4, modules were assembled into 12 segments along with the liner at the fabrication shop and transported to site

### BENEFITS DERIVED

- Reduction in the number of components needed to be handled – from 45 to 9 – and work after positioning (at height)
- 50% of rebar was ready by the time the vibro-isolator was installed in position
- Improved quality
- Is safer as work is done at ground level
- Saves time
- Improved quality of welds
- Eliminated liner work needed after concreting of wall

### ACHIEVEMENTS

**₹ 5.87 Crore**  
Savings in costs

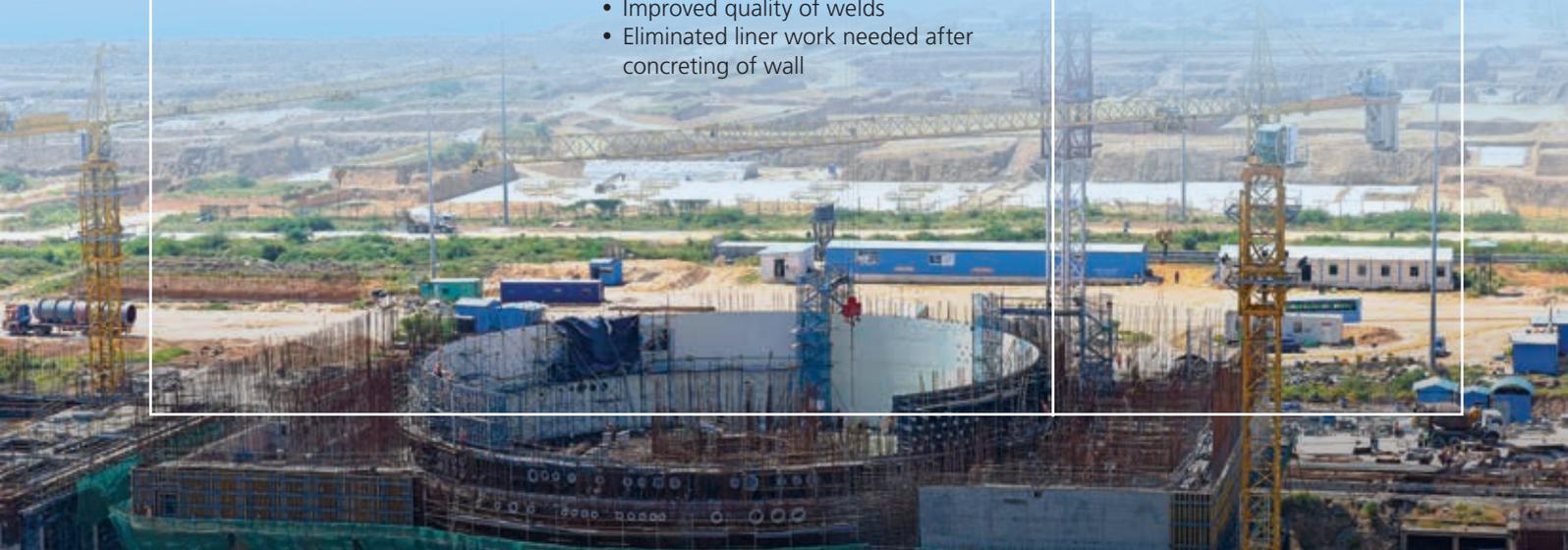
**3.5 months**  
Saved in building the reactor

**2.5 months**  
Saved in turbine building

**Overall quality excellence accomplished**

**Higher safety standards maintained**

This image is for representation purpose only



## Manufactured capital

### CASE STUDY

# Sieving of bedding and backfilling material for underground MS pipes with a mechanical sieving bucket attachment on an excavator

As per the design requirement of the project, bedding and backfilling of underground laid MS pipes should be using material less than 10 mm size. Undertaking the sieving activities manually led to very less productivity. Hence, we shifted to sieving the available excavated earth with a mechanised sieving bucket attached on an excavator.

#### THE OBJECTIVE

Completing pipe-laying work in Surya Water Supply Scheme, where MS pipe of large diameter needed to be laid in the Right of Way (RoW), along NH-8 and through some dense forest areas

#### THE CHALLENGE

The design requirement was that the bedding and backfilling of the underground MS pipes should be using material less than 10 mm size. Initially, we commenced the sieving activities manually. However, we eventually found that this strategy was making the entire activity costlier and more labour-intensive, as the earth being excavated was much coarser in nature. Therefore, a mechanised process was the need of the hour.

#### INITIATIVES UNDERTAKEN

We deployed a mechanical sieving bucket at our site, and installed an additional internal screen. This bucket screened all types of material directly on site. It is simple and compact and offers superior production (approx. 10 cu.m of screened earth in one hour with the deployment of one operator for the screener) compared to the conventional method. The material retained in the bucket is further used for backfilling the trench portion above the pipe's crown. Hence, the productivity of the bedding and backfilling team increases substantially. The excavated material can also be efficiently utilised.

#### ACHIEVEMENTS

- Achieved the required specification of backfill material with superior productivity
- Saved costs worth ₹ 1.56 Crore on account of procurement of backfill material from other sites, royalty charge, transportation and muck disposal charges
- Process becomes highly mechanised and therefore less labour-intensive
- Accomplished significant improvement in productivity:

Conventional method: 10 cu.m in 8 hours with four workmen



Improved method: 80 cu.m in 8 hours with one operator

This image is for representation purpose only



## CASE STUDY

## Fast turnaround of milestone heavy lift for Oman Oil Refineries and Petroleum Industries Company (ORPIC)

The Modification, Revamp and Upgrade (MRU) business unit of L&T Heavy Engineering was awarded a contract by ORPIC in April 2018 for Residue Fluid Catalytic Cracking (RFCC) unit upgrade at the Sohar Refinery, Oman.

### THE OBJECTIVE

The scope of this technically challenging project involved EPC, including supply of a new reactor, logistics and replacement of the existing reactor at site during Turnaround 2019 (TA2019), all-inclusive within 19 months. The construction comprised mechanical, heavy lift, piping, electrical, instrumentation and civil works.

### INITIATIVES UNDERTAKEN

- Removal of the old reactor and replacement with a new one
- The team led to a year-long process of detailed engineering, planning, site survey and evaluation of different options for heavy lifts within several constraints of the site
- A 1,600 MT Ringer Crane (PTC-35) was selected for heavy lifts of 1,670 MT in total with a single heaviest lift of 740 MT. The new RFCC reactor, along with related components, was fabricated in L&T's world-class fabrication facility at Hazira in Gujarat, within 15 months.

### ACHIEVEMENTS

The MRU business of L&T Heavy Engineering established a new industry milestone with the lift of 37 m long RFCC reactor weighing 740 MT to a height of 99 m and installing it at an elevation of 64 m.

### OUR ENDEAVOURS

#### DEVELOPMENT OF UNISTAGE RADIAL TYRE BUILDING MACHINE FOR TWO-WHEELER TYRES

The popularity of two-wheeler radial tyres is increasing, and the normal cycle of building revolves around two stages, with a machine for each stage. This costs customers more, with high cycle times to build a tyre.

This new product has the potential to change the perception of L&T Rubber Processing Machinery by the tyre building machinery industry, enabling the business to position itself as the leader in this category. We should also be able to expand to passenger radial tyre building machines and cover light truck Tyre Building Machines (TBM).

#### CONVERSION OF CONCRETE BOX PUSHING TO PIPE PUSHING AT TWIN LIVE RAILWAY CROSSINGS

The project scope included laying of MS pipes (1,850 mm ID, 10.5 mm thick) underneath twin railway lines spanning a ROU of 123 m. The Indian Railways were adopting the Relieving Girder methodology for twin railway crossing by the box-pushing method. Train halting charges and large capacity cranes for installation of girder/track made it expensive.

We converted the methodology of box pushing to pipe pushing. The carrier pipe diameter was reduced from 1,850 mm to 1,485 mm, the output increased by more than three times. Pipe pushing saved ₹ 10.64 Million and reduced execution time from 6-8 months to just 30 days.

#### IMPROVING OPERATIONAL EFFICIENCY THROUGH A SMALL OVERHEAD MOBILE CRANE

To facilitate the deck slab works for the viaduct portion of the Railway Bridge over Rupsha River in Bangladesh, the mini overhead mobile crane was used at the site. One mini overhead mobile crane is already in operation at the Khulna site and has been utilised to complete 21 deck slab spans. Another mini overhead mobile crane has been readied for the Mongla site.

**This led to savings of at least ₹ 4.8 Crore and 20% reduction in execution time.**

# Intellectual capital



At L&T, innovation continues to be integral to our product development, processes as well as people practices. Our innovative ideas, powered by advanced technology, enable us to deliver best-in-class projects, setting new industry benchmarks across our different businesses.

The digital platforms help us serve our customers better, emerge as a leaner organisation and drive efficiency across all our processes.

## KEY HIGHLIGHTS OF FY20

\*During FY20 \*\*As on March 31, 2020

### R&D SPEND

₹ 225.40 Million\*

### VALUE ENGINEERING PROJECTS

2,346\*\*

### PATENTS FILED

54\*

### PATENTS GRANTED

51\*\*

### STRATEGIC OBJECTIVES

S1

S5

S6

S8

### SDGs IMPACTED



### MATERIAL ISSUES

- Occupational health and safety of employees and contractors
- Project risk management, quality of construction and EPC services
- Climate change mitigation and GHG emissions



## CASE STUDY

# View EHS: Adopting smarter EHS approach and initiatives

**View EHS is a powerful digital solution in the realm of safety, available both as a web module and mobile application. Developed by the WET business division, it captures all relevant EHS data, compares it with baseline data and assigns Key Performance Indicator (KPI) scores to analyse EHS performance of sites in real time.**

 [Read more on pg 89](#)

*L&T has provided critical subsystems for most of India's space missions*

## Intellectual capital

Organisation-wide digitalisation initiatives during FY20 include:

- Increased use of digital collaboration tools such as Microsoft Teams and Virtual Inspections, leading to reduced travel and hence lower carbon footprint
- Adoption of digital tools such as Integrated Vehicle Management System, driving fuel savings
- The SWC Digital Team, developed a Proactive Project Monitoring Tool (from start to finish) in house. It manages approvals digitally (smart Signoff), monitors the completion of packages/files in a project, helps identify concern areas, draws responsibility and accountability for project stakeholders and generates timely alerts via SMSes/emails
- Use of Asset Insight, L&T's connected equipment platform, acquired a variety of operational, performance and health-related data from more than 11,000 construction equipment across various project sites connected to it, streaming real-time equipment data. Insights derived from this

platform have enabled us to increase equipment productivity, enhance capacity utilisation, right-size assets, improve fuel efficiency, reduce capital expenditure and much more.

- Enhanced use of Worker Induction and Skills Application (WISA) is an end-to-end digital solution for smooth on-boarding of blue-collar workers in our construction sites. This solution spans mobilisation, screening of records, KYC, health screening, skill grading, attendance management, performance records and observations, appreciations, violations, and training management.
- Introduced several EHS apps for the site execution team to help them create safe-to-start cards, enhance EHS observations, invite suggestions and so on. These solutions comprise prestart, near-miss reporting, EHS observations and Ib4U (Inspection Before Use) and have helped workmen analyse the risks involved in various activities. They have played an important role in providing a safe environment to test and evaluate procedures.

- Adopted a Quality Incident Report (QIR) app for reporting and closure of quality incidents. The app ensures quality effectiveness of projects by identifying and rectifying quality observations via proper workflow approval. It also helps avoid delays in handing over and reduces rejections by customers, and saves 20 to 30 days per project by addressing quality issues immediately.
- Implemented analytical dashboards to enhance efficiency across HR, finance, safety, quality and engineering functions. These dashboards enable the leadership team and department heads to monitor, control and focus on data-driven decision-making on operational parameters and functions.
- Used a Remote Monitoring System (RMS) to obtain real-time data of sites. It facilitates timely implementation of necessary interventions in operations.

## Buildings & Factories (B&F)



### Key initiatives during FY20

Actions	Description
<b>Deployed the Ib4U app</b>	Allows to inspect plant and machinery assets; provides tools used for periodic maintenance; and helps conduct third-party inspection, labour colony and other inspections
<b>Adopted the Conquer app (quality application)</b>	Facilitates conducting/raising inspection for pre-concrete check, post-concrete check, quality walkdown, and customer and executive feedback, among others
<b>Used the digital store app</b>	For creating indent request on mobile, issue and approve material, book daily cost in Enterprise Resource Planning (ERP) and so on
<b>Procube software</b>	Helps monitor the progress of projects
<b>Implemented FORM FIT</b>	A solution to track formwork panel and its repetitions



### Key projects

- Government Hospital & Medical College, Madhepura, Bihar
- Ford Global Technology & Business Centre, Chennai
- ITC Royal Bengal, Kolkata
- Police Bhawan – Signature Building, Lucknow
- Prestige Song of the South, Bengaluru
- Asian Paints Factory, Visakhapatnam

**Adopted Robotic Process Automation (RPA) for finance and plant and machinery functions to minimise human intervention and replace mundane work through bot.**

## Transportation Infrastructure (TI)



### Key digitisation initiatives during FY20

Actions	Description
<b>Workmen productivity and safety</b>	Adopted several EHS apps and digitalised several processes
<b>Employee training</b>	Virtual Reality Module for EHS training



### Key projects

- Rewa–Katni–Jabalpur–Lakhnadon Road Project – 4 Packages, 288 km, 4-lane, Madhya Pradesh
- Bijapur–Humnabad Road Project, 220 km, 2-lane, Karnataka
- Raipur–Bilaspur Road Project, 42 km, 4-lane, Chhattisgarh
- Hospet–Chitradurga Road Project, 108 km, 4-lane, Karnataka
- North–South Parallel Runway commissioned for Bangalore International Airport, Phases 1&2

## Heavy Civil Infrastructure (HCI)



### Key initiatives during FY20

Actions	Description
<b>E-Tap</b>	Tracking enabling structures using Radio Frequency Identification (RFID) technology for quicker mobilisation of temporary structures and improved reuse, resulting in reduced timeline and costs of projects
<b>QR-coded drawing</b>	Extensive use of QR-coded drawings ensures that the latest released drawing is provided at the site by enabling real-time drawing revision status tracking for site engineers. It has successfully enabled better communication between the site and design team and reduced rework
<b>Energy</b>	Implementation of a comprehensive dashboard for major ongoing projects, enabling real-time project progress update to all stakeholders
<b>Conquer — Online Request for Inspection (RFI)</b>	Implementation of field inspection digital quality RFI app, Conquer, leading to reduced paperwork, improved quality inspection and reduced approval timeline. The initiative is being extended to the client



### Key projects

#### Mumbai Trans Harbour Link 1

The Mumbai Trans Harbour Link (MTHL) is a road bridge (21.8 km length) that is currently under construction, connecting Mumbai with Navi Mumbai. After completion, it would be the longest sea bridge in India. Our HCI business is building Package 1 (10.38 km) and Package 3 (3.61 km) of this 21.8 km project. The first phase on MTHL 1 and MTHL 3 was erected in FY20.

## Intellectual capital

# Power Transmission & Distribution (PT&D)



### Key initiatives during FY20

Category	Actions	Description
Project monitoring	<b>Align</b>	An integrated project monitoring tool to track the progress of a project and support planning. It also has integration for visualisation in geospatial format.
	<b>Empower</b>	An integrated tool for project monitoring, including material tracking at site. It helps to handle material from issue to consumption at site with proper reconciliation. Also, it has integration for visualisation in geospatial format.
	<b>Video analytics</b>	A Point of Control (POC) through video analytics for identifying PPE, face mask and social distancing violations
Material tracking	<b>T-TRAX</b>	An RFID-based solution for tracking tower bundles across factories and site locations to improve tower-wise visibility, traceability and lot completion
	<b>Factory IOT</b>	Monitoring of Overall Equipment Effectiveness (OEE) through IoT data
Operations and Maintenance (O&M)	<b>Fibertrack</b>	App for ensuring tracking and monitoring of patrollers and O&M of around 16,300 km fiber network
Business development	<b>Customer Relationship Management (CRM)</b>	A module for managing leads and order pipeline
Risk management	<b>Enterprise Risk Management (ERM)</b>	Risk management of a project from the pre-bid stage and during the project execution stage



### Key projects

More than 1,900 ckm long transmission corridors were completed in FY20.

The prominent lines include:

- 765 kV Raipur – Jharsuguda TL for Sterlite
- 765 kV Ajmer – Bikaner TL for PGCIL
- 400 kV Dichipally – Nirmal TL for TSTRANSCO
- 220 kV Amargarh – Wagora TL for PGCIL
- Various 132 kV and 220 kV transmission lines in Madhya Pradesh, Jharkhand and Bihar



Qabel 400/132 kV Grid Station - Oman

## Water & Effluent Treatment (WET)



### Key initiatives during FY20

Actions	Description
<b>Bid management</b>	A web-based app to record and capture the entire process of tender and bid submission online, with workflow approvals for all financial and management decisions
<b>ERM</b>	A system to capture all technical and financial aspects of tender to analyse the risks associated, their probability and impact. This facilitates the preparation of a suitable mitigation plan
<b>Electronic Document Management System (EDMS)</b>	In-house developed engineering document management system to schedule documents, communication, transmittal, generate workflow/reports and store files, thereby facilitating document revision control for projects
<b>ConstZon</b>	A powerful catalogue management tool meant to drive standardisation and optimisation in the procurement process. It provides benchmark rates for all major services and materials that we procure, and guides the buyer to buy at the best price
<b>ePragati</b>	An online platform designed and developed by the WET business to monitor the operating projects. It monitors various processes to ensure that the project is planned and executed according to the customer's requirements. It includes scheduling, tracking, reviewing and managing the progress and performance of the project along with managing changes when required
<b>ViewEHS</b>	A mobile app with an online system to help teams across sites access all Standard Operating Procedures (SOPs) and forms for submission and verification, ensuring 100% safety compliance as per the standards
<b>Cognisite</b>	A server-based, mobile-enabled field supervision platform to integrate product quality and document management in one platform. It also synergises between the central quality and site execution teams



### Key projects

#### Upper Indravati Irrigation Project

The Upper Indravati lift canal system comprises electrical connectivity, pumping water from Hati barrage, eight rows of rising main, 43.26 km of gravity lined canal, including 164 inlined structures, 1,100 km of closed conduit distribution network pipeline along with an outlet management system. This mega project was planned to irrigate 26,248 hectares of higher land areas during the Kharif season across the predominately drought-prone areas of Odisha's Kalahandi district, promising a radical shift in the livelihood of the people by converting this region into one of the highest rice production basins.

#### Bansujara Irrigation Scheme

The project under Water Resources Department (WRD), Madhya Pradesh, involves the laying of 478 km of MS pipes, 8,862 km of HDPE pipes, laying and construction of one of the largest balancing reservoirs across the country with 0.25 million cu m capacity for handling the discharge of 35 cumecs, one pump house, two delivery chambers and 3,500 OMS outlets. This will help bring 75,000 hectares of land under irrigation in the Tikamgarh district of Madhya Pradesh. The project also achieved the lowest power consumption of 0.1 KW per hectare against the conventional 1 KW/hectare by economical design.

## Intellectual capital

# Smart World & Communication (SWC)



### Key initiatives during FY20

Actions	Description	Savings
<b>ProdoSpec</b>	A POC-approved catalogue of smart products for easy selection and finalisation of the technical requirement and approval for procurement	5 man-days per product ₹ 0.25 Million per project
<b>Smart quality inspection</b>	Real-time, paperless RFI — quality inspection request and inspection verifications, real-time dashboard on progress	More than a month per year Overhead expenses
<b>Smart sign-off</b>	Paperless proposal approval process for vendor offer from Supply Chain Management (SCM), operations, F&A and BU Head. It reduces the turnaround time and increases productivity.	Saves 50% time per file Doubles the productivity for on-time delivery of material
<b>O&amp;M incident management</b>	Helps to monitor edge devices and close the tickets on time with live manpower tracking and optimisation	20 man-hours per day
<b>Energy Efficiency Services Limited (EESL) project management app</b>	Complete end-to-end smart meter implementation solutions. Also allows handling of multiple vendor and field forces, multi-level approvals and a robust review system with real-time data. The app facilitated handling of 1 Crore meters in total in a short span of three years.	2+ months per year Overhead expenses



### Key projects

#### EESL

The objective is to design, supply, install, commission, integrate and maintain the Advanced Metering Infrastructure (AMI) for 5 Million smart meters, which are scalable up to 10 Million smart meters. EESL intends to deploy the AMI system with its auxiliary applications for the project implementation duration: 3 years design, development, integration and go-live, and FMS/O&M for 5 years from the date of go-live. The aim is to create a sustainable impact by increasing DISCOM revenues. Hence, some of the priority areas are increasing the billing efficiency and enhancing customer satisfaction

#### Hyderabad City Surveillance and ITMS project

The project's objective was the design, development, implementation and maintenance of an IP-based citywide CCTV surveillance system for Hyderabad city, covering the areas of Hyderabad and Cyberabad Police Commissionerates. Following project implementation, incidents of chain-snatching declined by 41%, burglary declined by 16%, murders in the city jurisdiction went down by 16% and fatal accidents reduced by 21%.



State Emergency Operations Centre, Odisha

## Power



### Key initiatives during FY20

Actions	Description
<b>Embracing AI</b>	A bot based on Robotic Process Automation (RPA) to provide rate contract PR file to create a comparison sheet. This technology also enables us to validate and verify logistics invoices.
<b>Improving attendance system</b>	Adopted a contactless face recognition attendance system for workmen
<b>Car invoice verification</b>	Hired a car invoice verification system, which uses GPS data
<b>IoT-enablement</b>	Undertook IoT-enablement of 53 construction machines and 300 welding machines
<b>Smart Glass</b>	Deployed Smart Glass to undertake progress monitoring of projects



### Key projects

- Achieved commercial operation for the first unit of 2 x 660 MW Khargone ultra-supercritical thermal power project in Madhya Pradesh
- Commercially operationalised the second unit of 2 x 660 MW Chhabra supercritical thermal power project in Rajasthan
- Commercial operation achieved for 400 MW Bibiyana III gas-based combined cycle power plant in Bangladesh



Khargone ultra-supercritical thermal power project

## Intellectual capital

# Heavy Engineering



### Key initiatives during FY20

Actions	Description
<b>Employee safety</b>	Conducted safety awareness training for employees using VR technology
<b>Implementing IoT</b>	Undertook IoT-enabled smart manufacturing across several projects
<b>Customer engagement</b>	Observed customer-centricity week wherein key customers addressed our employees on a virtual platform and we organised virtual tours and shop audits for our customers
<b>Quality checks</b>	Conducted online inspection of projects



### Key projects

#### India's heaviest hydrocracking reactor for HPCL – 1,858 MT

Hindustan Petroleum Corporation Limited (HPCL) Visakh Refinery awarded a contract to L&T Heavy Engineering for a hydrocracking reactor in September 2017 for its Full Conversion Hydrocracker Unit (FCHCU) Modernisation Project. The team used the Submerged-arc Welding (SAW) process for welding heavy thick shells and Electrostatic Strip Cladding (ESSC) for overlay in shells head and nozzles. The Heavy Engineering team succeeded in optimising the delivery time by meticulously planning and implementing digitalisation across the welding and fabrication processes using the latest smart welding stations.

#### 16 ARDS reactors dispatched to ADNOC, Abu Dhabi before contractual delivery date

We received an order from Chicago Bridge & Iron Company (CB&I) for Abu Dhabi National Oil Company (ADNOC, UAE) for supply of ARDS reactors for a crude flexibility project in April 2018. Improvements such as the use of innovative fixtures, process digitalisation and station-based concept, among others, were initiated to optimise the overall manufacturing cycle. We dispatched all 16 reactors ahead of schedule, including the last lot (four equipment), which was dispatched during the COVID-19 lockdown, in close coordination with the clients, the shipping agency, the government and port authorities.



Ammonia Converter for HURL, Barauni

## Defence



### Key initiatives during FY20

Actions	Description
<b>Inspection Call Logging System (ICLS)</b>	A GPS-enabled system to manage field inspection calls across different locations
<b>Integrated Gun Management System (IGMS)</b>	A comprehensive programme management system, aimed at external and internal supply chain visibility and project management for K9 Vajra
<b>Confined space monitoring system</b>	A LoRA-based people tracking system is used in a confined space to track people, their approximate location and sudden fall or no movement for safety
<b>Tool Crib</b>	Digitisation of the tool store with the use of QR code to track the issue and receipt of returnable tools
<b>CHATUR</b>	An AI-enabled chatbot for HR processes



### Key projects

- Successfully delivered multiple weapon launch systems (land and sea), Engineering systems and missile systems to the Indian Armed Forces
- Delivered 44 K9 Vajra-T self-propelled Howitzers ahead of schedule during the year, having reached a peak of 10 deliveries a month, with the team at ASC Hazira ramping up operations
- The Kattupalli Shipyard attained the globally unique distinction of complete sea acceptance trials of OPV5 on its maiden sea sortie and cut the build time to less than 20 months from the keel-laying
- Delivered two offshore patrol vessels and five interceptor boats to the Indian Coast Guard

## Electrical & Automation (E&A)



### Key initiatives during FY20

Actions	Description
<b>Employee safety</b>	Conducted safety awareness programmes using VR
<b>Customer service</b>	Utilised our AR platform to build a guided service module for the field service technicians to enable reliable service delivery and ensure higher product uptime for customers
<b>Leveraging RFID</b>	Deployed RFID to undertake asset lifecycle management
<b>Driving automation</b>	Deployed 11 RPA-based bots to carry out different functions
<b>Employee engagement</b>	Organised factory visits for employees using VR technology

The E&A business has acquired 45 patents, six designs, 77 trademarks and 10 copyrights.



## Intellectual capital

# L&T Hydrocarbon Engineering Limited (LTHE)



### Key initiatives during FY20

Actions	Description
<b>Digitalising workmen permits</b>	Implemented an electronic Permit to Work System (ePTW) for paperless permits to workmen in yards and project sites
<b>HSE Credibility Mobility app</b>	Adopted the HSE Credibility Mobility app at project sites to record HSE related Unsafe At/ Unsafe Conditions (UA/UC) incidents
<b>Implemented Marine Integrated Transport Planning System (MITP)</b>	Helps track people and material at offshore project sites
<b>Adopting EPSILON</b>	Implemented an integrated project management system to track progress of projects
<b>Vendor engagement</b>	Adopted the SAP Ariba programme for vendor management
<b>Smart Glass</b>	Implemented SMART Glass/Merge reality solution for remote inspection, supervision and management



### Key projects

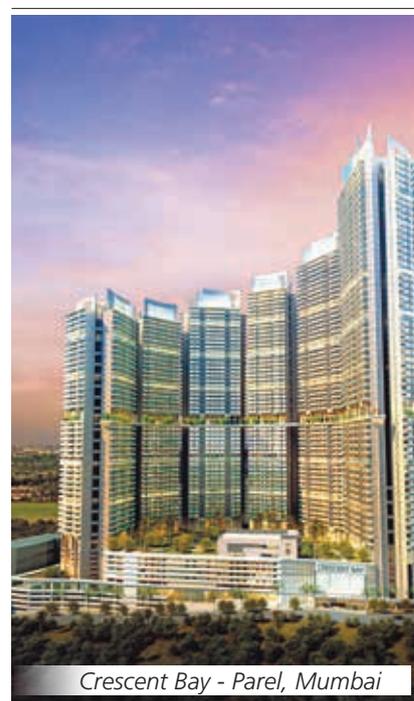
- Partial mechanical completion for Hasbah II project of Saudi Aramco
- Completion of ONGC's Bassein development three-well platform and pipeline project
- Completion of ONGC's Neelam Re-development and B173AC project
- Phase-2 of the Coal Bed Methane Development Project at Shahdol in Madhya Pradesh for Reliance Industries
- Commissioning of Syngas Phase 2 Project at Kochi for air products involving expansion of gas separation facility based on cold-box technology and laying

## L&T Realty



### Key initiatives during FY20

Actions	Description
<b>Deploying iBMS</b>	Started providing digitally most advanced office spaces using iBMS
<b>Adopted the MS Project app</b>	Helps update project schedule online in a timely manner
<b>Implemented the MIS dashboard</b>	The dashboard uses Microsoft PowerBI to provide accurate, real-time information
<b>Centralising sales data</b>	Migrated the presales and sales activities to a cloud-based network
<b>Marketing solutions</b>	Adopted flip book solutions for the launch of projects



## CASE STUDY

## View EHS: Adopting smarter EHS approach and initiatives

**View EHS is a powerful digital solution in the realm of safety, available both as a web module and mobile application. Developed by the WET business division, it captures all relevant EHS data, compares it with baseline data and assigns Key Performance Indicator (KPI) scores to analyse EHS performance of sites in real time.**

### THE CHALLENGE

Our construction projects in India have their own set of hazards, risks and impact on the environment, depending on geography-specific reasons. Identifying these hazards and controlling the risks associated with them plays a vital role in executing projects safely. The EHS team assists the projects team in identification, risk assessment and implementing control measures at the sites through Integrated Management Systems (IMS).

### INITIATIVES UNDERTAKEN

We approached this problem in a holistic manner. Instead of attacking each process and document separately, we started working on a

single document, which is the starting point of all EHS activity in the project – EHS objectives. These objectives are set following a SMART Approach, i.e., they are specific, measurable, attainable, realistic and time-bound.

An EHS performance management system should not only monitor the end results, but also capture a wide range of proactive controls implemented by the project site. View EHS ensures this with the six KPIs known as '6 senses of EHS' that focus on the effectiveness of implementation.

The six KPIs are IMS implementation and documentation, training and EHS review meets, incident communication, investigation and Corrective and Preventive Action (CAPA) online Non compliances and observations and

compliances, proactive measures and environmental performance. This unique system of scoring provides a credible picture of how a project has performed based on the overall implementation of the IMS and achievement of EHS objectives.

The web module and mobile app is implemented across all our sites, i.e., around 250 sites and for 4,587 users. The initiative has also been implemented in the SWC business. This shows that it can be scaled up and replicated in all L&T sites. We have successfully received copyrights for View EHS from the Government of India.

Status before improvement	Status after improvement
All reports on paper	All reports digitalised
Manual escalations of issues	Escalations matrix incorporated in the systems, which helps us highlight the EHS issues to the top management via auto-generated escalation mail communications for immediate resolution.
Responsibilities and accountabilities vaguely defined	The EHS system precisely defines the responsibilities and accountability of everyone for system compliance based on the observations raised on their site activity for timely closure.
Key performance index manually calculated and reported	Digitalised KPI - All the major EHS key parameters are linked together to monitor the cluster/site EHS performance through KPIs. Automatic performance chart will be formed based on the cluster/site input. Data can be viewed and reviewed by the leadership team at any time from the system.

### ACHIEVEMENTS

Paper saved  
**29,47,568** sheets

Man-days saved  
**43,944**

Trees saved  
**353**

Financial savings  
**₹ 2.20** Crore

By saving trees, we helped produce **91,780 lb** of oxygen annually

## Intellectual capital

### CASE STUDY

# Enhancing indigenous expertise in tyre building

**We have forayed into making state-of-the-art unistage radial Tyre Building Machines (TBMs) and for this purpose, we needed a unistage carcass drum of our own.**

#### THE CHALLENGE

The L&T Rubber Processing Machinery (LTRPM) team identified a unique market for radial unistage TBMs that was dominated by European manufacturers. The demand increase for radial tyres and the need for a locally made unistage tyre building machine had many challenges. The prominent one was that the technology was not available in India to build advanced high-accuracy machines. Even such machines had to depend on a unique carcass drum that was patented by few European and US companies. The use of such drums on our machines would make us uncompetitive.

#### INITIATIVES UNDERTAKEN

Our team of engineers identified this need and innovated a unique unistage tyre building drum that combines the advantages of reduced cycle time of a prior art unistage drum and the mark free tight bead wrap of a still prior art machine that is very slow on the cycle time.

This invention provides us a unique advantage of being or defining a new state-of-the-art unistage drum, which was also presented as a technical paper in the International Tire Tech Expo in Hanover, Germany in 2019.

#### ACHIEVEMENTS

New Intellectual property rights (IPR) generated Patent Cooperation Treaty (PCT) applied 'tire building method and apparatus' and we obtained a favourable report from the ISR. This paves the way for selling our own TBM with our own drums. Customers benefit from reduced cycle time and mark free tight bead wrap. This machine can be used for all motorcycle and passenger car radial tyres from 12 inches through 22 inches bead diameter.



## CASE STUDY

## Leveraging a Differential Global Positioning System (DGPS)

Implemented by our WET division, DGPS provides positional corrections to GPS signals. It uses a fixed, known position to adjust real-time GPS signals to eliminate pseudo-range errors.

### THE CHALLENGES

While undertaking the extension of the Lake Victoria project package II, the most time-consuming task was shifting of survey equipment. The package has around 1,000 km pipeline. While using GPS, several errors can take place, namely orbital error, satellite clock error, multi path error and human error. GPS can be used in places where less accuracy is required, such as driving navigation.

But in offshore construction, rig positioning and highly critical areas, GPS is not recommended.

### INITIATIVES UNDERTAKEN

In this situation, we decided to use DGPS for accurate positioning. DGPS corrections improve the accuracy of position data and do not in any way impact results that are based on speed data, such as brake stop results. By the usage of DGPS, with one set up of base

station on a day, 20 km radius area was covered without any shifting of survey equipment. This led to the saving of equipment shifting time, accurate results and appreciations from the customer.

### ACHIEVEMENTS

- Savings of 200 days
- Two-third reduction in total costs
- Reduction in transportation charges

### OUR ENDEAVOURS

#### AUTOMATED CRAWLING CAMERA FOR INSPECTION OF JOINTS AND ALIGNMENTS OF RCC NP4

Our team at WET Business deployed a combination of advanced robotics and closed circuit cameras to provide an efficient method of testing the work completed. They conducted mirror test, hydro-testing in the existing method and mounted CCTV cameras on a small van for inspection of drives. Major advantage of this method is that it reduces time and effort to minimum without compromising the authenticity of the testing process.

The visual image of faults helps in assessing the accurate extent of rectification required, which saves a lot of time. As there is no excavation required and workmen need not enter

the pit to assess the damage, it provides with a solution, which is far safer. As the customer visually assesses the situation of the drive, it instills the much-needed confidence in them regarding L&T's execution practices. The method has been scaled to cover every aspect of the entire project and its easy steps make it replicable in all the sewerage pipe laying projects.

#### Key achievements

- Savings of ₹ 129 per meter testing
- Savings of 3.5 days for each testing

#### USING GOOGLE MAPS (MY MAPS)

Our team at WET Business provided a dynamic pipeline to every member of the project by using Google Maps (My Maps). The georeferenced pipeline network aimed to reduce daily travelling cost at the Moga pipeline network.

This network spans roughly over 250 sq km, encompassing three blocks of Moga district in Punjab. This certainly makes travel for a single section in charge cumbersome. A satellite view of the pipe-laying location facilitates better planning and coordination and makes travel redundant in many instances. The team customised Google Maps (My Maps) as per the project scope. The developed pipeline network made it accessible to travel to the exact location through the correct route.

#### Key achievements

- Savings of ~ ₹ 1.1 Million in the entire project
- Reduction in travelling time
- Easy navigation
- Prior knowledge of congestion during pipe laying

# Human capital



To drive operations in a challenging and ever-evolving business landscape safely, reliably and efficiently and to deliver our projects on time and within budget, we hire and retain high-performing and diverse people with the right skills and experience.

Over the years, we have crafted a culture of continuous learning and empowerment with emphasis on transparency, efficiency and empathy. This strategy has helped us accelerate our corporate evolution to newer horizons of growth and opportunity. Our teams continue to hone their multi-disciplinary skills, with encouraging results.

## KEY HIGHLIGHTS OF FY20

\*During FY20    \*\*As on March 31, 2020

### PERMANENT EMPLOYEES

48,823\*\*

### ENGINEERS

36,422\*\*

### TOTAL TRAINING HOURS

>7 Million

### SAFETY TRAINING HOURS

>5.1 Million

### STRATEGIC OBJECTIVES

S2

S7

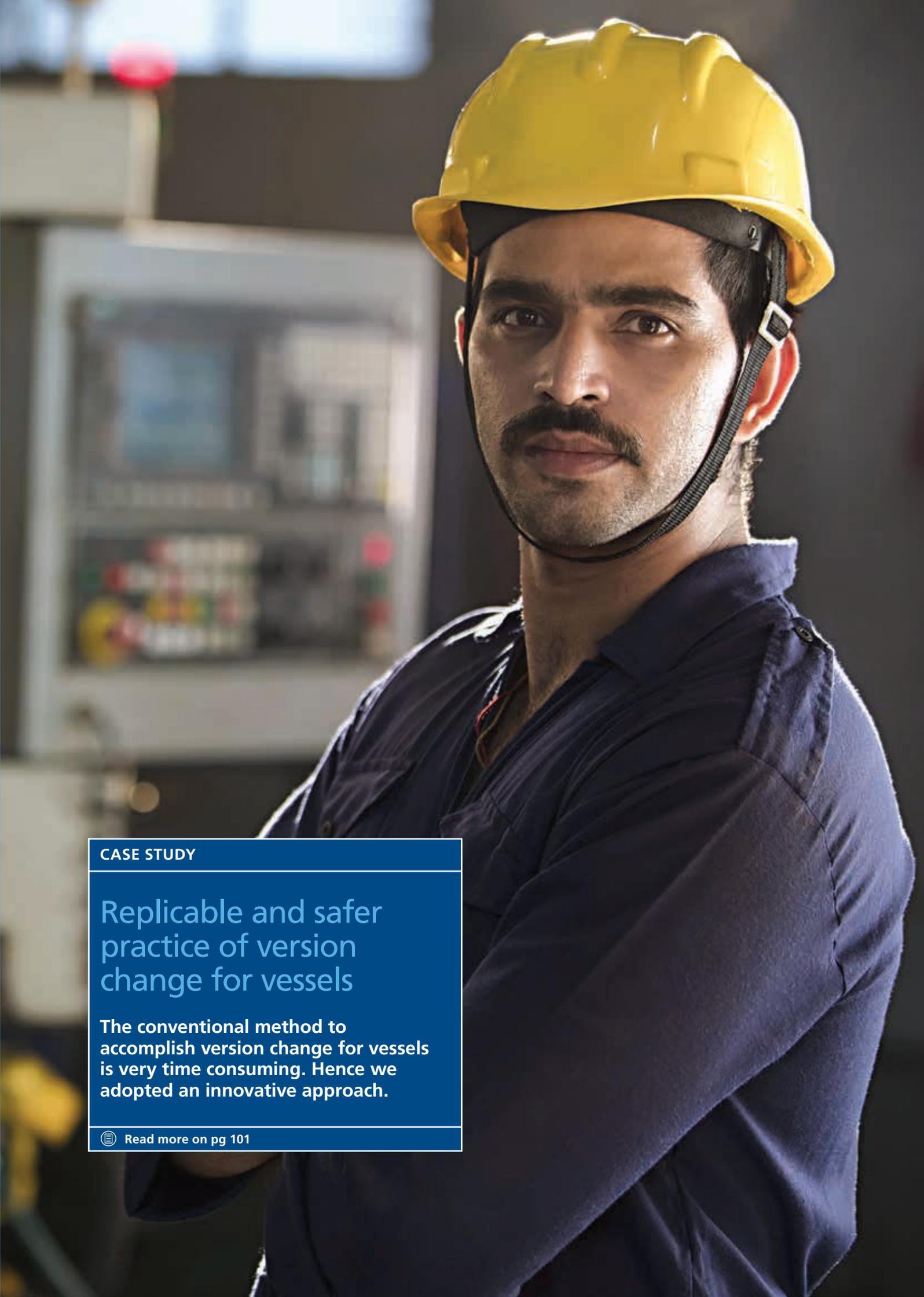
S10

### MATERIAL ISSUES

- Occupational health and safety of employees and contractors
- Talent attraction and retention
- Labour management

### SDGs IMPACTED





#### CASE STUDY

## Replicable and safer practice of version change for vessels

The conventional method to accomplish version change for vessels is very time consuming. Hence we adopted an innovative approach.

 Read more on pg 101

## Human capital

### SCALING THE LEARNING CURVE

At L&T, our business aspirations are firmly rooted in our capability-building programmes and practices that provide us with a steady pool of best-in-class professionals, managers and leaders.

To address the dynamic and complex demands of the business, we have, for a long time, been investing in the continuous and world-class capability development of our talent pool. Our industry-leading Learning & Development (L&D) efforts are widely respected.

In our efforts to make learning cutting-edge and contemporary, we have partnered with reputed global schools and experts, including INSEAD, Ross Business School, Harvard Business School, IITs, IIMs, SDA Bocconi, Cranfield School of Management, University of Texas, Austin, RICS UK and NICMAR. Programmes and learning interventions are carefully curated to maximise learning in line with the current and future business needs identified through robust internal processes. These efforts at the corporate level are supplemented by equally comprehensive programmes deployed in the respective businesses to address specific needs.

Our L&D practices have enabled us to step up our efficiency and our performance excellence has been recognised by several prestigious awards such as:

- Brij Mohan Munjal Award for Business Excellence through Learning & Development for the 7-Step Leadership Pipeline Development Programme
- SHRM Award for Developing Technology Leaders
- People Matters Awards for Best in L&D Technology & Analytics

### OUR INSTITUTIONS

- The Leadership Development Academy at Lonavala
- Institute of Project Management at Vadodara and Chennai
- Corporate Technology and Engineering Academies at Madh and Mysuru
- Power Training Institute at Vadodara
- Engineering Design & Research Centres at multiple locations
- Switchgear Training Centres
- Safety Innovation School at Hazira and Kanchipuram

These institutions, among many others, are considered to be role models and have been emulated widely.

### TRAINING OUR PERSONNEL DURING THE LOCKDOWN

We have always pushed the envelope of digitalisation of learning to attain better ROI, scale and reach. Our ATLNext (an advanced version of our Any Time Learning platform) and other microlearning platforms that use the latest developments in machine learning and gamification provide advanced and learner experience and enhance learning uptake. Our leadership in digitalisation has enabled us to provide a relevant and meaningful learning experience to all our employees, even while working remotely.

Promoting learning on ATLNext

**21,983\***  
Unique learners

**139,516\***  
Training hours

\*During FY20

With the COVID-19 scenario still evolving, the Corporate HR, Learning & Development team at L&T has actively engaged with partners for redesign and roll-out of learning offerings on robust and user-friendly virtual mediums. These initiatives ensure the continuity of the learning culture in our Company as well as increase the engagement of employees with focus on continuous upskilling. Specific initiatives, tailored to business needs, were also designed and rolled out, using the consulting capabilities of the HR fraternity. At the same time, the uptake and use of ATLNext increased rapidly. There was a huge spike in demand for online, self-paced programmes, in both general as well as business-specific areas.



## Talent development in L&T is broadly categorised into 3 archetypes



**BUSINESS LEADERSHIP**



**TECHNICAL LEADERSHIP**



**PROJECT LEADERSHIP**

### **BUSINESS LEADERSHIP** (Corporate HR, Learning & Development)

- A robust 7-step leadership pipeline development model has been institutionalised for more than a decade.
- We partnered with world-renowned domestic and international B-schools such as INSEAD, Ross Business School, Harvard Business School and IIM Ahmedabad, among others, for this initiative.
- At every step, instructor-led training is blended with online learning and coupled with rigorous high-impact Action Learning Project (ALP).
- Includes several core development programmes, ranging from the supervisory up to the senior management cadre
- We have partnered with top premier domestic B-schools, such as IIM B, IIM C, XLRI, IIT B and NMIMS for conducting these programmes.
- We conduct a wide range of competency development programmes, accreditation programmes and other strategic programmes to cater to niche, contemporary and upcoming skills.
- These programmes are specifically linked to our development centre framework of competencies, specific business needs and our future outlook.
- Our Centre of Excellence caters to teams at the corporate level, with internal and external trainers meeting the diverse needs of our businesses.

- Programmes organised by this Centre include Value Engineering, Lean Six Sigma and NEBOSH & IOSH (specialised programme for safety professionals).
- We introduced the micro-learning platform to facilitate learning-on-the-move for our people.
- This micro-learning platform enables bite-sized learning that is reinforced and adapted to each employee.
- The app nudges employees to learn by continuously challenging them with important workplace scenarios.
- A fully stocked library with job aids acts as a ready reckoner on the job, while gamification encourages and motivates the learners.

### **TECHNICAL LEADERSHIP** (Corporate technical training)

- Includes two training academies called Corporate Technology and Engineering Academy (CTEA) in Madh and Mysuru, which were created to provide learning support to businesses to make their employees acquire knowledge and skills in technical, functional and business domains.
- CTEAs make young engineers (JETS/GETs/PGETs) job-ready by providing hands-on technical training in specially set up workshops/labs.
- The academies also take care of technical competency building of practicing engineers by organising domain-related technical training programmes relevant to our businesses.

- Technical programmes, including certification programmes in the areas of manufacturing, construction and digital technologies, are offered in collaboration with training partners, which includes academic institutes such as IITs and premier engineering colleges.

### **PROJECT LEADERSHIP** (Institute of Project Management)

- The Institute of Project Management (IPM) was established in the year 2008 on the sprawling 115-acre L&T Knowledge City campus in the city of Vadodara.
- The institute was set up with a vision that is directly linked with our Company's vision to be a global major in the area of projects.
- Employees wishing to pursue the 'project management' career path benefit from the specifically curated programmes with international partners such as SDA Bocconi, Cranfield School of Management and University of Texas, Austin, among others.
- The institute conducts specific skill-based programmes such as Quantity Surveying with RICS UK, Excellence in Infrastructure and Construction Management from National Institute of Construction Management and Research (NICMAR) and cost engineering programmes to meet the requirements of AACE (Association for Advancement of Cost Engineering), US.

## Human capital

### DEVELOPMENT CENTRES

Our core philosophy of talent management has always been to internally build a pool of leaders to fuel our growth plans. Nearly all business and function heads at L&T today have grown from within. This is spearheaded by the Leadership Talent Assessment Development practice which, since 2001, has conducted 18,000+ assessments to identify leadership potential and help craft development plans.

The Development Centres (DCs) are the fulcrum around which our leadership

development efforts revolve. A typical DC is a 2-day in-person process in which multiple participants are assessed by highly trained assessors/developers in a simulated environment through highly reliable and valid tools and methods for maximum objectivity. The multiple data points are integrated into a comprehensive report and shared with the participant in a detailed feedback session. Subsequently, the participants are helped to formulate an Individual Development Plan (IDP), which becomes the focal point of the leadership development efforts of the individual.

**In FY20, more than 80 DCs were conducted, encompassing 700+ participants and 800+ online assessments.**

From FY21 onwards, responding to the changed context, the DCs have been migrated from being in-person to being fully virtual without compromising on the quality and sanctity of the process. This will pave the way for scaling up the leadership development practice and will widen the talent pool for our current and future business needs.

Cadre-wise distribution of training (hours/employee)		
	FY20	FY19
Covenanted	23.26	19.9
Supervisor	17.9	20.4
Executive	20.31	23.9
GET	480	480

## Our values, our priority

Our overarching objectives focus on individual dignity, respect for human rights and professional conduct to sustain and grow with a long-term roadmap. We are committed to operating ethically and complying with the United Nations (UN) Universal Declaration of Human Rights, the 10 UN Global Compact (UNGC) principles and the applicable Core Conventions on Labour Standards of the ILO.

Our Code of Conduct upholds human rights and practices, along with our relevant policies and systems for effective implementation. From the prohibition of child labour and forced or compulsory labour to encouraging non-discrimination, the policies encompass diverse areas.

We acknowledge the right of all employees to form and join a union,

as stated in the CoC, which is available to all team members through the ATLNext portal. The Industrial Disputes Act stipulates that the minimum notice period for operational changes is mandated as 21 days.

Our investment and contract documents with sub-contractors enclose clauses on human rights. It is mandatory for all new suppliers and vendors to sign a CoC as a pre-registration requirement. This encompasses financial, environmental and social aspects, including human rights, wages and good labour practices.

Over 43,000 suppliers and vendors have signed the CoC so far. We lay emphasis on strict adherence to these clauses within our premises and project sites. We have put in place a robust grievance-handling mechanism to address concerns related to our labour

practices and human rights. Besides, we also conduct due diligence of our suppliers and contractors to ensure that they comply with our CoC.

We regularly appraise our security personnel. During the reporting year, there were no recorded grievances related to the security personnel's breach of human rights at our operations. There were no fines or non-monetary sanctions for non-compliance related to human rights or labour practices; no cases of child labour, forced or compulsory labour or discrimination; and no violations involving the rights of indigenous people, during the reporting period.

# Thriving on diversity and inclusion

We celebrate the diversity in our talent pool cutting across the barriers of race, gender, nationality, caste and age. Simply put, our culture is truly inclusive. Our culture encourages cross-pollination of ideas and perspectives and challenges the 'business as usual' approach to seek feasible solutions to concerns that really matter. Diversity also fosters a wider network for observing and analysing emerging trends.

**We are an equal opportunity employer, and the male to female remuneration ratio is 1:1.**

No cases of discrimination were reported during the year. Our Board members are Indian nationals, above the age of 50, with two female members.

## PROVIDING A WORK-LIFE BALANCE

**127** employees

Maternity leave

**81%** employees

Returned to work after maternity leave

**57%**

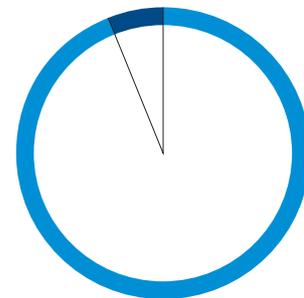
Of the employees returned, remained employed at our Company

All above figures are for FY20

We have created a unique platform 'Renew' that empowers female professionals to resume their journey in the corporate world following a maternity and child-rearing break.

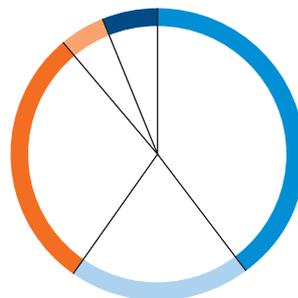
There is also a stringent redress mechanism (under the Protection of Women's Rights at Workplace Policy) to look into complaints from female employees. We have constituted apex and regional complaints committees to address specific cases of sexual harassment at the workplace, if any.

**Gender-wise workforce distribution: FY20 (%)**



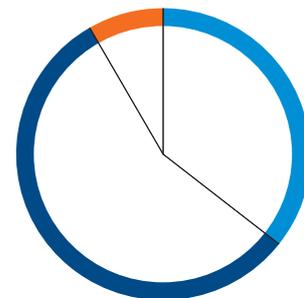
Male 94.02  
Female 5.97

**Cadre-wise workforce distribution: FY20 (%)**



Covenanted 39.95  
Supervisor 19.84  
Executive 29.24  
GET/JET 5.16  
Unionised 5.90

**Age-wise workforce distribution: FY20 (%)**



Below 30 35.67  
30-50 56.18  
Above 50 8.15

**Distribution of new joinees and attrition**

Category	New team members	Attrition
Male	6,093	4,753
Female	648	381
Below 30	4,582	1,993
Between 30 and 50	2,043	2,574
Above 50	116	567

## Human capital

### OCCUPATIONAL HEALTH AND SAFETY

Providing safe and healthy workplaces across campuses and project sites remains our topmost priority. For this purpose, we have deployed a structured process for continual improvement in our safety performance. Our safety systems are extended to contractors working at our premises and we encourage our suppliers to set up safety management processes at their premises.

Our corporate EHS Policy demonstrates our continued commitment to an accident-free workplace, along with the management framework to be deployed across businesses. To stay relevant, the policy is periodically reviewed by our senior management.

Our businesses conform to international certifications such as ISO 14001:2015 (Environment Management System) and OHSAS 18001:2007 standards. As a conscious strategy, we have already commenced our transition to the recently released standard of ISO 45001:2018 (Health and Safety Management System), and the entire procedure will be completed shortly. Additionally, some of our businesses are governed by the oil & gas industry's standards and maritime standards, among others and hence, may not require these certifications. Our teams across project sites stringently conform to these certifications and the entire mechanism is periodically reviewed by our leadership.

#### Our objective

**Effective implementation of health and safety practices is in line with our 'Vision Zero Accident'. The vision is to create a safer work environment for our employees, contractors and customers through the meticulous development and implementation of rigorous systems and procedures.**

### Safety culture

The corporate EHS Policy is translated into viable strategy and action with the help of a Corporate EHS framework, which has properly defined procedures and guidelines. Each employee plays a key role in developing a safety culture across the organisation. We have enthusiastic EHS teams at each business and project site, which work in tandem with the project site teams, with the objective of implementing industry-leading safety practices. These teams also facilitate the implementation of business-specific EHS programmes.

Our interventions include:

- A safety induction training session before work commencement
- Functional safety training sessions

Our Company's safety performance is reviewed every month at the management review meetings and on a quarterly basis at the Board level to provide recommendations that ensure continual improvement.

The safety and well-being of all the contract workmen at our project sites is important to us. Our sub-contractors are evaluated on their safety infrastructure and processes and strengths before we award them an assignment. All contract labour must comply with L&T's policies and practices. The understanding of safety requirements is improved through regular refresher training sessions and capacity-building programmes. In addition, periodic site visits by the senior management and site audits are conducted to improve EHS performance.

At our manufacturing locations and project sites, safety committees are constituted and regular meetings are organised. These committees comprise senior management representatives, as well as union members. We have included unionised employees in the safety committee at our manufacturing locations. These committees facilitate specific safety objectives, in line with the Company's 'Vision Zero Accident'. In the collective bargaining agreement, specific clauses related to health and safety are incorporated as well.



Ultra-supercritical / Supercritical turbine manufacturing facility at Hazira, Gujarat

## ENVIRONMENT HEALTH AND SAFETY (EHS) COUNCIL

Organisational sustainability rests on the critical pillars of EHS and is intrinsic to our business philosophy. We are making our EHS processes more sturdy and are putting in place proven best practices. The EHS Council comprises members from all our businesses.

The Council's objectives are:

- To create better awareness among members on various EHS aspects
- To learn from each other and sharing best practices across businesses and verticals
- To standardise safety equipment, along with effective deployment
- To build a strong, organisation-wide EHS structure, along with processes and management systems to manage risks
- To enable the members to effectively manage the EHS issues of their respective businesses by means of regular audit and implementation of corrective and preventive actions, among others

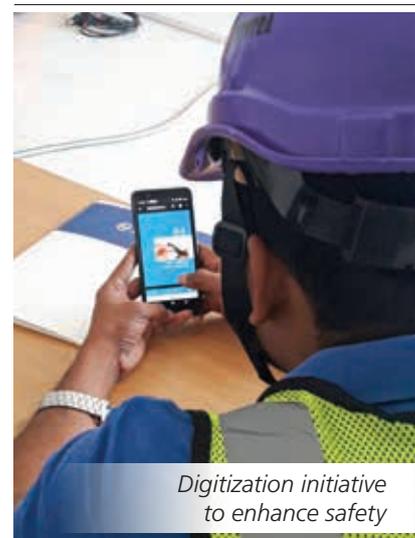
At project sites with extremely high ambient temperature, our policy is to change work schedules to safeguard team members from heat or dehydration risks. Our fabrication yards and workshops have very high noise levels. Therefore, we ensure that the noise levels are kept under permissible limits. Reliable noise barriers/absorbers are installed, and workmen are given hearing protection (ear plugs and ear muffs) as a safety measure.

**At L&T, the safety and security of our workforce is among our top priorities. We work closely with our clients to establish best safety practices across our project sites. Our clients appreciate the efforts we undertake to strengthen our safety practices.**

## SAFER WITH DIGITAL INTERVENTIONS

Digitalisation is the new normal for almost all businesses in the second decade of the 21<sup>st</sup> century. At L&T, we believe that the training and implementation of safety measures cannot remain outside the purview of such a sweeping transformation. As an industry leader in safer practices, we have always been proactive in adopting digital technologies to craft e-learning modules at project sites, and devise VR-based training modules. Digitalisation also plays a critical role in designing safety cards for reporting unsafe acts/conditions, incident investigation, safety inspection, improved SOPs to reflect evolving work methodologies, EHS suggestion systems, and so on.

Additionally, we conduct in-depth training on behaviour-based safety programmes. These programmes are automated by various technology platforms. We even conduct cross-functional safety audits, along with train-the-trainer programmes. The objective is to progressively ramp up site-based safety capabilities.



*Digitization initiative to enhance safety*

We design various theme-based campaigns to spread safety awareness to as many stakeholders as possible on the following days:

- L&T Safety Day (2019) – Let's work towards an accident-free workplace
- Fire Service Week (2020) – Prevent fires, prepare yourself, promote safety
- National Safety Week with a message to reinforce positive behaviour at the workplace to achieve safety and health goals

In the construction business, an innovative programme has been developed to groom fresh Diploma Engineers to perform the role of EHS professionals.

### Safety dashboard (at L&T level)

	FY20	FY19	FY18
Severity rate	204.29	105.21	114.41
Frequency rate	0.11	0.10	0.11
Fatality rate	10.19	5.06	5.10
Fatality	41	22	24

#### Notes

- 1) Severity Rate (SR): Number of man-days lost per million man-hours worked
- 2) Frequency Rate (FR): Number of reportable accidents per million man-hours worked
- 3) Fatality Rate: Number of fatalities per 100,000 work force

## Human capital

### SAFETY ON OUR RADAR

Our focus areas to ensure safety comprise the following:

- Specific training on tunnel safety programme
- Tailored training programmes for crane operators and riggers
- Development and mandating of training matrix for all employees, including those of contractors
- Involve and evolve EHS in all steps from project bid to award and execution
- Redefine Standard Operating Procedures (SOPs) for all temporary works, including dos and don'ts
- Conduct safety surveys regularly and 'Voice of Customer' workshop for the line management

### Digitisation initiatives in Safety

- **Introduced Virtual Reality (VR) safety training modules**
- **Launched EHS-centralised reporting, documentation and performance measurement system**
- **ISO 45001:2018 and ISO 14001:2015 based audit modules, incident reporting and investigation module**
- **Introduced the Safety Task Analysis Risk Reduction Talk (STARRT) Card; SafeArmZ-safe to start**
- **Accelerated cultural transformation**
- **Complying with relevant legal and regulatory requirements**
- **Implemented ISO 45001**
- **SOP on safe working in the night shift**
- **Zero tolerance against wilful violation; visible leadership in weekly management EHS walkaround; Job Safety Analysis (JSA) / risk assessment and review**
- **Introducing the concept of maintaining minimum two protection layers, while working at height; monthly life saver programmes**
- **Frequent checks on the functionality of safety devices; safe material handling by crane by limiting crane capacity to 75% of Safe Working Load (SWL); mock drills and campaigns**
- **Management Review Meetings (monthly/quarterly); drive safety leadership through measurable actions; implementation of risk control before work commencement**

### EHS Council initiatives

The L&T EHS Council makes continuous effort to minimise unfortunate incidents under the sponsorship of Shri. Subramaniam Sharma (Whole-time Director and Senior Executive VP). The EHS Council sets out key strategic objectives, and core EHS policy and procedures to all businesses, supported by the esteemed ECOM members. The key initiatives include:

- Identified and analysed fatal incident data for the preceding three years
- Feedback on fatality prevention were received from each IC (root causes were identified, based on severity and recurrence of incidents, for planning the Serious Accident Prevention programme). These root

causes are accountability, job risk assessment and monitoring, deviation from method statement /manpower (availability, quality and frequent rotation) and workplace infrastructure and discipline.

Additional recommendations from ECOM members were also incorporated in the Company's safety culture. These include managing additional operational risks, focusing on mitigating the risks to new team members during the early stages of deployment, imparting safety training, enhancing supervision across all areas of operation and so on.

### OUR ENDEAVOURS

#### PIPE RACK AT SITE FOR PIPE STACKING

Most pipelaying works in Pune 24x7 Water Supply Package-02 project were conducted in a highly congested area and the availability of storing pipes for pipe laying works was also a concern since it is required to be stored at the roadside to facilitate unloading and laying works. Besides, storing pipes on roadside is a challenge as enough space may not be available, it can cause accidents and may require extra resources such as a tractor for carrying pipes along way with laying works. Hence, we designed a pipe storing rack as per the required dimensions to increase safety and ease in working environment.

We could save the cost for truck carrying pipes during pipe laying works of around ₹ 1.41 Million for the project. This can be implemented at all sites where storing pipe in the nearby congested area for laying works is not suitable and to save the constant need for other resources (such as truck) at those places. This safety practice has led to a significant cost reduction.

#### DEPLOYING SHORING BOX FOR TRENCH EXCAVATION

During the process of trench excavation, there is a risk of side-wall collapse over the workmen engaged for pipe laying work as the depth of the trench varies from 900 mm to 1.5 m, depending on the pipe diameter.

We have implemented the use of a shoring box to mitigate the risk and to provide a safer environment for all workers. Two vertical plates made of Fibre Reinforced Plastic (FRP) framed in MS tubular assembly horizontally supported by adjustable MS braces and designed by the Engineering Design Research Consultancy (EDRC) formwork department, are placed in the work area inside the trench and completely safeguards the engaged workmen. Also, placing a shoring box in the work area inside a trench provides workers with safety against soil collapse and ensures safer project execution.

This safety initiative helps reduce stray accidents and the number of medical interventions required.

## CASE STUDY

## Replicable and safer practice of version change for vessels

When a particular ship is docked for refit, the complete hull surface is required to be blasted and painted. The dock block areas are inaccessible, and hence, there is a requirement for undocking and redocking of the vessel. The conventional method to achieve this severely hampered the whole production activity.

### THE OBJECTIVE

Our sustained focus was to undertake the version change in the dry berth with minimal disturbance to production activities and very limited use of resources to improve the safety aspect of the entire operation.

### THE CHALLENGE

Undocking and redocking of vessels for version change is a highly resource-intensive and time-consuming activity. Also, a lot of unnecessary activities are required to be carried out, including temporary blanking of openings, calculation of the Center of gravity of the vessel in the incomplete stage, and determining the corrective weights and executing the placement of temporary corrective weights. Additionally, regular production is hampered as all efforts are directed towards intermediate floatation of the vessel.

### INITIATIVES UNDERTAKEN

- Used the Why-Why analysis and undertook detailed brainstorming
- Used docking log records for collecting and analysing data
- Developed a plan and a design for change of dock block location at dry berth itself with the utilisation of in-house resources such as ship transfer system, steel stools, and wood and sole plates

### ACHIEVEMENTS

- Saved ₹ 1.5 Crore of total costs in docking and undocking operations
- Completed the entire process within two days, compared to the conventional duration of six days
- Reduced man-hours to 200 as against the 1,000 man-hours earlier
- Managed close coordination between the project team, ship transfer team and the dock team, ensuring smooth operations and timely project turnaround

This process can be replicated for all vessels at dry berth with minimum hassles, limited resource usage and quick turnarounds.

Cost saved

₹ 1.5 Crore

Time saved

4 days

Effort saved

800 man-hours



This image is for representation purpose only

## Human capital

# Our COVID-19 response

Since the early months of the pandemic, L&T proactively adopted stringent safety measures to ensure the well-being of its employees, business partners and other stakeholders.

## Plan

Our diversified portfolio makes it essential for us to have a common unified approach to tackle the pandemic in India and overseas.

Our Company's Executive Committee (ECOM), comprising Executive Directors and heads of major business verticals, constituted a high-level committee exclusively for COVID-19 related matters and decisions.

The committee 'Decision Response Team' (DRT) comprises:

- Executive Director of our Infrastructure business
- Executive Director of Defence and Smart Technologies
- Corporate HR Head
- Group HR Advisor
- Director of Health and Medical Services

The DRT kept a constant vigil on the situation and addressed enquiries from anxious employees with quick decisive responses while ensuring business continuity. Our Company's Group HR Head was appointed as the one-point authority for all internal communication related to COVID-19 across operations.

## Do

Effective communication, we believe, is a critical lever to ensure the Long-term success and sustainability of any programme and campaign.

Our leadership team – including Group Chairman Mr. A.M. Naik and CEO & MD Mr. S.N. Subrahmanyam – addressed all people through MS Teams. Direct communication by the medical team on do's and don'ts through e-mails also helped clear doubts and apprehensions of people.

A comprehensive SOP was prepared on work resumption for offices, manufacturing units, project sites and cross-country assignments. This SOP was reviewed and revised as and when there were updates from governments and other statutory bodies.

The SOP encompasses the following major sections:

### Preparedness prior to resumption

Details on area disinfection, cleaning and testing of safe drinking water, HVAC system cleaning, availability of hand sanitisers with pedal access (no hand touch), type of disinfection material, its method, frequency and PPEs were laid down.

### Official working procedure

Changes in the working methodology were made to avoid crowding and for maintaining social distance while working. Guidelines have been prepared on working days, working hours and Work From Home (WFH) (e.g., for pregnant ladies and mothers with young kids).

### Travel and transportation

Government guidelines on travel within city limits and national and international travel have been incorporated in the SOP.

### On resumption of work

Detailed procedures on various aspects are laid down. These comprise:

- Statutory permissions
- Security procedures at entry gates
- Sanitisation during entry
- Attendance system
- Preventive measures during duty hours at offices
- Sanitisation and upkeep of common places/utilities
- Rules pertaining to common access places
- Canteen management

At all project sites, we screened the labour force, conducted their medical check-ups and disseminated COVID-19 related advisories during the induction of new members and trainings. A separate section has been dedicated to process-related measures specific to cross-country jobs.



- 1 Sanitisation of a shopfloor at L&T ESP unit at Mahape
- 2 Pedal sanitiser facility at LTTS office at Airoli
- 3 Employees entering the L&T ESP unit at Mahape by strictly adhering to physical distancing norms
- 4 An employee being screened for temperature at the L&T House in South Mumbai
- 5 Physical distance marking in elevators
- 6 L&T employees travelling on the bus with enforced physical distancing

## Check

A task force has been created at each worksite and office comprising a doctor, HR head and head of operations. Checklists for various activities have been prepared and are filled up daily. Union representatives were involved in the preparedness planning at each stage. Their suggestions were incorporated to make the workplace safer.



## Act

DRT, at regular intervals, filtered COVID-19 related information and disseminated accurate and authentic information, advisories and guidelines to all employees.

### Challenges and mitigation

Our journey to mitigate the risk of COVID-19 was not without challenges. The virus is new, and therefore there is little authentic scientific information available. This information is getting regularly updated based on observation, analysis and data collection from different geographies.

A dedicated helpline is available for employees to directly contact our Company's doctors for any COVID-19 related queries and information. Various health promotional webinars were organised with the help of medical experts on several relevant topics such as parenting, care of the elderly and ergonomics during work from home. Many health advisories and information were published through intranet and made available on our Company's internal portal.

The vision and strategy of our leadership team, along with transparent communication and implementation of preventive measures have resulted in safe resumption of business operations and a safer work environment.

**PROACTIVE AND FOCUSED INITIATIVES**  
**A comprehensive SOP was prepared on work resumption for offices, manufacturing units, project sites and cross-country assignments. This SOP was reviewed and revised as and when there were updates from governments and other statutory bodies.**

### Ensuring employee safety and well-being during the pandemic

- Majority of workforce worked from home
- To and for transport facility with social distancing in buses
- Foot handles in all the doors
- Social distancing in sinks
- Partition in dining tables in canteen
- Foot tap for all sinks and water coolers
- Servers with PPEs (mask and gloves) appointed for serving meals
- Thermal camera at entry locations for measuring temperature
- COVID-19 do's and don'ts wall paper and screen saver on all desktops

# Natural capital



The world's scarce natural capital has to be nourished and further enhanced in the best way we can for future generations. That is one of the core sustainability tenets at L&T.

We recognise that environmental degradation and climate change are some of the formidable challenges of the 21<sup>st</sup> century, which, if unattended, can have severe socio-economic ramifications. Our strategy is to proactively monitor and reduce the environmental footprint of our operations. In all that we do on the environmental front, we are guided by our own intrinsic desire to remain an environmentally-responsible organisation.

## KEY HIGHLIGHTS OF FY20

\*During FY20 \*\*As on March 31, 2020

SPENDS ON ENVIRONMENTAL MEASURES	WATER POSITIVE CAMPUSES
₹ 94.5 Million*	24**
WASTEWATER RECYCLED	VALUE OF GREEN PORTFOLIO
76.5%*	₹ 324.92 Billion*
STRATEGIC OBJECTIVES	MATERIAL ISSUES
	<ul style="list-style-type: none"> <li>• Water management</li> <li>• Natural resource conservation</li> <li>• Climate change mitigation and GHG emissions</li> <li>• Adoption of renewables</li> <li>• Energy efficiency</li> <li>• Supply chain management</li> </ul>
SDGs IMPACTED	
	



#### CASE STUDY

## Reusing waste prudently

As part of our World Environment Day celebrations, we introduced the 'Terracotta Pot' composter at our Strategic Electronics Centre (SEC) at Bengaluru in June 2019. This initiative was undertaken by the MILCOM business unit.

[Read more on pg 115](#)

250 MWp Solar PV Plant for REWA

## Natural capital

In line with the Sustainable Development Goals of the United Nations, we focus on optimising the use of natural resources, building efficient infrastructure, reducing emissions, and, more importantly, urging stakeholders towards a behavioural change through consultation and partnership. The objective is to translate our sustainability initiatives into lasting outcomes.

Our corporate EHS Policy defines our business philosophy on environment management. We have a team of dedicated EHS managers at our facilities and project sites to implement the policy initiatives. We regularly train our workforce on the aspects of environment conservation to ensure smooth implementation.

Since 2009, we have been setting targets as a part of our sustainability programme and working actively to fulfil them. Our third sustainability roadmap came into effect in 2016, and the targets are to be achieved by 2021. In order to achieve them, we periodically review our programme. We have also implemented an Environmental and Social CoC, which helps us manage the impact of a project life cycle in a holistic manner.

### Key highlights of FY20

#### ENERGY CONSERVATION

**118 kWh.**  
Of energy saved

**>100,443 MT**  
CO<sub>2</sub> emissions avoided

#### GREEN BUILDINGS

**17**  
Green buildings including our office spaces and a green factory

#### RENEWABLE ENERGY

**31.8 kWh.**  
Renewable energy used in our campuses

**>7.07%**  
Of total electricity mix

#### WATER POSITIVITY

**24**  
Campuses in India are water positive

**Zero**  
Discharge and high water harvesting in the vicinity of our campuses

#### MATERIAL MANAGEMENT

**40,570 MT**  
Of steel recycled (cumulatively)

**>1,494 MT**  
Of zinc recycled (cumulatively)

#### WATER CONSERVATION

**46.67%**  
(m<sup>3</sup>/workforce)  
Reduction in specific water consumption versus FY16

## Energy

Our aim is to ramp up the share of renewable energy within our total energy consumption. We have put together a dedicated team comprising in-house Bureau of Energy Efficiency (BEE) certified energy managers and auditors. The primary objective of this team is to enable us to manage energy at our manufacturing facilities in the best possible manner. Starting energy audits at our major project sites is one of our initiatives.

In FY20, our total energy consumption was 8,955,656 GJ, comprising direct energy consumption of 7,234,401 GJ and indirect energy consumption of 1,721,254 GJ. The transport facilities we provide our employees to commute outside the organisation's premises also enables us to reduce our environment footprint owing to reduced usage of private vehicles by our people. The energy consumption outside the organisation was 300,968 GJ in the year FY20, including employee commute and work related travel.

This year, our total energy consumption declined by 5.6% y-o-y because of energy conservation initiatives and the increased use of renewable energy.

Direct energy intensity decreased by 9.7% y-o-y, while indirect energy intensity decreased by 12% with respect to FY16, primarily because of sourcing of renewable electricity at our campuses and increase in energy conservation activities. Our major business is EPC of projects, where energy consumption is related to project execution. We will continue to implement the measures recommended

to manage energy consumption across our campuses and project sites

### Renewable energy

Increasing the contribution of renewable energy in our total energy consumption is a key focus area for us.

**18 campuses**  
Generate renewable energy

**8 campuses**  
Source wind power

**1 campus**  
Sources solar electricity

Our campuses utilised 31.8 Million units from wind powered turbines, which constitutes 5.78% of our total grid electricity mix.

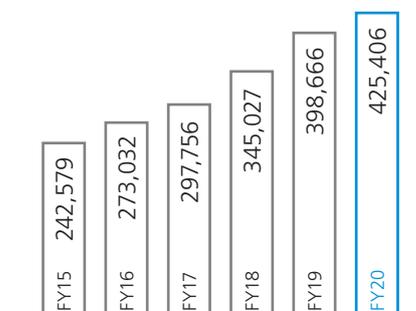
In FY20, 1.06 Million units of solar energy was harnessed at our campuses.

### Energy conservation

At L&T, our goal is to achieve a 10% increase in energy conservation measures, every year. The energy conservation measures have decreased by 24% compared to last year and increased by 50% compared to FY16. Cumulatively, we saved energy equivalent to 118 Million units, thereby avoiding 100,443 tonnes of CO<sub>2</sub> equivalent emissions in FY20.

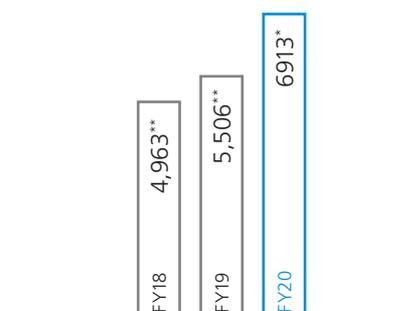
### Cumulative energy conserved

(GJ)



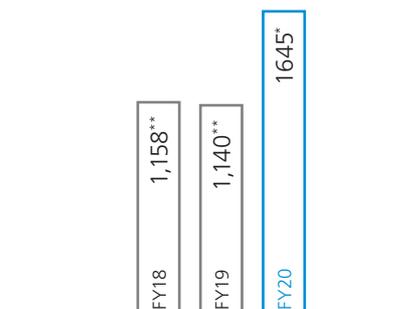
### Direct energy intensity

(GJ/₹ Billion)



### Indirect energy intensity

(GJ/₹ Billion)



### Energy conservation interventions (GJ/year)

Process re-design	606.2
Optimisation and operational control efficiency	3,514.2
Conversion and retrofitting of equipment	5,771.2
Change to CFL and LED lamps	8,031.1
Change in personal behaviour and auto shutting of lights when not in use	1,012.7
<b>Total energy conserved</b>	<b>18,935.3</b>

\* Calculated with the revenue within the scope of this report

\*\* Calculated with the consolidated revenue from the annual report

## Natural capital

# Emissions

### GHG

We are committed to contributing meaningfully to the fight against climate change. Our focus is on realigning our processes and systems to reduce our GHG emissions.

#### GHG Emissions

**529,093** tCO<sub>2</sub>e

Direct GHG emissions (Scope 1)

**367,874** tCO<sub>2</sub>e

Indirect GHG emissions (Scope 2)

**3,656,395** tCO<sub>2</sub>e

#### Scope 1

Consumption of fuels such as petrol, high speed diesel, furnace oil, natural gas, LPG, CNG and acetylene

Note: The energy, GHG emissions and water consumption intensity per employee have been derived as per the scope of reporting

Calculation methodologies are as per ISO 14064-1 standard and the global warming potential used in these calculations is taken from IPCC and WBCSD GHG protocol.

#### Scope 2

Utilisation of grid electricity supplied by state electricity supply boards

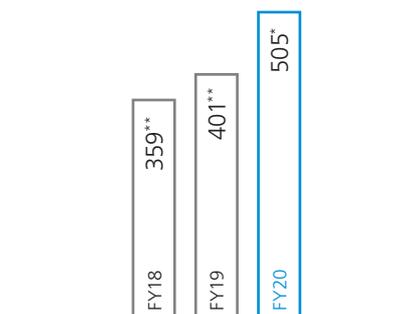
#### Scope 3

Business travel, employee commuting provided by the organisation and waste generation in operations

Note: We are expanding the inventory of Scope 3 emissions to make the data more inclusive. Emissions from leased assets (upstream) and investments are included in the Company's Scope 1 and Scope 2 emissions. Initiatives such as technology change, switching to renewable energy and improving energy efficiency are enabling us to reduce our Scope 1 and Scope 2 GHG emissions.

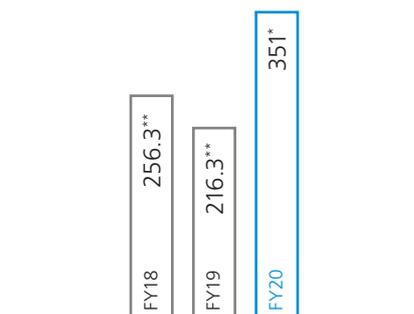
#### Direct GHG emission intensity

(tCO<sub>2</sub>e / ₹ Billion)



#### Indirect GHG emission intensity

(tCO<sub>2</sub>e / ₹ Billion)

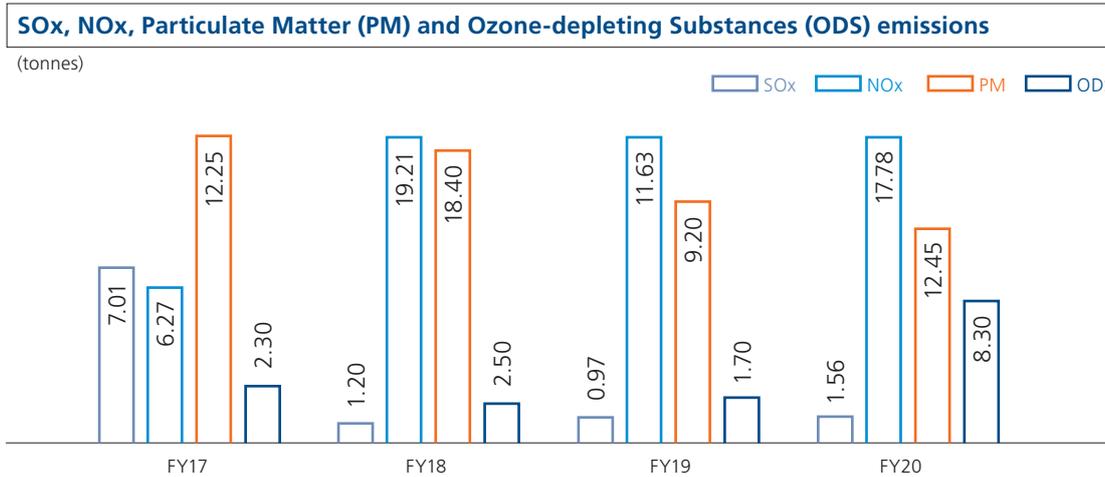


\* Calculated with the revenue within the scope of this report

\*\* Calculated with the consolidated revenue from annual report

## AIR EMISSIONS

We monitor air emission at our campuses and project sites and ensure that that they stay within the permissible limits. Our principle sources of air emissions are process stacks at a few campuses and diesel generator sets.



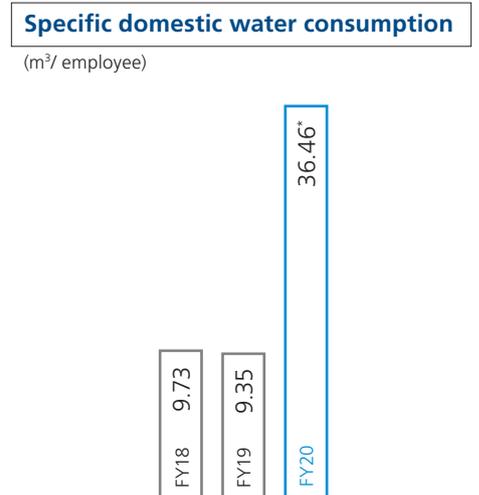
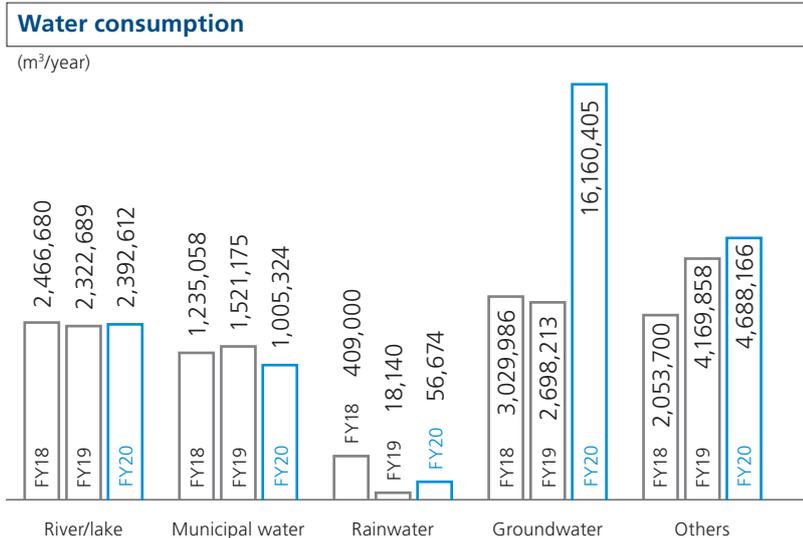
Note: We have widened the scope of air emission this year

## Water

Our responsibility is to continuously step up the conservation of water as a part of our sustainability initiatives. The construction business is largely water-intensive, but it is encouraging to note that we have been successful

in reducing water consumption significantly. Our 24 campuses remained water-positive in FY20. Our campuses have also achieved 'zero water discharge status'. All the water we recycle is used for gardening

and flushing purposes. We undertake various measures to construct rainwater harvesting structures both inside our premises and in areas where our projects are functional.



\* We have widened the scope of water consumption this year. We have developed a method in which the project-related hydrotesting water which the businesses are using has also been accounted for. That is being presented in the report this year. The workforce has also decreased in FY20.

## Natural capital

### Waste and spills

Both hazardous and non-hazardous waste are handled diligently and responsibly at L&T. During the process of disposal, all the norms and procedures applicable are appropriately observed and documented for further reference, should there be an emergency. For example, we handle oil spills with meticulous care and we continually report on waste and spills as mandated by ISO 14001 and OHSAS 18001. Periodic internal and external assessments are conducted to ensure compliance with applicable regulations.

#### Waste generated (tonnes)

**1,770**

Hazardous waste\*

▽ 19% y-o-y

**42,754**

Non-hazardous waste\*

▽ 4% y-o-y

\*During FY20

#### Our waste management strategies

- Hazardous waste – such as used oil, oil-soaked cotton waste, used chemical/paint/oil containers, batteries, paint residues and Effluent Treatment Plant (ETP) sludge – is disposed of through government-approved recyclers/re-refiners/re-processors.
- Hazardous waste is transported as per the statutory requirements
- Electronic waste (e-waste) is disposed of through authorised vendors as per the statutory requirements
- Biomedical waste generated at dispensaries and health centres is disposed of responsibly as per statutory requirement.
- We do not import, export, transport or treat any hazardous waste covered under the Basel Convention.

#### Compliance

All our campuses and project sites have obtained necessary approvals from the local authorities before commencing operations. Compliance is ensured with respect to various statutes, rules and

regulations applicable to our Company. There is a 'system compliance report' which is reviewed at all units and regional offices and submitted to the Corporate Secretarial department on a quarterly basis. During the year, there were no incidents of non-compliance, and no fines were imposed on our campuses within the reporting period.

#### Materials management

Being a construction and engineering company, the materials primarily consumed in the course of our business activities are iron, cement and sand. We make all feasible efforts to gradually bring down our material consumption, while ensuring relevant quality standards. We make efforts to recycle our steel and zinc at our production facilities. However, we are a project-based company, and most customer specifications insist on virgin material. Hence, the scope of using recycled material is limited. At our construction sites, we make judicious use of fly ash and granular blast furnace slag to blend cement.

#### Material consumption in FY20 (partially reported) (tonnes)

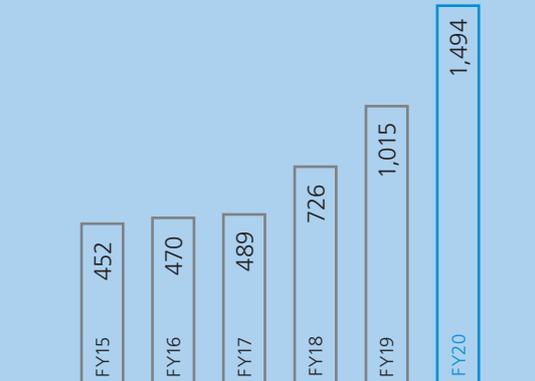
Material	Consumption
Ferrous	1,090,189
Non-ferrous	155,296
Hazardous chemicals	134,309
Oils and lubricants	4,833
Cement and sand	7,084,639

**Recycled steel – cumulative**

(tonnes)

**Recycled zinc – cumulative**

(tonnes)

**Fly ash – cumulative**

(tonnes)

**Crushed sand – cumulative**

(tonnes)



## Natural capital

### Green portfolio

According to experts, no product or project can be 100% eco-friendly, because all product development will have some impact (direct or indirect) on the surrounding environment. Given these challenges, at least for the foreseeable future, we put in our best efforts to reduce and restrict our environment footprint through our sustainability initiatives. Over the years, we have developed a growing portfolio of sustainable engineering and design solutions.

**Our green portfolio comprises projects embedded with advanced technology solutions centred around lowering carbon emissions, optimising water consumption and reducing air pollution. The aim is to lay stronger emphasis on energy efficiency and resource conservation to increase the sustainability quotient across our projects.**

**Our green portfolio offers infrastructure that has a low impact on the environment and focuses on public well-being.**

Our green product and services portfolio has shown stellar growth and is now valued at ₹ 324.92 Billion. This constitutes 31.05%\* of revenues.

\* Calculated as per the revenue within the scope of this report

#### WATER AND RESOURCE CONSERVATION

##### Water treatment and distribution infrastructure

We build bulk distribution and water treatment systems, wastewater treatment plants, ETPs and recycling plants as well as lift irrigation systems.

##### Key projects completed in FY20

- Parwati Mega Lift Irrigation Schemes Phase III and IV, Madhya Pradesh
- 100 Million Litres per Day (MLD) Sea Water Reverse Osmosis Desalination (SWRO) Plant in Dahej district
- 477 MLD Water Treatment Plant at Chandrawal
- 30 MLD Combined Effluent Treatment Plant (CETP) at Ahmedabad, Gujarat

##### Supercritical and ultra-supercritical thermal power plants and equipment

Supercritical technology aids energy efficiency, with lower fuel and water consumption, emitting lesser GHGs. These entail lower requirement of land and operating and maintenance expenses over the project life cycle.

##### Key projects completed in FY20

- Achieved commercial operation of India's first ultra-supercritical power project for Central Utility in Madhya Pradesh

#### Share of green portfolio

(%)



A water treatment plant

## ENERGY EFFICIENCY

### Renewable energy systems

- Solar power plants
- Hydro power plants
- 'Water to Wire' solutions

#### Key projects completed in FY20

- 2 x 10 MWp grid interactive solar photo voltaic power project integrated with 8 MWhr battery energy storage system at Attam Pahad and Dolly Gunj, Port Blair, South Andaman for NLC India Limited
- 4 MWp grid connected floating type solar photo voltaic power project on a reservoir in Chittoor District under implementation of the Smart City Mission in Tirupati, Andhra Pradesh
- Singoli Bhatwari Hydro Electric Project, Uttarakhand

### Efficient power transmission and distribution system

Our highly efficient power transmission and distribution systems play an important role in reducing losses related to pilferage as well as transmission and distribution. These systems comprise transmission lines, underground cable networks, substations, distribution networks, electrical, instrumentation and communication solutions.

#### Results

- 20-40% savings in electricity costs
- Reduced CO<sub>2</sub> emissions

#### Key projects completed in FY20

- More than 1,900 ckm long transmission corridors
- A 220 kV transmission line in Egypt and a 500 kV HVDC transmission line in Kenya
- In Malaysia, a 500 kV transmission line from Yong to Peng to Segamat has been successfully commissioned on schedule
- Commissioned one of the highest-altitude 400 kV GIS at Wangtoo, Himachal Pradesh, at an altitude of 1,727 m above Mean Sea Level (MSL)

### Energy-efficient equipment

Our Electrical & Automation business offers a range of eco-friendly products, systems and services for industrial, commercial and residential applications.

#### Products

Low-watt loss fuses, AC drives, soft starters, power factor improvement capacitors

#### Systems

Industrial and building automation solutions, and smart metering systems

#### Software functions

Energy performance analysis and integrated energy management systems

#### Key projects completed in FY20

- The MV portfolio was enhanced by an improved range of GIS for wind energy applications and metro projects
- 'SMART' Ring main units were launched in smart cities
- New Moulded Case Circuit Breakers (MCCBs), new variants of ACBs, contactors, isolators and panel solutions for emerging market segments such as solar and railways, new state-of-the-art motor protection relays, controllers for power quality solutions and intelligent products for the agricultural segment, among others

### CO<sub>2</sub> emission reduction (Metro and monorail)

Mass rapid transit systems provide enhanced connectivity, reducing the number of vehicles on the road, which in turn, reduces pollution and maximises resource efficiency.

#### Key projects completed in FY20

- Mauritius Light Rail Transit system (Phase I, 25 TKM)
- Hi-tech City – Raidurg Line of Hyderabad Metro Project
- JBS-MGBS Hyderabad Metro Project
- Dwarka – Najafgarh Delhi Metro

### Coal gasifiers

Coal gasification technology is used to produce synthesis gas, an economical alternative to natural gas. Synthesis gas-based plants use coal economically, lowering CO<sub>2</sub> emissions.

#### Key projects completed in FY20

- In the domestic market, our Heavy Engineering business has secured the order for the first coal gasifier using air product technology solutions for the Talcher Gasification Project

### Green buildings (Buildings & Factories)

We construct certified green buildings, which consume less energy and water, utilise recycled material and locally source most of the construction material

#### Key Green Building Projects completed in FY20

Project name	Rating system	Rating level	Area sq ft
JISPH, Puducherry	Griha V 3.1	4 Star	138,007
JIPMER Rural Health Centre, Puducherry	Griha V 3.1	3 Star	173,000
Ford Global Technology & Business Centre	IGBC Green NB	Platinum	2,611,236
Nxtra, Airtel Datacentre, Pune	LEED	Silver	260,000

## Natural capital

### L&T'S GREEN BUILDINGS AND CAMPUSES

#### U.S. Green Building Council (USGBC): LEED Platinum

- Technology Block, Hazira
- Administrative Building, Kattupalli
- Office Complex, Talegaon
- SBU Block (2<sup>nd</sup> Floor), Hazira
- Administrative Building, LTSSHF, Hazira
- Office Building, Coimbatore

#### USGBC: LEED Gold

- Office Complex, Ahmednagar
- Unnati Building at C&A, Mahape (Navi Mumbai)
- Knowledge City, Vadodara
- North Block II, Mumbai
- Learning Centre – LDA, Lonavala
- East Block 2, Knowledge City, Vadodara

#### USGBC: LEED Certified

- L&T TC II, Chennai

**17**  
Green buildings

**1**  
Green factory

**2.6 Million sq ft**  
Of green-building area within our campuses

#### USGBC: LEED Silver

- Green Factory, Vadodara
- EDRC, Chennai
- L&T TC III, Chennai
- Administrative Building, Vadodara

### CASE STUDY

## Water stewardship

**Our consistent focus is to reduce water wastage across the operational canvas. As a part of that overarching objective, we undertook specific initiatives at our Mejila Distribution Project site.**

#### THE OBJECTIVE

To reduce wastage of water across all the Company-provided accommodation in the Mejila Distribution Project in West Bengal.

#### INITIATIVES UNDERTAKEN

The accommodation provided by the Company was monitored to analyse its water usage, and the following water-saving initiatives were undertaken:

- Repairing of leaky taps
- Periodic checking of water leakage
- Creating awareness among workmen and other staff through signages

#### ACHIEVEMENTS

- Daily reuse of around 5-10 litres water from water purifiers
- Can be implemented in other accommodation provided by our Company

## CASE STUDY

## Reusing waste prudently

**As part of our World Environment Day celebrations, we introduced the 'Terracotta Pot' composter at our Strategic Electronics Centre (SEC) at Bengaluru in June 2019. This initiative was undertaken by the MILCOM business unit.**

### THE OBJECTIVE

To convert wet/kitchen waste generated by the office canteen into compost, using an eco-friendly, sustainable method and product, i.e. the Khamba (or stack composter), a set of three stacked terracotta pots

### INITIATIVES UNDERTAKEN

The wet waste collected daily from the office cafeteria and pantry (food waste, tea bag / coffee powder waste, among others) is dumped into this Khamba. A remix combust powder and coconut pit are added to the waste and the food leftovers decompose and are converted into compost over the period of 1-2 months.

This high-quality compost is used as manure for in-house indoor plants and the office garden. This process has been continuing successfully at our unit for the last 5-6 months and the SEC has not needed to purchase manure for plants.

### KEY BENEFITS

- Reduced the load of the local municipality that collects waste from every residence in the neighbourhood and transports it to distant places to make the city garbage-free
- Saving by avoiding the purchase of wet waste disposal bags and physical effort
- Generation of manure
- Reuse of manure in the L&T office garden, thereby saving the cost of garden manure
- The initiative can be scaled up at different offices across India

L&T's Bengaluru area office has already adopted this process.



SEC facility

## Natural capital

### CASE STUDY

# Greening semi-urban and urban areas

Our WET business accords utmost importance to tree plantation drives in cities and other semi-urban and urban areas. Trees are often planted in parks, gardens, societies and other site locations. Many non-profits and schools volunteer for tree plantation.

#### THE OBJECTIVE

Planting trees to reduce CO<sub>2</sub> buildup in the atmosphere and combat climate change

#### INITIATIVES UNDERTAKEN

The leadership team of the business actively undertakes this initiative every year. A regular audit reveals that on an average, 75% of the saplings survive. To improve the rate of sapling survival, we have commenced the implementation of the Miyawaki afforestation technology at a few sites.

#### ACHIEVEMENTS

- Planted over 1.4 Million saplings in FY20
- Converted 90.7 acres into greenery
- Enhanced biodiversity cover and oxygen levels
- Reduced air pollution, GHGs and global warming

Clusters	Trees planted
Bengaluru	1,00,950
Bhopal	3,04,641
Bhubaneswar	1,91,357
Chennai	55,696
Faridabad	57,616
Indore	43,346
Jaipur	1,77,376
Kolkata	89,677
Lucknow	20,150
Pune	1,23,546
Task Force Projects	64,732
Tanzania	10,962
West Cluster	1,82,401
Sri Lanka	245
<b>Total</b>	<b>14,22,695</b>

#### Species planted

Neem
Mango
Guava
Indian gooseberry (Amla)
Jamun
Moringa
Sheesham
Almond
Indian Elm (Chirol)
Babhul
Karanja
Teak
Gulmohar
Citrus



Tree plantation for a greener tomorrow

### OUR ENDEAVOURS DISPOSING E-WASTE FOR SUITABLE REUSE

Our Ahmedabad office needed to identify a registered e-waste vendor to dispose of e-waste. To fulfil this objective, our team at the DMN Business made several enquires and found three e-waste vendors. We shortlisted M/s. e- Coli Waste Management Pvt. Ltd. – a registered and certified vendor of the Gujarat Pollution Control Board. This firm also supported us by collecting the waste from different locations.

A tie-up with an authorised e-waste recycling company leads to systematic destruction and recycling of the e-trash generated. Regular awareness programmes should be conducted to create proper understanding on the perilous effect of e-waste and the need for its appropriate disposal.

### PERFORMANCE EVALUATION OF WASTEWATER TREATMENT PLANT BASED ON SBR TECHNOLOGY

The need for effective wastewater treatment plants based on appropriate technologies is rising rapidly on a global scale. This is true especially in those regions where availability of pure water is at a challenging phase.

The construction of Sewage Treatment Plants (STPs) based on the emerging treatment technologies in different regions of India is a necessary and environment-friendly approach to reducing water pollution as well as to extract groundwater for irrigation, horticulture and other purposes. The Sequence Batch Reactor (SBR) technology is an emerging advanced wastewater treatment technology that is being successfully used to treat both municipal and industrial wastewater.

The performance of STPs at Nava Raipur based on SBR technology was evaluated during a certain span of time. Wastewater samples were analysed for

pH, Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS) and turbidity. The treated effluent from treatment plants meets the discharge standards with reference to the evaluated parameters. The treated effluent was finally used for horticulture, and it meets the guidelines for reuse.

### NON-RECYCLABLE PLASTIC WASTE DISPOSAL

Disposal of thermoset plastic waste in a responsible manner and preventing it from ending up in landfills across Ahmednagar was a key challenge for us.

L&T generates DMC Thermoset waste which is non-recyclable in nature. This waste is generated during the manufacture and assembly of our products. Conventionally, we used to hand over this waste for disposal to scrap dealers, who used to dispose it in an eco-unfriendly way. Hence, we started looking for an eco-friendly and sustainable solution. Efforts are already in progress to reduce DMC waste generation. After a lot of search, the team discovered that co-processing in cement kilns could be a solution and identified two cement companies undertaking co-processing. The first consignment of 15 tonnes was sent for co-processing in September 2019. So far, we have sent 50 tonnes material for co-processing.

We are the first electrical switchgear company to start the disposal of DMC by co-processing in a cement plant. This is the most eco-friendly way of disposing non-recyclable plastic by observing Central Pollution Control Board (CPCB) guidelines, and is a major step towards sustainability. The substitution of fossil energy sources helps reduce GHG emissions and leads to other environmental benefits.

### INSTALLATION OF A 400 KW SOLAR PLANT

In a bid to step up the adoption of renewable energy across our facilities, our team at TI Business decided to install a 400 KW solar plant in the two acres at the plant area in Veer Wadpale to Bhogaon Road Project. Given that a large part of the land around the plant is used for agricultural activities, the proper identification of land became an uphill task. Another challenge we faced was to overcome the objections of local panchayats to install the plant. In order to successfully install the net meter, we had to follow-up constantly with the MSEB.

**Saved ₹ 1.98 Million during the reporting year**

**Reduction in pollution, including noise pollution**

**Exports/imports system enables transmitting unused power of the plant to the Electricity Board grid**

**Maintenance-free**

### ENERGY OPTIMISATION BY SOLAR LIGHTING IN BOOM PLACER

This initiative aims to replace traditional electricity sources with advanced, cost-effective and more environment-friendly sources. We use the boom placers in remote locations where we have to use separate a DG or a solar light mast for the area lighting. To overcome this challenge, our team at TI Business installed a solar panel on the boom placer cabin and are now using four lights of 50 watts in the areas near the boom placer.

**Reduced time and effort for shifting of DG or solar light mast as the concreting by the boom placer takes place at various locations.**

## Natural capital

# National Action Plan on Climate Change

At L&T, our programmes to help combat climate change, drive energy efficiency and encourage renewable energy are aligned with the National Action Plan on Climate Change (NAPCC), released by the Honourable Prime Minister's Office, Government of India in 2008. Our Company's programmes are also in sync with the Nationally Determined Contributions (NDCs) ratified by the Government of India during the COP 21 – Paris Agreement.

### Mission 1 SOLAR

- Our solar business provides a single-point EPC turnkey solution for solar PV-related projects, along with energy storage solutions. Our experience ranges from flat to highly undulated as well as to landfill topologies with specialised technologies, including designing and executing contour-following solar PV power plants
- The solar business has in-house capabilities of different module mounting structure types [fixed tilt, seasonal tilt and Horizontal Single-axis Solar Tracker (HSAT)] to choose for most optimal solutions
- As grid stability and power conditioning requirements gain significance in the wake of large-scale renewable integration, standalone and PV integrated storage solutions are being offered
- Government schools and communities have been provided with solar power systems benefitting students and community members
- Water distribution system operated through solar power to reach water to households in water-stressed locations in Rajasthan

#### Highlights

- The business secured a cumulative 650 MWp+ capacity of grid-connected solar PV plants across India, including the prestigious order for 325 MWp in Rewa, Madhya Pradesh, which is also the single largest EPC contract in India to date
- The Company also secured 140 MWp in Bhadla, Rajasthan and 187 MWp in Tamil Nadu
- The business won the prestigious Bihar State Rural Electrification project, the first-of-its-kind distributed generation project with a cumulative 12 MW solar capacity and 105 MWh of energy storage, which aims to electrify 236 remote villages
- 18 L&T establishments are generating onsite solar energy for campus usage

### Mission 2 ENHANCED ENERGY EFFICIENCY

- Through focused energy conservation projects, more than 118 Million units (kWh) of energy was saved, avoiding over 100,443 tonnes of CO<sub>2</sub> emissions at our establishments, cumulatively
- Ahmednagar, Hazira, Kanchipuram, Pithampur and Pondicherry campuses have implemented ISO 50001: 2000 (Energy Management Systems)
- The E&A business helps customers improve energy efficiency and reduce their carbon footprint through its products and services
- L&T's Control and Automation business has an Automation Training Centre at Navi Mumbai offering an 'Integrated Automation Training Course' with focus on energy efficiency for fresh graduates
- We are focusing on energy audit of our project sites. This has given us a huge opportunity for energy management and efficiency improvement at project sites
- Installation of solar panels for power generation at government schools.
- Installation of solar water heater at residential schools

### Mission 3 SUSTAINABLE HABITAT

- L&T has 17 green buildings within its campuses and one green factory at Vadodara
- L&T constructed more than 67 million sq ft of certified green space for its clients and another 41 million sq ft area is in various construction stages
- As a part of the Sustainability Roadmap 2021, all new buildings within L&T campuses are expected to follow green building norms
- Our Company ensures water and soil conservation and encourages agro-based livelihoods for preventing migration

### Mission 4 WATER

- With continuous and dedicated efforts towards water conservation and establishing water stewardship, we constructed water harvesting structures both within our campuses and in communities
- All 24 L&T campuses in India continue to be water positive, complemented by our efforts in constructing water storage structures for the communities
- Adopted zero wastewater discharge approach and rain-water harvesting across campuses and communities
- 76.5% of the total freshwater consumed at our campuses and project sites is reused/recycled
- Our WET business created water infrastructure to cater to the requirements of 30 Million people
- The business also constructed 350,000+ km of water distribution pipelines, designed and constructed more than 5,300 MLD of water treatment and recycling plants
- Achieved water adequacy for drinking, sanitation and agriculture through watershed projects, as part of the Integrated Community Development (ICD) programmes in five locations
- Creating or desilting water bodies to increase groundwater level with participation from communities
- Conservation of surface water through rain water harvesting in communities and schools

**Mission 5****STRENGTHENING THE HIMALAYAN ECOSYSTEM**

- Large-scale tree plantation across project sites is being practiced across L&T, and we continue tree plantation in and around projects sites in the Himalayan region
- Skill-building programmes are conducted for the local youth to enhance their employability during the project execution phases at the Himalayan region
- School infrastructure is provided in government schools in Uttarakhand, Sikkim and Meghalaya
- Health camps/medical camps are periodically conducted at project sites in the region

**Mission 6****GREEN INDIA**

- We maintain a green cover across all our campuses, which exceeds the statutory limit of 35% of available open land by a far margin
- More than 150,000 fully grown trees are nurtured at L&T campuses
- L&T planted 1.4 Million + trees FY20
- We continue to nurture a self-sustaining forest at four locations in India through the Miyawaki technique
- The Company monitors the tree plantation through a tree inventory portal
- Our guests are felicitated either by planting a sapling or by presenting a Tree Certificate at the L&T establishment
- Tree plantation and maintenance is a part of Integrated Community Development (ICD) programme adopted across villages in Rajasthan, Maharashtra and Tamil Nadu

**Mission 7****SUSTAINABLE AGRICULTURE**

- Our WET business brought 200,000+ hectares of land under irrigation.
- Among other significant projects, we are undertaking:
  - Kundaliya lift irrigation scheme from the water resources department, Government of Madhya Pradesh
  - Sauni Yojana Link 2 package 6, Gujarat Mallanna Sagar reservoir reach 2, Government of Andhra Pradesh
- The check dams constructed by L&T Public Charitable Trust (LTPCT) have contributed towards raising the water level in our intervention areas. Five solar irrigation projects have enabled 180 farmers to grow two crops instead of one, along with vegetable cultivation.
- At Vidisha, in Madhya Pradesh state, L&T has created more than 39 water reservoirs for the farmers. This intervention has led to 1,159 ML of water storage/year, which is used for growing crops such as wheat and rice in the area. These reservoirs are part of individual farmlands, the soil is fertile and hence India's best quality wheat is grown in this region and up to two crops/year are harvested
- The ICD-CSR project focuses on increasing the availability of water for agriculture at water-stressed locations and encourages sustainable agricultural practices by use of zero budget natural farming, drip irrigation, indigenous pesticides, seed treatment, balanced dose of fertilisers, discouraging plantation of water-intensive crops and introducing horticulture through farm field schools and demonstrations
  - The WET business provides turnkey solutions in lift irrigation and canal rehabilitation
  - The E&A business offers a wide range of products and solutions for electricity distribution and control in the agriculture sector

- The E&A business conducts training programmes for farmers in the use of motor starters and pump controllers, which are widely used in agricultural across India.
- Solar pumps are provided by the E&A business to enable farmers to reduce their dependency on conventional pumps.

**Mission 8****STRATEGIC KNOWLEDGE ON CLIMATE CHANGE**

- The Company actively participates in institutional and industrial forums and employees attend various capacity building programmes on climate change and green initiatives
- Many in-house functional and technical capacity-building programmes on sustainability and climate change are conducted, including:
  - GRI standards reporting framework
  - Regular training on GHG accounting and management procedures for all the businesses
  - Energy management and energy conservation
- Employees actively participate in the celebration of important events and days such as world Environment day, Earth Day and Earth Hour
- Employees actively contribute in nature photography competition and environmental quiz contest to increase their understanding on climate change
- Prayag (the induction programme for new employees) covers sustainable development and climate change topics along with EHS and human rights
- School children and communities in the ICDP area are educated and made aware about safe drinking water and saving natural resources
- Awareness programmes in government schools on solid and liquid waste management
- Environment awareness programmes in schools

# Social and relationship capital



Our overarching objective is to help uplift local communities in the vicinity of our operations. We help local and underprivileged communities and provide appropriate technology-based solutions, thereby accelerating their development.

Our citizenship efforts are part of the umbrella initiative 'Building India's Social Infrastructure' to usher in impactful and sustainable societal outcomes in four key areas. These are water and sanitation, education, health and skill development. Our aim is to improve the quality of life, mitigate social inequities and help individuals realise their true potential in targeted communities.

## BENEFICIARIES OF OUR CSR PROGRAMMES IN FY20

### WATER AND SANITATION

131,988

### EDUCATION

363,377

### HEALTH

795,736

### SKILL DEVELOPMENT

84,240

### STRATEGIC OBJECTIVES

S6

S9

S10

### MATERIAL ISSUES

- Occupational health and safety of employees and contractors
- Project risk management, quality of construction and EPC services
- Material sourcing
- Supply chain management
- Labour management
- Local supply base development

### SDGs IMPACTED





#### CASE STUDY

## Ensuring water security for all

We undertake water harvesting across several villages to help them become water-sufficient. One such project was implemented in Chettipalayam, South Coimbatore.

[Read more on pg 131](#)

# Social capital

## DRIVERS OF OUR CSR INTERVENTIONS

### Corporate CSR Team

We have a dedicated CSR team at the corporate level, committed to maximising our social impact. This team acts under the guidance and framework approved by the CSR Board Committee. They devise, execute and monitor CSR programmes in partnership with NGOs that are committed to individual causes and with the aid of teams at our campuses and business offices.

### CSR coordinator and teams at campuses, area offices and sites

Area offices and campus teams perform need assessments, identify local projects and NGO partners and implement and monitor the projects, providing support to achieve our CSR goals.

### Prayas Trust

The Prayas Trust originated as the L&T Ladies Club more than 20 years ago. It was formed and run by the wives of employees and female employees to provide services to the underprivileged sections of society, located around various L&T facilities.

### Volunteers

L&T-eering, our structured employee volunteering programme, enables and encourages employees to participate in community development activities.

### Larsen & Toubro Public Charitable Trust (LTPCT)

LTPCT was established in 2004. The contribution from employees and management grant from L&T has made the institution sustainable and a unique not-for-profit entity within the large L&T conglomerate. LTPCT has been undertaking projects to create a better world for the marginalised population. Its mission has

been to facilitate visible and sustainable development of society through well-directed initiatives in the realms of vocational training, water management, holistic development of children and healthcare. LTPCT benefits from the committed support and in-house expertise of various L&T companies in the areas of engineering, architecture, construction, IT and medical services to design and deliver its programmes for the community. In a nutshell, LTPCT is an L&T initiative, that goes beyond the statutory mandate of corporate responsibility.



Smart Classroom Fosters Learning-A CSR Initiative



## Water and sanitation

We started the Integrated Community Development Programme (ICDP) in FY15 to help improve the availability of water in underprivileged communities. This programme covers 38,420 households in nine water-stressed districts in Rajasthan, Maharashtra and Tamil Nadu.

**24,819** hectares

Land under the project

### AGRICULTURE

**21**

Seed banks in villages

**134**

Crop demonstrations

**318** hectares

Protected from direct run-off

**89%**

Increase in the area under cultivation/irrigation

**4,023** hectares

Fallow land converted to agricultural land

**986** hectares

Area under horticulture

### WATER AVAILABILITY

**5%**

Increase in water storage capacity

**3.14** metres

Increase in water table

**95%**

Households with drinking water

### INSTITUTION BUILDING

**403**

Self-Help Groups (SHGs) formed

**149**

Farmer groups formed

**22,99,000**

SHG savings fund created for interloaning

### HEALTH AND NUTRITION

**2,248**

Kitchen gardens

**232**

Children supported in Balwadis

### CAPACITY BUILDING

**3,940**

Farmers attended farm-field trainings

#### Training on subjects

- Improved kharif and rabi cropping
- Horticulture WADI development
- Zero-budget natural farming
- Best practices on grains, pulses, vegetable nursery and fruit orchards
- Water budgeting
- Facilitating Village Development Committee

## Social capital

### SANITATION

2,741

Toilets constructed

100%

Households using and maintaining toilets regularly

2,298

Children included in campaign on sanitation

19

Schools with new or repaired toilets

2

Schools with roof rainwater harvesting structures for drinking water facility for students

### LIVESTOCK LIVELIHOOD

57

Veterinary camps

118 hectares

Pasture land area under protection

### INFRASTRUCTURE

Our CSR teams have intervened to make water available for drinking, sanitation and agriculture.

**As a part of the intervention, structures such as check dams, anicuts, contour trenches, farm bunds and farm ponds were constructed, with community participation.**

These structures, along with certain practices, helped enhance the water level in the water bodies, and retained soil moisture.

### SUSTAINABILITY

Along with water security initiatives, the community was trained in the importance and methods of water conservation. Community groups such as Village Development Committees (VDCs) were also created. They assumed the responsibility of maintaining the structures created through the project. Our farmers were trained in agricultural practices that require minimum water use and introduced to zero-budget natural fertilisers to retain land fertility. The community members also devised methods that enhanced arability.

**Sustainable agricultural methods like the guli method and Systematic Rice Intensification (SRI) methods were introduced to enhance crop production without hampering the quality of the soil or using chemical fertilisers.**

Local farmers are receiving training in water budgeting to monitor water usage and prevent the exploitation of common resources by few groups or individuals in the village. Training in ethno-veterinary care and practice has increased milk production and reduced cattle mortality, thereby increasing the household income of the many farmers depending on livestock for their livelihood.

We collaborated with Seva Sansthan to conduct field training on data collection using the monitoring format with the

community to arrive at a sustainability index. This reflects the maturity and readiness of local committees to sustain the project over the long term.

Various factors are taken into consideration, such as functioning and governance of local institutions, participation and empowerment of members, and linkages established with stakeholders. Further capacity building is planned, depending on the level of sustainability attained by villages for long-term sustenance and preparation for exit.

### SANITATION DRIVES

Awareness on sanitary practices continues to be our priority among communities, while making toilets and water available to them. Our Company, with contributions from the community and 'Shramdaan' (volunteering), constructed 1,000+ well-designed toilet-cum-bathrooms using locally sourced material and labour.

Local masons were trained in the toilet design and construction process, practical layout of toilet construction, quality of work during construction, material-labour requirements and responsibilities of village groups during construction and so on. Also, we formed community monitoring committees to ensure that villages stay free of open defecation.

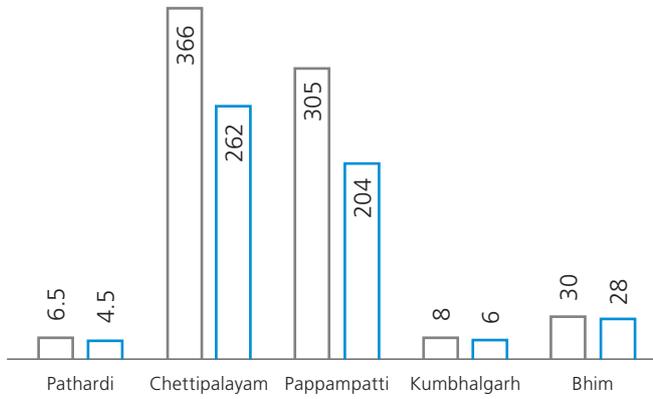
**Based on the positive experiences and outcomes of our ICDP programmes, three more water-stressed districts were adopted this year for the implementation of this programme namely Nagzari, Devgaon and Sevantri.**

1,100

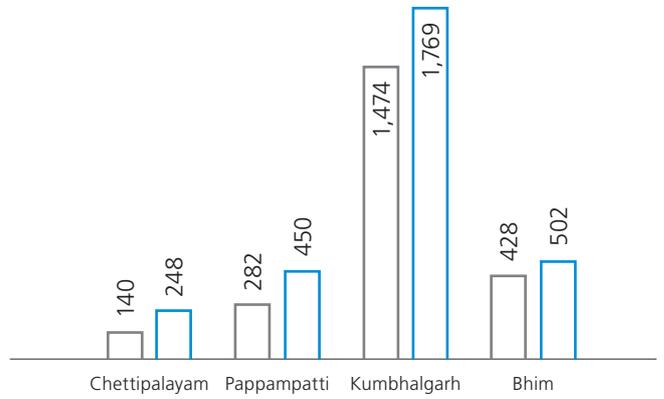
Households benefitted during FY20, after two gram panchayats along with two revenue villages and 13 hamlets turned Open Defecation Free (ODF).

**IMPACT INDICATORS FOR ICDP IN FY20**

**Depth of water from ground surface**  
(Metres)

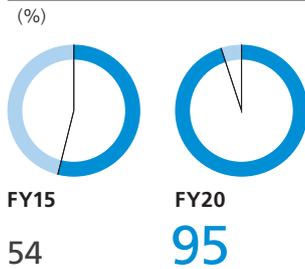


**Increase in arable land**  
(Hectares)

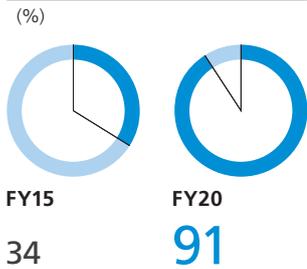


Baseline Achievement

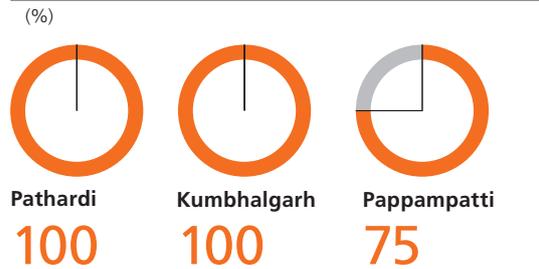
**Households with access to water**



**Households with access to toilets**



**Fallow land brought under cultivation**



Treated fallow land Remaining fallow land

## Social capital



### Education

**We are committed to educate every child, irrespective of their social status.**

We have undertaken a variety of initiatives to:

- Provide infrastructure to schools that lack adequate resources
- Improve the quality of instruction and learning for the children
- Make schools accessible to children
- Reduce dropouts by introducing relevant curriculum
- Enhance teaching methods and pedagogy

We involve the parents and the community to create a learning environment at home to ensure that the children are educated in the right earnest.

Our efforts this year focused on strengthening the physical infrastructure of and supplies to schools, improving

the learning levels of children through community learning centres, strengthening community based pre-school education ensuring enrolment, adopting schools for whole-school transformation, digitalisation of schools and introducing techno-pedagogy through STEM education that promotes activity-based learning and capacity building of teachers to encourage a scientific rigour among students. Education interventions also include offering sponsorships and providing mentorship, support and career counselling to economically and socially weaker students in rural and tribal areas.

**215,776**  
Beneficiaries reached through our education projects in FY20



*Providing better Infrastructure for Schools*



## Health

We provide quality healthcare to patients in urban and remote areas through permanent health centres as well as health camps that provide free or subsidised medical care.

Our health centres in India comprise:

### 12

Community health centres at Ahmednagar, Chennai, Kattupalli, Coimbatore, Kansbahal, Thane, Lonavala, Surat and Vadodara, along with three in Mumbai

### 6

Health centres in Mumbai, Thane, Titwala, Vadodara, Surat and Chennai have artificial kidney dialysis clinics

### 14

Mobile clinics that take healthcare services deep into urban slums, rural and tribal areas

An Anti-Retroviral Therapy (ART) centre in Mumbai that conducts HIV/AIDS awareness camps and provides medical support along with therapy, counselling and testing.

We conduct health camps and diagnostic camps in the areas of:

- Reproductive health and immunisation
- Malnutrition and anaemia mitigation
- Eye check-ups
- Blood donation
- Health awareness



### Key initiatives undertaken in FY20

Conducted a medical health check-up camp at Butibori village in association with SVMM Hospital and patients requiring further treatment were referred to the Hospital Khapri.

### 266 villagers Availed the facility

On the eve of the birth anniversary of our co-founder Mr. Holck Larsen in January, we organised blood donation camps at various locations.

### ~30,643 Units of blood were donated by L&T volunteers

We provide infertility services free of cost to the underprivileged communities at our Andheri Health Centre.

### ~313,839 Individuals became aware of their medical conditions and received access to better healthcare facilities in FY20



Strengthening Child health and development program

## Social capital



## Skill development

**We conduct vocational training courses and other skill-building activities to provide less-educated youth or school dropouts with job-earning skills and opportunities. Our Construction Skills Training Institutes (CSTIs) provide free-of-cost training to rural and urban youth in trades such as bar-bending, formwork carpentry, masonry, scaffolding, welding and electrical wiring and train them to be EHS stewards and solar PV technicians.**

With emphasis on technology and innovation, new courses related to smart city projects have been introduced such as networking, metro communication and Smart Meter-PM Solution training, optical fibre cable, Intelligent Traffic Management System (ITMS) and CCTV Installation and maintenance.

Generally, young eligible candidates are sourced from the underprivileged segment of society in remote locations through career fairs. They are given three-month skills training in construction trades with free boarding and lodging. Post training, support is also extended in finding placement at construction projects.

With the implementation of the CSTI digital training modules, digital study material, micro learning modules on mobile apps, attendance via biometric and mobile app, AR/VR training module imbuing safety and quality standards, periodic online assessments are initiated. Safety, quality and soft skills training are integral parts of all the skill-training modules.

The hands-on training and L&T certificate at the end of the course makes these young trainees job-ready, enabling them to contribute to their family's income.

Many trainees from CSTIs have found jobs in India and abroad, and earn a good income. At L&T, we attempt to bridge the gap between the skill demands of the industry and the aspirations of the youth, making them employable.

### Highlights of CSTIs in FY20

CSTI	Applicants registered	Students trained	Youth employed
Panvel	1,641	899	642
Cuttack	1,990	1,691	720
Attibele	1,302	1,202	1,101
Chacharwadi	1,872	944	602
Jadcherla	1,342	1,221	648
Kanchipuram	1,499	1,239	962
Pilkhuwa	986	968	674
SBT Hyderabad	600	600	510
Serampore	1,270	1,270	1,250
<b>Total</b>	<b>12,502</b>	<b>10,034</b>	<b>7,109</b>

## OUR ENDEAVOURS COMMUNITY LEARNING CENTRES

We have collaborated with Angel Xpress Foundation (AXF) to run community learning centres across three locations in Mumbai. AXF uses innovative concepts and techniques of teaching children in open public spaces such as parks, creating a fresh and open learning environment for them.

The community learning centres are driven by volunteers who are committed, educated and capable. They make an impact by creating a generation of empowered and evolved individuals, who grow up to be aware of their rights and responsibilities. Besides regular classes, medical camps, outings and movie screenings are organised at regular intervals for the recreation of these children.

Over the years, AXF has also extended their impact by reaching out to the parents of these children to further foster their overall holistic development at home and in the external world.

**In FY20, the programme reached out to 458 students across three locations.**

## CANCER DETECTION CAMPS

In collaboration with the Indian Cancer Society, we initiated a project to conduct cancer awareness and screening camps for people in and around L&T Construction's sites in Mumbai, Aurangabad and Tamil Nadu.

Screening camps were held for oral cancer for men and general cancer screening camps (cervical, oral and breast) for women in the neighbourhoods of the L&T Construction sites across Maharashtra and Tamil Nadu. Information, Education, Communication (IEC) materials were distributed to the beneficiaries.

**The project undertook 90 such camps and covered approximately 5,084 beneficiaries over the past two months.**

## L&T-EERING: EMPLOYEE VOLUNTEERING INITIATIVE

We have a growing army of livewire volunteers or L&Teers who support our Company's CSR efforts. They undertake various initiatives from teaching at community schools to writing examination papers for the visually challenged. L&Teers are passionate, sensitive to social causes, and committed to community development.

**In FY20, 7,122 employees volunteered and worked on various CSR initiatives.**

## "Training and employment helped me become self-reliant and a proud citizen of my country."

Amirul Hossain comes from a poor family at Cooch Behar district, West Bengal. His father is a small farmer and the only earning member of his family. They were struggling to survive on a family income of ₹ 6,000 per month.

Amirul heard about the mobilisation drive of L&T in his village, appeared for the selection test and was selected for the Assistant Bar Bender and Fixer course at L&T's CSTI at Serampore

After the completion of the training, Amirul was employed at an L&T project site and started earning ₹ 10,000+. He is now a more confident, self-reliant individual.

**Amirul initially obtained employment at Odisha and has subsequently moved to another project in Maharashtra, earning around ₹ 13,224 per month.**

## Social capital

CASE STUDY	
<h1>360-degree support to farmers through collaborative problem-solving</h1>	
<p><b>A severe drought adversely impacted large parts of Maharashtra in FY20. A reliable estimate suggests that around 42% of the state's talukas had to grapple with the calamity, deepening rural distress.</b></p>	
<p><b>THE OBJECTIVE</b></p> <p>The state had declared drought in 15 talukas and sought central aid to support around 60% of Maharashtra's 1.4 Crore farmers. Talasari was one such taluka. We, at L&amp;T, worked closely with the farmers in Talasari. Our objective was to enhance the income of farmers by promoting access to entitlements, technology deployment and collaboration.</p>	<p><b>₹ 9.73 Million</b> Total project cost</p> <hr/> <p><b>251</b> Farmers benefitted</p> <hr/> <p><b>301 acres</b> Land under irrigation</p> <hr/> <p><b>90.28 litres</b> Fuel saved per day</p> <hr/> <p><b>230.8 kg</b> CO<sub>2</sub> emission reduced per day</p>
<p><b>INITIATIVES UNDERTAKEN</b></p> <p>We provided 360-degree support to farmers through collaborations. The key focus areas included providing water for irrigation, using agriculture technology, convergence with government schemes for farmers, improving market linkage and providing financial planning support to farmers.</p>	
<p><b>KEY AREAS OF INTERVENTION</b></p> <p><b>Infrastructure</b></p> <ul style="list-style-type: none"> <li>• Water source identification</li> <li>• Micro irrigation with submersible pump and solar power</li> <li>• Mapping the land through geofencing</li> </ul>	
<p><b>Technical support</b></p> <ul style="list-style-type: none"> <li>• Soil and water testing</li> <li>• Season-long schedule and support</li> <li>• Farming/fertiliser techniques</li> <li>• Solar water pumps and solar grid power</li> </ul> <p><b>Government support</b></p> <ul style="list-style-type: none"> <li>• Block Development Officer (BDO) support for linking with government schemes</li> <li>• Water drips</li> <li>• Seeds</li> <li>• Cast certificates to access benefits</li> </ul> <p><b>Market connect</b></p> <ul style="list-style-type: none"> <li>• Identifying market</li> <li>• Connecting to the buyer</li> <li>• Financial planning</li> </ul>	
<p><b>BENEFITS</b></p> <p><b>Economic</b></p> <ul style="list-style-type: none"> <li>• Increased productivity/yield</li> <li>• Reduced production cost</li> <li>• Increased income</li> </ul> <p><b>Social</b></p> <ul style="list-style-type: none"> <li>• Development of tribal areas in the state</li> <li>• Livelihood enhancement</li> <li>• Reduced migration</li> <li>• Reduced interruptions in the education of a child</li> </ul> <p><b>Behavioural</b></p> <ul style="list-style-type: none"> <li>• Increased skills</li> <li>• Lifestyle enhancement</li> </ul> <p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>• Increased soil fertility</li> <li>• Responsible utilisation of resources</li> </ul>	

CASE STUDY

# Ensuring water security for all

**We undertake water harvesting across several villages to help them become water-sufficient. One such project was implemented in Chettipalayam, South Coimbatore.**

### THE CHALLENGE

Before implementation of the watershed project, locals in Chettipalayam, South Coimbatore used to fetch drinking water only from the panchayat municipality, which was a constraint due to scarcity.

### INITIATIVES UNDERTAKEN

Water harvesting structures such as check dams, farm ponds and channels, constructed during the third year of the project, significantly improved the water storage capacity through existing and newly developed water bodies. All the water bodies created under the ICD project with the support of L&T were filled to their optimum water harvesting capacity during FY20, with the rainfall in Chettipalayam at 97%, i.e., 629 mm to an average of 650 mm.

This year, the total water-holding capacity created through various structures stood at 4.7 Million litres.

### ACHIEVEMENTS

The watershed intervention has a significant impact on the water security of the community in terms of water availability for agricultural and domestic purposes. Locals have now started harvesting water from their own wells.

These measures have resulted in changes in the cropping pattern, from the original cultivation of one crop to three or four crops per season, and an increase in crop yield ranging from 15-50%. The area under horticultural crops has also increased to an additional 10 hectares.

**The increased yield has contributed to an overall improved household income of 20-50%**

### WATER HARVESTED

<b>180.9</b> Field bund	<b>0.90</b> Sunken pond
<b>120.6</b> Farm pond	<b>17.5</b> Check dam 8.0
<b>16.6</b> Percolation tank	<b>28.0</b> Check dam 8.5
<b>273.4</b> De-silting of water bodies	<b>40.5</b> Check dam 10M

Figures indicate water holding capacity (in Lakh litres)

**67.85 Million litres**  
Cumulative water holding capacity (since 2016)



## Social capital

### CASE STUDY

# Evolving collaborative and dynamic teaching methods

Digitisation of schools and introducing techno-pedagogy through STEM (Science, Technology, Engineering and Mathematics) education is one of our key programmes.

#### THE CHALLENGE

Under-resourced government schools were not able to impart quality education to students.

#### INITIATIVES UNDERTAKEN

This STEM-based programme was introduced in 103 government schools this year. It utilises technology to transform government schools into dynamic places to teach and learn STEM content through collaborative, project-based learning.

Teachers are trained in collaborative and dynamic teaching methods, which replace rote learning with experiential learning. The STEM content is mapped with the syllabus and taught by teachers in the classroom. Technology integration is ensured in every class through the usage of Edukit, covering subjects in Math, Science and Social Sciences for grades 6<sup>th</sup> to 8<sup>th</sup>, mapped with the syllabus of National Council of Educational Research and Training (NCERT) and developed in the local language by subject experts.

Students are given the opportunity to work with STEM models and experiments as well as undertake project-based learning that provides

hands-on and minds-on lessons for the students. Making Math and Science both fun and interesting helps the students do much more than just learn; it helps them apply Science and Maths concepts in their day-to-day life.

We organise exposure visits for students and teachers to the local science centres and encourage students to participate in the interschool science exhibitions and competitions. Innovation contests are also conducted for teachers to encourage them to be innovative, creative and practical in teaching.

School Management Committee (SMC) meetings are held to create awareness of this programme and to monitor the infrastructure and project activities. Parents are encouraged to send both boys and girls to participate in the STEM activities in the school.

#### ACHIEVEMENT

**In FY20, the STEM programme reached out to 103 schools, 465 teachers and 23,000 students.**

#### STEM PROGRAMME OUTREACH

**103**  
Schools reached

**465**  
Teachers trained

**23,000**  
Students participated

## CASE STUDY

## Serving underprivileged patients with enhanced hospital infrastructure

Sankara Charitable Hospital was set up in 2009 to provide relief and support to the underprivileged population in and around Kanchipuram. The hospital has been extending emergency care to cardiac patients and dialysis facilities to patients with kidney disorders at significantly subsidised rates. It serves underprivileged patients from other parts of Tamil Nadu and other states of India as well.

### THE CHALLENGE

The hospital was functioning in a makeshift facility and had severe space constraints.

### INITIATIVES UNDERTAKEN

To accommodate the growing number of patients and to ensure high quality healthcare to them, the Trust approached L&T for support.

We converted an old, incomplete structure belonging to the Trust, conquering the challenges of considerable redesigning, and transformed it into a multispecialty hospital measuring 42,000 sq ft facility. It was built to conform to the standards of the National

Accreditation Board for Hospitals & Healthcare Providers (NABH), and has infrastructure and equipment suitable for outpatient and in-patient services across all major specialties.

Our team was actively involved in the design and planning support provided to the Trust.

The hospital offers facilities such as:

- 20 patient rooms
- Two modern operation theatres
- ICU and NICU
- Maternity and child welfare facilities
- Fully equipped dialysis centre
- Laboratory
- Blood storage
- Digital X-ray
- Pharmacy

The Trust aims to extend affordable and compassionate care through this hospital to all those who need medical facilities, especially the rural communities in the vicinity.

### ACHIEVEMENT

The Trust has served 8,542 patients since its construction in October 2019 till March 2020.



This image is for representation purpose only

# Relationship capital

Ever since we commenced our initiatives on sustainable growth over a decade ago, we have focused our strategies towards building stronger bonds of trust with all those who have a stake in our progress. This includes customers, shareholders, employees, bankers, business partners, central and state governments and the communities we work with. We believe that enduring relationships with all stakeholders provide us insights, which help us review and progressively refine our strategies to create long-term value for all.

We have always conducted our business in a fair, transparent and ethical manner, and our engagement with stakeholders is tailored around a multi-pronged approach.

Our stakeholder engagement matrix is modelled along the following lines:

Stakeholders	Engagement Modes
<b>Shareholders and investors</b>	<ul style="list-style-type: none"> <li>• Press Releases, Info desk - an online service, dedicated email ID for Investor Grievances, Quarterly Results, Annual Reports, Sustainability / Integrated Reports, AGM (Shareholders interaction), Quarterly investor presentation, Investors meets, corporate website.</li> </ul>
<b>Suppliers/contractors</b>	<ul style="list-style-type: none"> <li>• Regular supplier, dealer and stockiest meets</li> </ul>
<b>Media</b>	<ul style="list-style-type: none"> <li>• Press Releases, Engagement with Media, Quarterly Results, Annual Reports, Sustainability / Integrated Reports, AGM (Shareholders interaction), Access to information &amp; responses to queries</li> </ul>
<b>Community</b>	<ul style="list-style-type: none"> <li>• Periodic feedback mechanism</li> </ul>
<b>Customers</b>	<ul style="list-style-type: none"> <li>• Regular business interactions, Client satisfaction surveys</li> </ul>
<b>Government</b>	<ul style="list-style-type: none"> <li>• Press Releases, Quarterly Results, Annual Reports, Sustainability / Integrated Reports, Stock Exchange fillings, issue specific meetings, engagement through industry bodies</li> </ul>
<b>Employees</b>	<ul style="list-style-type: none"> <li>• Employee satisfaction surveys, engagement surveys</li> <li>• Circular, Messages from Corporate and Line Management</li> <li>• Corporate Social initiatives</li> <li>• Welfare initiatives for employee and their families</li> <li>• Online news bulletins to convey topical developments</li> <li>• A large bouquet of print and on-line in-house magazines (some location-specific, some business-specific), a CSR programme newsletter</li> <li>• L&amp;T Helpdesk, toll-free number</li> </ul>

## SHAREHOLDERS AND INVESTORS

We follow a policy of engaging with all stakeholders regularly and keep them informed of evolving developments in the organisation. Our objective is to take their perspectives, get clarity on 'pain points' and craft a way forward collaboratively. Their faith in our abilities and constant support enables us to tailor our policies in alignment with our market value creation objectives.

**₹ 25.27 Billion**  
Value distributed in FY20

## CUSTOMERS

Our customers represent the centre of all our strategies and actions. Our constant endeavour is to provide them with superior experience at every stage of their association with us. Innovation – across products, projects, processes and customer servicing – enables us to create value that can set a benchmark for the industry to emulate. We enjoy long-lasting, time-tested relationships with our customers across all our businesses.

We engage with our customers regularly through various modes of communication to get their feedback, suggestions and to understand their requirements. The L&T Info Desk can be reached at [infodesk@larsentoubro.com](mailto:infodesk@larsentoubro.com) and is a source of information and feedback on the entire spectrum of our offerings.

We collect customer feedback on a scale of 1 to 10 (10 = Excellent, 1 = Poor) quarterly and this is reviewed during the management review meetings. Corresponding action plans are formulated to improve performance in the areas rated below on an average of 8.0 points of collection. The survey covers various aspects of customer service such as time schedule, product quality, housekeeping, safety standards, response to client's requirements, work methods, communication, work delegation, resource mobilisation and courteousness.



### Noteworthy initiatives during the reporting year

- Established an official mechanism for the review of customer response on our project sites
- Getting inspection reports signed by the customer
- Providing a digital platform called FOCUS where customers can provide feedback regarding 10 different parameters on a real-time basis. It also tracks the corrective actions in case of non-conformance and enables the customers to escalate unaddressed issues
- Conducting Customer Centricity Week for individual businesses wherein key customers addressed our employees on a virtual platform on their expectations and views
- Having a separate marking channel for customer feedback in various business verticals within Independent Companies (Businesses)
- Obtaining feedback from customers during Business Excellence Audit
- Joint development of SOPs for remote inspection management system for vendor inspection

### Some of our distinguished institutional investors:

Investor	% stake in L&T
Life Insurance Corporation of India	14.9
HDFC Mutual Fund	4.6
ICICI Prudential Life Insurance Co.	1.9
General Insurance Corporation of India	1.8
GIC Private Limited (Singapore)	1.8
Nippon India Mutual Fund	1.6
SBI Mutual Fund	1.5
ICICI Prudential Mutual Fund	1.4
Kotak Mutual Fund	1.3
Birla Sunlife Mutual Fund	1.1
SBI Life Insurance	1.0

Note: Above information is as on March 31, 2020

## Relationship capital

### Suppliers and contractors

At L&T, our focus is on maintaining and enhancing our relationships with suppliers, contractors and service providers to drive mutual growth. These include raw material vendors, machine suppliers, and contract workers. We engage with them regularly through partner meets.

We have established an e-procurement model for paperless buying and an e-tendering system is used for information flow and reverse auctioning.

### We trained more than 0.4 Million vendors, dealers and sub-contractors in FY20.

Our human rights practices forbid child, forced and compulsory labour, and discrimination based on gender, caste and nationality. This year, we have made a separate CoC for our vendors. Environmental & Social CoC includes compliance with environmental regulations, health and safety, labour practices, human rights aspects, minimum wages, freedom of association, collective bargaining, prohibition of child labour, forced and compulsory labour, ethical behaviour, transparency in business processes and environment conservation. So far, more than 43,000 vendors have signed the CoC.

### GOVERNMENT

We work closely with the Government of India as well as local governments during the regular course of our operations. We abide by the laws of the land and believe compliance is absolutely non-negotiable. We stay updated of changes in laws and policy initiatives. With several international associations, we participate in national and international policy formulation and economic forums. We also participate in several government schemes to help enhance the lives of communities we work with.

### PROMINENT INITIATIVES IN FY20

- B&F Business involved suppliers and contractors in customer feedback inspections for select projects
- All Businesses and E&A Business conducted periodic supplier meets, channel partner meets and so on
- LTHE – Offshore BV-prepared HSE assessment plan wherein suppliers/ vendors and sub-contractors are made a part of it to conduct yearly assessment of their HSE management systems
- Power business interacts with S/C in the following way:
  - Vendor onboarding and registration portal: For technical and financial evaluation of vendor before ordering
  - Yearly vendor meet Power Ensemble
  - Rate contract for domestic/overseas inspection services on pan L&T Level
  - Logistic portal for receipt of logistics request from the user department on an online platform and interfacing with the vendors to the same portal for generation of online tracking reports and fulfilment of payment cycles including invoicing in the same portal
- Deployed BOT for logistics invoice processing
- Realty Business conducts quarterly vendor service quality rating linked to payouts
- The WET Business supply chain management team started using digital platforms like MS Teams extensively to interact with suppliers/sub-contractors for negotiations and order finalisation, virtual inspection of materials at vendor premises by our quality team and so on

**₹ 893.21 Million**  
Value expended in FY20



### Major government programmes we are associated with

#### Government campaigns

#### Our initiatives

#### Swachh Bharat Abhiyan

- Constructed over 1,000 well-designed washrooms using local skills and materials
- Community-based monitoring committees ensured that these villages became open-defecation free
- L&T provided adequate Water, Sanitation and Hygiene (WASH) infrastructure for 3,000+ children and trained them in using toilets and keeping their schools clean and hygienic

#### Make in India campaign

- Local sourcing of products and services
- Defence business collaborates extensively with the government, thus supporting this initiative

#### Digital India campaign

- More than 11,000 equipment across various project sites are connected to the Asset Insight, streaming real-time equipment data
- Worker Induction and Skills Application (WISA) is an end-to-end digital solution for smooth on-boarding of blue-collar workers into construction sites. Today, more than 300,000 workers are on-boarded in WISA.
- Embracing Industry 4.0: The IoT for manufacturing has been applied to connect machines, cranes, welding machines and other equipment across various manufacturing plants for remote monitoring and maintenance.



**Interventions during the year**

Project/business	Our role
<b>National Smart Cities Mission</b>	<ul style="list-style-type: none"> <li>Hyderabad City Surveillance and ITMS project</li> <li>Vizag Smart City</li> <li>Prayagraj Smart City</li> <li>Mumbai City Surveillance</li> <li>Raipur Smart City</li> </ul>
<b>Defence business</b>	<ul style="list-style-type: none"> <li>Aerospace manufacturing shops for rocket motors for India's space launch vehicles at Powai and Coimbatore</li> <li>Strategic Systems Complex for weapon and engineering systems and sensors at Talegaon near Pune</li> </ul>



Smart Pole, Vizag

**₹ 92.84 Million**  
Contribution to the exchequer in FY20

**₹ 1,164.70 Million**  
Order book of government projects



3x660 MW Koradi Thermal Power Plant, Maharashtra

## Relationship capital

### SUPPORTING STAKEHOLDERS DURING THE PANDEMIC

COVID-19 is unprecedented in its scale and impact. Therefore, a coordinated response with all stakeholders helps us prepare a strong foundation to deal with such health and socio-economic catastrophes in future.

Some of our initiatives include:

#### Suppliers and contractors

- Set aside an outlay of over ₹ 500 Crore per month to support about 160,000 contract workers
- Remitting timely wages to workmen and sub-contractors despite the lockdown

- Practising extra vigilance across the labour camps attached to project sites to ensure proper hygiene, catering, waste management, and cleanliness
- Ensure that preventive measures, including social distancing, are being rigorously maintained
- 24X7 availability of ambulances, doctors and other medical facilities for assistance to workmen and employees across all locations
- Use of the WISA mobile application to send SMS alerts in English, Hindi and other vernacular languages to workmen and employees on the nature of COVID-19, its symptoms, and testing facilities available locally

### Communities

- Opening our community Health and Medical Centres 24X7 and use ambulances to transport patients to nearest hospitals

### Government

- Donated ₹ 150 Crore to the PM-CARES Fund
- Installed smart technologies in over 20 major cities to help various state governments and local authorities to fight the COVID-19 pandemic effectively

### ENDEAVOUR HELPING CITIZENS IN DISTRESS

The city of Pune in Maharashtra experienced torrential rain between September 25-28, 2019 that made the water reservoirs overflow and flood the city. It caused large-scale devastation, including loss of human lives and damage to properties.

Residents were stranded in their houses due to filling of mud and garbage in their housing societies and nearby areas. In this scenario, our Pune team extended their support to local citizens and government authorities and launched Operation **Raahat**.

The team deployed 300+ workmen, 25+ team members and all the required resources to clean the locality as well as the premises of local neighbourhoods. The operation was conducted for at least seven days round the clock. We are honoured to receive an appreciation letter from the Honourable Commissioner of Pune Municipal Corporation for helping citizens proactively in their hour of need.



## CASE STUDY

## Upskilling children for a next-gen digital society

This programme drives STEM education through digital platforms with emphasis on creativity, innovation and technology-based rational approach to learning.

### THE OBJECTIVE

In continuation with our efforts to drive STEM education, we provided computer labs and introduced the Zero2Maker (Z2M) programme in seven government schools in rural Karnataka in FY20. We partnered with Encube labs and the Asia Business School, Malaysia to take selected students and teachers through the Z2M journey.

This framework is a training method to transform the uninitiated students (Zero), to a Maker who is trained to create, to an Innovator who

can identify key customer needs and develop solution strategies, and to an Entrepreneur who can commercialise and monetise the solution.

### INITIATIVES UNDERTAKEN

Under this programme, children from classes 7 to 9 were exposed to sessions on creativity, science, CAD design, electronics, fabrication, coding, robotics and 3D printing. The first year of the Z2M programme culminated in a design competition that recognises top-performing participants who display exemplary commitment to promoting innovation and entrepreneurship in their schools.

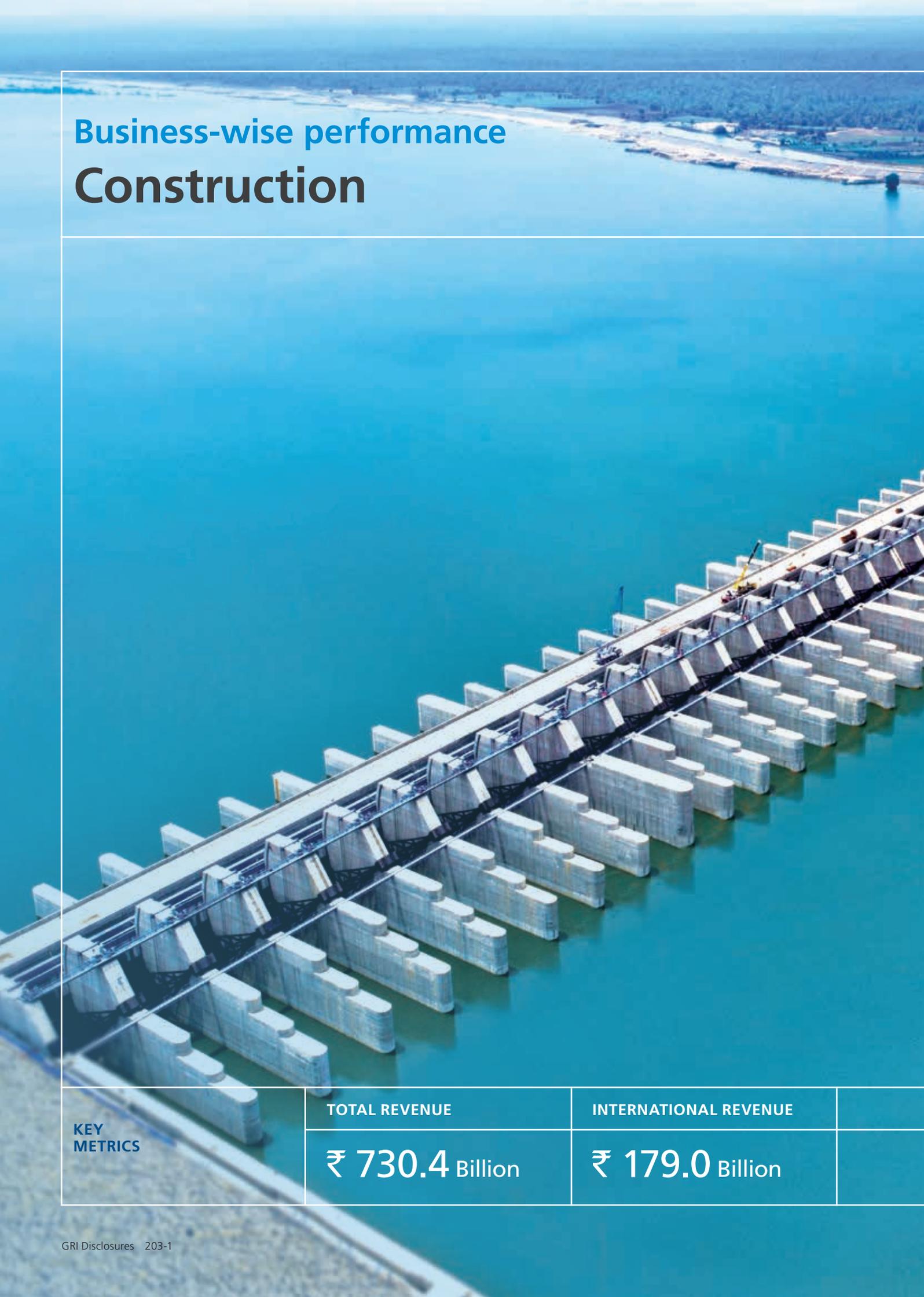
The first phase of this programme started in Mysore in July 2019 with 42 participants from seven local schools with a Z2M 3-day workshop.

Prior to the workshop, most of the students had not even used a computer. During the course of the programme, they were able to learn enough to have confidence in their ability to build solutions using technology. After the programme, participating schools were given a starter maker lab, enough to continue the programme in their school, that they could scale to meet growing demand.



# Business-wise performance

# Construction



## KEY METRICS

TOTAL REVENUE

₹ 730.4 Billion

INTERNATIONAL REVENUE

₹ 179.0 Billion



The critical segments that drive our construction business:

**Buildings & Factories**

**Transportation Infrastructure**

**Heavy Civil Infrastructure**

**Power Transmission & Distribution**

**Renewable Energy**

**Water & Effluent Treatment**

**Smart World & Communications**

**Metallurgical & Material Handling**

**Risks**

The existing and emerging risks are relevant for all segments of the construction business.

**Strategy**

Our strategy is to conduct a detailed scenario mapping and accordingly create a robust response mechanism to maximise opportunities and minimise risks. .

EBITDA	PROJECTS ACHIEVED 'ZERO ACCIDENT' STATUS
₹ 59 Billion	93%

## Business-wise performance: Construction

### EVOLVING BUSINESS LANDSCAPE

The infrastructure sector has played a pivotal role in driving India's socio-economic progress for decades. The sector has always received primacy and proactive resource allocation from both the central and state governments.

**80% share**  
Of roads, railways, urban housing, power and irrigation in the National Infrastructure Pipeline (NIP)

With a long-term perspective, opportunities in air connectivity are also expected to rise.

### SECTOR PERFORMANCE IN FY20

FY20 ushered in growing challenges for the Indian economy, which underperformed significantly owing to escalating global trade disputes, low consumer and investor confidence and structural impediments. Additionally, the liquidity crunch in the banking and financial sector also contributed to the underperformance of the economy and the construction sector. The sector registered a six-year low growth of 1.3%.

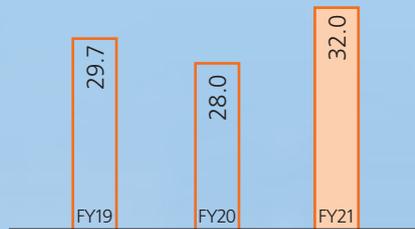
Cement production saw a marginal decrease of 0.8% in FY20 compared to 13.3% increase in FY19. India's crude steel production was down by

1.5% and finished steel production was flat at 109.2 MT in FY20 against 110.9 MT in FY19.

Despite adversity, the government's impetus continued to provide opportunities for our Company. For instance, the prolonged weakness in the realty sector was, to some extent, countered by the government's thrust on the affordable mass housing and health segments.

#### Construction of highways

(kms per day)



Source: Ministry of Road Transport and Highways (MoRTH)

Competition in this sector has increased with a higher frequency of smaller-sized bids attracting interest from smaller players. This sector is also grappling with payment terms in government tenders, coupled with issues in land acquisition. The renewable energy segment saw some uptick, which has offset the decline of prospects on centrally sponsored intensive electrification projects under the Saubhagya Scheme.

**26+ Million**  
Households received electricity through the Saubhagya Scheme as on March 31, 2020

We have been focusing more on geographic diversification since the last few years, which has resulted in some big-ticket successes in countries other than the Middle East region. Our infrastructure business, which encounters normal execution challenges in terms of 'ROW' and delayed client clearances, faced other unprecedented concerns during the reporting year. Change in some state governments led to reassessment of awarded contracts, while some environment-related work stoppages adversely impacted smooth execution in some projects.

The sudden outbreak of the pandemic further accentuated the challenges in the last fortnight of the financial year. With the lockdown imposed by various governments to flatten the COVID-19 curve, businesses and the prospects of the economy were severely affected. The fourth quarter is otherwise the busiest quarter for the segment in terms of progress of projects and collections. Therefore, execution challenges in that quarter had an adverse impact on the revenues and profits of this business.



Al Wakrah Bypass Road, Qatar

## MANAGING UNCERTAINTIES PRUDENTLY

Risk	Mitigation initiatives
<b>Growing competition in the construction industry</b>	<ul style="list-style-type: none"> <li>Operational excellence initiatives for cost and schedule optimisation</li> <li>Value engineering to optimise design cost</li> <li>Strategic bidding</li> </ul>
<b>Limited availability of credible sub-contractors, suppliers and vendors</b>	<ul style="list-style-type: none"> <li>Continuous engagement with sub-contractors, suppliers and vendors for their development and upgradation</li> <li>Technical and financial evaluation of suppliers and contractors before the award of contract</li> </ul>
<b>Delay in project execution and cost overruns</b>	<ul style="list-style-type: none"> <li>Timely mobilisation of resources</li> <li>Elimination of procedural delays</li> <li>Improvement in internal processes</li> </ul>
<b>Limited availability of skilled workforce</b>	<ul style="list-style-type: none"> <li>Upskilling workers through skill-based training</li> <li>Enhancing skills of rural youth through the Company-owned CSTIs</li> </ul>
<b>Negative environmental impact</b>	<ul style="list-style-type: none"> <li>Used LED lights and digitalisation at project sites</li> <li>Initiated energy audits at project sites</li> <li>Extensive use of video-conferencing and digital practices, saving business travel time, cost and natural resources</li> <li>Enhancing green cover through tree plantation, and maintenance at construction sites and establishments</li> </ul>
<b>Limited availability of personnel due to remote location of projects</b>	<ul style="list-style-type: none"> <li>Preference to local personnel, and their basic requirements are taken care of</li> </ul>
<b>Rising construction costs due to escalating labour and material costs</b>	<ul style="list-style-type: none"> <li>Developing and embracing new technologies for increased mechanisation and automation</li> <li>Adopting strategic sourcing practices to add new sources/suppliers and negotiating with current suppliers</li> </ul>
<b>Gaining societal consensus</b>	<ul style="list-style-type: none"> <li>Effective implementation of CSR initiatives for water and sanitation, education, skill development and health</li> <li>Need-assessment surveys are conducted prior to the implementation of CSR programmes in key thrust areas</li> </ul>

## OUTLOOK

As the situation is still evolving and the arrival of a vaccine is still uncertain, the economic cost of the COVID-19 outbreak is going to impact revenue collections and GDP growth in FY21. This may trigger a contraction of infrastructure spends. The Government of India and state governments are attempting to mitigate the impact

of lower tax collections through significantly higher market borrowings than originally budgeted for FY21, and the increase could be in the region of ₹ 0.9 Million Crore. What is encouraging is that multi-lateral funding of projects, which has increased in recent years, is providing additional resources for building national infrastructure.

## DEMAND DRIVERS

- Increased urbanisation and limited land availability leading to:
  - Increased spending on affordable housing
  - Verticalisation of accommodation
- Smarter solutions for public resources such as roads, water, power grids, sewage treatment and pollution control
- Urban traffic congestion in Tier I and Tier II cities leading to programmes of Mass Rapid Transit Systems (MRTS)
- Increasing scarcity of water resources leading to higher spending on water infrastructure; augmenting local water availability through the Jal Jeevan Mission
- Safeguarding agriculture from uncertain rainfall patterns leading to higher spends on irrigation
- Efforts to combat climate change giving rise to increased investments in:
  - Renewable energy
  - Green buildings
  - Pollution and emission control equipment
  - Effluent treatment facilities
  - Efficient power grids
- Growing non-oil capex in the Middle Eastern countries, particularly Saudi Arabia and the UAE
- Combined budgetary capex spends (including PSU capex) of over ₹ 16 Trillion. in FY21 for the infrastructure sector (over 7% of the expected nominal GDP)

As the situation is still uncertain, the project sites are also required to adapt to a new set of safety protocols for continuation of work, which will jeopardise progress for some time. The impact of the pandemic may gradually decline as normalcy returns.

Business-wise performance

# Buildings & Factories

**OVERVIEW**

The business has six BUs:

					
<b>AIRPORTS</b>	<b>HEALTH</b>	<b>PUBLIC SPACES</b>	<b>IT &amp; OFFICE SPACE (ITOS)</b>	<b>RESIDENTIAL BUILDINGS</b>	<b>FACTORIES</b>

The Buildings & Factories (B&F) business has retained its dominance in Engineering, Procurement and Construction (EPC) of airports, hospitals, stadiums, retail spaces, educational institutions, IT parks, office buildings, data centres, residential buildings, high-rise structures, mass housing complexes, cement plants, industrial warehouses and other factory structures in India and other geographies. The business has strong capabilities to create engineering marvels and landmarks.



Hyderabad International Airport

The business comprises several segments:

### AIRPORTS

- Design-and-build solutions for passenger terminal buildings and allied service buildings, and cargo terminal buildings, with integrated airport system solutions such as baggage handling systems, passenger-flow monitoring system, passenger boarding bridges, visual docking guidance systems and other facilities.

### IT AND OFFICE SPACES

- Turnkey solutions for IT and office spaces.
- Leverages the strong Mechanical, Electrical and Plumbing (MEP) competencies of B&F to offer concept-to-commissioning services for building data centres

A combination of best-in-class design facility, competency cells, advanced formwork systems, mechanised project execution, digitalised project control and a talented team of go-getters helps drive the business forward, retain marquee customers and secure big-ticket orders. The competitive advantage is further sharpened by an efficient supply chain and extraordinary project management expertise, honed over decades.

### BUSINESS ENVIRONMENT

The Indian economy began the year on an encouraging note and the government of India's move to drive more investments into creating infrastructure, drive growth and generate more employment was evident in the Union Budget, 2020. The tax sops for sovereign wealth funds investing in

### HEALTH

- Manage hospitals, and medical and nursing colleges
- Healthcare infrastructure is delivered with end-to-end healthcare facilities, including medical equipment, right from concept to commissioning

### RESIDENTIAL BUILDINGS

- A prime EPC solutions provider of elite, affordable and mass housing projects

the infrastructure sector, an Investment Clearance Cell, viability gap funding for projects in healthcare and logistics were some of the initiatives that were proposed and that helped dispel the negative sentiment in the economy.

The allocation of funds towards the NIP was also a positive and decisive move. Additionally, the data localisation policy has paved the way for more data centres in India, a segment in which B&F has concept-to-commissioning capabilities. The real estate industry was the focal point of the Indian economy during the year. The Government of India announced substantial relief packages to support the real estate industry by improving liquidity and enabling developers to jettison realty projects that were not seeing any movement for a substantial period.

### PUBLIC SPACES

- Design and execution of special structures such as tall statues, metro stations, convention centres, secretariat buildings, hotels, malls, integrated development and educational institutions

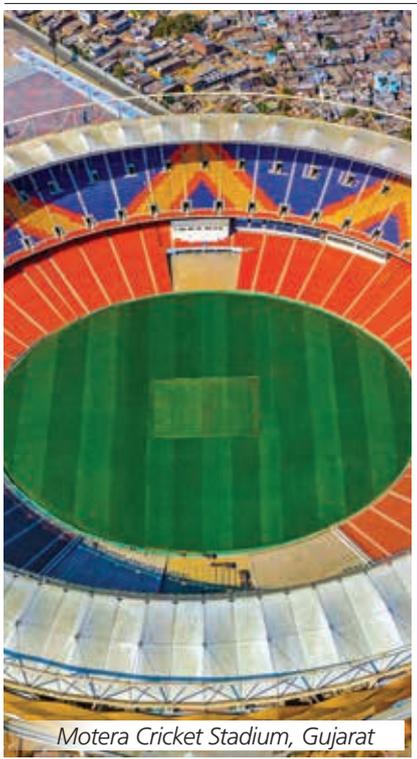
### FACTORIES

- A one-stop destination for the EPC requirements of factories such as cement plants, automobile plants, glass manufacturing and food processing plants
- In line with L&T's Perspective Plan 2026, the business is venturing into a new segment – **B&F Fast** – to explore and create value from advanced construction technologies such as prefabricated prefinished volumetric construction, offsite manufacturing, structural steel construction and 3D printing.

However, sizeable orders emerged from the affordable and mass housing industry, and major developers from the elite housing business were making a move to capture the segment.

In the political arena, assembly elections and the political instability that followed led to delayed tender results and uncertainty in policy initiatives and decisions in this fiscal. Additionally, the COVID-19 outbreak and the nationwide lockdown adversely impacted economic activity and output. Also, construction activities across India were halted during this period.

## Business-wise performance: Construction — Buildings & Factories



### Major orders secured

- CIDCO Housing Project in Navi Mumbai
- One of the largest greenfield airports in India in Navi Mumbai
- Mandarin Oriental Hotel, Muscat in Oman



### Updates on key projects

#### Key projects commissioned during the year

- Government Hospital and Medical College, Madhepura, Bihar
- Ford Global Technology and Business Centre, Chennai
- ITC Royal Bengal, Kolkata
- Police Bhawan – Signature Building, Lucknow
- Prestige Song of the South, Bengaluru
- Asian Paints Factory, Visakhapatnam

#### Achieved important milestones in the execution of major landmark projects

- The pitch-laying process was completed at the Al Rayyan - FIFA Stadium, Qatar in under 12 hours
- South Asia's largest skybridge weighing a massive 2,000 MT was erected in 8 hours at ITC Colombo by our in-house team
- AIIMS Gorakhpur's OPD block was completed and handed over
- The largest cricket stadium in the world at Motera, Gujarat, was substantially completed

### SIGNIFICANT INITIATIVES

- The business remains at the frontline of developing bespoke digital applications to serve its project sites more efficiently.
- Besides embracing advanced Building Information Modelling (BIM) in construction, the business is leveraging contemporary technologies such as:
  - Geospatial Information System (GIS) (mapping existing structures and creating 3D models)
  - Image recognition
  - Artificial Intelligence (AI)
  - Robotic Process Automation (replacing human intervention in day- to-day repetitive activities)
- The WISA is extensively used to digitalise the workmen's induction process and build a database of over 0.2 Million workmen.
- The Digital Stores initiative has digitalised the processes of indent

generation, approval, material issue and indent creation in an ERP system.

The data generated through this application has facilitated better inventory management.

- The team leveraged the 3D-printing technology to successfully print a 2.8 m-high residential building in Kanchipuram, the first full-scale 3D-printed building in India. The mix design developed by the team enabled the use of crusher sand in the 3D printing of concrete. This is a pioneering initiative and further research on this subject is continuing in right earnest.

### ENVIRONMENT, HEALTH AND SAFETY

The business has already commenced its EHS Professional Development Programme (EHSPDP) and has put in place a detailed Risk Management training programme meant for front-line engineers to ensure robust EHS practices.

It is our consistent effort to nurture and cascade across hierarchies a robust safety culture based on the principles of Behaviour Based Safety (BBS) and Safety Improvements made by Me. Over 4,000 interventions (SIM cards) were made at all levels of employees at the project sites. The business was certified for ISO 45001:2018 Occupational Health & Safety on June 13, 2019 by M/s DNVGL, which is a strong vindication of its industry-leading EHS standards.

## Key statistics of FY20

**93%**  
Of projects achieved the 'zero accident' status

**65**  
Projects achieved 3+ Million safe person-hours

**20**  
Projects achieved 10+ Million safe person-hours

As a part of our Company's broad focus on sustainability, the business has banned the use of single-use plastic in all forms across all offices, sites and establishments.

To safeguard employees and workmen in India and overseas at the onset of the pandemic, various project sites are housing workmen in labour camps. These camps are equipped with all essential facilities, medical care and 24x7 supervision. The COVID-19 Emergency Response Teams (ERT) constituted at the cluster-level, pan-India are tasked with reaching out to people, especially those at project sites, to check on their well-being.

Additionally, as a part of our Company's broad focus on sustainability, the business has banned the use of single-use plastic in all forms across all offices, sites and establishments.

## CONCERNS

The housing and real estate business is prone to political headwinds and changes in policy initiatives following change in regimes. At L&T, we have developed a political risk index to identify and mitigate these risks at the initial bidding stage. In the case of a few projects, especially government projects, the handover of encumbrance-free sites on time remains a key concern that impacts a project's momentum. In jobs executed

on a design-and-build contract basis, frequent modifications in design by the client and client-appointed consultants represent a considerable concern.

Our in-house Engineering, Design & Research Centre (EDRC) is proactive in documenting and implementing the learnings from previous experiences in new projects executed. Unexpected changes suggested by clients impede the timely completion of tasks. Such changes are thoroughly documented and communicated to clients by the Contracts Administration team to pursue claims.

The strategy of the business is to develop a specialised vertical – B&F Fast – to modularise, standardise and focus on 'prefab plus assembly' building solutions for different types of buildings to manage and mitigate the escalating risk of the non-availability of skilled resources in the industry. The solution will also cater to the increasing need of customers for faster construction.

**At L&T, we have developed a political risk index to identify and mitigate these risks at the initial bidding stage.**

At present, the world economy is facing a downturn triggered by the COVID-19 pandemic, which is unprecedented in its global reach and impact. The infrastructure industry is among the badly affected industries due to the contagion-led lockdown and eventual 'new norms' of working by maintaining the safety protocols. The smooth operation of the supply chain and the availability of the workforce have also been severely impacted. The business is working on identifying different scenarios and preparing contingency plans for each scenario. Necessary measures are being implemented to ensure the collection of payments due and to rationalise fixed costs and optimise overheads during the lockdown period.

## OUTLOOK

As the economy implements a calibrated exit from the lockdown, restrictions on construction activities are expected to be completely lifted. The lockdown has reduced consumption demand in the country, leaving government spending in social sectors as the only driver of economic growth.

However, the commercial and residential real estate business in India will see a prolonged impact of the pandemic. The investments in the development of airport construction may slow down and are expected to rebound only during the latter part of FY21.

Going forward, the major challenge for the construction industry will be supply chain disruptions, including limited availability of labourers as the migrant workers constitute a huge portion of the workforce. We are implementing long-term solutions to face such challenges, such as reducing our dependence on human resources by leveraging advanced construction technology.

Also, we are considering the implementation of techniques such as zero-based budgeting to reduce unnecessary expenses and optimise resource utilisation. Globally, B&F will put in place a cautious approach in the Middle East and explore opportunities to foray into new geographies such as Bangladesh and Africa.

**We are confident of navigating through the challenges arising from subdued demand and execution challenges through our customer-centric approach, construction expertise and technology leadership in the industry.**

## DEMAND DRIVER

The healthcare industry will provide significant opportunities for this business amid the likelihood of increased government spending.

## Business-wise performance

# Transportation Infrastructure

### OVERVIEW

Our Transportation Infrastructure (TI) business is one of the oldest, largest and most reputed EPC contractors in India in the road, railway and airport sectors.

It has two Strategic Business Groups (SBGs), namely, Roads, Runways and Elevated Corridors (RREC) and Railways Business Group (RBG).

The business leverages its vast experience in project management, engineering design and construction management to achieve international standards of safety, quality and operational efficiency. It has engineering design centres in Mumbai, Faridabad and Chennai. Additionally, it has a Competency Development Centre at Kanchipuram for the RBG and a Workmen Training Centre at Ahmedabad for the RREC.

### Strategic Business Groups (SBGs)



**ROADS, RUNWAYS AND  
ELEVATED CORRIDORS  
(RREC)**



**RAILWAYS BUSINESS GROUP  
(RBG)**

*NH 14 Palanpur Swaroopganj*

The business comprises several segments:

### ROADS, RUNWAYS AND ELEVATED CORRIDORS (RREC)

- The Roads & Runways (R&R) BU, provides EPC design and build construction services for all types of roads (asphalt and concrete). It is a pioneer in providing comprehensive civil infrastructure for greenfield city infrastructure projects, e.g., Smart Cities.
- This includes associated structures, cross drainage, toll booths and wayside amenities, among others, to NHAI, MoRTH, state governments and certain private clients. In the airport sector, the R&R business unit undertakes EPC construction of complete airside infrastructure, namely, runways, taxiways, aprons, airfield ground lighting and fuel hydrant systems, among others.
- The Elevated Corridor (EC) segment is engaged in EPC construction of all types of urban flyover projects for city traffic decongestion and the Dedicated Freight Corridor Corporation of India (DFCC). It undertakes civil works projects in both the eastern and western Dedicated Freight Corridors (DFCs).

### RAILWAYS BUSINESS GROUP (RBG)

- It comprises the Mainline Business Unit (MLBU) and the Metro Business Unit (MTBU). The MLBU provides EPC construction services for all mainline railway projects, western and eastern DFCs, including track laying, overhead electrification, dedicated railway linking for port and mining facilities and more.
- The MTBU executes EPC projects for all Signalling & Telecommunication Systems Works, Mass Rapid System Projects for metro projects in India, Riyadh Metro, Dhaka Metro and end-to-end Integrated Transit System complete with Civil and Systems Works (Mauritius Light Rail Transit – LRT). The overseas achievements of the business during the year are encouraging. It has recently completed several large and complex road projects in the UAE, Oman and Qatar. The RBG is now executing major projects in Mauritius and Bangladesh.

In FY20, the transportation infrastructure business has executed

**~1 Million sq m**  
Of airside construction

**1,347 lane km**  
Of roads

**389 km**  
Of track linking

**981 km**  
Of railway electrification  
[Overhead Equipment (OHE)]

### BUSINESS ENVIRONMENT

#### Roads, runways and elevated corridors

Over the preceding five years, the budgetary support for road construction has seen a steady rise. However, the award of contracts has reduced significantly owing to issues related to land acquisition. The delay in the financial closure of Hybrid Annuity Model (HAM) projects has impacted the government's ambition to infuse private investment into the sector.

Any shift towards a higher proportion of EPC projects will impact the NHAI's awarding capability due to higher funding requirements for civil works related to EPC projects. Stringent contractual terms are making the working capital requirement for road projects very high.

The delays in settling contractual issues such as extension of time and arbitration award, among others, are compounding problems. In FY20, approximately 5,100 km of roads were awarded and 9,855 km of roads were constructed. Highways construction at 28 km/day in FY20 has been a consistent feature with growing focus on delivery of projects. The market is full of many small EPC contractors, consequently intensifying the competition.

City infrastructure development has seen a lull in orders in FY20, with no significant awards. The Delhi–Mumbai industrial corridor is at an advanced stage, with multiple projects completed in Dholera and Bidkin industrial townships.

#### Planned outlay under the NIP

**₹ 100+ Lakh Crore**  
Total

**19%**  
Of outlay earmarked for roads

## Business-wise performance: Construction — Transportation Infrastructure

### Railways

The EPC tendering model of the Indian Railways (IR) has significantly improved over the years. The new EPC tender document (single-stage 2 packet) has been finalised, with industry suggestions primarily incorporated. However, the IR needs successful and faster implementation of EPC tendering. No major project was awarded in FY20. High-speed rail, the tendering for which was expected to gather momentum, has been deferred, with the major bids being extended multiple times. Steady projects in metro rails in various states are expected to help increase business. The Public-Private Partnership (PPP) component has been made mandatory for availing central assistance for new metro projects.



### Major orders secured

- Navi Mumbai International Airport – design, engineering, procurement and construction of the passenger terminal building, runway, taxiways and aprons, landside roads, utility infrastructure and drainage
- Delhi International Airport Limited – fuel hydrant system
- Three systems packages on EPC basis for the Eastern DFC
- EPC overhead electrification job from CORE
- Track works for two packages of Mumbai Metro Line 3



Underground tunnel built for Mumbai Metro project



### Updates on key projects

#### Key projects completed during the year

- Rewa–Katni–Jabalpur–Lakhnadon Road Project – 4 Packages, 288 km, 4-lane, Madhya Pradesh
- Bijapur–Humnabad Road Project, 220 km, 2-lane, Karnataka
- Raipur–Bilaspur Road Project, 42 km, 4-lane, Chhattisgarh
- Hospet–Chitradurga Road Project, 108 km, 4-lane, Karnataka
- North–South Parallel Runway commissioned for Bangalore International Airport, Phases 1 and 2
- Kanakura–Madar section (OHE – 294 TKM) and the Alwar–Bandikui section (OHE – 68 TKM)
- Khaliapali–Loisinga (11.15 TKM) track section of the Sambalpur–Tilagarh Doubling Project
- GMRCL – Meg Track Project – Priority Stretch (13 TKM)
- Hyderabad Metro OHE and Track Package (25 TKM)
- Track-linking for the Rewari–Iqbalgarh section of CTP 1 and 2 [1,400 tonne kilometre (TKM)]
- Commercial trial runs are in progress in the Rewari – Madar section
- Mauritius Light Rail Transit system (Phase I, 25 TKM)



Rewa–Katni–Jabalpur–Lakhnadon Road Project

- Roads and Transport Authority (RTA) 1028 (extension of Tripoli Street)
- RTA 1048 improvement of Expo 2020 Roads Network contract No. R 1048/1 and 5

#### Achieved important milestones in the execution of major landmark projects

- DFCC – (civil track package) CTP3R project had the highest single-day production of 1.16 cu m/day earthwork in filling and record of executing 2.03 Million cu m in May 2019

- Mumbai–Nagpur Expressway Project, Mumbai–Vadodara Road Project — 80% design completed in six months' time under the Design Acceleration Initiative of the RREC business
- Aurangabad–Karodi Road project milestone II achieved six months ahead of time

## SIGNIFICANT INITIATIVES

- The predominant fixed cost for the RREC business includes hiring charges for asset operation and maintenance, fuel and so on. Our decision-making is productivity-driven and has translated into aggressive cost reduction on all these fronts.
- This business leverages the benefits of the extensive use of linear project management tools, such as TILOS, to effectively visualise and plan mega linear projects across domains. Driven by a dedicated 'Track Planning Cell', this strategic initiative simplifies and accelerates centralised planning of civil and track projects, along with mega OHE projects.
- We have put together an Internal Project Management Consultant (IPMC) team to conduct comprehensive quality audits of projects that are continuing. The team ensures that construction conforms to design specifications, specified materials are being used during construction, and codal specifications meet with the requirements. It also reviews the status of non-conformance reports and facilitates closure.
- The Engineering Project Monitoring and Control Cell was formed under the project controls team. Their mandate is to design and develop a drawing tracker to monitor the delivery with respect to agreed timelines, optimisation of quantities with respect to initial design and coordination. They also monitor the actual quantity reported by the design department progressively and for development of a model for indices for quantities of similar projects.
- Enhanced mechanisation in the railway business for faster execution has been a remarkable feat. This involves simultaneous stringing of contact and catenary, which reduces operational costs and execution time. Having been well-established in DFCs, such mechanisation is also being used in other EPC projects, such as the Konkan Railway in the Western Ghats.

## CONCERNS

Land acquisition continues to be challenging owing to legacy laws and government policies. Very often, there are delays in handing over encumbrance-free land and ROW, impacting progress of work and idling of resources. Commercial terms in the business are getting tougher, resulting in working capital pressures. The sector is also exposed to delays in various approvals, leading to a domino effect. Environmental challenges (such as unprecedented rainfall or flood), National Green Tribunal bans and construction bans due to pollution enhance the risk in project execution.

## OUTLOOK

### RREC business

Over the next five years, the government has planned to expand the National Highway network by ~60,000 km, with about 20,000 km in major economic corridors, strategic areas and major tourist destinations. To enhance connectivity across the country, the Department of Civil Aviation has planned to build 100 new airports over the next 10 to 15 years. It is also working on the cargo policy to bolster the nation's logistics capacity. An investment pipeline of 1.43+ Lakh Crore for airports under the NIP has been planned over a period of five years. The government's focus on developing a strong express highway network, along with changes in contractual terms, is expected.

### Railway business

The Indian Railways is planning its highest outlay of ₹ 1.61 Lakh Crore for FY21, over ~3% increase on last year's outlay of ₹ 1.58 Lakh Crore. The conventional projects of the Indian Railways are backed by strong institutional funding such as Life Insurance Corporation of India (LIC), Indian Railway Finance Corporation (IRFC) and more.

### International

As all the major infra projects related to Expo 2020 in Dubai and FIFA 2022 in Qatar have already been awarded and oil prices have dropped, which

constraints cashflow, no more major prospects are visible in the near term in the Middle East. On the other hand, very few opportunities were identified in Africa during the reporting period. In addition, Chinese contractors posed stiff competition, further dampening any prospect.

The key hubs for investment in 2020 are likely to be Morocco, Egypt, Ghana, Cote D'Ivoire, Namibia, Botswana, Rwanda, Ethiopia and Kenya. Following the COVID-19-induced disruptions, funding for new projects is likely to be affected. The lockdown may trigger a shortage of raw materials and workmen, disruption in the supply chain, a significant increase in costs related to operating at site, coupled with reduced productivity due to a controlled working environment, need for hygiene infrastructure and requirements for various safety measures. Rising debt levels, limited capital availability and low private investment may result in a decline in project awarding.

## DEMAND DRIVERS

- The Indian Railways is planning to tackle mainline capacity constraints through a new line of ~5,000 km, capacity augmentation (doubling and tripling) of ~12,000 km and gauge the conversion of ~2,500 km in the next five years
- Electrification of ~10,000 km is expected to be awarded under the banner of 'Mission Electrification' over the next four years.
- New projects, including port connectivity dedicated rail links, are lined up.
- Tendering for three new DFCs is likely to be initiated in the next two to three years.
- Packages worth ₹ 68,000 Crore are likely over the next five years for undertaking new DFCs.
- Several opportunities exist in neighbouring countries and our existing global markets.
- Initiation of a few major airports in FY20, such as the Delhi International Airport and Navi Mumbai International Airport, are creating more opportunities.

## Business-wise performance

# Heavy Civil Infrastructure

### OVERVIEW

L&T's Heavy Civil Infrastructure (HCI) business has attained unrivalled market leadership in EPC projects across core civil infrastructure segments (metros, special bridges, hydel and tunnels, ports and harbours and defence) that are the critical components of the economy. As an industry leader in augmenting capabilities for urban mass rail transit systems, we are involved in the construction of metro rail systems in almost all the major Indian cities.

Supported by the expertise and experience gained from managing mega projects, we have established a position of pre-eminence in bolstering the country's defences. Dedicated design and technical centres, competency cells, specialised training centres, digital project management and a talented pool of employees help us sustain a leading role, attract marquee clients, penetrate new geographies and secure major orders.

### Core segments



NUCLEAR



SPECIAL  
BRIDGES



HYDEL AND  
TUNNEL



PORTS AND  
HARBOURS



DEFENCE  
INFRASTRUCTURE



L&T  
GEOSTRUCTURE

Mumbai Coastal Road Project

The business comprises several segments:

### NUCLEAR

We provide EPC solutions in civil, mechanical, electrical and instrumentation, including seismic qualification and modular construction technology. Our expertise extends to both Pressurised Heavy Water Reactor (PHWR) and Light Water Reactor (LWR) technologies.

### PORTS AND HARBOURS

This team has rich experience in greenfield ports, shipyard structures and seawater intake systems in all coastal states of India. It provides EPC solutions for breakwaters, berths, jetties and wharfs, dry docks and shore protection structures. It has unique expertise in providing design and construction solutions for state-of-the-art ship lift structures.

### BUSINESS ENVIRONMENT

Infrastructure creation propels the overall development of the Indian economy. Ramping up infrastructure allocation was one of the Union Budget priorities of Government of India this year. With major metropolitan areas on the metro map, both the central and the state governments are now focusing on Tier II cities such as Kanpur, Agra, Surat, Patna, Meerut, Ahmedabad, Nagpur, and so on due to their increasing population density. The business has been awarded two packages of the 82 km Delhi–Ghaziabad–Meerut Regional Rapid Transit System (RRTS) line in Uttar Pradesh.

The Ministry of Defence has identified an urgent need to upgrade the country's defence infrastructure and major projects are currently at the planning stage. Bridge construction in India is witnessing considerable interest from international funding agencies such as the Japan International Cooperation Agency (JICA) the World

### SPECIAL BRIDGES

This team has extensive experience in executing a wide range of bridges, such as cable-stayed, precast, pre-stressed concrete, steel and concrete composite construction using ingenious best-in-class construction techniques, such as incremental launching, segmental construction, balance cantilever construction and span-by-span construction.

### DEFENCE INFRASTRUCTURE

We offer single-point EPC solutions in the form of infrastructure facilities for defence bases, underground facilities and surveillance. The business has a strong presence in India, the Middle East, Bhutan and Bangladesh. Our ability to provide 'tailor-made' design-and-build and EPC solutions to suit the specific requirements of customers for complex infrastructure projects has made us a market leader in the country.

Bank and the Asian Development Bank (ADB), among others.

India's ports and trade-related infrastructure accelerate growth in the manufacturing industry and assist the 'Make in India' initiative. India has 12 major ports and approximately 200 non-major ports administered by central and state governments, respectively. With a view to promoting the expansion of port infrastructure and facilitating trade and commerce, the Ministry of Shipping's proposal to replace the Major Port Trusts Act, 1963 with the Major Port Authorities Bill, 2020, was approved. The Major Port Authorities Bill, 2020 will empower the major ports to perform with greater efficiency on account of full autonomy in decision-making and by modernising the institutional framework of the major ports. We have secured the Dabhol Breakwater Project (offshore structures) located in Ratnagiri.

FY20 saw a steady increase in projects tendered out by the government in the hydel, tunnel and irrigation segments,

### HYDEL AND TUNNEL

It offers EPC solutions for complete hydroelectric power projects, large-diameter transport/water tunnels and complex irrigation projects. The business also provides expertise for road and railway tunnelling projects, which cater to nation-building.

### L&T GEOSTRUCTURE

This is a unique entity that focuses on foundation and ground improvement related projects. It has a strong and professional foundation specialist team with the knowledge of design, equipment and methods to execute and supervise sophisticated foundation works. It has expertise in deep piling and diaphragm walls, multi-cellular intake wells for river-linking, marine terminals with berths and jetties and deep cut-off walls.

as the government introduced a few structural policy changes to promote the hydropower sector-based recommendations of the Standing Committee on Energy (2019).

India's total nuclear power generation capacity is 6,780 MWe, which comprises 2% of the country's overall power generation. The energy policy of the country calls for 25% of electricity to be generated from nuclear power by 2050. The business is expecting the government to move forward with a proposal for 10 PWR fleet. Major tenders in the nuclear industry were delayed and were pushed to FY21 due to lack of clarity about the Civil Liability for Nuclear Damage Act, 2010 among civil contractors.

However, the momentum of project awards suffered due to delays in bid evaluations, Board approvals and so on towards the end of FY20, and was further aggravated due to the impact of COVID-19 in March 2020. These delays have affected the much-anticipated order inflow for the business.

## Business-wise performance: Construction — Heavy Civil Infrastructure



### Major orders secured

- Rishikesh–Karnaprayag Rail Link Project (Package# 2), Uttarakhand
- Dabhol Breakwater Project (offshore structures) located near Ratnagiri, Maharashtra
- Delhi–Meerut Regional Rapid Transit System (RRTS) – two packages, Delhi and Uttar Pradesh
- Strategic Defence Facility project



### Updates on key projects

#### Key projects completed during the year:

- Medigadda Barrage, Kaleshwaram Irrigation Project, Telangana
- Singoli Bhatwari HEP, Uttarakhand
- Hyderabad Metro Rail Project (HMRP) Raidurgam stretch, Telangana
- Doha Metro Gold Line, Qatar
- Durgam Cheruvu cable-stayed bridge, Telangana
- Kakrapar Atomic Power Plant (KAPP MPCW), Gujarat

#### Achieved important milestones in the execution of major landmark projects:

- A 16 m high wall was cast in a single pour at the Kudankulam Nuclear Power Plant Project, setting a benchmark in the industry.
- A first-of-its-kind superstructure erection was undertaken, using heavy cranes across the congested Delhi–Mumbai live railway line in a block period of 4 hours for the Dedicated Freight Corridor Corporation (DFCC) 15C project.
- The first span for the Mumbai Trans Harbour Link (MTHL Package 1) was erected in January 2020.

### SIGNIFICANT INITIATIVES

- With high-potential business opportunities anticipated in tunnelling projects, an in-house Tunnelling Excellence Academy (TEA), the first-of-its-kind in India, was built at Kanchipuram, Chennai, India.
- It has been set up with international expertise to build strong technical capability in the design and execution of complex tunnelling projects conforming to world-class standards, with high quality and safety compliance.
- The academy has in-house subject matter experts, capable of training personnel on various technical aspects, to upskill them in alignment with the needs of the business.
- The objective of this institute is to create a pool of certified tunnelling professionals for the business to meet international industry standards in safety, quality and productivity.

### CONCERNS

Each construction project is unique and comes with its own set of challenges and opportunities. Major risks for the business are delay in obtaining ROW, work front, third-party liability, epidemic risks, schedules, approvals/clearances, design approvals, and change in design. We have a strong risk management system and process in place. The risks identified in the pre-bid and post-bid stages are continuously monitored through regular reviews throughout the project cycle for mitigation/resolution.

**2%**  
Of India's overall power generation is nuclear power

### OUTLOOK

The NIP has been prepared for capital investment worth ₹ 100+ Lakh Crore in infrastructure through FY25, pledging about ₹ 65 Lakh Crore for ports, urban development, irrigation, railways and roads and power.

The COVID-19 scenario has contributed to a slowdown in decision-making in the award of projects. Aggressive infrastructure investments are necessary to kickstart the economy and accelerate economic growth. The government has introduced several stimulus packages, which will help bolster the infrastructure sector.

### DEMAND DRIVERS

- Of the total NIP, ₹ 34 Lakh Crore (30%) worth of projects are at the conceptualisation stage and ₹ 22 Lakh Crore (20%) worth of projects are now under development
- Several big-ticket and first-of-its-kind projects are proposed by the government – such as high-speed Rail, DFCs, urban transport / MRTS projects
- Strategic investments in the North East and the J&K region in hydel projects over the next two to three years
- Upgrading the country's defence infrastructure, including naval and air force bases
- Creation of underground infrastructure for strategic assets by the government

**6,780 MWe**  
India's total nuclear power generation capacity

## Business-wise performance

# Power Transmission & Distribution

### OVERVIEW

L&T's Power Transmission & Distribution (PT&D) business vertical is a leading EPC player in the field of power Transmission and Distribution (T&D) and solar energy. We offer integrated solutions and end-to-end services – ranging from design, manufacture, supply, installation and commissioning of transmission lines, substations, underground cable networks, distribution networks, power quality improvement projects, infrastructure electrification and fibre optic backbone infrastructure, to solar PV plants, including floating solar, battery energy storage systems and mini-/micro-grid projects. A dominant player in the Indian subcontinent, the business enjoys a significant share and a strong reputation in the Middle East, Africa and ASEAN markets.



TL-500kV TL Bang Saphan-2 to Surat Thani (2)

## Business-wise performance: Construction — Power Transmission & Distribution

The business comprises several segments:

### SUBSTATION BUSINESS UNIT

- Provides turnkey solutions for Extra High Voltage (EHV) air-insulated/ gas-insulated substations, Flexible AC Transmission Systems (FACTS) and substation automation
- Provides digital substation solutions for utilities and power plants, EHV cable systems and complete electrical and instrumentation solutions for various infrastructure projects, such as metros and airports

### OPTIC FIBRE CABLING (OFC)

- Provides turnkey solutions for deploying a gigabit-scale optical fibre backbone for both government agencies and private telecommunication companies by establishing a state-of-the-art network infrastructure
- Provides operation and maintenance support to ensure the health of the optic fibre cable by maintaining Mean Time Between Failure (MTBF) and Mean Time To Repair (MTTR) figures as per the agreed Service Level Agreements (SLAs)

As grid stability and power conditioning requirements gain relevance in the wake of large-scale renewable integration, standalone and PV integrated storage solutions are being offered, ranging from rooftop systems to floating solar systems. The international units of the business in the Middle East, Africa and the ASEAN region offer complete solutions in the field of power T&D up to 500 kV. These include substations, power transmission lines, EHV cabling, distribution networks, solar plants and Electrical, Instrumentation and Controls (EI&C) works for infrastructure projects such as airports and oil & gas industries, among others.

Our Middle East business caters to the UAE, Saudi Arabia, Qatar, Oman, Kuwait and Bahrain and has garnered a

### POWER DISTRIBUTION BUSINESS UNIT

- Provides a wide spectrum of EPC services related to urban/rural electrification, including last-mile connectivity, augmenting, reforming and strengthening of high-voltage and low-voltage distribution networks, distribution automation solutions and power quality improvement works

### RENEWABLES BUSINESS

- Provides single-point EPC turnkey solutions for solar PV related projects, including energy storage solutions and microgrids
- The solar business has in-house capabilities to produce different module-mounting structure types such as fixed tilt, seasonal tilt and Horizontal Single-axis Solar Tracker (HSAT)

coveted place in the Gulf Cooperation Council (GCC) region. Our business unit in Africa has emerged as a force to reckon with, in 10 countries across the North, East and South of the continent. With a sizeable market share in the addressable segment and projects from all the business lines within the PT&D spectrum, the business unit is now poised to make inroads into the western parts of Africa. In the ASEAN region, a proven track record of successful project execution in Malaysia and Thailand has helped the business foray into Myanmar and the Philippines. Larsen & Toubro Saudi Arabia LLC (LTSA) is a wholly owned subsidiary providing engineering, construction and contracting services in the sphere of T&D in the Kingdom of Saudi Arabia (KSA).

### TRANSMISSION LINE BUSINESS

- Offers turnkey EPC solutions for overhead lines for power evacuation and transmission, bolstered by its state-of-the-art tower manufacturing units at Puducherry, Pithampur and Kanchipuram
- The Testing and Research station at Kanchipuram is accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) and is one of the largest in Asia, apart from being among the most renowned testing centres in the world

### BUSINESS ENVIRONMENT

The achievement of electrical connectivity in all villages and the near closure of centrally sponsored schemes such as Saubhagya and Restructured Accelerated Power Development and Reforms Programme (R-APDRP) redirected the focus to strengthening of urban distribution networks and intensification of electrification in select states. As the state DISCOMS depended primarily on multilateral funding, finalisation delays were witnessed. However, the business could maintain its market share and garner significant orders from Karnataka, Tamil Nadu and Uttar Pradesh.

In the transmission system space, investments were driven by the packages finalised based on

tariff-based competitive bidding and through the state utilities that could secure multilateral funding. With the continuing general lack of investment in the conventional power generation and industry segments, centrally-driven transmission schemes were not aplenty. States such as West Bengal and Tamil Nadu finalised packages to strengthen their intra-state transmission line networks and associated substations.

The neighbouring countries of Nepal and Bangladesh too offered potential across the T&D spectrum, viz. substations, transmission lines and distribution. Despite the fact that the solar industry faced a lower capacity

addition in FY20 vis-à-vis the previous year, in the face of political changes in some states and the dependence on China for modules, the solar business portfolio surpassed a cumulative 2.3 GW capacity. Measures such as the removal of the ceiling on tariff, acceptance of corporate guarantees in lieu of bank guarantees and so on, bolstered the confidence of the developers. Central PSU tenders with a domestic content requirement strengthened prospects.

In the Middle East, though the macro-economic scenario was mixed in FY20, we garnered a major portion of the opportunities that emerged. The continued trend of non-oil-based

economic diversification has opened infrastructure project development in these countries.

In Africa, certain countries in need of facilitation in terms of funding and expertise to build transmission lines and substations at EHV levels resorted to the Memorandum of Understanding (MoU) route with reliable partners.

With the on-schedule completion of projects in Malaysia and Thailand and the strengthening of its presence in the Philippines and Myanmar, the business has demonstrated its capabilities and has won recognition in the ASEAN market.



### Major orders secured

- Modernising the power distribution network in Bengaluru Metropolitan Area Zone, Gurugram Smart City and Chennai. The package for Chennai also includes fully automated, unmanned 33 kV Gas Insulated Substations (GIS) at select locations
- Underground cabling packages and supply and installation of medium voltage capacitor banks with related accessories in Uttar Pradesh
- Construction of 765 kV and 400 kV transmission lines for integration and evacuation of power from wind energy in Kutch, using high-capacity transmission systems
- Design, supply and construction of a 400 kV substation at Ottapidaram, Tamil Nadu and the associated 400 kV double-circuit Ottapidaram–Udangudi–Kamudhi Transmission Line on a total turnkey basis
- Establishing a 220 kV GIS, including the laying of associated 220 kV and 66 kV cable networks in Karnataka
- Substation and transmission line packages associated with Meerut–Simbhavali Project under tariff-based competitive bidding
- Power transmission infrastructure for 800 MW Rupsha power plant, Bangladesh; 220 kV substations in Nepal and a distribution package for establishing an underground cable network in Kathmandu



400-220-132-33 kV Mawana, Botswana Substation

- Developing a 230 MW grid-connected solar PV plant, which is one of the largest such orders under the Community and Public Sector Undertaking (CPSU) Scheme Phase II (Tranche II)
- Another 150 MW solar PV plant in Tamil Nadu and Uttar Pradesh, including a large floater solar power project at a reservoir of Auraiya Gas Power Plant
- Providing off-grid DC solar PV water-pumping systems with standalone lighting systems for farmers, with provisions for mobile charging and transfer of automated meter reading and water discharge reading data in Maharashtra
- Orders across the Middle East for establishing 380 kV and 230 kV transmission line corridors

- in the KSA, upgrading substations and related power facilities in Kuwait and the UAE, constructing 400 kV overhead lines in Qatar and setting up a 400 kV grid station in Oman
- EPC of the 400 kV overhead transmission line between the towns of Chimwara and Alto Molocue in Zambezia province in Mozambique, Africa. In Ethiopia and Uganda, orders have been received for establishing distribution networks involving medium-/low-voltage distribution lines and last-mile consumer connections
- 500 kV substation order in the Philippines

## Business-wise performance: Construction — Power Transmission & Distribution



### Updates on key projects

#### Key projects completed during the year

- Three STATCOM projects in Hyderabad, Udumalpet and Trichy
- Commissioned one of the highest altitude 400 kV GIS at Wangtoo, Himachal Pradesh, at an altitude of 1,727 m above MSL, overcoming cold weather conditions
- More than 1,900 ckm long transmission corridors were completed
- Communication backbone networks involving aerial/underground optic fibre cable links of more than 11,000 km have been established
- The first biggest utility-scale solar-cum-MWh-scale energy storage project in India was substantially completed. Also, the first MW-scale floating solar project in India (4 MWp) was rendered ready for commissioning
- Across the Middle East, 26 substations were commissioned, including major 400 kV substations in Qatar and Oman. More than 200 km of overhead transmission lines and 325 km of underground cable networks capable of high-capacity energy transfer were built
- Building upon the successful commissioning of EHV substation projects in Africa, the business has now completed a 220 kV transmission line in Egypt and a 500 kV High-voltage Direct Current (HVDC) transmission line in Kenya
- In Malaysia, a 500 kV transmission line from Yong to Peng to Segamat has been successfully commissioned on schedule

### SIGNIFICANT INITIATIVES

- The containerised integration facility for battery energy storage systems set up at Kanchipuram was commissioned successfully. The ready-for-commissioning cell that was created to quicken the handing over of completed transmission line stretches has enhanced customer delight
- Improvised modularisation initiatives such as kitting of tower components and remote electrification items continue
- Mechanised bush-clearing activities and the adoption of advanced techniques, such as the aerial Light Detection and Ranging (LiDAR) survey, have led to timely project completion with desired productivity levels
- With mechanised trenching and in-house GIS surveys with 360° cameras, increased productivity was witnessed in the domestic optic fibre cabling projects too
- The TL9000 certification, meant for the supply chain of the telecommunications industry, has been obtained
- The Ministry of Municipal and Rural Affairs (MoMRA) certification for L&T Saudi Arabia has strengthened opportunities with Royal Commission tenders

### CONCERNS

Towards the end of the financial year, the outbreak of the COVID-19 pandemic and the consequent lockdown caused uncertainties in timely delivery of a few supply items that were planned. Adequate contractual safeguards were put in place and extensive scenario planning exercises were carried out. Recovery is likely to be prolonged and necessitates a multi-pronged approach towards prudent financial management, workmen management and so on, as it provides an opportunity for new methods of working and revised cost estimates.

A bespoke digital platform has been implemented for ERM that underpins the pre-bid and execution risk reviews with robust stage gates.



Yong Peng East Substation, Johor, Malaysia

## OUTLOOK

The proposed amendment to the Electricity Act envisages stringent enforcement of obligations that are to be fulfilled by state utilities, thereby improving their financial health.

It may also open up new models of participation in the distribution sector.

The Union Budget 2020-21 hinted on a centrally sponsored scheme, focused on smart metering, feeder segregation and AT&C loss reduction. Early formulation and implementation, along with project packaging and models of participation, are critical.

Though the investment levels delineated in the NIP are not markedly higher than historical trends, the report contains a KPI-based framework with specific targets on Aggregate Technical and Commercial Losses (AT&C) loss reduction and so on by 2023. In urban areas and cyclone-prone zones, High-tension (HT) and Low-tension (LT) overhead lines are being replaced with underground cables. New 11 kV feeders are created for load bifurcation. Such projects improve the overall reliability of the power distribution network and, in particular, help in avoiding unscheduled power cuts during rains and gusty winds. The transmission lines and substations related to the second phase of Green Energy Corridors for evacuation of renewable energy are expected to get finalised. These are under various stages of bidding through the Tariff-based Competitive Bidding mode. In addition, intra-state system strengthening-related opportunities are expected to come up in select states. Also, certain mass transit projects that involve receiving substations and power supply networks are envisaged in key cities.

Grid integration of intermittent renewable energy and the emerging prospects of distributed generation require investments in power quality devices such as Static Synchronous Compensator (STATCOM), Thyristor-controlled Reactors (TCR) and Static Var Compensator

(SVCs) to ensure voltage stability, reactive power compensation and reduction of harmonics.

## 17% CAGR

The expected CAGR of the Indian market for optical fibre cable through 2023

In the Middle East, the business is cautiously optimistic in its outlook as oil prices are hovering in the lower ranges, commodity prices are volatile and the geopolitical stalemates continue. The investment in infrastructure will depend on the fiscal surplus and financial buffers available with the countries. However, the diversification of the economy to non-oil sectors will continue to provide opportunities in terms of upgradation to higher voltage levels, integration of renewable energy sources to the existing power grid and interconnections of transmission networks. The business continues to concentrate on key African economies that have a clear road map to build transmission and distribution networks to meet increasing demand.

Grid strengthening, regional interconnection and rural electrification opportunities are being pursued in select countries. Consolidating the breakthroughs achieved in countries forayed into, exploring renewable energy opportunities and the opening-up of select West African countries will hold the key to success in the coming year.

Our entry into the Philippines, Myanmar and Cambodia is expected to provide a fillip in the region. Plans are afoot for an expanded presence in Malaysia and Thailand. Given the visibility of prospects in traditional strongholds and the thriving expansion in renewables and new geographies, the growth momentum of the PT&D business is intact, backed by a strong order book and ably supported by cost leadership, technology leverage, delivery excellence and employee engagement initiatives.

## DEMAND DRIVERS

- System strengthening and generation linked schemes, especially those funded by Indian Lines of Credit and multilateral aids, offer potential in Bangladesh and Nepal.
- Despite the slow pace of solar EPC tenders from private developers being incommensurate with ambitious targets, there are ample opportunities, especially from PSUs.
- Preference for hybrid renewable projects and floating solar projects are on the rise.
- The expanding support to the International Solar Alliance is a positive factor in attracting investments into the renewable energy sector in India.
- Rising investments in Optic Fibre Communication (OFC) network infrastructure by the Indian government will increase internet penetration across the country.
- Success of 5G technology will ultimately depend on the strength of optical fibre cable connectivity.
- The Kenya Vision 2030, Growth and Transformation Plan II of Ethiopia and the National Development Plan of Botswana offer significant opportunities.
- Rising power demand in ASEAN countries continues to pave the way for significant investments in grid interconnections, grid development and strengthening.

## Business-wise performance

# Water & Effluent Treatment

### OVERVIEW

The Water & Effluent Treatment (WET) business focuses on the construction of water infrastructure for the efficient usage, conservation and treatment of water. The business is a leading player in the domestic market and has also had significant successes globally.



*Barmer water supply*

The business comprises several business segments:

### WATER SUPPLY AND DISTRIBUTION BUSINESS

Caters to the supply of potable water

### WASTEWATER BUSINESS

Provides infrastructure by building sewer networks and sewage treatment plants to collect and treat municipal wastewater for safe disposal of the treated effluent

### LARGE WATER BUSINESS

Irrigates Million of hectares of land to enhance the livelihood of millions, pumps and lifts water from rivers to delivery chambers and distributes it using automated outlet management systems.

The business also constructs combined Effluent Treatment Plants (ETPs) for industries and desalination plants

### SMART WATER INFRASTRUCTURE BUSINESS

Develops utility infrastructure in the cities as well as the shortlisted brownfield cities under the Smart City Mission

### THE INTERNATIONAL ARM

Focuses on building water infrastructure, viz. sewage treatment plants, water treatment plants and water T&D projects. The business has a presence in the UAE, Qatar, Oman, Tanzania and Sri Lanka

## BUSINESS ENVIRONMENT

Aiming to provide piped water supply to all households, the government has announced the Jal Jeevan Mission. The scheme places emphasis on augmenting local water sources and recharging existing sources, and will promote water harvesting and de-salination. The 'Har Ghar Jal' scheme to provide a functional tap connection to all households by 2024 is part of the Jal Jeevan Mission.

**The business accounts for an average of over 35% share of the domestic market. Over the years, it has emerged as a strong contender in the water segment, meeting the requirements of the public at large.**

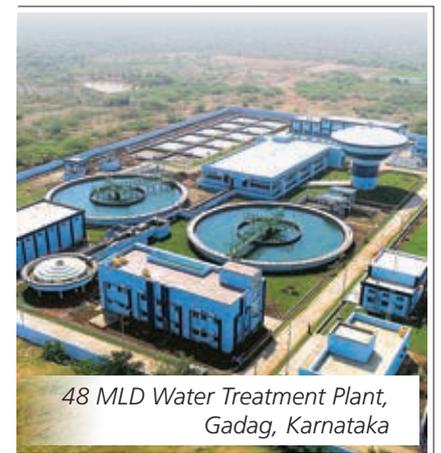
FY20 has been volatile, with the general elections and the change in governments of key states. This has resulted in some delays in new prospects fructifying and the execution of projects being stalled or reviewed by a few states. The COVID-19 pandemic also continues to have a profound impact on the Indian construction industry.



### Major orders secured

#### Orders won in India

- Parwati Mega Lift Irrigation Schemes Phase III and IV, Madhya Pradesh
- 100 MLD Sea Water Reverse Osmosis Desalination (SWRO) plant in Dahej district
- 477 MLD water treatment plant at Chandrawal
- Area-based development for Rajkot, Gujarat
- Gunjawani Lift Irrigation Scheme
- Bhubaneshwar Sewerage Scheme
- Rural Water Supply Scheme to Keonjhar district in Odisha
- 30 MLD Combined Effluent Treatment Plant (CETP) in Ahmedabad, Gujarat
- Water supply schemes to four blocks in Medinipur, West Bengal
- Water management projects in Hubballi–Dharwad, Belagavi and Kalaburgi districts of Karnataka



48 MLD Water Treatment Plant, Gadag, Karnataka

#### Orders won in international markets

- Al Dhakhliya Water Transmission System, Phase-II project in the Sultanate of Oman
- Kundasale Haragama Water Supply Project, Sri Lanka
- Supply of Recycled Water along Abu Dhabi Al Ain Road – Package B, UAE

## Business-wise performance: Construction — Water & Effluent Treatment

### SIGNIFICANT INITIATIVES

With significant focus on digitalisation, we have developed many web and mobile applications, including:

- Project monitoring tool **ePragati**, which captures data for visualisation of project progress using 3D GIS platform for pipeline and civil structures
- The customised Pipe fabrication (P-Fab) application to track the status of pipes – from manufacturing to installation
- The Material Schedule Tracker (MST) to ensure timely supply of items by effective monitoring and tracking
- The WISA application for elaborate and faster on-boarding, monitoring and screening of the workforce
- Using AI in contracts for classifying, extracting and assessing the risk in the tender's clauses

The continuous emphasis on strengthening the in-house design team has helped shorten the design duration by leveraging technological solutions, such as:

- LiDAR surveys to capture accurate, speedy and voluminous data
- Automated design-to-drawing preparation of Elevated Storage Reservoirs (ESRs) using in-house developed tools
- Extensive utilisation of BIM for project monitoring and progress review
- Creation of value engineering centres and process improvement techniques to facilitate innovation and design optimisation

Apart from digitalisation, this business has also developed strong process teams and has formed tie-ups with educational institutions such as IIT Madras, Anna University and BITS, Goa for research in the field of wastewater and sludge management.

### CONCERNS

The operational risks for the business include delays in land acquisition, ROW/ROU issues and volatile steel prices. With the majority of clients of the business being state government authorities, there is not much risk related to projects getting shelved or concerns pertaining to creditworthiness. However, wherever there was change in state governments, cashflow rationalisation was largely seen to happen.

The assessment of risks associated with the projects is carried out frequently to evaluate appropriate project cost, cash flows, margins as well as physical progress, and thus determine the overall health of the portfolio. Also, state-wise exposure is dynamically monitored to track any early signals of cashflow constraints.

The business proactively ensures that it has a healthy mixture of projects funded by various credit-worthy clients and bodies like the central government, state governments, municipal corporations, urban local bodies, multilateral funding agencies and more. Wherever feasible, the payment terms with supplier and vendor partners are aligned to customer terms to avoid cash gaps.

Foreign currency exposure in the case of international projects is minimised by ensuring a natural hedge at the bid stage. Further, hedging policies are also in place for exposures, if any.

### OUTLOOK

There is expectation of multilateral funding for the business from the domestic market. However, there are obvious challenges in terms of prolonged payment cycles, mobilisation of the workforce and loss of productive months of the year due to the ongoing pandemic.

**₹ 11,500 Crore**  
Allocated in the Union Budget towards the Jal Jeevan Mission

The Jal Shakti Ministry has been created by merging the Ministry of Drinking Water and Sanitation (MDWS) and the Ministry of Water Resources and Ganga Rejuvenation (MoWR).

### DEMAND DRIVERS

- The Government of India's Jal Jeevan Mission aims to provide piped water supply to every rural household under the 'Har Ghar Jal Yojana' scheme by 2024, which will facilitate greater coherence to policy objectives and the decision-making process.
- FY21 is likely to see a revision of the National Water Policy 2012 with key changes in the water governance structure and regulatory framework in FY21, with enhanced emphasis on water management and river interlinking. This is expected to create enhanced opportunities for the business.

## Business-wise performance

# Smart World & Communication

### OVERVIEW

L&T's Smart World & Communication (SWC) vertical was created in 2016 to address the emerging need of a safe, smart and digital India. As a Master Systems Integrator (MSI), SWC operates and retains market leadership in the following segments:

### Core segments



**SMART CITIES & SMART INFRASTRUCTURE**



**SAFE CITIES**



**COMMUNICATION & TELECOM INFRASTRUCTURE**

With project experience spanning over 26 cities and 44 agencies in India, the business is now growing on sound fundamentals. The technology and project management team with 800+ personnel addresses the requirements of both projects and Operations & Maintenance (O&M). The business is now proactively transforming itself into a 'thought partner' to its clients; a value-adding Master System Integrator (MSI) with futuristic solutions, strategic partnerships, as well as integration and analytics, and domain-specific centres of excellence.



Command control centre, Rajpur

## Business-wise performance: Construction — Smart World & Communication

The business comprises several segments:

### SMART CITIES & SMART INFRASTRUCTURE

Smart Cities, e-gov, Smart Energy, Smart Education and more

### SAFE CITIES

Public safety, critical infra security, ITMS, among others

### COMMUNICATION & TELECOM INFRASTRUCTURE

Wired and wireless, i.e., Internet Protocol (IP) / Multiprotocol Label Switching (MPLS) backbones; dense wavelength division multiplexing; global system for mobile Wi-Fi; satellite; microwave; emergency communications such as APCO, Tetra, Early Warning Dissemination, 5G, and so on

### BUSINESS ENVIRONMENT

Cities across the world are now adopting smart city infrastructure. The fundamentals that support a smart city infrastructure comprise intelligent traffic management and surveillance systems, smart electric grids and lighting, fibre optic cabling and transport and logistics systems. Of the 100 Smart Cities planned in the Smart Cities Mission, an integrated command-and-control centre along with various Smart City solutions is operational in 47 cities, with 17 more cities being in the process of implementation.

To provide 100% population coverage for telecom and high-quality broadband services for the socio-economic empowerment of every citizen and end-to-end online delivery of government services, the government will continue to invest in the Bharat Net Programme.

**During the COVID-19-induced lockdown, authorities leveraged Smart City or Safe City Command and Control Centres set up by the business, with advanced technologies such as AI and IoT, among others.**

Twenty major cities across India have embraced smart technology solutions to combat COVID-19. These technologies are enabling the administration in cities such as Mumbai, Pune, Nagpur, Prayagraj, Raipur, Ahmedabad, Visakhapatnam and Hyderabad in flattening the COVID-19 curve through the Command Centres or City Operations Centres.

**47 cities are operational with Smart City solutions, with 17 more cities in the process of implementation.**



### Major orders secured

#### Large order wins

- An order to establish the first-of-its-kind, state-of-the-art unified network management system to manage, support and operate a countrywide armed forces network under the Network for Spectrum (NFS)
- Jhansi Smart City involving deployment of an integrated command and control centre, ITMS, city surveillance, city Wi-Fi, technology-enabled solid waste management, GIS, citizen portal and e-office applications
- SUMITRA project, which is a pilot project for surveillance using multilayer intelligent tracking, response and analysis system on a turnkey basis
- Army IP MPLS – an order to create an IP MPLS network backbone for the armed forces
- An order for expansion of the ITMS for Rachakonda and Cyberabad

#### Other achievements

- The Early Warning Dissemination System (EWDS) for Andhra Pradesh was successfully commissioned and covers 10 coastal districts.
- The EWDS for Odisha was effectively utilised in disaster management by the government during Cyclone Fani, enabling the Government of Odisha to save millions of lives through the dissemination of warnings through text messages (26 million messages), sirens and radio communication
- Rolled out 1+ Million smart meters, with meter data management system and head end system hosted on the cloud, in Uttar Pradesh and Haryana as part of the ongoing project to deploy 5 Million smart meters.
- Commissioned the E-shiksha (Hi-tech lab) project for the state of Tamil Nadu, involving the largest roll-out of Information and Communication Technology (ICT) for more than 6,000 schools in the state.
- The largest city surveillance and ITMS for Hyderabad was declared go-live
- Raipur Smart City was successfully commissioned and declared go-live.

## SIGNIFICANT INITIATIVES

The business has taken the following initiatives in the areas of tendering, technology, supply chain management and operational efficiency improvement:

- Established an Analytics and Integration Centre of Excellence (CoE) using big data, IoT and AI technologies to solve problems arising from enormous data traffic and accumulation in 25+ smart and safe cities. We have also undertaken development of a world-class integrated platform, which allows the creation of one operating system to solve business problems as against point solutions. This value-based approach helps in retaining clients. Under this initiative, a pilot use case of in-house AI-based crowd management solutions was successfully deployed in Telangana state to manage 'Samakka Saralamma Jatara', Asia's largest tribal fair.
- We are collaborating with global partners, reputed academic institutions, and start-up ecosystems to co-develop customised solutions, blending the partner's technology and our domain expertise. This approach will position us as 'value-adding MSI' and help transform this business into a 'thought partner' to clients.
- Launched a multitude of digital solutions to support the business functionalities, viz.,
  - **SWIFT**: 'Supply and Work Integrated Finishing on Time' to enable procurement
  - **Centralised O&M**: A GIS-based tool to track O&M activities and incident management
  - **VR training module**: A virtual reality training module for site staff/workmen
  - **QMS tool**: QMS manual and risk/opportunity/objective tracking

## CONCERNS

Though the projects secured are funded through union and state budgetary allocations, payment terms continue to pose working capital challenges. Projects with certain state authorities need close monitoring due to delay in handing over of sites, delay in certifications due to involvement of

multiple agencies and the challenges faced in timely budgetary allocations.

Operational risks such as timely mobilisation, procedural delays in ROW and sign-offs are mitigated through digital interventions at every stage of project implementation – from planning to monitoring operations – helping the management to take appropriate action to pre-empt and overcome challenges. This business is well supported by a centralised support team in the maintenance of Service Level Agreement (SLA) requirements.

We also face unstructured competition through aggressive bidding of new entrants in certain segments. However, with our expert team and previous experience in executing complex technological projects, L&T has an advantage in the market.

## OUTLOOK

India's Infrastructure Vision 2025 includes the overarching objective of attaining 'Digital Services: Access for All', among others. The current pandemic has unleashed new opportunities to leverage digital services owing to the necessity of social distancing, the proverbial new normal.

Under the Smart Meter National Programme, the government aims to replace 250 Million conventional meters with smart meters in the next five years. There is now sharper focus on reducing commercial losses and providing a choice of suppliers to consumers through smart meters. This programme

**₹ 8,000 Crore**  
Outlay announced over the next five years to focus on a quantum computing domain

**250 Million**  
Conventional meters to be replaced with smart meters in the next five years

is likely to be implemented with speed with the target of completion in a span of three years.

With the growing need for perimeter security for all critical installations – including defence establishments, air/army bases, armament factories, nuclear power plants, and so on – investments are expected to flow into projects designed to meet these security needs.

The Union Budget 2020-21 also announced the National Mission on Quantum Technologies & Applications with an outlay of ₹ 8,000 Crore over the next five years to focus on a quantum computing domain and its impact on new frontiers in computing, communications and cyber security, with widespread applications, including smart cities.

This business is steadily sharpening its in-house domain expertise, enabling it to provide end-to-end offerings to its customers. This strategy helps it play the role of an accomplished MSI for the smart cities of the future, where citizens can have a wholly secured and enriching quality of life.

## DEMAND DRIVERS

- Investment in digital connectivity backbone will be more significant under the Bharat Net Programme.
- The government has also announced the possible launch of Smart Cities Mission 2.0 soon, spanning 4,000+ cities or smaller towns.
- The Ministry of Home Affairs continues its focus on safe cities and the modernisation of the police force. It is expected to launch multiple city surveillance projects and augment the scope of the existing safe city projects.
- Focus on creating ICT infrastructure for primary and secondary schools through 'Samagra Shiksha Abhiyan' is expected to create many new opportunities in e-education.

Business-wise performance

# Metallurgical & Material Handling

## OVERVIEW

Our Metallurgical & Material Handling (MMH) business offers its global clients comprehensive EPC solutions for the metal (ferrous and non-ferrous) sectors. The business undertakes end-to-end engineering, procurement, manufacture, supply, construction, erection and commissioning, spanning the complete spectrum from mineral processing to finished metal products.

The business offers comprehensive product solutions such as mineral crushing equipment and plants, surface miners, premium sand plants, material handling equipment (stackers, reclaimers, wagon tippers, ship unloaders, multipurpose cranes and other mining equipment) as well as steel plant machinery catering to cement, mining, power, construction, steel, fertilisers and chemical plants.

Supported by five decades of experience and innovation, in-house design resources and state-of-the-art manufacturing capabilities, these solutions are helping the business stay ahead of the curve.

The manufacturing centres of its product lines are in Kansbahal, Odisha and Kanchipuram, Tamil Nadu with facilities for fabrication, machining and assembly of custom-made equipment and critical structures.



NTPC Tanda

## BUSINESS ENVIRONMENT

The metal sector witnessed suboptimal price level globally owing to less-than-anticipated growth in demand. The demand for manufactured sand rose with increasing restrictions/bans on river-sand mining. The replacement of river sand with quality manufactured sand continues to gain momentum, improving prospects for the business.

The successful completion of the steel industry consolidation and allocation of iron ore mines in Q4 of FY20 have brought all the majors on par as vertically integrated producers. Despite the liquidity crunch during the consolidation cycle and new expansions not immediately on the anvil, the refurbishment and de-bottlenecking of the newly acquired assets to synergise with their existing products will be something very much on the cards.

The business faces reduced competition in EPC contracts and technology-oriented projects due to the scarcity of players matching qualification requirements.

## SIGNIFICANT INITIATIVES

- We have fostered strategic alliances with leading global technologists to offer comprehensive EPC solutions across various sectors such as mineral beneficiation, steel processing units and mega-sized by-product plants.
- Encouragingly, the technical collaboration with Kemco of Japan was strengthened to enrich the existing portfolio of products with new additions for the construction industry.

## CONCERNS

The impact of the pandemic on the global and national economies and the time the situation takes to return to normalcy will determine the confidence of the industry, especially the private sector, towards fresh capital expenditure.



## Major orders secured

**The continued focus on the Middle East and North Africa (MENA) region yielded encouraging outcomes in FY20, with the award of major orders from the Ma'aden-Gold Plant Project in Saudi Arabia and the Etihad Rail – freight handling package in the UAE. Despite limited opportunities, the business has managed to remain resilient to headwinds in terms of order booking.**

**Marquee projects commissioned / at an advanced stage of completion in FY20 comprise:**

- Hot strip mill at Rourkela Steel Plant
- Basic oxygen furnace plant at Bokaro Steel Plant – Commissioned

- Tandem tippler at JSW Paradip – Commissioned (hydraulically driven largest tippler in India)
- Coal Handling Plant (CHP) and Ash Handling Plant (AHP) at Tanda, Khargone
- CHP Lingaraj, Chhabra (Phase 1)
- 10 large-capacity state-of-the-art sand plants commissioned for various customers
- 3 newly-developed track-mounted mobile roll crushers commissioned for coal-crushing applications
- 5 surface miners commissioned in Coal India subsidiaries
- 1,100 MT sky bridge in Colombo, fabricated in a factory at EWL Works, Kanchipuram



COVID-19 will impact business operations, with restrictions on the mobilisation of the workforce to Middle East/North Africa (MENA) and disruptions in the supply chain, which may have adverse effects on the projects under execution. However, strategies to overcome these difficulties are being put in place to minimise impact, and customers are being taken into confidence.

## OUTLOOK

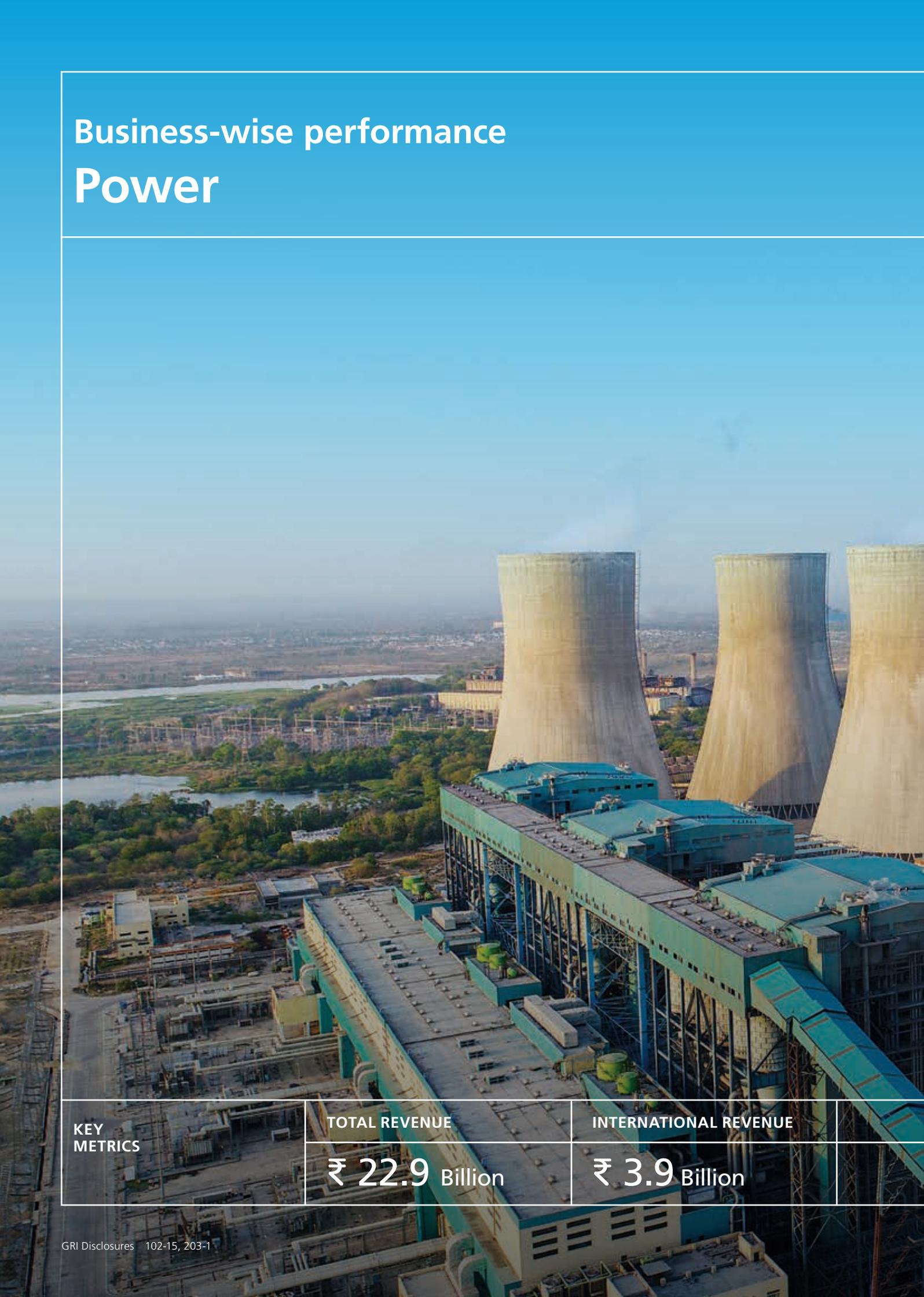
The COVID-19 pandemic has adversely impacted the industry worldwide. The steady flow of investments in developing countries may steadily taper off. While the base and light metal prices continued to be subdued during the reporting year, the demand for these metals in the medium-to-long term is expected to be robust.

While oil prices are gradually recovering after touching new lows due to tepid demand, the impact on earnings of the Gulf Cooperation Council (GCC) countries may slow down the capex plans of governments. Although there is a slump in prices of base metals due to weak and fragile demand, GCC nations (e.g., Kingdom of Saudi Arabia (KSA)) with their own mines are expected to move ahead with capex plans to compensate for the loss of revenues from the oil sector.

With expected growth pick-up in the coal and cement sectors, core products such as crushing plants, surface miners and material handling equipment are expected to grow at a good pace, especially in the second half of FY21.

# Business-wise performance

# Power



KEY METRICS	TOTAL REVENUE	INTERNATIONAL REVENUE
	₹ 22.9 Billion	₹ 3.9 Billion



As one of the leading EPC players in the power plant business in India, we are known to deliver complete turnkey business solutions from concept to commissioning for the thermal power industry.

We have become a major player in emerging technologies such as Flue Gas Desulphurisation (FGD) in the thermal power plant industry and now have a sizeable presence in the FGD business.

EBITDA

₹ 2.7 Billion

SAFETY TRAINING HOURS

0.43 Million

## Business-wise performance: Power

Over the years, the business has developed its core capabilities, which include in-house engineering, state-of-the-art manufacturing facilities, a competent workforce and decades of experience. It is executing large and complex projects in India and overseas. The business has a proven track record to deliver complete power plant solutions with the scale and sophistication to meet the country's growing energy requirements.

L&T's integrated power equipment manufacturing facility at Hazira, Gujarat, is one of the most advanced in the world. The facility manufactures ultra-supercritical/supercritical boilers, turbines and generators, pulverisers, axial fans and air preheaters, components of Flue-gas desulphurisation (FGD) and electrostatic precipitators.

The business has project management offices at Vadodara and Faridabad. It is now gearing up to make its mark to provide EPC solutions for the turbine island of nuclear power plants and has taken the necessary steps to participate in tenders for upcoming nuclear power projects.

### The business has the following JVs within its fold

#### L&T-MHPS Boilers Private Limited

A JV with Mitsubishi Hitachi Power Systems Limited (MHPS) Japan, for the engineering, design, manufacture, erection and commissioning of ultra- supercritical/supercritical boilers in India up to a single unit of 1,000 MW

#### L&T-MHPS Turbine Generators Private Limited

A JV with Mitsubishi Hitachi Power Systems Limited (MHPS), Japan and Mitsubishi Electric Corp. (MELCO), for manufacture of Steam Turbine Generator (STG) equipment of capacity ranging from 500 MW to 1,000 MW. It is engaged in engineering, design, manufacture, erection and commissioning of ultra-supercritical/supercritical turbines and generators in India.

#### L&T Howden Private Limited

A JV with Howden Holdings B.V. L&T Howden is in the business of regenerative air-preheaters and variable

pitch axial fans (equipment, after-market spares and services) for power plants

#### L&T Sargent & Lundy

A JV with Sargent & Lundy LLC, US, which is engaged in the business of providing design, engineering and project management services for the power sector

### BUSINESS ENVIRONMENT

As renewable energy enjoys the government's growing emphasis and investments, the thermal power sector is growing at a sluggish pace. However, compared to the previous year, FY20 saw improved ordering in coal-based power projects with the advent of major hydel players such as Satluj Jal Vidyut Nigam (SJVN) Limited and Tehri Hydro Development Corporation (THDC) India Limited in the coal sector.

L&T's FGD segment continued its order-winning streak with a total of 13.4 GW, of 65 GW of orders from the central, state and private sector companies chasing the deadline of installing FGDs to meet revised emission norms by 2022.

Going forward, the power sector will continue to face challenges such as the non-availability of funds, lowering plant load factor, financial stress, load balancing, coal and water availability issues, payment assurances and so on. Additionally, muted demand from the private sector and excess manufacturing capacity of suppliers continues to exert pressure on prices.

### SIGNIFICANT INITIATIVES

- As a part of continuous improvement in operating efficiency, the workshop at Hazira for manufacturing of Electrostatic Precipitator (ESP) collecting electrodes was upgraded to undertake the manufacturing of casings made of exotic material (nickel-based high alloy) for absorbers required in FGDs.
- This business has embarked on several initiatives to reduce cost in areas such as procurement, manufacturing, logistics, value engineering and overheads, among others, and has utilised the services of leading consultants / subject matter experts.
- The business has been able to improve its competitiveness due to these initiatives and intends to continue its cost-saving journey in the coming years.
- The business also enhanced its focus on initiatives to achieve quality and EHS excellence and expand its global footprint.

### CONCERNS

With the increased emphasis on renewable energy, the business may face some headwinds on the opportunities available. However, the business anticipates that coal will continue to be a dominant source of power generation in India and that may continue to offer market opportunities. Excess manufacturing capacity, however, will continue to drive the prices downwards and would reflect in the financials of EPC players. The onslaught of the pandemic has set in some uncertainty on project execution timelines, for which the business has initiated the required steps considering force majeure conditions.



### Major accomplishments in FY20

- Achieved commercial operation of India's first ultra-supercritical power project for the central utility in Madhya Pradesh. Also, achieved the completion of performance guarantee test of the first unit and completion of trial operation of the second unit of this project.
- Forayed into turbines for the nuclear sector in collaboration with MHPS, Japan and participated in NPCIL's ambitious tender for 6 X 7,000 MW turbine island package for the Gorakhpur and Kaiga projects, which are expected to be ordered in FY21.
- Received certification for the completion of Phased Manufacturing Programme (PMP) for supercritical steam generators and STGs as required under CEA (Central Electricity Authority) regulations for setting up of indigenous manufacturing facilities

## MANAGING UNCERTAINTIES PRUDENTLY

### Risks

**Protectionism in overseas geographies (norms related to local content, local hiring, and so on)**

**Limited domestic opportunities (especially in gas), delays in finalisation of projects in coal**

**Intense competition / aggressive bidding**

**Declining share of coal-based generation in overall energy mix (owing to increased thrust on renewables)**

### Mitigation initiatives

- Entry into consortiums with established Independent Power Producers (IPPs) / EPC contractors / local players to enable entry into specific overseas geographies
- Target increased exports through strategic tie-ups
- Entry into select overseas geographies for providing gas EPC and engineering services
- Implementing cost reduction and execution excellence initiatives to enhance competitiveness
- Advocate importance of the coal sector in ensuring grid stability and meeting 24X7 steady and quality power demand, especially in core sector industries

## DEMAND DRIVERS

- Coal-fired stations will continue to be in demand as they would enable a stable power supply and provide peaking power requirements, ensuring a balanced grid.
- The government has an ambitious plan to enhance the nuclear power production to 23 GW by 2031 from the current level of 7 GW.
- Gas-based plants are expected to be slowly revived in India.

## OUTLOOK

The projection of 292 GW thermal power capacity by FY25 in the NIP report published by the Department of Economic Affairs (Ministry of Finance) and retirements of old, inefficient and polluting power plants indicate that thermal power is still going to be the mainstay in the country's power generation mix. Considering the legacy and inefficient power plants that are nearing retirement, the business is confident of growth in capacity addition in the thermal power sector. The objective is to match the projected rise in power demand.

It is estimated that the total installed capacity of power plants in which FGDs are to be installed is around 167 GW, involving 440 FGD units. Of this, 65 GW of orders have already been placed, while additional 100 GW of orders are expected to gain momentum in time to come.

Since the revival of the domestic gas sector is going to take some time, the business continues to focus on markets outside India for gas-based power plants. The target countries are Bangladesh, Sri Lanka, Myanmar and GCC countries. The business has

taken steps to strengthen its presence in the Middle East to capitalise on the available opportunities in this sector.

The L&T-MHPS Boiler JV and L&T- MHPS Turbine Generator JV are looking forward to leveraging upcoming spares and service opportunities in the domestic market and will continue to explore business opportunities in the international market for export orders.

Ultra-supercritical/supercritical turbine manufacturing facility at Hazira, Gujarat

# Business-wise performance

# Heavy Engineering



KEY METRICS	TOTAL REVENUE	INTERNATIONAL REVENUE	
	₹ 28.5 Billion	₹ 14.3 Billion	



L&T Heavy Engineering (HE) ranks among the top three global fabricators to supply engineered-to-order critical equipment, piping and systems for core sector industries which includes critical revamp and upgradation projects.

Business units as per industries served:

**Refinery, Cracker, Oil & Gas and Gasification**

**Fertiliser and Petrochemical**

**Nuclear**

**Modification, Revamp & Upgrade**

**Piping Centre**

**L&T Special Steels & Heavy Forgings Private Limited**

EBITDA	SAFETY TRAINING AT HAZIRA
₹ 6.1 Billion	48 Batches

## Business-wise performance: Heavy Engineering

The business is organised into BUs based on the industries served.

### REFINERY, CRACKER, OIL & GAS AND GASIFICATION (RCOG)

The RCOG BU focuses on hydro-processing reactors, high-pressure heat exchangers, gasifiers, pressure vessels, waste heat boiler packages, process plant internals and such critical equipment for process plants.

### FERTILISER AND PETROCHEMICAL (FP)

The FP BU focuses on products such as ammonia converters, urea reactors, urea strippers, methanol converters and critical reactors for the fertiliser and petrochemical sector.

### NUCLEAR

The Nuclear BU supplies highly critical equipment such as steam generators, reactor components (end shield assembly, end fittings) and pressurisers for the nuclear power sector.

### MODIFICATION, REVAMP & UPGRADE (MRU)

The MRU unit offers complete solutions for process plants through dedicated engineering, procurement, project management and construction services.

### PIPING CENTRE (LTPC)

The LTPC BU fabricates critical piping spools for power and other process industries.

### L&T SPECIAL STEELS AND HEAVY FORGINGS PRIVATE LIMITED (LTSSHF)

The business has a JV with Nuclear Power Corporation of India (NPCIL) — L&T Special Steels and Heavy Forgings Private Limited (LTSSHF) — to cater to the growing demand for critical forgings required for the Indian nuclear power programme and for other critical sectors such as defence, hydrocarbon and oil & gas. The JV has set up a fully-integrated forging facility (from steel scrap to finished forgings of alloy steels, carbon steel and stainless steels) with capacity to produce a single-piece ingot up to 200 MT and forgings up to 120 MT in the first phase

These have applications in critical equipment in nuclear power plants, defence, the hydrocarbon industry and the power sector. Other applications include separator blocks for the oil & gas segment and other heavy forgings for engineering purposes.

The business has attained global acclaim by delighting clients by executing large, complex projects and constantly creating international benchmarks. Capabilities include state-of-the-art fully integrated, globally benchmarked manufacturing facilities, an experienced talent pool and impressive global references for the supply of high-end reactors and high-pressure heat exchangers. The sustainability and safety standards at its manufacturing facilities located in Mumbai, Hazira and Vadodara are at par with international standards.



#### Major achievements



On the nuclear front, the base section and upper cylinder of the Cryostat, a key component of the world's largest fusion reactor, was delivered to ITER at Cadarache, France. Cycle time for NPCIL's 700 MWe steam generator, currently under manufacturing, was reduced from the contractual 48 months to a record 30 months, setting an industrial benchmark.

In the domestic market, the business has secured the order for the first coal gasifier using air product technology solutions for the Talcher Gasification Project. During the year, the country's heaviest hydrocracker reactor weighing 1,858 MT was dispatched to HPCL's Vizag Refinery.

In the Defence sector, LTSSHF has been qualified as the only indigenous producer of large and heavy forgings and thick plates for the prestigious Submarine Programme.



On the international front, the business dispatched 16 critical chrome-moly-vanadium reactors for ADNOC-Takreer refinery, Abu Dhabi — all delivered before time. The MRU business vertical executed a benchmark project — revamp of an Fluid Catalytic Cracking Unit (FCCU) reactor for the ORPIC Refinery in Oman.

**BUSINESS ENVIRONMENT**

The business is grappling with stringent competition from European, Korean and domestic fabricators, while Korean, Chinese and European companies continued to get preference due to Export Credit Agency (ECA) financing requirements. Excess global capacities and limited demand put pressure on pricing and deliveries.

Amid growing competition, the business continued to bag significant orders from global and domestic clients for hydrocracker reactors, ethylene oxide reactors, coke drums, HP heat exchanger and heavy columns, primarily for projects in the Middle East, South East Asia, North America

and Mexico. In the domestic market, the business bagged orders for high pressure and exotic material heat exchangers for HPCL's Residue Upgradation Facility (RUF) Project and an ethylene oxide reactor for IOCL's Paradip Project.

The domestic nuclear sector continued to remain sluggish due to delay in fleet procurement orders.

**The business continued to bag significant orders from global and domestic clients for hydrocracker reactors, ethylene oxide reactors, coke drums, HP heat exchanger and heavy columns.**

**SIGNIFICANT INITIATIVES**

In FY20, the business focused on cultural transformation, especially streamlining initiatives across units and aligning with its mission statement. The Root Cause Analysis (RCA) mechanism was strengthened to encompass project costs and other overruns in addition to quality and safety priorities.

**OUTLOOK**

The outbreak of COVID-19, combined with global recession and a tough operating environment, may lead to reduced demand for heavy engineering equipment in the short term.

Nuclear customers are increasingly adopting strategies such as reverse auction and qualifying new suppliers. The result is a huge supply-demand gap with less demand and excess global capacity, thus causing increased pressure on price and margin.

The ongoing domestic bids are expected to face slowdown on account of the COVID-19 pandemic. In the domestic market, we expect new projects in the sectors of coal to chemicals, petrochemical and the specialty chemicals industry, and increased demand for MRU services. For the LTSSHF business, the domestic sectors in the fields of nuclear and defence are expected to grow in the coming years. Upcoming investments in 10 domestic nuclear power plants have opened up opportunities for the JV with the placement of orders for supply of steam generator forgings for six units, end shield plates for four units and forgings for pressuriser and bleed cooler for four units.

**MANAGING UNCERTAINTIES PRUDENTLY**

The direct impact of COVID-19 on orders under execution is covered under the force majeure clause of the contract on account of expected delay.

Risks	Mitigation initiatives
<b>Reduced investments in the refinery sector due to declining crude prices</b>	<ul style="list-style-type: none"> <li>Expanded our MRU offering, which continues to grow due to focus on upgrades, modernisation and revamps of existing plants</li> </ul>
<b>Reliability and delivery performance</b>	<ul style="list-style-type: none"> <li>Focus on reduction of cycle time</li> <li>Sustained efforts for on-time delivery</li> </ul>
<b>Shrinking markets and increasing competition, on both the international and domestic fronts</b>	<ul style="list-style-type: none"> <li>Identified the role of the Chief Technology Officer (CTO) as being exclusively responsible for building and developing engineering and technological capabilities and knowledge management within our Company</li> <li>Capabilities have been developed for niche equipment for specialty chemicals and petrochemicals such as Purified Terephthalic Acid (PTA) and acrylic acid</li> <li>The business is also foraying into unexplored geographies such as North Africa, Egypt, Mexico and MRU offerings for the Middle East and Asia Pacific region</li> </ul>
<b>Foreign competition in domestic projects</b>	<ul style="list-style-type: none"> <li>We are proactively suggesting policy changes to the Ministries through industry associates.</li> <li>Anomalies in the implementation of Make in India and GST by PSUs procurement are being addressed.</li> </ul>
<b>On the supply chain front, competitive sourcing remains a focus area</b>	<ul style="list-style-type: none"> <li>With escalating price pressure, we have identified and developed new vendors in China, Eastern Europe and India.</li> </ul>
<b>Energy, water and waste management</b>	<ul style="list-style-type: none"> <li>Continuous monitoring of energy/water conservation, consumption and GHG emissions at our campuses are done to identify improvement areas</li> <li>Spreading awareness of SDGs across locations</li> </ul>

**DEMAND DRIVERS**

- The government has cleared the proposal of investment in 10 domestic nuclear power plants (700 MWe each) through bulk ordering.
- Nuclear fleet procurement opportunities (700 MWe PHWR projects) are likely to be tendered in FY21.
- With a global recovery expected towards the end of FY21, we expect the crude prices to improve, which may lead to a revival of the capital expenditure cycle.

# Business-wise performance

## Defence



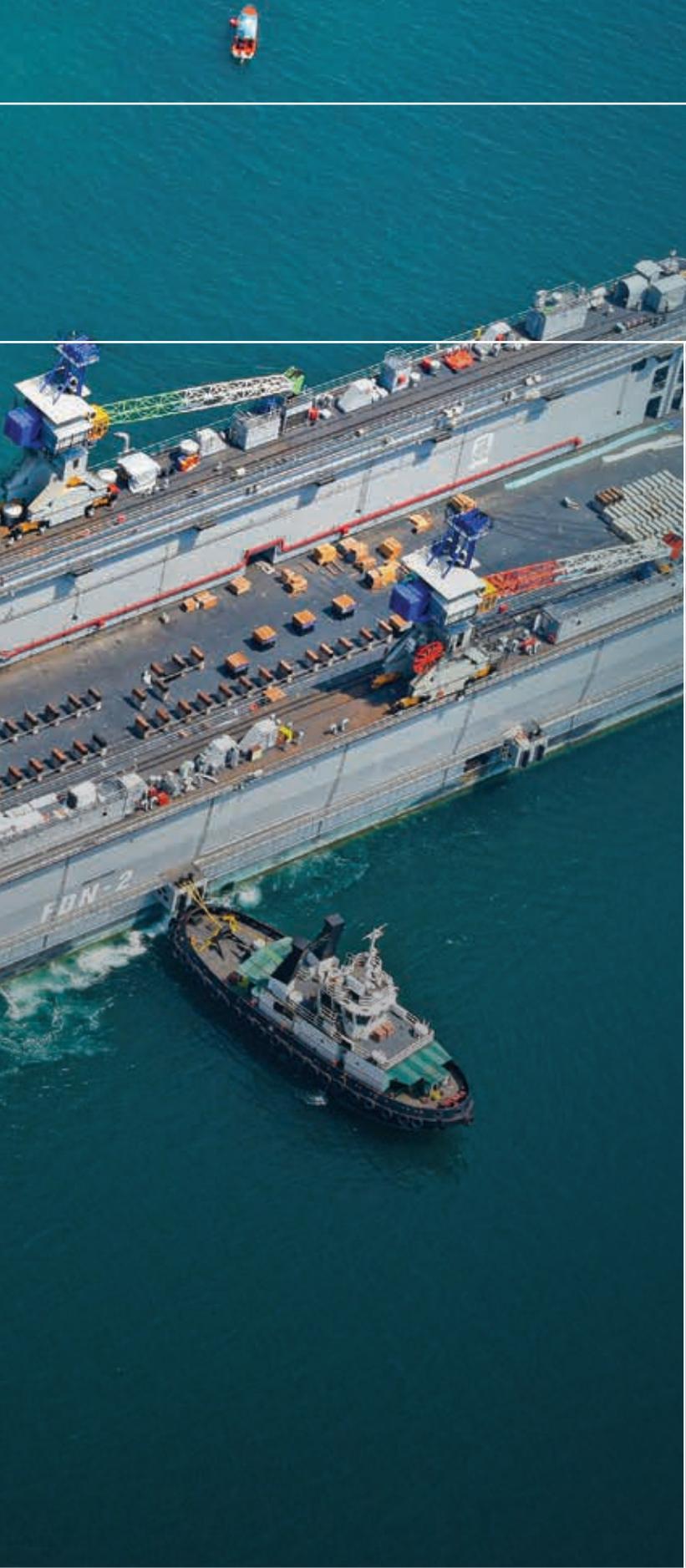
### KEY METRICS

TOTAL REVENUE

₹ 39.7 Billion

INTERNATIONAL REVENUE

₹ 3.4 Billion



The defence and strategic sector, since the mid-80s, was the key focus area of L&T in association with the Defence Research & Development Organisation (DRDO) and Naval Indigenisation programmes. This happened well before the sector was opened for private participation.

With an integrated portfolio comprising technologies, products, systems, platforms and solutions, L&T Defence today offers solutions across the project lifecycle.

The business does not manufacture any explosives or ammunition of any kind, including cluster munitions or anti-personnel landmines or nuclear weapons. The business also does not customise any delivery systems for such munitions.

This business has two verticals:

**Defence & Aerospace**

**Defence Shipbuilding**

EBITDA	NO. OF MAN-HOURS WORKED
₹ 7.21 Billion	18 Million

Anti-ship missile launched from an Indian Navy ship using the launch system and fire-control system made by L&T

## Business-wise performance: Defence

We offer next-generation solutions around concept, design and execution across select defence segments.

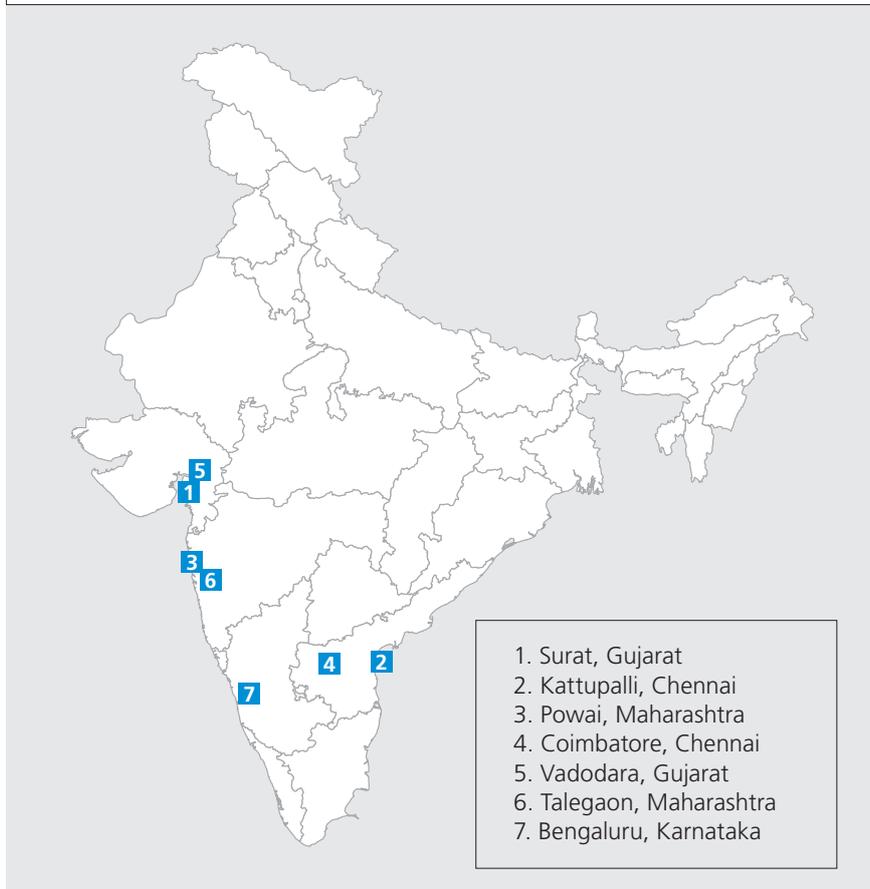
Our realms of expertise include indigenous design, development and production of naval (submarines and warships) and land platforms (armoured systems and howitzers), weapon systems, engineering systems, missile and space launch vehicle subsystems, sensors, radar systems and avionics. Such capabilities are strengthened by R&D and Design and Engineering Centres, focused on individual platforms, systems and solutions development.

We have an expansive presence, running operations to serve the Defence and Aerospace (D&A) sector from two R&D centres, three Design and Engineering centres as well as Production centres across India. Following are some of the facilities:

1. Submarine hull-building facility and an armoured systems manufacturing, integration and testing facility at L&T's Hazira Complex (near Surat)
2. Modern shipyard at Kattupalli (near Chennai)
3. Aerospace manufacturing shops focused on rocket motors for India's space launch vehicles in Powai and Coimbatore
4. Precision Manufacturing and Systems Complex for aerospace and missiles manufacturing at Coimbatore
5. Advanced composites facilities at Vadodara and Coimbatore
6. Strategic Systems Complex (SSC) for weapon and engineering systems and sensors at Talegaon near Pune
7. Strategic electronics centre at Bengaluru

Besides these dedicated facilities, we operate a complex facility devoted to one of our strategic programmes at Visakhapatnam under the Government Owned Contractor Operated (GOCO) model. Our R&D units in Powai, Mumbai and Bengaluru as well as Design and Engineering centres for warship, submarine, weapon and

### L&T Defence & Aerospace facilities



engineering equipment at Powai and Chennai power these work centres.

The Defence business is categorised into two verticals.

### DEFENCE & AEROSPACE

Over the years, we have built a diverse suite of indigenous products, systems, solutions, platforms and technologies within the D&A sector. This feat has been accomplished through in-house acumen and collaboration with the DRDO. Our active participation in the Indian Navy's indigenisation programme to develop a range of engineering systems and weapon systems ensured their implementation across the country. It also served to augment our expertise.

Backed by a differentiated value creation model and focused on in-house technology and product development, our offerings stand out for their inventiveness.

**Backed by a differentiated value creation model and focused on in-house technology and product development, our offerings stand out for their inventiveness.**

While mature and equated partnerships with global majors strengthen our market leadership, the business is supported by the Government of India's decided endorsement of the indigenisation agenda over the long run. This is important in an environment where legacy players are dependent on the Transfer of Technology (ToT) model to pursue defence production. This SBG also has a JV with MBDA, a global leader in missiles and missile systems, which is equipped to indigenously offer advanced missile systems to the Indian Armed Forces (IAF).

## DEFENCE SHIPBUILDING

Our Defence Shipbuilding business offers holistic solutions in design, construction and life support of defence ships. Under our operations are two defence shipyards at Hazira Manufacturing Complex, Surat and Greenfield Mega Defence Shipyard at Kattupalli, Chennai. Spanning a sprawling 900 acres, the Kattupalli Shipyard is India's largest. Its design and construction are inspired by global best practices, including modular construction, construction under covered shops, using a shiplift with dry and wet berths and so on. The shipyard is crafted to enable simultaneous production of diverse vessel types till near-completion on land, and then launching them through the shiplift. A large number of Industry 4.0 practices were also instituted, enhancing construction efficiency.

A dedicated Warship Design Centre, equipped with state-of-the-art, integrated 3D design, analysis and product lifecycle management tools, and built-in project management and ERP systems, in step with international standards, is operational in Chennai.

The Kattupalli Shipyard has been largely engaged in building, reconfiguration and repair of defence ships for the Indian Navy and Indian Coast Guard. Our Shipbuilding business is involved in design, construction and delivery of defence vessels such as a floating dock (for the Indian Navy), interceptor boats and offshore patrol vessels (for the Coast Guard) in record time. The unique capability of the business to achieve on-time or ahead of contractual delivery performance in all the contracts for defence vessels is a benchmark in itself in the Indian shipbuilding Industry. The shipyard has a track record of delivering

best-in-class vessels on/ahead of schedule with design and construction maturity and in-built quality.

L&T purchased the 3% stake held by the Tamil Nadu Industrial Development Corporation Ltd (TIDCO) in L&T Shipbuilding Ltd. (LTSB) in April 2019, making it a wholly owned subsidiary. In July 2019, the L&T Board approved the Scheme of Amalgamation of LTSB with L&T w.e.f. April 1, 2019 as record date. The NCLT permissions have since been obtained and LTSB has now been merged with the parent Larsen & Toubro Limited.

**57**  
Defence vessels  
delivered since 2010



### Major accomplishments in FY20

- Shortlisted as one of the two contenders as strategic partners for P75 (I) submarine programme, awaiting issuance of the Request for Proposal (RFP)
- Delivered multiple weapon launch systems (land and naval), engineering systems and missile systems to the IAF
- Set benchmarks in delivery (OPVs, K9 Vajra-T, PINAKA and Satcom systems, to name few), safety and digitalisation with our work centres
- Provided 44 K9 Vajra-T self-propelled Howitzers ahead of schedule, having peaked at 10 deliveries/month, with the ASC Hazira team ramping up operations
- Developed, with the R&D and Design & Engineering teams, new technologies, products and solutions ranges with focus on emerging technologies, such as unmanned systems, AR/VR, image processing and predictive maintenance that were on display at DefExpo 2020, emphasising the uniqueness of offerings, innovation and presence across the value chain
- Attained the globally unique distinction of complete sea acceptance trials of OPV5 on Kattupalli Shipyard's maiden sea sortie, reducing the build time to under 20 months from the keel-laying
- Designed two offshore patrol vessels and five interceptor boats for the Indian Coast Guard, ahead of contracted schedule
- Achieved breakthrough execution of a large export order for 12 high-speed guard boats from South East Asia and a PPP by securing workshare from a Defence Public Sector Undertakings (DPSU) yard for construction of three defence vessels with L&T Shipbuilding



Offshore Patrol Vessel

## Business-wise performance: Defence

### BUSINESS ENVIRONMENT

Over the preceding couple of years, the macro picture has been a mixed bag. The government adopted substantive measures to promote defence exports, boost the acquisition pipeline by preferential categorisation with indigenous procurement of defence systems, and accelerate the process of Acceptance of Necessity (AoNs) and Request for Proposals (RFPs). However, a gradual increase in the Defence Modernisation Budget is helping to reduce order slips. The inclusion of the GST (since July 2017) and customs duties (since April 2016) as additional outflows from funds allocated to the Ministry of Defence (MoD) have also reduced capital allocation to the defence sector.

The fund limitations in defence modernisation are reflected in the order volume drop placed on Indian companies, with preference to imports that fill urgent gaps in capability. The financial year was witness to measures adopted to defray the customs duties, Integrated Goods and Services Tax (IGST) on the MoD's imports (government-to-government deals) and specific programmes ordered on system integrators (DPSUs). This necessitates import inputs produced outside India to free some capital for indigenous acquisition from within the Budget allocation.

As per the Rajya Sabha Q&A data, the MoD cleared AoNs of over ₹ 409,000 Crore worth of programmes for Indian

industries to participate in over the last five years.

The Government of India's positive intent towards achieving greater indigenisation and self-reliance reflects in the latest policy measures and strategic partnerships. The Defence Procurement policy and procedures are evolving with impetus on 'Make in India' and industry friendliness, as reflected in the draft Defence Procurement Procedure (DPP) 2020. Even as the government adopts measures to offer ease of doing business, concerns around extending a level playing field for the private sector continue over provision retention and integration of large defence programmes and state-owned companies.

### SIGNIFICANT INITIATIVES

- Besides defence manufacturing for the IAF, direct export of our matured weapon systems offerings, either in partnership with DPSU / Ordnance Factory Board (OFB) for weapons or otherwise, and entering into PPP relationships for and workshare with DPSUs, are being pursued as two additional growth engines.
- We are leveraging our collaboration with DPSUs to emphasise specific programmes and explore opportunities within the domestic and international markets.
- Teams were deployed with the objective of work centre consolidation, and the business merged its Rabale operations into its Strategic Systems Complex (SSC) Talegaon.

- Our R&D investments will hasten the development of new-age technologies and products, such as unmanned systems (four segments), robotics, additive manufacturing and AI.
- The L&T-MBDA JV achieved an important landmark, with readiness to operationalise the new inert integration facility at Coimbatore.
- We have carved a niche in digital design since the mid-90s, with proficiency in Industry 4.0 elements. We are supported by R&D, D&C centres and production work centres that extend to platform building, such as warships and submarines.
- Skilled designers are employed by our in-house Warship Design Centre to build platforms in 3D/virtual domains and leverage VR/AR tools for walk-through analysis of highly engineered designs fit for contemporary production facilities on the shop floor.
- As leaders in submarine construction, outfitting and system integration with indigenously developed homegrown technologies, we draw from the lessons from our initiatives in the digital domain nearly two decades ago.
- Our gradual transition to an Industry 4.0 environment is being enabled by model digital data, tracking and scanning tools, as well as data analytics for improved planning, quality control and sequencing.
- An armoured systems facility recently built at our Hazira complex is a



Pinaka Multi Barrel Rocket Launcher

modern 'Industry 4.0-ready' setup. It connects shopfloor engineers and technicians with training opportunities in automation, robotisation and multi-disciplinary system integration to attain over 90% automated welding of armoured vehicle hulls and turrets. The process is further facilitated using a robot series and building complex components under the same roof using 3D printing wire-deposition processes for volume deposition.

### CONCERNS

Of the major concerns, one of the foremost is order deferrals, given the vagaries of Budget allocation following the outbreak of COVID-19. It can be seen from the Parliamentary Standing Committee reports that the Defence Modernisation Budget was inadequate to cover the committed liabilities over the last two years. This led to delays in acquisition programmes and sometimes even cancellation and reduction in quantities after RFPs issuance. The lack of funds for new acquisitions led to low order placement of about ₹ 77,000 Crore on Indian industries over the past three years, with large portions being nominated to DPSUs.

The remaining orders are placed on foreign suppliers to address urgent capability gaps.

### OUTLOOK

Owing to the impact of COVID-19, Budget allocation for defence capex and modernisation and Indian space programmes is expected to be lower. We expect slowdown in decision-making owing to the health crisis, leading to a spill-over of a few significant contracts from defence as well as space sectors. The current economic slowdown in India may affect funds release against the Navy's Capital Budget, while the Revenue Budget is expected to take a hit, affecting ship refits in the short term.

To compensate for the projects inflow risk, we are pursuing major orders with DPSUs, while exploring increased export opportunities in the short term. Productivity loss due to the pandemic is being tackled by way of cost reduction in project procurement and revenue expenses, accelerated cash conversion cycle, targeted digitalisation and reduced outsourcing to gainfully use idle person-hours.

**Our outlook for the defence business remains cautious for the short run but positive over the medium and long term, as indigenous production gains momentum, propelled by the government's focused efforts to implement major policy initiatives, such as strategic partnerships and indigenously designed and manufactured category programmes.**

By 2027, the Indian Navy intends to bring 175 warships and submarines under its operations. This aggressive fleet expansion plan, combined with the government's 'Make in India' initiative opens avenues for Indian shipyards to fast-track warship and submarine construction for defence forces. Our decades-long association with the DRDO in strategic indigenous design and development programmes, augurs well, supported by unprecedented opportunities in the pipeline.

In the short run, shipbuilding may witness significant opportunities, given the number of shipbuilding RFPs issued by the MoD during the last fiscal and with the weapons and engineering systems programmes offering a strong foundation for consolidation. The Indian Space Research Organisation (ISRO) will include private sector firms in vehicle integration, creating sizeable future opportunities in the aerospace segment.

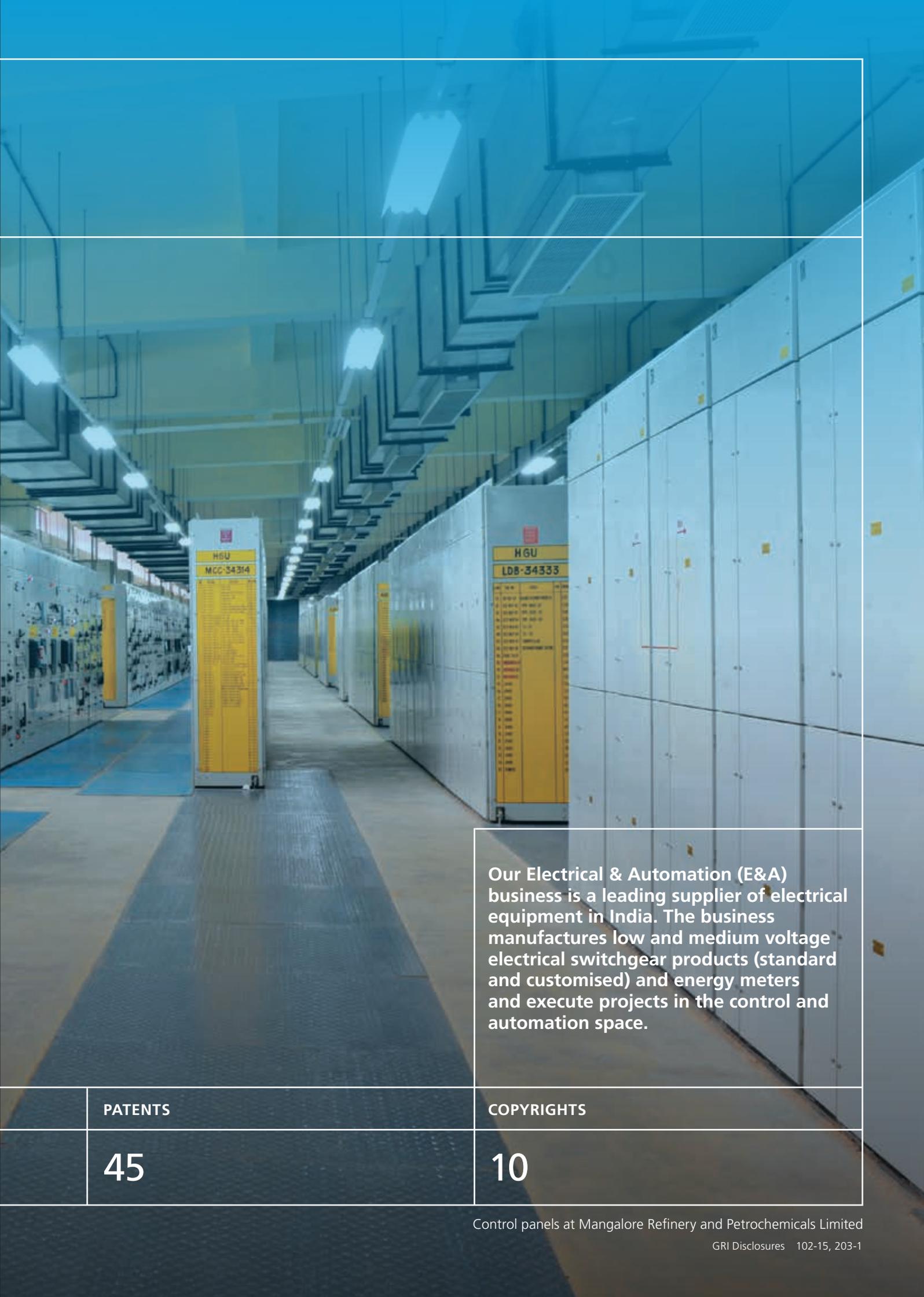
### MANAGING UNCERTAINTIES PRUDENTLY

Risks	Mitigation initiatives
<b>High level of dependence on Government of India and state government's budget allocations</b>	<ul style="list-style-type: none"> <li>Identify and capture opportunities in international markets</li> </ul>
<b>Complete reliance on policy action for business sustainability in future</b>	<ul style="list-style-type: none"> <li>Play an active role in policy advocacy</li> <li>Make steady investments in R&amp;D</li> </ul>
<b>Cyclical nature of the business</b>	<ul style="list-style-type: none"> <li>We have developed a bouquet of products across the segment through in-house efforts</li> </ul>

# Business-wise performance

## Electrical & Automation

KEY METRICS	TOTAL REVENUE	INTERNATIONAL REVENUE
	₹ 52.3 Billion	₹ 13.2 Billion



Our Electrical & Automation (E&A) business is a leading supplier of electrical equipment in India. The business manufactures low and medium voltage electrical switchgear products (standard and customised) and energy meters and execute projects in the control and automation space.

PATENTS

45

COPYRIGHTS

10

## Business-wise performance: Electrical & Automation

In the LV segment, we operate under two product categories — standard switchgear products and customised switchboards/electrical panels. Together they command the highest market share in India and are popular across international markets, particularly in South East Asia, the GCC and select African geographies. Our E&A business, with its electrical agri products, has been integral to the agricultural market for over four decades. Its innovative control-gear and next-generation solar-powered products offer a technological thrust to the Indian agricultural ecosystem.

Our LV products are manufactured across three Indian locations, with the customised LV switchboards being produced at two of these locations and one location each in the Kingdom of Saudi Arabia (KSA) and Indonesia.

The Medium Voltage (MV) range of switchgear products is manufactured in India and Malaysia. L&T E&A's group company Tamco Switchgear assumes leading market share in Malaysia, with robust presence in the MENA region, the South East Asia region, and select geographies across Europe and Australia.

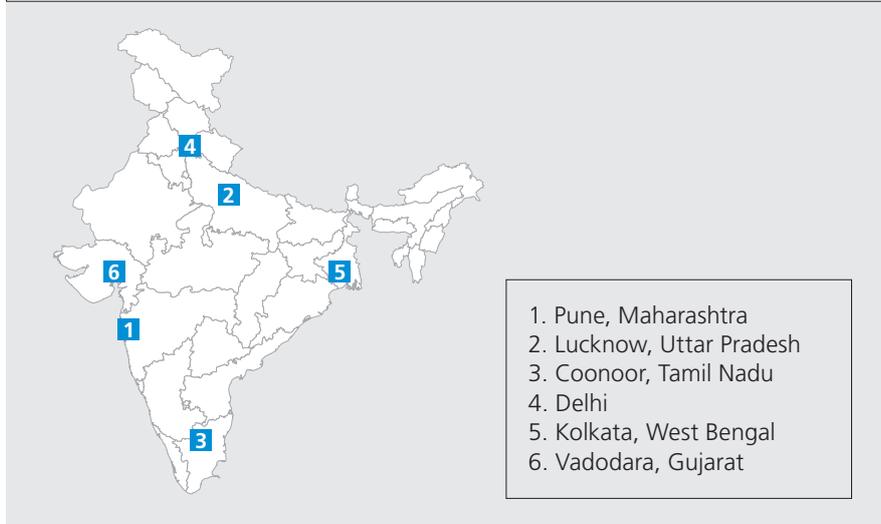
We are the largest manufacturer of single-phase energy meters and have a leading market position in India, with the capacity to manufacture three-phase/tri-vector meters. We have been one of the initial players to deploy smart prepaid meters at a large scale in India.

### Largest

**Manufacturer of single-phase energy meters with a leading market position in India**

Our E&A system integration business constitutes project management experience of over 25 years, supported by an in-house manufacturing facility for control panels, combined with its own copyrighted software solution i-Visionmax®. We offer a one-stop engineered solution coupled with project management skills. The domestic business serves the Indian market

#### L&T Switchgear Training Facilities



### 25 years

**Experience in project management for the E&A system integration business**

and neighbouring countries such as Bangladesh, Nepal and Indonesia, while its international arm addresses the GCC market.

Clients come from diverse sectors, including metro rail, airports, renewable energy/ solar, defence, hospitals, educational institutions, data centres, realty, auto, food and beverages, chemical, pharma, textile, sugar, automobile and steel.

Our business' LV standard switchgear and agricultural products are marketed through a solid network of 650+ stockists. Automation products, such as drives and Programmable Logic Controllers (PLCs) are sold by ~75 integrated solution providers. The retail market is serviced through a network of 165 distributors and ~350 distribution partners. The segment customers include private and publicly-owned undertakings and select corporates.

This is a full-suite business with in-house design and development teams. It has five DSIR-approved R&D facilities and two NABL-accredited testing laboratories to test products

on diverse parameters. Our design and development teams collaborate with international laboratories, testing centres and academic institutions, with the business being strengthened by state-of-the-art tooling facilities, which produce high precision tools for in-house and customer requirements.

To promote good electrical practices in the industry, the business conducts training programmes for technicians, customers, engineers, professionals and students through its Switchgear Training Centres at Pune, Lucknow, Coonoor, Delhi, Kolkata and Vadodara.

Our business is charting an international presence through the following group entities:

- **Tamco Switchgear** is an established manufacturer of LV and MV switchgear. By way of its direct subsidiary in Indonesia, Tamco's international market spans the MENA regions, select geographies in Europe, ASEAN countries and Australia.
- **L&T Electrical & Automation FZE (LTEAFZE)**, located at Jebel Ali Free Zone (Dubai, UAE) provides turnkey engineering, assembly and

### 650 +

**Solid network of stockists used to market LV standard switchgear and agricultural products**

integrated electrical, instrumentation and telecommunication solutions, encompassing the cross-section of customers from the Middle East and Africa.

- **L&T Electrical & Automation Saudi Arabia Company Limited**, located at Dammam in the Kingdom of Saudi Arabia, offers a spectrum of products and services comprising Air Insulated Switchgear (AIS), Gas Insulated Switchgear (GIS), ring main units, LV switchgear, Motor Control Centre (MCC) fixed/drawout and pre-fabricated/package sub-stations in the Gulf market. Offerings also include variable frequency drive panels, automation

and security systems with allied equipment such as transformers, busducts, DC / Uninterruptible Power System (UPS) and power quality management systems. We also extend erection, testing, commissioning and retrofitting services and maintenance contracts.

- **Henikwon Corporation** is a leading Malaysia-based LV and MV busduct systems manufacturer, with building and infra segment solutions.
- **The UK-based Servowatch Systems Limited** offers control and automation space technology for marine applications and other emerging segments. Servowatch is a global leader in system integration for

modern naval platforms, super yacht installations and commercial marine operators. The unique software design allows integration of third-party software into a common operator platform environment.

- **Kana Controls, Kuwait** is a homegrown company that aids us in establishing a foothold in the Kuwait market and enhance our domain expertise in design, engineering, supply and commissioning. We are working to provide after-sales support on integrated automation and telecommunication systems, based on various global Original Equipment Manufacturer (OEM) products and technologies.



SCADA Systems at Mumbai International Airport Limited

## Business-wise performance: Electrical & Automation

### Product launches

- Launched Moduled Case Circuit Breakers (MCCBs), variants of Air Circuit Breakers (ACBs), contactors, isolators and panel solutions for emerging market segments such as solar and railways, new state-of-the-art motor protection relays, controllers for power quality solutions, intelligent products for the agriculture segment, among others
- Introduced feeder pillars, compact sub-stations and front RMU with FRTU for the utilities segment through our Electrical Systems & Equipment business. For the international market, Sub-main Distribution Boards (SMDBs) and GIS for the wind segment were launched for the infrastructure sector, including metros, airports, smart cities and high-end residential complexes. The business also introduced a pre-fabricated electrical substation building, known as 'E-House', customised to house electrical equipment in keeping with project requirements
- Offered the domestic LV switchboards with the closed-door operation feature to key customers in the refinery and power plant segments. The 'SMART' ring main units are in high demand in smart cities
- Worked to integrate new communication technologies, such as 4G, Narrowband Internet of Things (NB-IoT) and LoRa in the Smart Meter segment within our Metering division
- Rolled out one of India's largest smart meter projects based on the Linear Polarisation Resistance (LPR) technology
- Enhanced the MV portfolio with an improved range of GIS for wind energy applications and metro projects



**We successfully rolled out one of the largest smart meter projects in India, backed by the linear polarisation resistance technology.**

### BUSINESS ENVIRONMENT

Government reforms – such as enhanced focus on improving 41 different areas, primarily the Indian energy, infrastructure and irrigation sectors, to make India a USD 5 Trillion economy by FY25 – helped begin FY20 business with a healthy order backlog.

As the general elections in India were held at the beginning of the financial year, it was expected that economic performance would remain benign in view of the model code of conduct and slowing down of the decision-making process by the government in the first quarter of FY20. The pro-incumbency mandate received by the government reassured the sustenance of the 'reform' agenda.

The NITI Aayog's impetus on the North East with proposals to establish industrial estates or parks paved a development platform for our Standard Product's division in FY20.

**We are enthused by the government's continued emphasis on improving rural infrastructure, translating into opportunities for us. Announcements made by the government at the time of declaring the Union Budget 2020-21 encouraged new infrastructure, public transport systems and airport constructions.**

An increasing demand for renewable energy lent significant opportunities for L&T's Standard Switchgear Products and Switchboards divisions, functional within the LV and MV space.

Notable initiatives such as UDAY, Smart Cities, Smart Grid, Pradhan Mantri Krishi Sinchayee Yojana, Pradhan Mantri Kisan Samman Nidhi Yojana and Digital Villages were also among the FY20 highlights. These initiatives connected the Metering division of the business with crucial opportunities. We successfully rolled out one of the largest smart meter projects in India, backed by the linear polarisation resistance technology. Focus on developing smart cities helped the Control & Automation division of our business to conceive technologically superior solutions for the domestic market.

Owing to a substantial presence in Malaysia and Southeast Asian countries through Tamco, growth rate drops in Malaysia caused us to scale down business efforts for Tamco.

Multiplying market demand, enhancement in PPP projects and government reforms had kept business performance on anticipated lines until January 2020, with profitable growth. However, the COVID-19 onslaught impacted business February 2020 onwards.

**SIGNIFICANT INITIATIVES**

- Our switchboard business began manufacturing the compact substation switchboard at Ahmednagar for greater production excellence.
- A web-based portal for asset management was operationalised to monitor LV switchgear and other electrical system equipment.
- We received business grants for as many as 81 patents, nine trademarks and nine design applications in India.

**81 Patents have received business grants**

**CONCERNS**

In divesting the business to Schneider Electric, we sensed customer apprehensions on service quality and continuity. The pandemic further dampened market sentiments and the new norms mandated may impact operations.

**OUTLOOK**

Economies around the world are expected to contract over the near term as a result of the COVID-19 outbreak, leading to reduced capex by the private sector. The Middle East economies continue to grapple with oil-price meltdown, limiting opportunities and intensifying competition.

The Government of India’s emphasis on ‘Vocal for Local’ and the push for rural economic development in view of the large migration of workforce from cities are expected to work in our favour. With the government’s large-scale and focused roll-out of smart prepaid meters to improve the fiscal health of the DISCOMs, the Metering division stands to gain from in-house design and customisation capabilities and manufacturing capacity. Better prospects have been observed in Malaysia for large MV orders through Tamco.

The growing trade-tensions between the US and China, coupled by the world’s changing perception of China, are expected to fuel a shift in manufacturing bases among industries to India and Indonesia, among other remunerative countries.

**The divestment process of the business to Schneider Electric is on track and the approval of the Competition Commission of India, subject to fulfilment of certain conditions, was received, with its operations being discontinued since June 2019.**

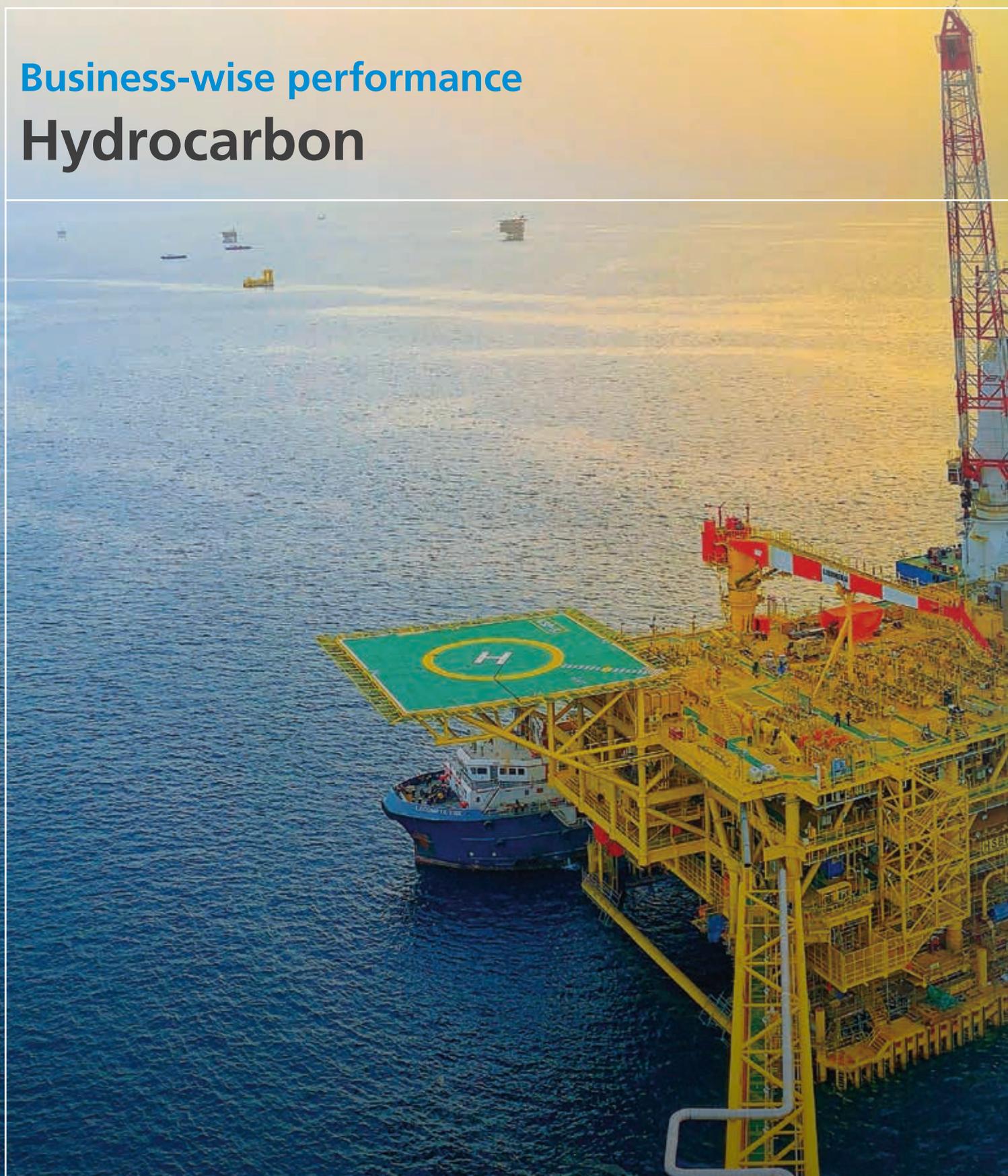


**MANAGING UNCERTAINTIES PRUDENTLY**

Risks	Mitigation initiatives
<b>Low profitability</b>	<ul style="list-style-type: none"> <li>• Moving towards operational excellence for cost optimisation</li> <li>• Continued organisation-wide emphasis on value-engineering, lean manufacturing and procurement optimisation</li> <li>• Product design initiatives to optimise material consumption</li> </ul>
<b>Technology obsolescence</b>	<ul style="list-style-type: none"> <li>• Investments in R&amp;D and generation of new Intellectual Property Rights (IPR)</li> <li>• Resources deployed to identify and develop potential new technologies for the future</li> </ul>
<b>Delay in speed-to-market</b>	<ul style="list-style-type: none"> <li>• Restructuring and improving processes for faster introduction of new products</li> </ul>
<b>Aggressive competition</b>	<ul style="list-style-type: none"> <li>• Focus on innovation, brand strength and increasing market share</li> </ul>

# Business-wise performance

## Hydrocarbon



KEY METRICS	TOTAL REVENUE	INTERNATIONAL REVENUE
	₹ 174.2 Billion	₹ 75.4 Billion



L&T Hydrocarbon Engineering Limited (LTHE), a wholly- owned subsidiary of L&T, provides integrated 'design-to-build' turnkey solutions for the hydrocarbon industry globally.

Through this vertical we provide solutions for:

**Oil and gas extraction and processing**

**Petroleum refining**

**Chemicals and petrochemicals**

**Fertilisers**

**Cross-country pipelines**

**Terminals**

In-house capabilities include front-end design and detailed engineering, procurement, fabrication, project management, construction and installation up to commissioning services.

EBITDA	SAFE MAN-HOURS (ACROSS 12 PROJECTS)
₹ 19.0 Billion	102 Million

## Business-wise performance: Hydrocarbon

The business comes with a fully integrated capability chain, engineering and R&D centres, world-class modular fabrication facilities and onshore construction and offshore installation capabilities. Some of our major Indian facilities include Engineering & Project Management Centres in Mumbai, Vadodara and Chennai, alongside fabrication yards at Hazira (near Surat) and Kattupalli (near Chennai). The Hydrocarbon Engineering business has carved an overseas presence in the Middle East, i.e. in the UAE (Sharjah), Saudi Arabia (Al-Khobar), Kuwait and Oman (Muscat) and Algeria, with a major modular fabrication and heavy engineering facility at Sohar in Oman.

### Offshore

- Offers diverse turnkey Engineering, Procurement, Construction, Installation & Commissioning (EPCIC) solutions to the global offshore oil & gas industry encompassing wellhead and process platforms, modules, subsea pipelines, brownfield developments, offshore drilling rigs (upgrade and new-builds), Floating Production Storage and Offloading (FPSO) modules, deep-water subsea manifold and structures, living quarters, transportation and installation services, offshore wind-farm projects and decommissioning projects
- Our offshore installation capability includes a self-propelled heavy-lift-cum-pipe-lay vessel – LTS 3000 – held in a JV, and a wholly-owned pipe-lay barge – LTB 300

### Onshore

- Provides EPCC solutions pertaining to a wide range of onshore hydrocarbon projects covering upstream oil & gas processing, refining, petrochemicals, fertilisers (ammonia and urea complexes), cryogenic storage tanks, and LNG regasification terminals and cross-country pipelines
- A track record of concurrent execution of multiple mega projects successfully, with diverse technology process licensors

- Our capabilities are complemented by the design and engineering prowess capabilities of L&T-Chiyoda for onshore engineering and L&T Gulf for pipeline engineering

### Construction services

- Helps render turnkey construction services for refineries, petrochemicals, chemical plants, fertilisers, gas-gathering stations, crude oil & gas terminals and underground cavern storage systems for LPG and cross country oil & gas pipelines
- Our expertise lies in heavy-lift competency, application of advanced welding technologies, high automation levels, workforce management of wand material in large volumes at construction sites and globally benchmarked quality/HSE systems
- Our Hydrocarbon business regularly invests in strategic construction equipment, a range of pipeline-spread equipment, automatic welding machines and other plant and machinery to ease electromechanical construction projects

### Modular Fabrication Services

- Fabrication and supply of modules and static equipment for offshore oil & gas fields, refineries, petrochemical plants and fertiliser complexes are some of the vertical's specialisations.
- With world-class modular fabrication facilities strategically located at Hazira (India's west coast), Kattupalli (India's east coast) and Sohar (Oman), the business' combined annual capacity is in excess of 200,000 MT (depending on the product mix).
- Supplies foundations and other modules for offshore wind-farm projects and modular e-houses.
- The all-weather waterfront facilities enable easy clients' access globally, with load-out jetties for the dispatch of large and heavy modules via ocean-going vessels and barges.
- We recently inaugurated an integrated manufacturing facility at Jubail in Saudi Arabia to cater to the local market.

**~200,000 MT**  
**Combined annual capacity with world-class modular fabrication facilities**

### Advanced Value Engineering & Technology Services (AdVENT)

- Offers customer-centric solutions for the hydrocarbon sector and emerging industries. It assesses and addresses need gaps within the evolving energy sector.
- Leveraging domain expertise in high-end engineering and experience gained from large-scale executions, AdVENT delivers comprehensive solutions in the domains of D&E project management, strategic project delivery, modularisation, smart asset management and green energy to global clients.

## PROJECTS COMPLETED



 Saudi Aramco

Our Offshore vertical achieved partial mechanical completion for the Hasbah II project of Saudi Aramco and concluded the ONGC's Bassein Development 3 Well Platform & Pipeline project and Neelam Re-development and B173AC Project.



 AI Dhafr Petroleum Operations Company Ltd

The Onshore vertical moved towards mechanical completion of the IndMax FCC Unit for IOCL Bongaigaon and completed the major milestone of ready for commissioning – multiphase pump for Haliba Field Development project of AI Dhafr Petroleum Operations Company Ltd., UAE.



 Reliance Industries

The Construction Services business saw commission approval of Phase-2 Coal Bed Methane Development Project at Shahdol in Madhya Pradesh for Reliance Industries, Commissioning of Syngas Phase 2 Project at Kochi for air products, involving expansion of gas separation facility based on cold-box technology, and laying and commissioning of pipeline for Barmer-Pali and Palanpur-Pali projects.



### Major orders secured

- EPCIC contract to develop the Heera Panna Block of the Western Offshore basin involving wellhead platforms, subsea rigid pipelines, riser installation and modification work on existing platforms
- EPCIC contract to develop the Mumbai High South field of the Western Offshore basin, involving a water injection platform bridge connected to the existing WIS platform, living quarters, modification and interconnection of utilities with existing platforms
- Marjan Incremental Development Project by Saudi Aramco, a mega venture in consortium with EMAS AMC PTE Ltd. (a Subsea 7 company) involving tie-in platforms, tie platform module, production deck modules, 217 km of subsea pipelines and 145 km of subsea cables
- EPCI contract from Saudi Aramco, involving 28 offshore jackets in Saudi Arabia's Zuluf, Marjan, Safaniya and Ribyan offshore fields in association with EMAS AMC PTE Ltd.
- EPCC contract to set up a 3.55 MMTPA Residue Upgradation Facility (RUF) for Visakh Refinery Modernisation Project (VRMP) at HPCL's Vizag Refinery to convert the heaviest oils into high-quality Euro 6 diesel
- EPCC contract to establish a new 9 MMTPA Atmospheric & Vacuum Distillation Unit (AVU) and allied facilities for Barauni Refinery Capacity Expansion project of Indian Oil Corporation
- Process and piperack modules (28,000 MT) for a refinery project in Southeast Asia from EPC Contractors Consortium, as a repeat order
- Critical supply for air separation process modules for a leading international technology company for their projects in the US and Algeria, as part of a repeat order
- Three instrumentation houses for an international client with a project in Algeria

## Business-wise performance: Hydrocarbon

### BUSINESS ENVIRONMENT

The two key drivers impacting a structural shift in FY20 were the increase in oil supply by OPEC and the collapse in oil demand due to the business interruptions caused by the COVID-19 pandemic. Oil prices fell by 30% due to oversupply in the first week of March, before the total COVID-19 impact was factored in.

There was widespread project deferment in the domestic market by a few quarters due to overcapacity in the domestic refining sector. The domestic segment also faced steep competition from new entrants.

The Middle East remains among the key regions of focus for LTHE. Business was impacted by stressed oil prices due to supply glut and the price war between Saudi Arabia and Russia. Saudi Arabia, a market where LTHE assumes a decent market share for the Offshore business, given its position of being the select contractor under the Long Term Agreement (LTA), saw new contractors being pre-qualified. This impacted LTHE's share in the contracts being awarded under LTA. Localisation efforts in the KSA are in progress to position LTHE as a compliant contractor in achieving In-Kingdom Total Value Add (IKTVA). In other geographies, such as the UAE and Qatar, we are addressing the multiplying In-country Value (ICV) requirements.

**With sharpened focus on 'Execution Par Excellence', LTHE achieved robust financial performance, far ahead of its global peers.**

### SIGNIFICANT INITIATIVES

- The 'Execution Par Excellence' mission is outlined by the business' emphasis on sharper bidding to enhance market share and execute projects within time and budget, protecting bid margins.
- Operational excellence initiatives remained among the priorities, yielding results in the form of enhanced cost-competitiveness in bids and improvements in the bottom line owing to projects under execution.
- We employ novel manufacturing techniques, such as the assembly line concept and serial production method, to fabricate multiple jackets concurrently. Modernised technologies in the pipe-welding process through automation and process upgradation are deployed at the fabrication facilities and construction sites to maximise productivity and maintain differentiated quality.
- Construction Competency Centres and Skill Development Centres have been upgraded.
- At LTHE, we have an organisation-wide digital transformation programme to integrate commercial processes, enterprise software and robust in-house IT applications to enhance execution and delivery efficiency. This, we anticipated, could compress project cycles and enable project progress visualisation through digital walls, assured delivery schedules, cost competitiveness and enhanced risk mitigation.
- Our connected construction machinery and workforce are also being evaluated through IoT to improve productivity.
- With a keen eye on building a solid foundation for business intelligence, analytics and knowledge management, LTHE implemented an Enterprise-wide Project Lifecycle Management programme (EPSILON). It was introduced to institutionalise project stakeholders' interaction around a 3D-model-based integrated workspace where project teams can ideate together, conduct what-if analysis, track updates and manage changes.
- To craft new opportunities with a sustained revenue stream, the AdVENT vertical is pursuing several initiatives such as Smart Asset Management, O&M services and development of green energy projects.
- The AdVENT business is actively engaged with various R&D centres and start-ups to harness emerging technologies and create differentiated solutions for its customers.



*New Strategic Gas Export Pipeline from North Kuwait to Minah Al Ahmadi for Kuwait Oil Company*

## MANAGING UNCERTAINTIES PRUDENTLY

Risks	Mitigation initiatives
<b>Limited domestic opportunities</b>	<ul style="list-style-type: none"> <li>Explore international opportunities</li> </ul>
<b>Financial and operational risks with strategic partners</b>	<ul style="list-style-type: none"> <li>Financial due diligence pursued</li> <li>Investigating the background and reputation of prospective partners</li> <li>Learnings from past projects are incorporated to strengthen the 'inter-se agreement'</li> </ul>
<b>Aggressive bidding by competitors</b>	<ul style="list-style-type: none"> <li>Enhanced pre-bid engineering</li> <li>Cost optimisation through controls and value-added solutions</li> <li>Differentiated from peers by offering more value and focus on on-time project delivery</li> </ul>
<b>Cost overruns</b>	<ul style="list-style-type: none"> <li>Operational excellence initiatives to reduce/eliminate schedule overruns</li> <li>Change orders in contract clauses to cover changes due to extended scope or delays</li> <li>Fixed purchase price contracts with vendors</li> <li>Long-term contracts with suppliers to limit impact from unforeseen events and price fluctuations in relevant commodity</li> </ul>
<b>Over-dependence on global oil prices and green environment pressures</b>	<ul style="list-style-type: none"> <li>Constant evaluation of our portfolio and the emerging scenario, exploring new regions and pursuing cost-competitiveness continuously for operational excellence</li> </ul>
<b>Global geo-political situations can impact new orders and execution momentum</b>	

## OUTLOOK

Oil price volatilities deepen uncertainty and push the risk index higher. Taking a global perspective, the downward oil price spiral stemmed from the confrontational stance adopted by OPEC and Russia. The scenario worsened with the scale and impact of the COVID-19 pandemic. Lockdowns, in an effort to arrest the outbreak, brought oil demand to a record low. To halt the free fall in oil prices, OPEC and Russia reached an agreement to limit production.

The US lowered its 2020 oil production forecast by over 1 Million barrels a day due to a demand downturn and nosediving crude prices. Although prices recovered from their historic lows, consumption in the industry is expected to remain sluggish in 2020. Fluctuating oil prices may delay project awards in the hydrocarbon segment, even as the Middle Eastern GCC economies begin exploring sectors beyond hydrocarbon. With international oil companies evincing interest in the market, investments in West and North Africa

will be rewarding when crude oil prices show upward movement.

In India, the Ministry of Petroleum and Natural Gas is collaborating with other ministries, state governments, and stakeholders to achieve reduction in import dependence for oil in the long run by using alternative fuels such as ethanol and biodiesel. The transition is made easier through Ethanol Blending in Petrol (EBP) Programme and biodiesel blending in diesel. A National Biofuel Policy in 2018 was introduced by the government to bolster biofuel availability in the country. This has been a Sustainable Alternative Towards Affordable Transportation (SATAT) initiative to produce bio-CNG by setting up 5,000 bio-CNG plants in the impending five years.

### Proposed capital outlay for oil & gas companies

	(₹ in Crore)
Exploration and production	52,019
Refining and marketing	41,654
Petrochemical	4,754
<b>Total value</b>	<b>98,522</b>

Major domestic pipeline projects deferred in FY20 are expected to regain momentum during FY21.

We plan to expand our bid pipeline and seek new clients and geographies to leverage opportunities that employ our existing capabilities optimally. With the onslaught of the pandemic, we expect new challenges in project execution. Our objective is to remain cashflow-positive and adopt the PIO approach.

### PIO Approach

- **Protect** the business
- Be **Innovative** in solving unprecedented challenges
- Seek marketplace **Opportunities** that extend strategic advantages over the medium and long term.

# Business-wise performance

## L&T Realty



L&T Realty continues to be ranked among the most distinguished realty players in India, with a 70 Million sq ft portfolio across prominent metro cities such as Mumbai, Bengaluru and Chennai. A combination of cutting-edge designs, advanced technologies and industry-leading project management acumen helps provide attractive value to consumers. Development of large land banks in metro cities, partnership with co-developers, sale/lease of commercial spaces and powerful brand recall are the value drivers of the business.

### Key business segments

Residential

Commercial

Retail

### KEY METRICS

TOTAL REVENUE  
**₹ 21.8** Billion

EBITDA  
**₹ 6.5** Billion

MAN-HOURS WORKED  
**4.8** Million

## BUSINESS ENVIRONMENT

In the last few years, the realty sector in India has witnessed major reforms and policy initiatives such as demonetisation, RERA, GST, IBC, and the ban on subvention schemes. While these changes have caused temporary disruption in the sector, they have ushered in transparency, accountability and fiscal discipline among sector players. The long-term implication of these changes will augur well for the sector as a whole. There is more consolidation and collaboration happening in the sector, and this development has helped L&T Realty further strengthen its position in the market.

## FY20 INDUSTRY PERFORMANCE SNAPSHOT

### Residential segment (% growth y-o-y)

**21%**  
New launches

**5%**  
Sales

## Commercial segment

**52 Million sq ft\***  
Grade A office space completed

\*88% absorbed in top seven cities

**40%**  
Office space growth y-o-y

The Government of India's focus on providing affordable housing to citizens continues to drive demand for the residential segment. This particular trend is here to stay and gain further momentum once the pandemic-induced disruption in the economy and the realty sector gradually wanes.

Demand growth for offices was primarily led by the expansion of IT/ITeS sector (42% of overall leasing) and co-working operators (14% of overall leasing) in cities. However, retail sector leasing was adversely impacted, which resulted in 35% dip in retail leasing activity in the seven Tier 1 cities of the country.

The maiden Real Estate Investment Trust (REIT), which aimed to attract private investments and reduce the load on formal banking institutions, was listed in 2019.

The Government of India introduced various fiscal measures and policy reforms such as:

- Special window for funding of stranded affordable and middle-income projects
- The Insolvency & Bankruptcy Code (Amendment) Bill 2019
- Digitalisation of land records
- Reduction in corporate tax rates

**USD 6.2 Billion**  
Of private equity investments were made in the Indian real estate in FY20

While the COVID-19 crisis is still unfolding in many parts of the country, the long-term impact of this health and socio-economic catastrophe will only be visible in the coming quarters of FY21.



## Major achievements



Rejuve 360, Mulund

- Successful launch of two new premium residential projects in Mumbai. Project Seawoods Residences was sold out within a month of the launch and project Rejuve 360, Mulund gained good traction in the micro market of Mumbai.
- Phase I of project Raintree Boulevard was completed on time and handover has commenced.
- Blackstone Group invested in the Seawoods Grand Central project.

## Business-wise performance: L&T Realty

### CONCERNS

In the post-COVID phase, real estate markets are showing signs of continued weakness. Periodic lockdowns to flatten the COVID-19 curve have led to delayed construction schedules. Unavailability of workforce for projects has further worsened the scenario.

On the other hand, the demand scenario is not encouraging owing to loss of income, insecurity surrounding health and finance, and restrictions on movement. For the next few quarters, office space demand is also likely to remain subdued, as the expansion plans and capital expenditures of major businesses have been put on hold.

### OUTLOOK

India's real estate sector was already grappling with many challenges before COVID-19 struck. Post COVID-19, the segment is likely to contract 20-30% in the short term before it bottoms out and sees further traction.

Roadblocks for the short-term are here to stay. However, given the government's continued support for the sector, the medium-to-long-term outlook appears to be positive. As most real estate developers are focusing on conserving cash and have adopted a wait-and-watch approach, new launches will be paused at least for the coming few quarters. Clearing the inventory in hand is the first priority of developers, rather than investing for new launches.

Digital channels are now being leveraged far more to reach customers, which is a positive trend. Additionally, consolidation and foreign institutional investment in the sector can help revive the sector in the medium term.

**Notwithstanding challenges, at L&T Realty, we are confident of our growth and expansion, given our strong business framework and brand connect with our customers.**



L&T Tech Park - Hebbal, Bengaluru

# Business-wise performance

## L&T Valves



A leading manufacturer of industrial valves with a global manufacturing presence, L&T Valves Limited (LTVL) leverages six decades of manufacturing excellence to serve key sectors nationally and internationally. The business caters to the requirements of oil & gas, defence, nuclear and aerospace, power, petrochemicals, chemicals, water and pharmaceuticals – in India and overseas.

A wide range of products are manufactured such as gate, globe, check, ball, butterfly, plug and control valves, as well as automation solutions. The business also runs a global after-market business to support its installed base with service and spares needs.

The business has three state-of-the-art facilities in Tamil Nadu and Gujarat in India and has established two new facilities in the US and Saudi Arabia respectively. LTVL's products enhance safety, reliability and performance in industries across the world.

### KEY METRICS

TOTAL REVENUE  
₹ 9.1 Billion

EBITDA  
₹ 0.7 Billion

ORDER BOOK  
₹ 13.8 Billion

## Business-wise performance: L&T Valves

### BUSINESS ENVIRONMENT

Market indicators such as prices of crude oil and natural gas, environmental norms for fugitive emissions as well as economic parameters of GDP growth, pace of urbanisation and capital investment in projects remain the key demand drivers for LTVL.

Considering most of these parameters, the operating environment remained stable through the first two quarters in FY20. The investment climate across sectors was lukewarm with an increased thrust on cost reduction and faster implementation. LTVL continued to maintain a balanced portfolio spread across domestic and international business.

**In FY20, approximately 40% of LTVL's order inflows were secured from overseas markets.**

With structural challenges ailing the power sector, there were no significant capacity additions in the thermal power space. However, the new fugitive emission norms introduced by the Government of India opened up some opportunities in the form of FGD projects.

### Outlook

The business is closely monitoring key demand indicators such as crude oil prices, capacity additions, liquidity, project capex spending and GDP trends in the relevant geographies. LTVL expects a market slowdown in the coming year if the lockdown across the world continues for a longer than expected period, thereby affecting its demand indicators and prospects. A prolonged decline in oil prices normally affects the valve industries by a one-year time lag.

Capital spending is expected to stay tepid for a few quarters in FY21. The initiatives on geographical expansion of markets and operations, product mix, focus on aftermarket business and brand labelling, among others, provide immense opportunities and will act as mitigation measures.



### Major orders received

- Critical valves for naval applications from the MoD
- LNG Canada project from JGC and Fluor JV
- Duqm Refinery project from UTE-TR
- Supply of remotely operated shut-off valves to IOCL
- BAPCO Modernisation Programme for Technip, TR and Samsung

Manufacture and supply of complex engineering products, viz:

- 76" Class 150 Triple Offset Butterfly Valve
- 6" Class 150 Titanium Trunnion Mounted Ball Valve
- Top Entry Cryo Triple Offset Butterfly Valve (16" and 20")



**With the oil prices expected to recover in Q4 of FY21, and the fragmented nature of the global valve market together with the strategies deployed by LTVL, the outlook remains positive.**

The business is taking adequate steps to maintain a strong liquidity buffer and conserve cash for business continuity and pursue long-term growth opportunities.

As the operating scenario gradually normalises, the entity is geared to strengthen its key strategies to gain market share and to develop an alternative supply chain to enhance its cost and delivery efficiency. With a strong order book, it continues to position itself as a brand that maintains high customer focus and industry-leading standards of quality and design. LTVL also expects the COVID-19 pandemic with consequent lockdowns and operating disruptions will drive the market demand for its maintenance, repair and operations segment.

# Awards and accolades

## BUILDINGS & FACTORIES

- L&T Construction Research and Testing Centre (LTCRTC) was conferred the Fly Ash Utilisation Award, 2019 for Excellence in R&D
- 11 sites won Gold Royal Society for the Prevention of Accidents (RoSPA) Awards, 2019
- 10 sites received the British Safety Council Five Star Audit & Sword of Honour

## SMART WORLD & COMMUNICATION

### Nagpur Smart City

- Safe City Project of the Year by Secutech India's SECONA Shield Awards 2019
- Dun & Bradstreet Infra Award 2019 for Best Smart City

### Prayagraj Smart City

- Best Artificial Intelligence / Machine Learning implementation of the year by Data Science Excellence Awards, CYPHER, India's largest Analytics and AI Summit
- Business World Smart Cities Award 2019 for Best Safe & Secure Environment Initiative
- Smart City Project of the Year by Secutech India's SECONA Shield Awards 2019
- FICCI Smart Urban Innovations Awards for E-Governance Initiative of the Year

### Vizag Smart City

- Business World's Smart Cities Award 2019 for Smart Solution of the Year

### Other Projects

- IFSEC India Award 2019 for Odisha EWDS for Disaster Management Excellence
- Climate Resilient Observing System Promotion Council (CROPC) and IMD Odisha EWDS for outstanding work in Lightning Risk Management.
- Raipur Smart City and Telecommunication Packages for Lucknow Metro Project received RoSPA Safety awards

## WATER & EFFLUENT TREATMENTS

- Water Supply Scheme (Balasore/ Bhadrak/Puri/Keonjhar/Bolangir) project received the Best Rural Drinking Water Solution Provider Award from Zee Business at its National CSR Leadership Congress and Awards for Excellence in Water'
- Global Innovation in Water Technology Award 2019 for innovation in hydraulics and design at the 3<sup>rd</sup> Global Water Summit
- Industrial & Large Water Business Unit — Water Treatment Plant for NMDC project received the Best Safety Performance Year – 2019 award from NMDC
- 20 Gold Awards at RoSPA Awards, 2019
- 8 sites won the CII Excellence awards
- 7 sites won the FICCI Safety Systems Excellence Award
- Southern region won the CII Excellence Awards, 2019
- 27 projects received British Safety Council's International Safety Awards
- 2 projects of Water International Business Unit received RoSPA Gold Safety Awards, 2019
- Waste Water System Business Unit — Barrackpore Sewerage Integration Works Project, Barrackpore, was ranked the 3<sup>rd</sup> Runner-up for successful lean implementation at the project site in the course of Lean Construction Training & Implementation Programme organised by Indian Institute of Technology Madras (IITM), Indian Institute of Technology Bombay (IITB) and Institute for Lean Construction Excellence (ILCE)
- Received 50 appreciation certificates for Total Quality Management, EHS and project completion from clients and local governments

## TRANSPORTATION INFRASTRUCTURE

- Western Dedicated Flight Corridor Electrical and Mechanical Package -4 won the Sword of Honour from the British Safety Council

## HYDROCARBON ENGINEERING

- Won RoSPA Gold Award for modular fabrication facility, Kattupalli, FNPDCP – Yambu, KSA
- Offshore businesses received:
  - Safety Innovation Award, 2019
  - Apex India Excellence Award 2019
- HPCL Crude Distillation Unit & Vacuum Distillation Unit Project received appreciation certificate from the client for the achievement of 2 Million safe man-hours
- HPCL Mittal Energy Limited Cracker Project received appreciation certificate from the client for the achievement of 1 Million safe man-hours
- FARABI Project received appreciation from customers for achieving 15 Million safe person-hours
- MFY Sohar Yard awarded Middle East Energy Award 2019 under the category of HSE Innovation of the Year for Workmen Safety Observation Programme by Oil and Gas Middle East Energy Awards 2019
- Kuwait Oil Company — Transit Line 5 project received award for Best Project in HSE Performance in Q1 FY20
- L&T Hydrocarbon Engineering Limited received the Sapphire Award for RIL J3, Jamnagar
- MFF Hazira won the Platinum Award in Exceed OHS Award 2019 by Sustainable Development Foundation of India
- Kakrapar Nuclear Power Plant 3 and 4 Main Plant Project conferred the Golden Trophy (Sarvashreshtha Suraksha Puraskar) Safety Award by National Safety Council – India (NSCI) under the Construction Award Scheme 2019
- Received appreciation certificate from Indian Oil Corporation Limited (IOCL), Panipat for 0.13 safe man-hours during the coke drum repair

## Awards and accolades

### ELECTRICAL & AUTOMATION

The business won multiple awards under different categories:

- JUSE (Union of Japanese Scientists and Engineers), Japan has awarded the coveted Deming Prize 2019 to Electrical Standard Products (ESP) and New product development of L&T Electrical and Automation.
- Indian Merchant Chamber – Ramkrishna Bajaj National Quality Performance Excellence Trophy 2019
- International Convention On Quality Control Circles – GOLD Award at Tokyo, Japan, Ahmednagar Switchgear Works (ASW) for Any Time Learning
- Quality Circle Forum of India – Four Gold Awards for ESP
- Chapter Convention on Quality Concepts – 2 Gold awards for Electrical Systems & Equipment, ASW
- CIII's 1<sup>st</sup> prize, Switchgear Design & Development Centre, Moulded Case Circuit Breakers (Vadodara, Gujarat)
- Quality Circle Forum of India – Silver Award, ESE-MV
- Chapter Convention on Quality Concepts – 26 Gold Award and 3 Silver, Metering & Protection Systems
- CII Pokayoke Competition 1<sup>st</sup> Prize Winner, Vadodara Switchgear Works (VSW)
- INVEST 35<sup>th</sup> International Conference, Bangalore:
  - VSW won 2<sup>nd</sup> Prize in the Debutant category
  - MPS won 3<sup>rd</sup> Prize in the Technical Paper Presentation category
- CII Digital Transformation DX Award
- International Data Corporation Insights Awards 2019
- SAP ACE Award 2019
- Coimbatore Plant won the Occupational Health, Safety and Environment Awards 2018 – Star Award conferred by the National Safety Council, Tamil Nadu Chapter

### L&T SHIPBUILDING LTD., KATTUPALLI YARD

- Gold in the large manufacturing sector at the 8<sup>th</sup> FICCI Safety Systems Excellence Award 2019
- Sword of Honour from the British Safety Council
- Health & Safety – Award of Honour by the National Safety Council (NSC) – Tamil Nadu Chapter

### METALLURGICAL & MATERIAL HANDLING

- 5 sites won RoSPA Gold Awards
- 4 sites won National Safety Award
- Indian Chamber of Commerce — Platinum OHS Award

### HEAVY CIVIL INFRASTRUCTURE

- Kakrapar Atomic Power Project (KAPP) received the Best Contractor for Environment Protection — 2018-19 from Nuclear Power Corporation of India Limited (NPCIL)

- KAPP 3 and 4 projects won the RoSPA Gold medal
- 2 projects won the prestigious British Safety Council's International Safety Awards
- L&T Geostucture won the Certificate of Appreciation from JSW Paradip Project for safety

### CONSTRUCTION EQUIPMENT & OTHERS (CE&O)

- L&T Rubber Processing Machinery received the Gold Plus Award from CII EXIM Bank Business Excellence for 2019

### SUSTAINABILITY REPORTING

- Won silver medal at Asia Sustainability Reporting Awards (ASRA) for Best Community Reporting



# Sustainability Development Goals (SDGs)

SDGs define global priorities and aspirations for 2030, with objectives to achieve conservation and ecological balance.

The following demonstrate our alignment with SDGs and our initiatives towards climate change mitigation, environmental conservation and corporate social responsibility.

Goals	Initiatives	
 <p><b>Goal 1: End poverty in all its forms</b></p>	<p>Skilling programmes for youth and migrant labour enables higher wage earning capacity</p> <p>Vocational, life-skills training and job placements for skilled youth, women and differently abled</p> <p>Encouraging entrepreneurship among youth, women and differently abled through training and promoting Self-help Groups (SHGs)</p> <p>Increased agricultural income and multi-cropping due to water adequacy</p> <p>Created agro-based livelihood, increasing household incomes</p> <p>Formation of Farmer's groups and market linkages for better crop prices</p>	122-133
 <p><b>Goal 2: End hunger, achieve food security, improve nutrition and sustainable agriculture</b></p>	<p>Training communities in better nutrition practices</p> <p>Promoting families to grow and use vegetables from kitchen gardens and revival of traditional foods including millets</p> <p>Encouraging sustainable agricultural practices by use of zero budget natural farming, drip irrigation, indigenous pesticides, seed treatment, balanced dose of fertilisers, discouraging plantation of water-intensive crops, and introducing horticulture through farm field schools and demonstrations.</p> <p>Kitchen gardens supporting nutrition needs of the family</p> <p>Developing kitchen garden at government schools</p> <p>Nutrition awareness campaign and counselling for women, pre-school teachers and school children from the community</p> <p>Addressing malnutrition among children by providing services related to Prevention, education to mothers, early detection and treatment in ICDP areas</p> <p>Daily distribution of multi-vitamins/milk at Anganwadis/schools</p> <p>Livestock management and training in dairy and poultry business</p>	122-133
 <p><b>Goal 3: Ensure healthy lives and promote wellbeing of people of all ages</b></p>	<p>Multi-specialty community health centres providing access to maternal, family welfare, paediatric and general healthcare</p> <p>Health centres offering mental health services, child guidance clinic and counselling</p> <p>Mobile health vans and camps for school children, women and elderly from underprivileged communities</p> <p>Health awareness for adolescents</p> <p>Care and counselling programmes for differently-abled children</p> <p>Blood donation camps</p> <p>Training of frontline healthcare workers</p> <p>Infrastructure support to anganwadis, Primary Health Care (PHC) and hospitals</p> <p>Integration with national health programmes</p> <p>Welfare teams at the workplace</p>	122-133

## Sustainability Development Goals (SDGs)

Goals	Initiatives	
 <p><b>Goal 4: Ensure inclusive and quality education, and promote lifelong learning opportunities for all</b></p>	<p>School infrastructure development for creating conducive learning environment, including construction of school sanitation facilities</p> <p>Technology enabled education (e-learning facilities) in Government schools</p> <p>Miniature science centres and laboratories to develop interest in scientific subjects</p> <p>Introducing and strengthening STEM (Science, Technology, Engineering and Math) Education programme in Government schools to unlock scientific and technological potential of children and encourage their curiosity, scientific vigour and creativity.</p> <p>Teacher training programme to impart effective pedagogy</p> <p>Enhancing curriculum and impacting classroom learning through nurturing talent</p> <p>Promoting girl child education</p> <p>Life skills and extra-curricular activities for overall development of students</p> <p>Community-based learning centres with parent involvement to prevent dropouts and prepare children for board exams</p> <p>Specific interventions to integrate children at risk of dropping out and out of school children into school</p> <p>Prepare indigenous students for admission to various public schools</p>	122-133
 <p><b>Goal 5: Achieve gender equality and empower all women and girls</b></p>	<p>Making water available to doorstep and drudgery reduction activities</p> <p>Awareness on women's health and menstrual hygiene</p> <p>Toilet facilities in schools for girls</p> <p>Creating livelihood opportunities and encouraging entrepreneurship among women through skill development, vocational training programmes and market linkages</p> <p>Formation of women's Self-help Groups (SHGs), ensuring participation and decision making in development and school management committees across villages</p>	122-133
 <p><b>Goal 6. Ensure availability and sustainable water management and sanitation for all</b></p>	<p>Achieving water adequacy for drinking, sanitation and agriculture through watershed projects, as part of Integrated Community Development (ICD) programmes</p> <p>Supplementing water bodies to increase ground water level with participation from communities</p> <p>Developing community-based groups such as village development committees, farmers groups for maintaining the water structures, judicious use of common water resources and ensuring the villages remain open defecation free</p> <p>Demonstration of rainwater harvesting system in schools and households</p> <p>Training farmer groups in water estimation and budgeting, and to measure water levels and in GIS-based water management</p> <p>Sanitation awareness campaigns followed with construction of household toilets and school toilets, to make rural India 'open defecation-free'</p> <p>Supporting Swachh Bharat Abhiyan</p>	122-133
 <p><b>Goal 7. Ensure access to affordable, reliable, sustainable energy for all</b></p>	<p>Providing solar lamps to the underprivileged communities and off-grid solar system with back-up for communities and schools</p> <p>Increasing renewable energy use within campuses and project sites</p> <p>Green products and services portfolio for customers</p> <p>Demonstration of solar agricultural fences in villages</p> <p>Demonstration of biogas plants</p>	122, 104

Goals	Initiatives	
 <p><b>Goal 8. Promote inclusive and sustainable economic growth, full and productive employment and decent work for all</b></p>	<p>Employable skill training and placements for youth from underprivileged communities and physically and mentally challenged persons</p> <p>Transform fresh ITI candidates to multi-skilled workers</p> <p>Skilling youth through training institutes</p> <p>Certified computer courses for students</p> <p>Television and digital media workshops for youth empowerment</p> <p>Empowering workforce through learning, development and welfare initiatives</p> <p>Training rural youth in ethno-veterinary care and natural resource management</p>	92, 122
 <p><b>Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation</b></p>	<p>Embolden automation with focus on application for patents/IPRs to inspire innovation</p> <p>Resilient infrastructure creation and sustainable industrialisation for our clients, through our offerings – green products—and service portfolio</p> <p>Focus on 'Make in India' initiatives to create employment opportunities and import substitution</p>	78, 104
 <p><b>Goal 10. Reduce inequality within and among countries</b></p>	<p>Merit-based hiring with emphasis on equal opportunities</p> <p>Established policies to empower employees irrespective of gender, age, disability, race and religion</p> <p>Encouraging the participation of vulnerable groups (women) and the deprived in rural development committees.</p> <p>Fairness in distribution of resources within villages under ICDP to circulate the benefit to the most needy and vulnerable in the community.</p>	96, 97, 122
 <p><b>Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable</b></p>	<p>Create comprehensive and smart technology solutions for critical infrastructure, power plants, metro rails and IT parks</p> <p>Offer specialised turnkey GIS-based network management solutions for city surveillance, traffic monitoring and analysis</p> <p>Road barriers and guards to control traffic areas at project sites, especially busy junctions in the city, along with road safety awareness campaigns</p> <p>Maintenance of gardens and green spaces in cities and flood relief interventions</p> <p>ICD Programme for water-stressed rural settlements</p>	68, 78
 <p><b>Goal 12. Ensure sustainable consumption and production patterns</b></p>	<p>Implement material conservation initiatives, energy efficiency advancement projects and sustainable production practices</p> <p>Our cumulative energy conservation over the years is more than 425,405.8 GJ.</p> <p>We proactively utilise flash granular blast furnace slag and crushed sand in our construction projects and recycled steel wherever permissible</p>	104
 <p><b>Goal 13. Take urgent action to combat climate change and its impacts</b></p>	<p>Climate change</p> <p>Mitigation and adaptation initiatives: GHG intensity reduction projects, promoting the use of renewable energy, green buildings and tree plantation</p> <p>Measurable targets for reducing energy and carbon intensity at campuses and project sites</p> <p>Carbon footprint mapping at the organisational level</p> <p>Alignment with National Action Plan on Climate Change (NAPCC), Government of India</p>	104

## Sustainability Development Goals (SDGs)

Goals	Initiatives	
 <p><b>Goal 14. Conserve the oceans, seas and marine resources for sustainable development</b></p>	<p>Evaluate business process risk to ensure that negative impacts are avoided/minimised/controlled</p> <p>Water conservation through check dams, farm bunds and ponds, anicuts, contour trenches, aquifer recharge, de-siltation of tanks and ponds to increase the stored water levels and improve groundwater levels and quality; farm in ICD Programmes</p>	104
 <p><b>Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, manage forests, combat desertification, and halt land degradation and biodiversity loss</b></p>	<p>Building soil conservation to prevent soil erosion in the ICD programme</p> <p>Village-level committee to regulate the use of common resources</p> <p>Rainwater harvesting in schools and households</p> <p>Lake clean-up and reserve forest clean-up drives alongside de-silting of water bodies</p> <p>Planted 14,00,000+ saplings in last year and four Miyawaki mini self-sustaining forests are nurtured</p> <p>In-house guidelines on scientific tree plantation and maintenance</p> <p>In-house nursery at Chennai Campus</p> <p>Felicitation of guests with a Tree Certificate, instead of a floral bouquet</p> <p>Optimising the use of natural resources</p>	104
 <p><b>Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective as well as accountable institutions at all levels</b></p>	<p>Village-level committee and democratic process formulated for maintenance, usage and monitoring the sustainability of ICDP interventions</p> <p>Associating with industry forums and government bodies for promoting sustainable development</p>	44-47
 <p><b>Goal 17. Strengthen the means of implementation and revitalize global associations for sustainable development</b></p>	<p>Collaboration and partnership with state and national governments, NGOs and ITIs</p> <p>In keeping with the United Nations Global Compact, and following Global Reporting Initiative Standards GRI Standards for sustainability reporting</p> <p>Skill-building programme in the Middle East</p> <p>Sharing best practices with stakeholders</p>	122, 205-212

# GRI Standards Content Index

'In Accordance – Comprehensive'



GRI standard	Disclosure number	Page number, URL and/or direct answer	Reason for omission	External assurance
<b>GRI 101: FOUNDATION 2016</b>				
<b>GRI 102: GENERAL DISCLOSURES 2016</b>				
<b>1. Organisational profile</b>	102-1	6-11	—	Yes
	102-2	6-11, 12-13	—	Yes
	102-3	Back cover	—	Yes
	102-4	12-13, 26	—	Yes
	102-5	Annual Report 2019-20, Page no. 7, non-promoter-driven, publicly listed organisation*	—	Yes
	102-6	6-13, 26-27	—	Yes
	102-7	6-13, 18-19, 26-27, 54-56, 58	—	Yes
	102-8	97	—	Yes
	102-9	80, 82, 84, 86, 88, 123-129, 136	—	Yes
	102-10	Ours is a project-based business and many of the locations keep changing. Our supplies of the local resources depend on the geographies in which we are working.	—	Yes
	102-11	20-25, 50-53	—	Yes
102-12	20-25, 27	—	Yes	
102-13	20-25, 27	—	Yes	
<b>2. Strategy</b>	102-14	4-5, 16-17, 19, 28-33, 45	—	Yes
	102-15	32, 50-53, 168-193	—	Yes
<b>3. Ethics and integrity</b>	102-16	20-25, 27	—	Yes
	102-17	20-25, 27	—	Yes
<b>4. Governance</b>	102-18	20-25, 27	—	Yes
	102-19	22, 26-27	—	Yes
	102-20	21, 27	—	Yes
	102-21	44-47, 134-137	—	Yes
	102-22	21, 22, 23, 26-27	—	Yes
	102-23	20-25, 27	—	Yes
	102-24	20-25, 27, Annual Report 2019-20, page no 100-104*	—	Yes
	102-25	21, 27, 134, 136	—	Yes
	102-26	21, 23, 26-27	—	Yes
	102-27	23	—	Yes
	102-28	Annual Report 2019-20, page no 100 (Nomination and Remuneration Committee)*	—	Yes

GRI 102-55

\*Please access relevant pages on <http://investors.larsentoubro.com/upload/AnnualRep/FY2020AnnualRepL&T%20Annual%20Report%202019-20.pdf>

#The information for GRI Disclosure 416-1 and 416-2 is common; similarly, for GRI Disclosure 417-2 and 417-3 also the information is common

For the GRI Content Index Service, GRI Services reviewed that the GRI content index is clearly presented and the references for all disclosures included align with the appropriate sections in the body of the report.

## GRI Standards Content Index

GRI standard	Disclosure number	Page number, URL and/or direct answer	Reason for omission	External assurance
	102-29	21-27, 50-53	—	Yes
	102-30	48-53	—	Yes
	102-31	40-41	—	Yes
	102-32	2, 21-23, 27	—	Yes
	102-33	21-23	—	Yes
	102-34	Annual Report 2019-20, page no 95-96 (Information to the Board)*	—	Yes
	102-35	Annual Report 2019-20, page no 101-102 (remuneration policy)*	—	Yes
	102-36	Annual Report 2019-20, page no 100-102 (nomination and Remuneration committee)*	—	Yes
	102-37	Annual Report 2019-20, page no 101-102 (remuneration policy)*	—	Yes
	102-38	Annual Report 2019-20, page no. 132-133(Annexure D to the Board)*	—	Yes
	102-39	Annual Report 2019-20, page no.133*	—	Yes
<b>5. Stakeholder engagement</b>	102-40	44-47	—	Yes
	102-41	96-100	—	Yes
	102-42	44-47	—	Yes
	102-43	44-47	—	Yes
	102-44	44-47	—	Yes
<b>6. Reporting practice</b>	102-45	2-3, 40-41, 57, 60, 62-67	—	Yes
	102-46	2	—	Yes
	102-47	48-49	—	Yes
	102-48	2	—	Yes
	102-49	2	—	Yes
	102-50	2	—	Yes
	102-51	2	—	Yes
	102-52	2	—	Yes
	102-53	2	—	Yes
	102-54	2	—	Yes
	102-55	205-212	—	Yes
	102-56	214-216	—	Yes

GRI 102-55

\*Please access relevant pages on <http://investors.larsentoubro.com/upload/AnnualRep/FY2020AnnualRepL&T%20Annual%20Report%202019-20.pdf>

\*The information for GRI Disclosure 416-1 and 416-2 is common; similarly, for GRI Disclosure 417-2 and 417-3 also the information is common

GRI standard	Disclosure number	Page number, URL and/or direct answer	Reason for omission	External assurance
<b>MATERIAL TOPICS</b>				
<b>GRI 103: Management Approach 2016</b>	103-1 (GRI 201: Economic Performance, GRI 202: Market Presence, GRI 203: Indirect Economic Impacts, GRI 204: Procurement Practices, GRI 205: Anti-corruption, GRI 206: Anti-competitive Behavior)	20-25, 27, 45, 48-49 54-66, 96, 97, 99, 104 -119	—	Yes
	103-2 (GRI 201: Economic Performance, GRI 202: Market Presence, GRI 203: Indirect Economic Impacts, GRI 204: Procurement Practices, GRI 205: Anti - corruption, GRI 206: Anti-competitive Behavior)	20-25, 27, 48-49, 53-67, 120-139	—	Yes
	103-3 (GRI 201: Economic Performance, GRI 202: Market Presence, GRI 203: Indirect Economic Impacts, GRI 204: Procurement Practices, GRI 205: Anti-corruption, GRI 206: Anti-competitive Behavior)	21-22, 48-49, 54-67, 104-119, 120,123, 124,126, 128, 134, 136 The evaluation is based on our materiality assessment	—	Yes
<b>GRI 200: ECONOMIC</b>				
<b>GRI 201: Economic Performance 2016</b>	201-1	54, 56-58	—	Yes
	201-2	118-119	—	Yes
	201-3	48, 62, 64-67, 96-97	—	Yes
	201-4	54, 56-67	—	Yes
<b>GRI 202: Market Presence 2016</b>	202-1	12-13, 26, 54, 56-59, 97	—	Yes
	202-2	12-13, 56-59, 97	—	Yes
<b>GRI 203: Indirect Economic Impacts 2016</b>	203-1	140-199	—	Yes
	203-2	58, 60-61, 63, 65, 67, 119, 120, 136-137	—	Yes
<b>GRI 204: Procurement Practices 2016</b>	204-1	48-49, 58, 80, 82, 84, 86, 88, 96-97, 136,	—	Yes
<b>GRI 205: Anti-corruption 2016</b>	205-1	Annual Report 2019-20, Page no 26-27*	—	Yes
	205-2	Annual Report 20190-20, Page no 26-27*	—	Yes
	205-3	Annual Report 20190-20, Page no 26-27*	—	Yes
<b>GRI 206: Anti-competitive Behavior 2016</b>	206-1	22-25, 27	—	Yes

GRI 102-55

\*Please access relevant pages on <http://investors.larsentoubro.com/upload/AnnualRep/FY2020AnnualRepL&T%20Annual%20Report%202019-20.pdf>

#The information for GRI Disclosure 416-1 and 416-2 is common; similarly, for GRI Disclosure 417-2 and 417-3 also the information is common

## GRI Standards Content Index

GRI standard	Disclosure number	Page number, URL and/or direct answer	Reason for omission	External assurance
<b>MATERIAL TOPICS</b>				
<b>GRI 103: Management Approach 2016</b>	103-1 (GRI 301: Materials, GRI 302: Energy, GRI 303: Water, GRI 304: Biodiversity, GRI 305: Emissions, GRI 306: Effluents and Waste, GRI 307: Environmental Compliance, GRI 308: Supplier Environmental Assessment)	48-49, 104-119	—	Yes
	103-2 (GRI 301: Materials, GRI 302: Energy, GRI 303: Water, GRI 304: Biodiversity, GRI 305: Emissions, GRI 306: Effluents and Waste, GRI 307: Environmental Compliance, GRI 308: Supplier Environmental Assessment)	104-119	—	Yes
	103-3 (GRI 301: Materials, GRI 302: Energy, GRI 303: Water, GRI 304: Biodiversity, GRI 305: Emissions, GRI 306: Effluents and Waste, GRI 307: Environmental Compliance, GRI 308: Supplier Environmental Assessment)	21-22, 48-49, 104-119	—	Yes
<b>GRI 300: ENVIRONMENT</b>				
<b>GRI 301: Materials 2016</b>	301-1	106, 110-111	—	Yes
	301-2	106, 110-111	—	Yes
	301-3		Not applicable; since we are a technology and engineering company, there are no packaging or product recall related issues	Yes
<b>GRI 302: Energy 2016</b>	302-1	106, 107	—	Yes
	302-2	106, 107	—	Yes
	302-3	106, 107	—	Yes
	302-4	40-41, 48-49, 106, 107, 113, 117	—	Yes
<b>GRI 303: Water 2016</b>	302-5	40, 48, 106, 112	—	Yes
	303-1	40, 104, 106, 109	—	Yes
	303-2	104, 106, 109, 110	—	Yes
<b>GRI 304: Biodiversity 2016</b>	303-3	40-41, 104, 106, 109	—	Yes
	304-1	118-119	—	Yes
	304-2	118-119	—	Yes
	304-3	118-119	—	Yes
	304-4	118-119	—	Yes

GRI 102-55

\*Please access relevant pages on <http://investors.larsentoubro.com/upload/AnnualRep/FY2020AnnualRepL&T%20Annual%20Report%202019-20.pdf>

\*The information for GRI Disclosure 416-1 and 416-2 is common; similarly, for GRI Disclosure 417-2 and 417-3 also the information is common

GRI standard	Disclosure number	Page number, URL and/or direct answer	Reason for omission	External assurance
<b>GRI 305: Emissions 2016</b>	305-1	40-41, 48, 108	—	Yes
	305-2	40, 48, 107, 108, 109	—	Yes
	305-3	48, 108	—	Yes
	305-4	40, 108	—	Yes
	305-5	40, 108	—	Yes
	305-6	108	—	Yes
	305-7	108	—	Yes
<b>GRI 306: Effluents and Waste 2016</b>	306-1	108, 109	—	Yes
	306-2	110	—	Yes
	306-3	110	—	Yes
	306-4	110	—	Yes
	306-5	110, 115, 117	—	Yes
<b>GRI 307: Environmental Compliance 2016</b>	307-1	110	—	Yes
<b>GRI 308: Supplier Environmental Assessment 2016</b>	308-1	46, 48-49, 96	—	Yes
	308-2	48-49, no negative impacts of this sort came to notice in 2019-20	—	Yes
<b>MATERIAL TOPICS</b>				
<b>GRI 103: Management Approach 2016</b>	103-1 (GRI 401: Employment, GRI 402: Labor / Management Relations, GRI 403: Occupational Health and Safety, GRI 404: Training and Education, GRI 405: Diversity and Equal Opportunity, GRI 406: Non-discrimination, GRI 407: Freedom of Association and Collective Bargaining, GRI 408: Child Labor, GRI 409: Forced or Compulsory Labor, GRI 410: Security Practices, GRI 411: Rights of Indigenous Peoples, GRI 412: Human Rights Assessment, GRI 413: Local Communities, GRI 414: Supplier Social Assessment, GRI 415: Public Policy, GRI 416: Customer Health Safety, GRI 417: Marketing and Labeling, GRI 418: Customer Privacy, GRI 419: Socioeconomic Compliance)	48-49, 54-58, 96-97, 99, 104, 107-110, 112, 120, 123-124, 126, 128, 134, 136	—	Yes

GRI 102-55

\*Please access relevant pages on <http://investors.larsentoubro.com/upload/AnnualRep/FY2020AnnualRepL&T%20Annual%20Report%202019-20.pdf>

#The information for GRI Disclosure 416-1 and 416-2 is common; similarly, for GRI Disclosure 417-2 and 417-3 also the information is common

## GRI Standards Content Index

GRI standard	Disclosure number	Page number, URL and/or direct answer	Reason for omission	External assurance
	103-2 (GRI 401: Employment, GRI 402: Labor/Management Relations, GRI 403: Occupational Health and Safety, GRI 404: Training and Education, GRI 405: Diversity and Equal Opportunity, GRI 406: Non-discrimination, GRI 407: Freedom of Association and Collective Bargaining, GRI 408: Child Labor, GRI 409: Forced or Compulsory Labor, GRI 410: Security Practices, GRI 411: Rights of Indigenous Peoples, GRI 412: Human Rights Assessment, GRI 413: Local Communities, GRI 414: Supplier Social Assessment, GRI 415: Public Policy, GRI 416: Customer Health Safety, GRI 417: Marketing and Labeling, GRI 418: Customer Privacy, GRI 419: Socioeconomic Compliance)	21-23, 48-49, 53-54, 56, 58, 96-97, 99, 103, 104, 107-110, 112, 120, 123-139	—	Yes
	103-3 (GRI 401: Employment, GRI 402: Labor/Management Relations, GRI 403: Occupational Health and Safety, GRI 404: Training and Education, GRI 405: Diversity and Equal Opportunity, GRI 406: Non-discrimination, GRI 407: Freedom of Association and Collective Bargaining, GRI 408: Child Labor, GRI 409: Forced or Compulsory Labor, GRI 410: Security Practices, GRI 411: Rights of Indigenous Peoples, GRI 412: Human Rights Assessment, GRI 413: Local Communities, GRI 414: Supplier Social Assessment, GRI 415: Public Policy, GRI 416: Customer Health Safety, GRI 417: Marketing and Labeling, GRI 418: Customer Privacy, GRI 419: Socioeconomic Compliance)	21-22, 48, 54, 56, 58, 96-97, 107-110, 112, 120, 123-139	—	Yes
<b>GRI 400: Social</b>				
<b>GRI 401: Employment 2016</b>	401-1	96-97	—	Yes
	401-2	96-97	—	Yes
	401-3	96-97	—	Yes
<b>GRI 402: Labor/Management Relations 2016</b>	402-1	18, 48, 92, 94, 96, 99		

GRI 102-55

\*Please access relevant pages on <http://investors.larsentoubro.com/upload/AnnualRep/FY2020AnnualRepL&T%20Annual%20Report%202019-20.pdf>

\*The information for GRI Disclosure 416-1 and 416-2 is common; similarly, for GRI Disclosure 417-2 and 417-3 also the information is common

GRI standard	Disclosure number	Page number, URL and/or direct answer	Reason for omission	External assurance
<b>GRI 403: Occupational Health and Safety 2018</b>	403-1	48, 96-97, 99	-	Yes
	403-2	98-99	—	Yes
	403-3	98-99	—	Yes
	403-4	98-99	—	Yes
	403-5	98-99, 18	—	Yes
	403-6	98-99	—	Yes
	403-7	98-99	—	Yes
	403-8	98-99	—	Yes
	403-9	98-99	—	Yes
	403-10	98-99	—	Yes
<b>GRI 404: Training and Education 2016</b>	404-1	92, 94, 96	—	Yes
	404-2	92, 94, 96	—	Yes
	404-3	96-97	—	Yes
<b>GRI 405: Diversity and Equal Opportunity 2016</b>	405-1	97	—	Yes
	405-2	97	—	Yes
<b>GRI 406: Non-discrimination 2016</b>	406-1	97	—	Yes
<b>GRI 407: Freedom of Association and Collective Bargaining 2016</b>	407-1	97	—	Yes
<b>GRI 408: Child Labor 2016</b>	408-1	97	—	Yes
<b>GRI 409: Forced or Compulsory Labor 2016</b>	409-1	97, 136-137	—	Yes
<b>GRI 410: Security Practices 2016</b>	410-1	97	—	Yes
<b>GRI 411: Rights of Indigenous Peoples 2016</b>	411-1	97	—	Yes
<b>GRI 412: Human Rights Assessment 2016</b>	412-1	48, 97, 136-137	—	Yes
	412-2	44, 48,97	—	Yes
	412-3	97, 136-137	—	Yes
<b>GRI 413: Local Communities 2016</b>	413-1	120, 123, 124, 126, 128,	—	Yes
	413-2	46-48, 120, 123, 124, 126	—	Yes
<b>GRI 414: Supplier Social Assessment 2016</b>	414-1	96, 136-137	—	Yes
	414-2	46, 48, 96, 136-137	—	Yes
<b>GRI 415: Public Policy 2016</b>	415-1	21, Annual Report 2019-20, Page no 34-35, 456	—	Yes

GRI 102-55

\*Please access relevant pages on <http://investors.larsentoubro.com/upload/AnnualRep/FY2020AnnualRepL&T%20Annual%20Report%202019-20.pdf>

#The information for GRI Disclosure 416-1 and 416-2 is common; similarly, for GRI Disclosure 417-2 and 417-3 also the information is common

## GRI Standards Content Index

GRI standard	Disclosure number	Page number, URL and/or direct answer	Reason for omission	External assurance																		
<b>GRI 416: Customer Health and Safety 2016</b>	416-1	Since we are an engineering and construction company, our product or services do not have direct impact on customer health and safety; however, through our focus on developing green portfolio, we ensure public well-being. Please find further details on	—	Yes																		
	416-2				<b>GRI 417: Marketing and Labeling 2016</b>	417-1	136-137	—	Yes	417-2	There were no incidents of non-compliance concerning products, service, information, labeling and marketing communication.	—	Yes	417-3	—	Yes	<b>GRI 418: Customer Privacy 2016</b>	418-1	48, 136-137	—	Yes	<b>GRI 419: Socioeconomic Compliance 2016</b>
<b>GRI 417: Marketing and Labeling 2016</b>	417-1	136-137	—	Yes																		
	417-2	There were no incidents of non-compliance concerning products, service, information, labeling and marketing communication.	—	Yes																		
	417-3		—	Yes																		
<b>GRI 418: Customer Privacy 2016</b>	418-1	48, 136-137	—	Yes																		
<b>GRI 419: Socioeconomic Compliance 2016</b>	419-1	96-97, 99, 104, 106-110, 112, 136-137 Annual Report 2019-20, Page no 26-27*	—	Yes																		

GRI 102-55

\*Please access relevant pages on <http://investors.larsentoubro.com/upload/AnnualRep/FY2020AnnualRepL&T%20Annual%20Report%202019-20.pdf>

\*The information for GRI Disclosure 416-1 and 416-2 is common; similarly, for GRI Disclosure 417-2 and 417-3 also the information is common

# United Nations Global Compact

Communication on progress

Principle	Category	Description	Page
1	Human Rights	Businesses should support and respect the protection of internationally proclaimed human rights.	49, 96, 134-137
2	Human Rights	Businesses should make sure that they are not complicit in human rights abuses.	49, 96, 134-137
3	Labour	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	22, 98, 136
4	Labour	Businesses should uphold the elimination of all forms of forced and compulsory labour.	23, 49, 96, 136
5	Labour	Businesses should uphold the effective abolition of child labour	23, 49, 96, 136
6	Labour	Businesses should uphold the elimination of discrimination in respect of employment and occupation.	96-97, 136
7	Environment	Businesses should support a precautionary approach to environmental challenges	104-119
8	Environment	Businesses should undertake initiatives to promote greater environmental responsibility	104-119
9	Environment	Businesses should encourage the development and diffusion of environmentally friendly technologies.	104-119
10	Anti-Corruption	Businesses should work against corruption in all its forms, including extortion and bribery.	22-23



# Independent Assurance Statement

## INTRODUCTION AND OBJECTIVES OF WORK

**BUREAU VERITAS** has been engaged by **Larsen & Toubro Limited (L&T)** to conduct an independent assurance of its **Integrated Report** ("the report") for the year **2019-20**. This Assurance Statement applies to the related information included within the scope of work described below.

This information and its presentation in the **Integrated Report 2019-20** are the sole responsibility of the management of **L&T**. Bureau Veritas was not involved in the drafting of the Report. Our sole responsibility was to provide independent assurance on its content.

### Scope of work

The assurance process was conducted based on the requirements of the **International Standard for Assurance Engagements (ISAE 3000)** for 'Limited' assurance and the **AA 1000 Assurance Standard<sup>1</sup>** for 'Type 2 Moderate' assurance. The scope of work included:

- Data and information included in Integrated Report 2019-20 for the reporting period 1<sup>st</sup> April 2019 to 31<sup>st</sup> March 2020;
- Appropriateness and robustness of underlying reporting systems and processes, used to collect, analyse and review the information reported;

### Methodology

As part of its independent assurance, Bureau Veritas undertook the following activities:

1. Visited selected locations of **L&T** and interviewed relevant personnel of **L&T**

- Heavy Engineering, Hazira
- Defence, Hazira, Talegaon and Coimbatore
- L&T Hydrocarbon MFF, Hazira
- L&T Hydrocarbon Engineering Construction, Mumbai
- L&T Hydrocarbon Engineering, Offshore
- Buildings & Factories, Chennai
- Heavy Civil Infrastructure, Chennai
- Power Transmission & Distribution, Chennai
- Smart World Communication, Chennai
- Water & Effluent Treatment, Chennai
- Metallurgical & Material Handling, Kolkata
- Power & Knowledge City, Vadodara
- Electrical & Automation, Ahmednagar & Mahape
- Electrical & Automation, Coimbatore and Mysore
- Transportation Infrastructure, Mumbai
- Shipbuilding, Kattupalli
- L&T Valves, Coimbatore & Kanchipuram
- L&T Realty, Mumbai

The assurance process involved carrying out an assessment by assessors from Bureau Veritas with experience in Environment, Health, Safety, Social Accountability and Sustainability. We interviewed Project and Plant Operations & Maintenance, managerial and supervisory personnel at various locations. The Sustainability & CSR team of L&T at Powai was also interviewed.

2. L&T had submitted performance data on reported GRI indicators. The data pertaining to each location visited was audited by Bureau Veritas through the process above described. The credibility of the reported data was confirmed by Bureau Veritas assessors through a comparison with data management platforms maintained by L&T such as SoFi, ERP, EIP, MIS & HR portals. Where necessary, relevant documentary records were also reviewed to confirm data trails up to reporting.

<sup>1</sup> Published by Accountability: The Institute of Social and Ethical Accountability <http://www.accountability.org.uk> (**AA 1000 AS 2008**) is the latest version of the assurance standard with 2018 addendum)

3. The data was audited on a sampling basis. It was confirmed that the same verified data for all locations went into preparation of the final data within the Integrated Report 2019-20.
4. Bureau Veritas reviewed stakeholder engagement activities that had been undertaken by L & T prior to the preparation of the Integrated Report. The Stakeholder Engagement process was reviewed. Various records of the stakeholder engagement activities were reviewed to confirm how aspects material to L&T stakeholders had been determined.

Our work was conducted against Bureau Veritas' standard procedures and guidelines for external assurance of Integrated Report, based on current best practices in the independent assurance.

### Reporting boundary

The reporting boundary of L&T's Integrated Report 2019-20 covers only the business activities of **Larsen & Toubro Ltd.** (standalone) and two of its main subsidiaries, viz., **L&T Hydrocarbon Engineering Ltd.** and **L&T Valves** and the assurance provided by us is limited to L&T's business operations within the reporting boundary during the reporting period.

### Reporting criteria

1. The reporting criteria for L&T's Integrated Report 2019-20 is the **International Integrated Reporting Council (IIRC) <IR> Framework<sup>2</sup>**
2. The reporting criteria for the Integrated Report 2019-20 is also the **Global Reporting Initiative (GRI) Standards<sup>3</sup>**
  - GRI 101 Foundation Standard
  - GRI 102 General Disclosures Standard
  - GRI 103 Management Approach Standard
  - GRI 200 Economic Disclosures Standards Series
  - GRI 300 Environment Disclosures Standards Series
  - GRI 400 Social Disclosures Standards Series

### Evaluation against the defined reporting criteria

Bureau Veritas undertook an evaluation of the L&T Integrated Report 2019-20 against the **International Integrated Reporting Council (IIRC) <IR> Framework** and the current versions of the **GRI Standards**. This included

1. The report was evaluated against the 7 guiding principles of the <IR> Framework
  - a. Strategic Focus and future orientation
  - b. Connectivity of information
  - c. Stakeholder relationships
  - d. Materiality
  - e. Conciseness
  - f. Reliability and Completeness
  - g. Consistency and Comparability
2. The report content was evaluated against the 8 content elements defined in the <IR> Framework
  - a. Organisational overview and external environment
  - b. Governance
  - c. Business model
  - d. Risks and Opportunities
  - e. Strategy and resource allocation
  - f. Performance
  - g. Outlook
  - h. Basis of presentation
3. The report was also evaluated for conformance to the current versions of the GRI Standards by cross-checking the GRI index table in the report against all the reference documents to provide an opinion on the self-declared GRI reporting option.

Based on our work, it is our opinion that the Integrated Report 2019-20 is aligned with the above mentioned 7 guiding Principles and 8 content elements of the **<IR> Framework** and meets the self-declared **"In accordance-Comprehensive"** reporting option of the GRI Sustainability Reporting Standards including appropriate consideration

<sup>2</sup> The <IR> Framework is published by IIRC and can be downloaded from <http://integratedreporting.org/the-iirc-2/>

<sup>3</sup> The GRI Standards are issued by the Global Sustainability Standards Board (GSSB) and can be downloaded at [www.globalreporting.org/standards](http://www.globalreporting.org/standards)

## Independent Assurance Statement

of the reporting principles and necessary indicators. The report is also aligned with principles of AA1000 Assurance Standard<sup>4</sup> 2008 with 2018 addendum, viz, Inclusivity, Materiality, Responsiveness and Impact.

### Our findings

We summarise our key findings on the disclosures made by L&T regarding the various capitals impacted as a result of its business activities during the reporting period.

#### Financial capital

The company's financial performance resulted in economic growth. Group revenues and Profit after Tax have registered increases over the preceding financial year. The company's current order book position seems to indicate revenue opportunities for the future year also.

#### Human capital

The company has policies in place to develop the capabilities of its employees and reports more than 7 million in training hours spent.

#### Manufactured capital

The business activities of the company have resulted in the creation of infrastructure such as roads, railway tracks, electricity transmission lines, and water pipelines. The other products manufactured by the company also have added to its manufactured capital base.

#### Intellectual capital

L&T has invested in R&D activities. The Electrical & Automation Division has acquired numerous patents, designs, trademarks and copyrights. It has also invested in value engineering projects.

#### Social & relationship capital

The CSR initiatives in education, health, water, sanitation have impacted the lives and livelihoods of a large number of intended beneficiaries. Engagement with shareholders, investors, employees, customers, suppliers & contractors, media, government bodies and communities was in evidence as an on-going activity.

#### Natural capital

Various initiatives were found to be taken for the conservation of natural resources and reducing impacts on the environment, such as energy savings, recycling of materials, water conservation and reduction of GHG emissions. The company has a green products and services portfolio.

Our assessment was directed at arriving at an understanding of L&T's business model, its internal processes and framework and resulting outputs and their impact on the six capitals hereinabove described.

### Our opinion

On the basis of our methodology and the activities described above, it is our opinion that

- Nothing has come to our attention to indicate that the reviewed statements within the scope of our verification are inaccurate and the information included therein is not fairly stated;
- We have not come across anything that indicates that the information and data included in L&T's Integrated Report is not accurate, not reliable or not free from material mistake or misstatement;
- There is no instance to indicate that the Report has not provided a fair representation of L&T's activities over the reporting period;
- The information within the Report is presented in a clear, understandable and accessible manner, and allows readers to form a balanced opinion over L&T's performance and status during the reporting period (F.Y. 2019-20);
- L&T has established appropriate systems for the collection, aggregation and analysis of relevant information;
- L&T has processes in place for consulting and engaging with its key stakeholders.
- The report provides a basis to understand the value creation by L&T in terms of the various capitals used by its business model and the resulting output and their effects on the capitals

<sup>4</sup> Published by Accountability: The Institute of Social and Ethical Accountability <http://www.accountability.org.uk> ((AA 1000 AS 2008 is the version of the assurance standard with 2018 addendum used for this assurance engagement)

## Limitations and exclusions

Excluded from the scope of our work is any assurance of information relating to:

- Activities outside the defined assurance period stated hereinabove;
- Positional statements (expressions of opinion, belief, aim or future intention) by L&T and statements of future commitment;
- Competitive claims in L&T's report of being "first in India", "first time in India", "first of its kind", "first in the industry" and such other claims
- Claims of campus 'carbon neutrality', "water positivity" or 'zero waste water discharge" in the report
- The number of people claimed by the report to have benefited from L&T's community development efforts
- Our assurance does not extend to the activities and operations of L&T outside of the scope and geographical boundaries mentioned in the report as well as the operations undertaken by any other remaining subsidiaries, associates or joint ventures of the Company.
- Our assurance on the financial indicators and financial performance of L&T during the reporting period is drawn from and is based entirely on the performance reported in the audited annual accounts<sup>5</sup> of L&T for F.Y. 2019-20 and we have not conducted any separate assessment for the same.

This independent statement should not be relied upon to detect all errors, omissions or misstatements that may exist within the Report.

## Statement of independence, impartiality and competence

Bureau Veritas is an independent professional services company that specialises in Quality, Health, Safety, Social and Environmental management with almost 180 years history in providing independent assurance services.

Bureau Veritas has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day to day business activities. We are particularly vigilant in the prevention of conflicts of interest.

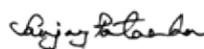
No member of the assurance team has a business relationship with L&T, its Directors or Managers beyond that required of this assignment. We have conducted this verification independently and there has been no conflict of interest.

The assurance team has extensive experience in conducting assurance over environmental, social, ethical and health & safety information, systems and processes an excellent understanding of Bureau Veritas standard methodology for the Assurance of Integrated Reports.

<sup>5</sup> The Annual Report of Larsen & Toubro Ltd. which contains information on L&T's financial performance for the financial year 2019-20 can be accessed at the web site <https://investors.larsentoubro.com/AnnualReports.aspx>



**Mahesh Gharat**  
Lead Assuror  
Bureau Veritas (India) Pvt. Ltd.



**Sanjay Patankar**  
Technical Reviewer  
Sustainability Scheme Lead-ICC  
**Bureau Veritas (India) Pvt. Ltd.**

Date: 02/11/2020  
Place: Mumbai





## Feedback on Integrated Report 2019-20

Thank you for your interest in L&T's Integrated Report 2019-20. Your feedback is important to us as it helps to improve our reporting on sustainability performance. Please do spend a few minutes to give us your feedback on this report. It will help us make it even more engaging and relevant to your needs.

### 1. Which of the following describes your affiliation with L&T?

- Employee
  Customer
  Vendor/Supplier
  Regulatory Agency  
 Other, Please specify

### 2. Your rating of the entire report

- Excellent
  Good
  Fair
  Poor

#### 2.1 If you ticked 'Excellent' or 'Good', what did we do well? (Choose relevant options)

- Navigation
  Design & Layout
  Readability
  Comparability  
 Clarity in representation
  Completeness

#### 2.2 If you ticked 'Fair' or 'Poor', what do we need to improve most? (Choose relevant options)

- Navigation
  Design & Layout
  Readability
  Comparability  
 Clarity in representation
  Completeness
  Flow of information

### 3. How would you rate individual sections in depth and coverage?

#### 3.1 Stakeholder inclusiveness (Prioritisation and engagement of stakeholders)

- Depth  Appropriate  Too detailed  Too brief  
 • Coverage  Appropriate  Too broad  Too narrow

#### 3.2 People Performance

- Depth  Appropriate  Too detailed  Too brief  
 • Coverage  Appropriate  Too broad  Too narrow

#### 3.3 Economic Performance

- Depth  Appropriate  Too detailed  Too brief  
 • Coverage  Appropriate  Too broad  Too narrow

#### 3.4 Environmental Performance

- Depth  Appropriate  Too detailed  Too brief  
 • Coverage  Appropriate  Too broad  Too narrow

## Feedback on Integrated Report 2019-20

### 3.5 Social Performance

- Depth  Appropriate  Too detailed  Too brief
- Coverage  Appropriate  Too broad  Too narrow

### 3.6 Product Stewardship

- Depth  Appropriate  Too detailed  Too brief
- Coverage  Appropriate  Too broad  Too narrow

### 3.7 Case Studies

- Depth  Appropriate  Too detailed  Too brief
- Coverage  Appropriate  Too broad  Too narrow

### 4. How would you rate L&T's Integrated Report as compared to our peers?

- Excellent  Good  Fair  Poor

### 5. Any other comments/suggestions (inclusions/exclusions).

---

---

---

---

---

---

---

---

#### Please provide your contact details for updates.

Name \_\_\_\_\_ Company: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Fax/Email your responses to:

#### Mr. Anup Sahay

Head Corporate Strategy and Special Initiatives  
Larsen & Toubro Limited, Saki Vihar Road,  
Powai Campus, Mumbai 400072, India  
Email: [sustainability-ehs@larsentoubro.com](mailto:sustainability-ehs@larsentoubro.com)

Fax no: 091-22-6705 1001

Mailing address: **Corporate Infrastructure & Administrative Services, Larsen & Toubro Limited**, Saki-Vihar Road,  
Powai, Mumbai – 400 072, India.



 /company/larsen-&-toubro-limited/

 /LnTCampusEngage

 /LarsenToubroGroup

/Concept, content and design at **AICL** (hello@aicl.in)



Reg. Office: L&T House, Ballard Estate, Mumbai – 400 001 | [www.Larsentoubro.com](http://www.Larsentoubro.com)

GRI 102-3