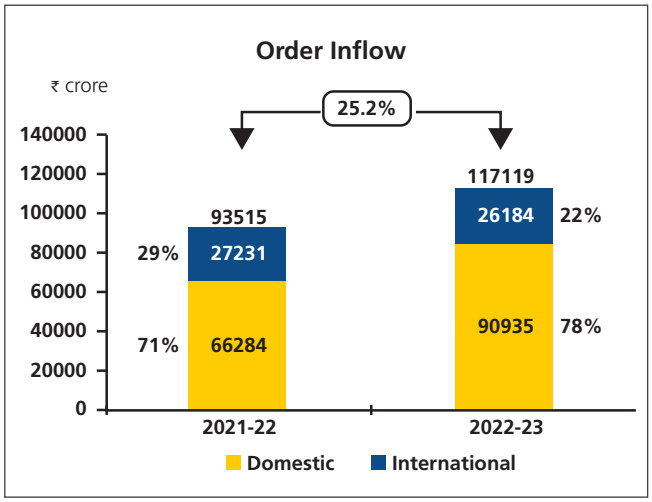
INFRASTRUCTURE PROJECTS SEGMENT

NPCI Data Center, Chennai

The Infrastructure Projects segment comprises the engineering and construction of:

(a) Buildings & Factories
(b) Transportation Infrastructure
(c) Heavy Civil Infrastructure
(d) Power Transmission & Distribution
(e) Water & Effluent Treatment
(f) Minerals & Metals

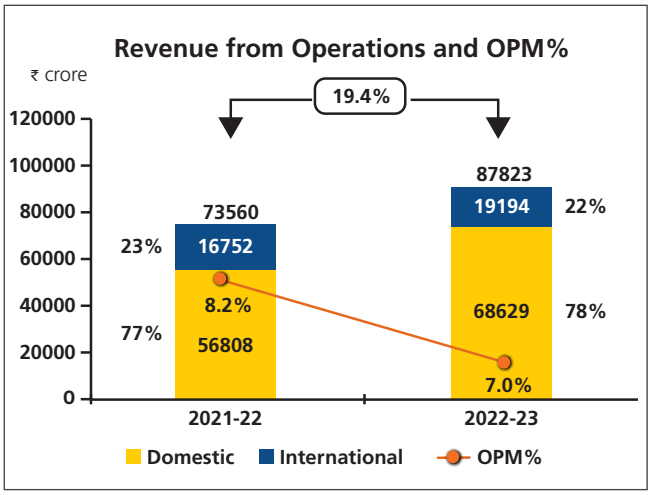
Financial performance of the segment



The Infrastructure segment won orders worth ₹ 117,119 crore in FY 2022-23, higher by 25.2% over the previous year, with the receipt of multiple orders across various sub-segments. During the current year, the Buildings & Factories business registered growth with the receipt of some prestigious orders in the Public Space business. The Heavy Civil Infrastructure business registered growth on receipt of a mega strategic infrastructure order and the Water & Effluent Treatment business also received numerous orders for irrigation and wastewater treatment. The Minerals & Metals business performed well with the receipt of multiple orders in the ferrous metal space from a private client. For two years in a row, the Power Transmission & Distribution business has continued to benefit from Gigawatt-scale renewable orders from the GCC region. The decline in order inflow in Transportation Infrastructure is mainly due to the deferral of targeted prospects.

The share of international order inflow for the Infrastructure segment decreased to 22%, from 29% in the previous year, reflective of the buoyant domestic ordering environment. There are visible green shoots of pick-up in the domestic private capex as well.

Chennai International Airport



The Infrastructure segment registered revenue of ₹ 87,823 crore for FY 2022-23 – a growth of 19.4% over the previous year. The growth was mainly due to a pick-up in the execution momentum of a strong and large opening Order Book. Revenue from international operations constituted 22% of the total revenue compared to 23% in the previous year.

The segment's operating margin reduced from 8.2% to 7.0%, largely reflective of input price pressures, time and cost overruns in certain jobs and delayed customer claim settlements. The delay and disputes on additional claims from clients have created a timing mismatch in the books, consequently impacting margins. The benefits will accrue to the P&L as and when the claims get processed.

The funds employed by the segment at ₹ 24,577 crore as at March 31, 2023, registered a modest increase of 1.4% vis-à-vis March 31, 2022. The increase was contained mainly on account of improved working capital management partly offset by higher capex spends for projects.

Buildings & Factories

Overview

The Buildings & Factories (B&F) business is recognised for providing turnkey solutions for the entire spectrum of building construction, from concept to commissioning. The business is an industry leader in design-and-build (D&B) projects ranging from airports, hospitals, stadia, retail spaces, educational institutions, IT parks, office buildings, data centers, high-rise structures to mass housing complexes, cement plants, industrial warehouses, test tracks and other light factory structures. The business' expertise in construction is powered by dedicated engineering design centres, competency cells, advanced formwork systems, mechanised project execution,

Birsa Munda Hockey Stadium, Rourkela, Odisha

a wide network of consultants and vendors, digitalised project control and a talented pool of employees.

The business is organised into the following Strategic Business Groups (SBGs):

Public Spaces, Airports & Factories SBG:

This SBG consists of the following three businesses:

- The Public Spaces business provides the design and execution of special structures like tall statues, metro stations, convention centres, marquee buildings, hotels, malls, integrated development and educational institutions
- The Airports business offers design-and-build solutions for passenger and cargo terminal buildings and their allied service structures, with integrated airport system solutions like baggage-handling systems, passenger-flow monitoring systems, passenger boarding bridges, visual docking guidance systems and other facilities
- The Factories business is a one-stop solution for the EPC requirements for cement plants, automobile plants, EV manufacturing, glass and paint manufacturing, warehouses, automobile test tracks and food processing plants

Health, Residential & Commercial Spaces SBG:

This SBG consists of the following four businesses:

- The Health business handles the design and execution of hospitals, medical and nursing colleges. Healthcare infrastructure is delivered with end-to-end healthcare facilities, including medical equipment, right from concept to commissioning.
- The Residential business is a prime EPC solutions provider of elite, affordable and mass housing projects. The business has expertise in executing tall towers and the development of mass-dwelling units.
- The IT Office Spaces & Data Centers business focuses on providing concept-to-commissioning services for setting up Data Centers, leveraging its strong mechanical, electrical and plumbing (MEP) competencies. It also offers turnkey office space solutions for Information Technology and Office spaces.
- The B&F Fast business explores and creates value from advanced construction technologies such as Prefabricated Prefinished Volumetric Construction (PPVC), modular construction, structural steel construction and 3D printing that will fast-track project delivery

The business offers total turnkey solutions with an in-house structural and architectural design using advanced systems like BIM 4D, 5D and BIM 360 field. The Engineering Design and Research Centre (EDRC), supports various business units with efficient engineering solutions and has proven capabilities in the Data Center segment as well.

T2 Terminal, Bengaluru International Airport

This business is also a pioneer in implementing digital technologies across its entire spectrum of offerings, right from design to project execution/delivery. Digital technologies enhance project execution efficiency and help reduce execution timelines.

The business is known for constructing some of the tallest, largest and most complex and iconic structures across India and overseas.

Business Environment

The Government's emphasis on infrastructure creation continued with the release of new packages in mega-developments like High-Speed Rail and Central Vista. Further, revolving around the Government's vision to position India as a hub for Data Centers, the current year saw investment announcements and commitments from private players, both domestic and international. Healthcare infrastructure has taken the front seat in the focus of the Government, with an increased allocation of 2.1% of GDP.

The Government's focus on expanding and strengthening India's manufacturing capabilities through PLI schemes, viz., Solar PV, Automobile and Auto Components, Advance Chemistry Cell (ACC) Battery, etc., has provided stimulus to factory capex.

The Real Estate market has recovered due to strong demand in residential real estate with housing sales registering healthy growth on the back of positive consumer sentiment.

The Construction industry is taking steps to reduce its environmental impact as global awareness of climate change grows. Customers are becoming more sustainability conscious and placing greater pressure on developers to lower the carbon footprint of new constructions. The increasing global focus on climate change could incentivise construction companies to factor sustainability into their projects, construction processes and designs. Industry leaders are looking for ways to reduce material waste from demolitions, switch to eco-friendly building materials and choose locally-sourced building products.

Major Achievements

Orders won:

- D2 Sabarmati Depot package, MAHSR to be developed on an 82-hectare land parcel in North Ahmedabad
- Kiran Nadar Museum & Convention Centre, Delhi – The Project involves the development of an eight-acre land parcel for the construction of an Art Museum and Convention Centre
- Construction of IKEA Meeting Place, Gurgaon
- Phoenix Commercial towers in Hyderabad with an approx. built-up area of 60 lakh sq. ft.
- Construction of state-of-the-art research and manufacturing facilities for Reliance Life Sciences Project, Nashik
- 2300-bed Government hospital in LB Nagar, Telangana

RAMCO Cement Plant, Kurnool, Andhra Pradesh

Key projects commissioned:

- Kempegowda International Airport T2, Bengaluru
- Seven Hospitals for Assam Cancer Care Foundation, Assam
- Birsa Munda Hockey Stadium, Rourkela, Odisha
- RAMCO Cement Plant at Kurnool
- IIT Hyderabad Phase 2 – Technology Innovation Park (TIP) Building & Research Centre Complex (RCC)
- JCB manufacturing facility at Halol, Gujarat
- Prestige Jindal City at Bengaluru, Karnataka
- International Terminal Building at Hyderabad International Airport, Telangana
- Wonder Cements Line 4, Nimbahera, Rajasthan

Other key achievements:

The business also achieved important milestones in the execution of major landmark projects:

- CIDCO Kharkopar – completed 96 flats in 96 days by achieving 3 days per floor slab cycle
- Structural works for Minerva Lokhandwala residential project in Mumbai were completed at 300 m height. This is one of the tallest residential towers in Mumbai City and the tallest building executed by L&T
- The Birsa Munda Hockey stadium at Rourkela (Odisha) was recognised by the Guinness Book of World Records as the world's largest fully-seated hockey area with a seating capacity of 20,011 permanent seats. This stadium was completed in fifteen months and inaugurated on January 5, 2023

The business continues to focus on the implementation of Lean Practices across major projects. Some of the Lean Initiatives being implemented are Planned Percentage Complete (PPC) – to measure the efficiency of planning systems at projects, Last Planner System (LPS®) – to increase worker productivity and accountability; Constraint Identification – to identify bottlenecks and increase throughput, Variance & Root Cause Analysis to improve quality of work; 5S system to improve housekeeping and Safety, and Workmen Performance Measurement & Reward System. Extensive training programmes are conducted for staff and workmen to adopt these practices.

Adhering to L&T's commitment to being the pioneer of new technologies in the country, the business has been a proponent of technologies like Volumetric (3D) Concrete Printing and Prefabricated Prefinished Volumetric Construction (PPVC). Following extensive research, the business received accreditation from the Building Materials & Technology Promotion Council (BMTPC) for the implementation of G+3 floors 3D concrete printing. And subsequently, as a major milestone, the business started receiving orders from external clients for the execution of projects using 3D concrete printing.

Digital tools are extensively used at project sites to improve project monitoring, quality and safety. The business has developed and implemented an in-house Predictive Analytics for Safety System (PASS) across many of its sites. This system predicts probable safety lapses at project sites by comparing various early EHS indicators and a huge volume of historical data from past projects. Additionally, pilot projects are being carried out using Artificial Intelligence (AI) in the form of visual analytics for hazard identification.

Assam Cancer Care Foundation Hospital, Dibrugarh

Targeted training programmes are conducted throughout the year for workmen, supervisors, staff and senior management to inculcate a pro-safety culture in the organisation.

Outlook

The Indian Railways has undertaken several railway station redevelopment projects across the country. The Rail Land Development Authority (RLDA) has been entrusted with the responsibility to upgrade and modernise major railway stations across India.

The Government aims to transform India into a global sporting powerhouse by undertaking mega-sports infrastructure projects that will have a long-term impact on health, education and tourism. The Indian Government has proposed a sports budget of ₹ 3,397 crore for FY 2023-24. This is an increase of 11% over the previous year's budget.

The Health sector has garnered significant attention from the Government after the pandemic. Both the Central and State Governments are focusing on building new hospitals and allied medical services like medical colleges on a large scale. We are also seeing significant investments from private players in the healthcare sector.

The residential real estate market in India witnessed astounding progress in 2022, setting new sales records of 68% y-o-y, further demonstrating the industry's prominence as one of India's fastest-growing sectors. India's housing market is expected to remain resilient despite rising interest rates and a weak global economic outlook. The increased allocation to housing projects under the Pradhan Mantri Awas Yojana by 66% to ₹ 79,000 crore will further boost the affordable housing segment.

The Indian Data Center Industry is witnessing meteoric growth with an expected CAGR of 11.4% in the next 5 years. The Data Center market is driven by the deeper internet penetration, increase in digital data traffic, public cloud services and higher expected growth in IoT. Many major private players are actively investing in this business.

There is increased optimism about the strong revival of the aviation industry. With many major international airports under construction across the country, the handling capacity across airports is expected to increase substantially in the next 2-3 years. Further investments are planned in the second half of FY 2023-24 by the Government and private players to augment the facilities and infrastructure of airports.

With many global manufacturing companies taking benefit from the PLI scheme, substantial investments are being envisaged in sectors such as automobiles and auto components, pharmaceuticals, electronics, food products, solar PV modules, Advanced Chemistry Cell (ACC) batteries, and drones and drone components.

With a slew of investments expected across various sectors in the coming years throughout the country, the business is well-placed to benefit from the expected large investments across them.

Madhya Pradesh Expressway project, part of the Delhi-Vadodara Expressway project

Transportation Infrastructure

Overview

L&T's Transportation Infrastructure business is one of the leading contractors in India offering turnkey Design & Build / EPC solutions with single-point responsibility for all kinds of transportation infrastructure such as Roads, Runways, Bridges, Elevated Corridors, Railways, City Infra, Urban Transit and Airports. The business is organised into two Strategic Business Groups (SBGs), namely, Railways Business Group (RBG) and Roads, Runways & Elevated Corridors (RREC).

The Railway Business Group (RBG) is organised into the Mainline Business Unit (MLBU) and Metro Business Unit (MTBU). MLBU addresses EPC construction works in the domains of civil and trackwork, electrification and system integration, including signalling and telecommunication for all Mainline Railway Projects, Dedicated Freight Corridors, and Rail Links for Port, Mining and Power Plant facilities, etc. MTBU carries out EPC construction works involving ballastless trackwork, electrification and system integration for all Mass Rapid Transit System projects and Regional Rapid Transit System Projects in India and abroad.

The Roads, Runways & Elevated Corridors (RREC) Business Group is organised into the Roads & Bridges Business unit (R&B) and Formations & Structure Business unit (F&S). R&B provides EPC design-and-build construction services for all types of roads, bridges and elevated corridors, including all associated structures, cross-drainage, toll booths, wayside amenities, etc. In the Airport sector, the R&B business is involved in the construction of complete airside infrastructure, viz., runways, taxiways, aprons, airfield ground lighting, fuel hydrant systems, etc. The F&S business provides design-and-build construction services for civil works (earthwork, blanket, earth-retaining structures, cross drainage, etc.) for all types of Railway projects such as Dedicated Freight Corridor (DFCC) projects, High-Speed Rail and Urban Railway Networks.

The business has Engineering Design Centres located at Mumbai, Faridabad and Chennai. It also has a Competency Development Centre in Kancheepuram and a Workmen Training Centre in Ahmedabad.

Business Environment

Railway Business Group

The Railway sector has been on a high growth trajectory for the past few years. The pace of infrastructure creation has been at an all-time high with new and innovative methods and financing of construction. With an emphasis on the introduction of High-Speed and Semi High-Speed Corridors, Regional Rapid Transport Systems, Suburban Rail Systems, first and last-mile connectivity projects, modernisation of railway stations, implementation of Automatic Train Protection System 'KAVACH', manufacturing of Vande Bharat trainsets and Electric Locomotives, the sector has been abuzz with activity, thereby opening up various opportunities for the business.

Mumbai-Nagpur Expressway

The business has been consistently recognised as a full-range rail system integrator through projects of national importance, viz., DFCC and other integrated transit projects, viz., Mauritius Metro and Dhaka Metro. It has built capabilities in all 3 railway domains including track construction, overhead electrification, and signalling and telecommunication.

The Indian Railways (IR) is on track to achieve its target of 100% electrification by the year 2024. Apart from Mission Electrification, IR has commenced the upgradation of the existing electrification system to 2 x 25 kV electrification to facilitate higher speed, haulage and improved system efficiency on major routes.

Roads, Runways and Elevated Corridors

The budgetary support for the Roads and Bridges sector has witnessed a steady increase of more than 58% over the last 4 years. Out of the capex announced under the National Infrastructure Pipeline, 18% is earmarked for Roads and Bridges, which augurs well for this business.

Over the last 7 years, the length of National Highways has gone up by 50% from 91,287 km (as of April 2014) to 144,634 km (till Jan 2023) and the length of expressways have expanded by 4,068 km during this period.

Also, in view of the exponential increase in traffic over the years in urban areas, the Government has shifted its focus on developing many new Elevated Corridor / Flyover projects across major cities, with the primary aim of decongesting urban roads and highways.

The Airports sector has not seen any major developments in the year. However, few opportunities are in advanced stages and are expected to be awarded soon.

Major Achievements

Orders won:

Major orders received during the year:

- Railway Electrification Works including Rigid Overhead Conductor Rail System & SCADA in Jammu & Kashmir from Indian Railways
- Multiple Track Works packages and overhead electrification works for Chennai Metro Rail Project from Chennai Metro Rail Limited
- Multiple Ballastless Track works for Bhopal Metro Rail Project from Madhya Pradesh Metro Rail Corporation Limited
- Construction of 4-Lane Flyover from Siramtoli Chowk to Mecon Chowk in Ranchi from Road Construction Department, Jharkhand

Projects completed:

The business has completed / commissioned the following projects:

- Phase 2B, 2C and 3 of Integrated LRT System Mauritius Metro Express package Phase 3 was inaugurated by the Hon'ble Prime Minister of Mauritius in January 2023

Mauritius Metro

- Phase 1 of the Dhaka Metro Line 7 from Uttara to Agargaon (25 TKM) including Uttara Depot (19 TKM) was commissioned in December 2022
- Metro Link Express for Gandhinagar and Ahmedabad (MEGA) Track Package in Gujarat (66 TKM) commissioned in October 2022
- EDFC CP 105 package (116 TKM) Overhead Electrification (OHE) between Dadri and Khurja in Uttar Pradesh commissioned in December 2022
- EMP 4 package Electrical and Mechanical Works for WDFC involving 2 x 25 kV, High Rise Overhead Electrification (OHE) has been commissioned in September 2022
- RVNL Bhatni Package-2 (19 TKM) priority section between Indara - Kiriharpur including 2 major yards commissioned in March 2023
- WDFC CTP 3R package priority section form Iqbalgarh to Sanand North (332 TKM) commissioned in September 2022
- Mumbai–Nagpur Expressway Project Package 10 (58 km) commissioned and inaugurated by the Hon'ble Prime Minister of India in December 2022
- Mumbai–Vadodara Expressway Project Package 1 (24 km) commissioned and handed over in August 2022
- Delhi–Vadodara Expressway Project Package 22 (25 km) commissioned and handed over in September 2022
- Pragati Maidan Project (priority section) commissioned and inaugurated by the Hon'ble Prime Minister of India in June 2022
- Khulna Mongla Bridge Project commissioned and jointly inaugurated by the Hon'ble Prime Ministers of India and Bangladesh in September 2022
- Tallah Railway Over Bridge commissioned and inaugurated by the Hon'ble Chief Minister of West Bengal in September 2022

Outlook

Railway Business Group

As per the National Infrastructure Pipeline, investments worth ₹ 13.67 trillion are proposed to be made in the Railways sector during the period from 2019-20 to 2024-25 to enhance track capacity, improve freight efficiency, augment the speed of trains thereby, enhancing safety and ensuring better connectivity.

The Indian Railways (IR) has been focusing on network expansion in the past few years. In the Union Budget 2023-24, the Railways sector has received the highest ever capex allocation of ₹ 2.6 trillion, with many projects aimed at capacity augmentation and traffic decongestion in the IR network. The prospects in the upcoming 3 to 4 years include 7,000 km of new lines (₹ 70,000 crore), Doubling / 3rd Line expansion of 8,000 km (₹ 80,000 crore).

In the High-Speed Rail (HSR) segment, the Electrical System packages and balance Track packages of the Mumbai–Ahmedabad Corridor are expected to be tendered during the FY 2023-24. IR has announced the plan to develop 7

Khurja-Khatuali section of Eastern Dedicated Freight Corridor

new high-speed rail corridors in the medium to long term, the feasibility studies of which have been initiated. In recent years, there has been a thrust for the development of Semi-HSR Corridors projects, of which Track and Systems packages worth ₹ 25,000 crore are expected to be finalised in the next 5 years.

In the Regional Rapid Transit System (RRTS), civil packages and system tenders in the next round are expected under the four RRTS corridors being implemented by the National Capital Region Transport Corporation (NCRTC).

On the DFCC front, progress towards new freight corridors, viz., East Coast (1,114 km), East-West (2,328 km) Corridors and North-South Corridor (2,327 km) are relatively slow. Projects worth a total of ₹ 58,500 crore are expected to be finalised in the next 5 years.

There is continued thrust on building new Metro / MRT Systems and expanding existing Metro networks as MRT facilitates Transit Oriented Development, easy movement across the city and reduced carbon footprint. Systems orders are expected to be finalised across 4 Metros in the next 2 years. The business outlook for the next 5 years includes 12 new projects (450 km) in the Track and Systems domain.

Roads, Runways and Elevated Corridors

Under the National Infrastructure Plan (NIP), the Government has planned to expand the National Highway network by ~ 60,000 km by 2025 in major economic corridors, strategic areas, and Elevated Corridors & Flyovers in major cities such as Delhi, Chennai, Kolkata, Mumbai and Bengaluru, with an investment outlay of ₹ 20.33 trillion. A daily average of constructing 23 km of roads has been achieved in March 2023.

In the Airports sector, the Government has envisaged 50 additional airports, helipads, water aerodromes, and advanced landing grounds to improve regional air connectivity.

~ 100 critical transport infrastructure projects for first and last-mile connectivity for ports, coal, steel, fertiliser and food grain sectors have been identified and are expected to pick up steam.

International Front

While the business continues to focus on neighbouring countries like Bangladesh, it is also strongly examining an entry into ASEAN, Middle East, North and East African countries where L&T has a strong presence and footprint.

Heavy Civil Infrastructure

Overview

The Heavy Civil Infrastructure business is a market leader in EPC projects in core civil infrastructure segments that are crucial to the Indian economy, viz., Metro Rail Systems, High-Speed Rail, Nuclear, Hydel and Tunnels, Marine Structures, and Defence Infrastructure facilities.

Kundankulam Nuclear Power Plant, Tamil Nadu

The business has a strong domestic presence. The ability to provide 'tailor-made' design-and-build and EPC solutions to suit the specific requirements of customers for complex infrastructure projects has enabled the business to become the market leader in India. Dedicated design and technical centres, competency cells, specialised training centres, digital project management, and a talented pool of employees help the business to sustain a leading role and secure major orders.

As an industry leader in augmenting capabilities for urban mass rail transit systems, the business is currently involved in the construction of various metro rail packages in Chennai, Bengaluru, Mumbai, Patna, New Delhi and NCR, in addition to the construction of the C4 section of the country's first High-Speed Rail Corridor connecting Mumbai to Ahmedabad.

The latest construction technologies including in-house fabricated Full Span Launching Equipment, Straddle Carrier and Girder Transporter are being used in marquee projects, as a part of the 'Make in India' initiative.

The Nuclear segment offers turnkey services including civil, mechanical, electrical and instrumentation, seismic qualification and modular construction technology. Its expertise extends to both Pressurised Heavy Water Reactor (PHWR) and Light Water Reactor (LWR) technologies. Presently, the business is involved in nuclear power plant construction at Kudankulam, Kalpakkam, Tarapur, Kakrapar and Rawatbhata.

The Hydel and Tunnels segment offers complete EPC solutions for hydroelectric power projects, large-diameter transport / water tunnels, pumped storage plants and complex irrigation projects. The business also provides expertise for road and railway tunnelling projects, which contributes to nation-building. Presently, the business is involved in the construction of hydel and tunnel projects at Dummugudem in Telangana, Mumbai in Maharashtra, Neemuch in Madhya Pradesh, Lower Kopili in Assam, Rishikesh-Karnaprayag in Uttarakhand and Pakal Dul in Jammu.

The Marine Structures segment has extensive experience in greenfield ports, shipyard structures and seawater intake systems along the Indian coastline. 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.

L&T Geostructure, a wholly-owned subsidiary, engages in the foundation and ground improvement related projects. It has a strong, professional and a specialised team with knowledge of design, equipment and methods to execute and supervise sophisticated foundation works. The business 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.

Business Environment

The Government is keen on building core infrastructure that is critical for economic growth as evidenced by the enhanced budgetary allocation of ₹ 10 trillion into various areas like transportation, energy, water and urban development.

Mumbai Trans-Harbour Link

Rapid urbanisation in India is driving the demand for better urban mobility. ICRA estimates that metro rail projects will provide business opportunities of about ₹ 80,000 crore to the construction industry in the next five years and consequently, the Metro Rail network is expected to expand by 2.7 times in next 5 years. With over 12 corridors proposed, Semi-High Speed and High Speed Rail projects are also being prioritised. Focus on reduction in energy consumption and carbon neutrality in this sector, places hyperloop as an attractive proposition for the national transporter. Indian Railways along with IIT-Madras are collaborating on the development of an indigenous Hyperloop system.

For India to achieve the ambitious target of 500 GW of non-fossil fuel based generation capacity, the country will need to add 25-30 GW capacity annually for the coming years. For the current year, USD 25 billion investment is estimated and the Government is taking steps to increase investment towards offshore wind, pumped storage, hydel power and nuclear power, etc.

India plans to increase its nuclear power generation threefold in the next decade to meet its growing energy needs and reduce its carbon footprint. The focus will be on pressurized heavy-water reactor projects, which are the mainstay of India's nuclear power programme and on capability improvements to achieve the fleet mode construction goals. As the country explores Small Modular Reactor technology, which could be factory built, the business will also be focusing on building capability on the same.

Maritime India Vision 2030 has identified initiatives for the development of ports. Investment opportunities of about ₹ 1 trillion to ₹ 1.25 trillion are expected, which will result in increased capacity and also build world-class infrastructure at Indian ports.

The Government is focusing on building new capacities and upgradation of existing defence infrastructure with a budget allocation of ₹ 23,000 crore. This will lead to the creation of opportunities in various Defence Infrastructure projects including Naval infrastructure facilities.

Major Achievements

Orders won:

- Chennai Metro Rail Ltd. - Phase 2 Package CP08 EV-01 for construction of an elevated viaduct of approx. 10 km including an elevated ramp and 10 elevated metro stations between Nehru Nagar and Sholinganallur
- NPCIL - Rajasthan Atomic Power Plant for construction of natural draught cooling towers 7 & 8, cooling water pump houses and large diameter cement mortar lined and coated steel pipes (CMLC)
- Greenko - Gandhi Sagar 1440 MW Pumped Storage Plant in Madhya Pradesh for construction of Upper Dam, Intake Structure with Approach Channel, Steel Lined Buried Penstock / Pressure Shaft (Vertical & Horizontal), Surface Powerhouse, Draft tube tunnel, Tailrace Outlet Structure and Tailrace channel
- Uttarakhand Jal Vidyut Nigam Limited - Lakhwar Multipurpose Project for construction of 300 MW Lakhwar multipurpose hydropower project in Uttarakhand

Mumbai-Ahmedabad High Speed Rail project

Key achievements:

- Set a world record of 456.724 m in tunnel boring in the slurry TBM category (11-13 m dia.) in an urban environment at the Mumbai Coastal Road Project, Package 4 in the month of July 2022
- Completed 108 m and 1,025 m of NATM (New Austrian Tunnelling Method) tunnelling in a single day on August 23, 2022 and 25 working days in the month of August 2022 respectively at the RVNL Package 2, Uttarakhand
- TBM relaunch in a record 15 days after completion of tunnelling at Bangalore Metro Rail Corporation package RT 03 in the month of September 2022
- TBM assembly completed in 52 days in Pakal Dul in the month of October 2022
- Record concreting of 11,050 m^3 in KKNPP 5&6 (Kundankulam Nuclear Power Plant) for the raft slab

Outlook

Considering Mission 2070 Net Zero India, the country is to focus on green construction technologies in future infrastructure projects. Carbon-efficient design (modular design), adoption of low-carbon construction processes (low emission materials such as fly ash) and enforcement of building energy codes are a few initiatives suggested by World Economic Forum in the Mission 2070: A Green New Deal for a Net Zero India white paper. The thrust on sustainability is expected to increase in the coming years, providing the necessary boost for sustainable infrastructure such as Metros, Hydel and Nuclear businesses.

The Government is also working on an investment plan of USD 750 billion to strengthen railway infrastructure and envisioned the Maritime India Vision 2030, which estimates massive investments in world-class infrastructure development at Indian ports. Further, there is an increasing thrust to expand metro services, being one of the low-carbon emission transport systems, to improve urban mobility. The Government is also considering the implementation of Mass Transit Systems such as Metro / Metro Lite / Metro Neo / Personal Rapid Transit System in Tier 1 and Tier 2 cities keeping in view the growing importance of the transport sector in the city's overall development.

The Nuclear business is expected to continue its growth along with a continued focus on 10 Pressurised Heavy Water Reactor (PHWR) projects. The growing energy demand in India will make nuclear power a major source of renewable power, as fossil fuels are scarce in the country.

Infrastructure as a sector will continue to attract strong capital inflows, especially with structural reforms undertaken in the recent past, digitalisation of logistics and infrastructure-focused wealth funds to aid investment formation. These investments have the potential to create a true multiplier effect to catapult the economy to a higher growth trajectory.

SGR 2.2 Transmission Line, Tanzania

Power Transmission & Distribution

Overview

L&T's Power Transmission & Distribution business vertical is a pioneering EPC player, providing technology-focused, end-to-end solutions for enabling access to clean and reliable electricity. It offers integrated EPC services and related digital solutions, starting from the establishment of Solar PV plants to smart, efficient transmission and distribution networks till the last-mile electrification. It serves Utility, Industrial and Infrastructure customers in 30 countries across the SAARC, ASEAN, the Middle East, Africa, North America and CIS regions.

The business is broadly organised into four major groups, viz., Transmission & Distribution (Domestic) SBG, International Transmission & Distribution Business Unit, Renewables SBG and the Digital Energy Solutions business, as under:

Transmission & Distribution (Domestic): This business group caters to various T&D utilities and developers, along with the bulk power supply consumers like metros, airports, etc.

The *Substation* business unit provides turnkey solutions for Extra High Voltage (EHV) air-insulated / gas-insulated substations up to 1200 kV, Flexible AC Transmission Systems (FACTS), devices such as Static Synchronous Compensator (STATCOMs) and Static VAR Compensator (SVCs), Digital Substation related solutions and EHV cable systems.

The *Transmission Line* business unit provides complete EPC solutions for overhead transmission lines. It is well integrated with the digitally-driven, power manufacturing units which has a combined capacity to produce more than 1.5 lakh tonnes of tower components per annum. The Kancheepuram manufacturing facility also houses the world-renowned Tower Testing and Research Station which provides its design and testing services to clientele from 33 countries.

The *Power Distribution* business unit has been at the forefront of taking electricity in an efficient manner to all by providing a range of EPC services related to urban / rural electrification, augmenting, reforming and strengthening of high voltage and low voltage distribution networks, power quality improvement works and advanced distribution management solutions.

International T&D units: This business group provides the entire spectrum of power T&D-related services in the Middle East, Africa and ASEAN regions.

Over the past three decades, the *Middle East* business unit has earned a strong reputation among the utilities and oil companies in Saudi Arabia, UAE, Oman, Qatar, Kuwait and Bahrain, having executed several marquee projects. It enjoys an enviable track record and garners a significant share of the T&D projects awarded every year.

Larsen & Toubro Saudi Arabia LLC (LTSA), a wholly-owned subsidiary, provides engineering, construction and contracting services in the sphere of transmission and distribution in the Kingdom of Saudi Arabia.

400 kV GIS, Pulianthope, Tamil Nadu

The fast-expanding *Africa* business unit has executed several landmark projects in Algeria, Egypt, Morocco, Kenya, Ethiopia, Tanzania, Uganda, Botswana, Mozambique and Malawi. It has made further inroads into Western and Northern Africa, with ongoing projects in Guinea, Cameroon and Tunisia. With the regional offices strategically located in Nairobi, Casablanca and Accra to serve the vast continent, the business has earned a coveted position, with a sizeable market share in the addressable segment.

In the *ASEAN* region, L&T is an established international T&D player, holding a portfolio of prestigious projects spread across Malaysia, Thailand, Myanmar and the Philippines. The offices in Singapore, Bangkok and Jakarta serve as the touchpoints for the electricity companies in the region.

Renewables: This business group is a single-stop EPC service provider globally for GW-scale Solar PV, Energy Storage, Microgrid and Hybrid Renewable Projects. There are very few players with such strong experience and expertise in different module technologies, module-mounting structures and storage types. The business group has accumulated in-depth engineering and construction know-how to execute a vast range of renewable projects, be it hybrid, floating or linear, with best-suited technologies for terrain type and tracking. The container integration facility at Kancheepuram augments the capabilities of the business with an annual capacity to integrate ~400 MWh of battery energy storage system with associated intelligent management and control systems.

Digital energy solutions: This arm of L&T's Power T&D business provides electricity-related consulting and digital solutions globally through its 'Spark' platform as well as a multitude of software products and solutions. Its offerings include hybrid energy management systems, energy storage controllers, substation data platforms, power system cyber security needs, etc. Driven by powerful algorithms and simulations, the solutions offered by this unit enable customers across India, the Middle East and the USA to build resilient future-ready systems.

The Power T&D business vertical aims to provide a green technology path to clean energy transition in India and abroad, while enabling the customers and prosumers with the highest standards of reliability, availability and efficiency of power transmission and distribution networks.

Business Environment

The renewable energy boom, especially in the Middle East, has paved the way for a plethora of opportunities in both Solar EPC and related transmission networks. As part of the National Renewable Energy Programme, the Kingdom of Saudi Arabia intends to increase the share of renewable generation in its energy mix. As a result, several GW-scale renewable energy projects and related 380 kV transmission network-strengthening projects have joined the fray.

In India, during the latter part of the year, several state DISCOMs finalised orders under the Reforms Based Results-linked Distribution Sector (RDSS) Scheme. Reducing Aggregate Technical & Commercial (AT&C) losses is an important objective towards achieving financial sustainability for distribution utilities.

40 MW Solar PV Power Plant, Haripar, Gujarat

The much-delayed transmission system packages related to renewable energy evacuation in Rajasthan and Gujarat were cleared.

Project progress was calibrated and project schedules were realigned during most parts of the year due to intermittent supply chain disruptions and commodity price volatility.

Major Achievements

Orders won:

- 3 GWp+ Solar PV Plant EPC orders in the Middle East
- 90 MW Floating Solar Plant in Madhya Pradesh
- 765 kV Substations and Transmission Lines related to Renewable Energy integration in Rajasthan, Gujarat and Andhra Pradesh
- 400 kV Gas Insulated Substation in West Bengal
- Advanced Distribution Management System order in Mumbai
- Distribution Infrastructure Improvement projects in Rajasthan, Gujarat and Chhattisgarh
- 380 kV and 230 kV Substation packages in Saudi Arabia
- 380 kV Overhead Line packages in Saudi Arabia
- 132 kV Substation packages in UAE
- 400 kV Transmission Line in Tunisia
- 500 kV Transmission Line in Thailand
- 275 kV and 132 kV Transmission Line, Substation orders in Malaysia
- Digital Solutions for managing EV Charging Infrastructure and for integration of Renewable Power Generation in USA

Projects completed and commissioned:

- Three 220 kV high-altitude Substations in Nepal
- 400 kV Substation in Tamil Nadu
- 376 km of 765 kV and 400 kV Transmission Lines for strengthening of Eastern Grid
- 170 km of 400 kV Transmission Line in West Bengal
- Distribution Infrastructure improved by adding 3,000+ Ring Main Units and over 3,800 km of cable conversion
- 484 MWp Solar PV Plants in India and Middle East, including a 20 MW Floating Solar Plant
- 20 Gas Insulated Substations and 476 km of overhead / underground transmission corridors in the Middle East, including the power evacuation substations meant for FIFA World Cup in Qatar
- 5 EHV Substations, 378 km of EHV Transmission Lines and 733 km Distribution Lines in Africa
- 500 kV and 230 kV Gas Insulated Substations in Thailand

Significant Initiatives

- Machine Learning-based design optimisation tools capable of handling multiple variables have been deployed for engineering and design
- First time in India: Using a precast method for cable jointing bay in a metro power supply system project, resulting in faster completion

20 MW Floating Solar PV Power Plant, Auraiya, Uttar Pradesh

- Time benefits have been realised by applying Lean Construction and Scrum principles for select construction activities in UAE projects

Outlook

The Transmission System Plan for the evacuation of 500+ GW Renewable Energy before 2030 provides a workable roadmap. The revival in the finalisation of deferred Tariff-based Competitive Bidding (TBCB) orders is a positive sign. The cross-border interconnections, network expansion fuelled by demand growth in states and neighbouring countries will lead to improved opportunities in substations and transmission lines.

On the distribution front, the Supervisory Control and Data Acquisition (SCADA) / Advanced Distribution Management System (ADMS) packages and UG Cabling packages of the distribution modernisation programme are expected to gain thrust.

With the PLI scheme for Module Manufacturing seeing budgetary allocations and Renewable Energy Implementation Agencies (REIAs) setting a target to go for bidding of 50 GW capacity every year for the next 5 years, the domestic solar EPC will witness substantial potential. Several GWh scale battery energy storage systems (BESS) projects and floating solar projects are also on the anvil.

The Union Budget 2023-24 from the Government of India has laid emphasis on the Green Hydrogen Mission and HVDC corridors. The traction on offshore wind generation is another advantage. The initial wins and building up of credentials in the Electrical Vehicle Charging Infrastructure space augurs well for the emerging opportunities. Green shoots towards establishing a carbon credit market in India are seen, which may lead to additional business opportunities. The pace of order finalisation in election-bound states is a factor to keep an eye on.

There are visible opportunities in international markets as well. The Middle East region has plans to increase renewable energy capacity by another 70 GW before 2030. Country-level transmission system expansion projects, regional interconnection projects and utility infrastructure requirements for tourism and industrial hub-related giga projects continue to provide substantial opportunities in the Middle East.

The emphasis on 'Just Transition' to a green economy entails investments for improving electricity access and regional interconnections in Africa. The 'Plus One' strategy for manufacturing-related investments may fuel demand growth in the Far East. Targeted prospects from select countries in Africa and a stable inflow from the Far East, especially Malaysia and the Philippines, are expected to boost growth on the international front.

The Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA) in the USA are expected to unlock huge power system-related opportunities with resultant potential for Digital Solution offerings. In India and elsewhere, with an increasing renewable mix and prosumerism, the need for modernisation to bring in discipline and accuracy in the forecast, scheduling, dispatch and real-time control has increased tremendously. Such developments provide an opportunity for profitable growth through smart digital energy solutions.

With a strong Order Book in hand and being better positioned to garner ample prospects visible in both domestic and international markets, the business will target selective large opportunities with the intent of scaling up the business to the next level.

Dahej Desalination Plant, Gujarat

Water & Effluent Treatment

Overview

L&T's Water & Effluent Treatment business specialises in building comprehensive water management infrastructure with capabilities covering engineering, design, procurement, construction and commissioning of water and wastewater treatment plants by providing end-to-end solutions for drinking water, irrigation, wastewater and industrial effluent treatment. The division caters to various clients such as irrigation departments, municipal corporations, industrial units and more. The solutions include technologies such as conventional and advanced treatment processes, membrane-based filtration, desalination, sewage treatment, effluent treatment, recycling and reuse, and Zero Liquid Discharge (ZLD) systems.

L&T's Water & Effluent Treatment business is organised into 3 verticals – (i) Water & Wastewater (ii) Irrigation, Industrial & Infrastructure (iii) Water International

The Water & Wastewater business vertical encompasses a wide range of solutions for rural and urban water supply, water management and wastewater treatment.

The Irrigation, Industrial & Infrastructure business vertical caters to the needs of agriculture and industrial sectors by providing solutions for mega and micro irrigation, industrial water systems, effluent treatment, desalination and smart water infrastructure. It also includes the development of smart water infrastructure solutions, leveraging advanced technologies for efficient water management.

The Water International business vertical lays its focus on the international markets and continues to tap business opportunities in these markets, with a focus on regions such as the Middle East, East Africa, and SAARC (South Asian Association for Regional Cooperation) countries.

Business Environment

With COVID retreating, the business witnessed a steady recovery during FY 2022-23 by winning prestigious orders and ramping up execution activities, despite price pressures emanating from supply chain disruption caused due to the Russia-Ukraine crisis. The business has maintained a steady pace of growth capitalising on the increased budgetary allocation towards irrigation and water supply schemes. The business did well in its journey to become a technology-driven EPC player by bagging a slew of orders in the area of specialised water and waste treatment, primarily from states like Madhya Pradesh, Maharashtra, Odisha and Karnataka.

The water demand in the Middle East is expected to grow significantly as the business foresees significant spending in the areas of wastewater treatment and desalination. The water sector in the African subcontinent is seeing increasing thrust from multilateral agencies focused on social sector lending in areas of drinking water supply and wastewater treatment.

Despite the increased competitive intensity, the business has been able to sustain and grow due to its cost leadership, adoption of advanced technologies and various digitalisation

Nuapada Water Treament Plant, Odisha

techniques and is on course to transform itself into a technology-led EPC player.

Major Achievements

Orders won:

- 360 MLD Wastewater Treatment Facility at Bandra, Mumbai
- Hatpipaliya Lift Irrigation Project, Madhya Pradesh
- Kukshi Micro Irrigation Project, Madhya Pradesh
- Kutch Irrigation Scheme, Gujarat
- Parallel Carrier System to the Rajiv Gandhi Lined Canal, Jodhpur, Rajasthan
- Masalia Ranishwar Mega Lift Irrigation Scheme (LIS), Dumka, Jharkhand
- Lower Suktel Irrigation Project, Odisha

Major projects commissioned:

Over 1.5 million people benefitted from the commissioning of 10 projects during FY 2022-23. Some of the major projects commissioned during the year are:

- 100 MLD Desalination Plant, Dahej, Gujarat
- Chhaigaonmakhan LIS, Madhya Pradesh
- Alirajpur LIS, Madhya Pradesh
- Bhima LIS, Karnataka
- Harapanahalli LIS, Karnataka
- Athikadavu Avinashi LIS, Tamil Nadu
- Saidpur Sewerage Network Project, Bihar

Significant Initiatives

The following strategic initiatives were implemented during the year for the effective working of project sites and to build on the foundation of an agile culture:

- To fully automate the design process and generate uniform design documents with high precision, an in-house digital design tool WET Desk was developed. It is a futuristic and innovative digital solution, free of any manual intervention.
- Digital Stores were launched which help in efficient material issues, real-time cost booking and easy reconciliation, while offering secure transactions powered by OTP verification
- In the current year, a state-of-the-art laboratory 'Water Technology Centre (WTC)' has been established in Kancheepuram for research, development and innovation in water and wastewater treatment technologies. The laboratory is a testimony to L&T's commitment to research and innovation in the field of water and effluent treatment, and the Company's focus on developing cutting-edge solutions to address water challenges in the region and globally.
- In order to reduce the impact of volatile commodity prices on input costs, the business is entering into pre-tender pricing agreements with key vendors and increasingly focusing on the Just-in-Time Model for material procurement, based on the availability at work fronts
- Water projects, being cross-country in nature, involve a lot of local stakeholders' engagement for securing right-of-way, which leads to delays in project execution.

Mega Lift Irrigation Project Cluster IV, Odisha

In order to overcome the challenges faced, a task force team with members having relevant experience in industrial relations and ex-Government officers from various departments has been formed

- We further aim to set new benchmarks in the industry and deliver exceptional value to our clients by implementing cutting-edge technologies such as drone deployments, LiDAR surveys and ML / AI to automate progress monitoring, thereby enabling the project teams to identify potential bottlenecks and make informed decisions for timely completion.

Outlook

Domestic water infrastructure prospects possess tremendous potential on the back of a large unserved population, rapid urbanisation, industrialisation and climate change. Various schemes have been launched by the Government to tackle water scarcity, improve sanitation and water quality. In the coming year, the business could see more opportunities under the Government's AMRUT 2.0 scheme which aims to provide water supply through functional taps to all households and coverage of sewerage management in 500 cities.

The Indian Government's Jal Jeevan Mission aims to provide piped drinking water to 191 million rural households by 2024. Since its inception, over 80 million households have been provided tap water. With the General Elections scheduled for 2024 and several state elections around the corner, the Government is working on a war footing to monitor the progress and hence, the prospects in the near term appear abundant.

The Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) has an outlay of ₹ 93,068 crore spread over a couple of years and will potentially benefit about 22 lakh farmers. A wide array of prospects is visible in macro and micro irrigation through this scheme.

With growing water scarcity in many parts of the world, desalination is emerging as a viable solution to meet the water needs of coastal communities and industries. The business delivered 100 MLD desalination plants in the current year within the stipulated time, a testament to its execution, technology and process expertise.

The Indian Government has identified several key industrial corridors for development, including the Delhi-Mumbai Industrial Corridor (DMIC), Chennai-Bengaluru Industrial Corridor (CBIC) and others. The business could benefit from this by providing smart infrastructure solutions in the areas of water supply, wastewater management and other amenities to such zones.

The focus on sustainable water solutions, viz., groundwater recharge and water reuse, has increased since the emergence of ESG, thereby leading to improved business prospects.

On the international front, the business would focus on building partnerships and winning contracts in the Middle East, South Asia and Africa to diversify its revenue streams and expand its global footprint.

India's largest capacity Stacker-Reclaimer, JSW Jaigarh

Minerals and Metals

Overview

The Minerals & Metals (M&M) business offers complete EPC solutions for the Minerals & Metals sectors across the globe. The business undertakes end-to-end engineering, procurement, manufacturing, supply, construction, erection and commissioning of projects covering the complete spectrum from mineral processing to finished metals.

The business also offers comprehensive product solutions with an array of customised mineral crushing solutions and equipment for varied applications, viz., surface miners, material handling, high-speed rail, steel plant machinery and other custom-made critical equipment and complex assemblies catering to core industrial sectors including Mining, Steel, Non-ferrous, Ports, Fertilisers, Cement, etc.

The business' complete of product solutions is backed by five decades of experience and knowledge, in-house design resources, state-of-the-art manufacturing capabilities, as well as providing after-sales product support, and value-added, cost-effective services to ensure higher uptime. The manufacturing centres are in Kansbahal, Odisha and Kancheepuram, Tamil Nadu.

Business Environment

Domestic Business

India has witnessed a gradual and healthy revival of economic activity in the post-pandemic period. Riding on improved economic activity, a steady rise in demand and consumption of ferrous and non-ferrous metals is visible, both in domestic and international markets.

The states' impetus to infrastructure development and the 'Make in India' initiative has played a significant role in boosting metal consumption. All the metal producers have been witnessing improved capacity utilisation and higher sales consistently over the last two years. The improved volumes, coupled with better realisations, have helped the industry players to substantially de-leverage their balance sheets.

With these positives, all major public and private sector metal producers in India are in various stages of a fresh Capex cycle due to the adoption of large modules of expansion plans.

Given the exhaustion of high-quality ore and mineral reserves and policy framework revolving around the use of lower-quality ores, it is now imperative for the industry to adopt beneficiation and pellet plants which will supply improved raw material to steel plants. The business has already geared up its knowledge base and resources to grab this upcoming opportunity.

Torpedo Ladle Car, JSW Bellary

The significant rise in demand for copper and aluminiumover the past years has raised a critical need to establish large-sized smelter units to keep up with the pace of rising demand. The recent allocation of mines will facilitate capacity expansion in the Aluminium sector. The discovery of lithium deposits for the first time in the country will fuel the industry growth further.

The M&M business, by virtue of its long-standing associations with almost all major metal producers in India, is confident of garnering a major share of these opportunities.

International Business

The GCC countries continue to invest in various industrialisation initiatives revolving around mining and minerals as a means of diversifying their current oil dependent economies. Amongst the Middle East countries, Saudi Arabia has been the frontrunner in new mineral exploration due to an abundance of reserves. UAE and Oman are emerging destinations for the next phase of the iron-making facilities expansion, offering lower power tariffs and flexible policies to promote ease in setting up new business ventures.

New projects lined up in Iron & Steel, Aluminium, Gold, Phosphates and new-age minerals provide opportunities for the business to offer the full spectrum of comprehensive services.

In Africa, minerals continue to be the mainstay core sectors as many of the countries are rich in a wide variety of valuable minerals and metals. However, the scale of plants is mostly restricted to ore-to-port which limits the entry of business to fewer countries, i.e., those who have opted for the downstream extraction chain to enhance value creation.

Product Business

The Product Business has been actively pursuing prospects in select international markets – more precisely, across Africa, the Middle East and Australia for a variety of products. The growth of core products in the domestic market (like Crushing Systems, Surface Miners, Material Handling Equipment, High-Speed Rail Equipment and Port Cranes) is primarily driven by movement in the following industrial sectors:

Cement Sector: The cement segment in India is expected to grow at a CAGR of 4-5% over the next four years, with large investments in greenfield and brownfield projects. All the major players are undertaking ambitious expansion plans to capitalise on this growth potential. Overall, the segment is poised for significant positive growth in the coming years. The business unit witnessed good order inflows from the Cement Sector in FY 2022-23 and continues to see a strong order pipeline in FY 2023-24, riding on the current momentum in the infrastructure economy.

Mining & Steel Sector: A spurt in capacity augmentation of steel plants and continued capacity augmentation in coal and iron ore to cater to the growing demand for steel and power have increased the business potential for its equipment range covering Surface Miners, Skid-mounted Coal Crushers, Stacker Reclaimers, Wagon Tipplers, Plough Feeders, etc. The current year witnessed increased order inflow for these equipment

Utkal Alumina Expansion Project, Rayagada, Odisha

from the afore-mentioned sectors and the momentum is expected to continue in the near to medium term.

Port Sector: The port segment in India is expected to experience significant growth due to various Government initiatives aimed at promoting port-led development like the Sagarmala initiative and Maritime India Vision 2030. The business signed a licence agreement with Konecranes Finland to manufacture and supply technologically-advanced cranes for Indian ports and shipyards and received the first order for two shipyard cranes at Cochin Shipyard Limited in the current year. The business expects this traction to continue in the next financial year for providing the most advanced crane solutions to other Indian ports and shipyards.

Major Achievements

Orders won:

With increased demand and growth in the industrial sectors domestically, here are a few highlights and prestigious orders received:

- Mega order from the Arcelor Mittal / Nippon Steel (AMNS) for their expansion at Hazira, Gujarat covering 2 Blast Furnaces and a Steel Melting Plant. An order was also received for a Mineral Beneficiation Plant at Sagasahi, Odisha
- Aluminium Smelter at BALCO Korba, Chhattisgarh
- Phosphoric Acid Plant (PAP) and Di-ammonium Phosphate (DAP) Plant for HZL Chanderia, Rajasthan
- Cold Rolling Mill Plant at Hindalco Lapanga and Hirakud, Odisha
- Alumina Refinery at Utkal, Rayagada, Odisha
- First Export order for 1100 TPH Aggregate Crushing Plant from JSW Fujairah, UAE
- Orders for a new product, L&T Sizers, from external agencies for Coal India projects
- Largest order in crushing segment from Ultratech Cement for their prestigious sprint projects in Kotputli, Rajasthan, Kukurdi, Chhattisgarh and Maihar, Madhya Pradesh
- First order for Hybrid Wagon Tippler (manufactured for the first time in India) from Jindal Stainless Limited

Marquee projects commissioned or at an advanced stage of completion:

- Mansourah Massourah Gold Project in the Kingdom of Saudi Arabia
- Freight Handling Package for the Etihad Rail in UAE
- Steel Melt Shop in JSW Dolvi – 2nd Stream Commissioned
- Plant Upgradation for Birla Copper Phase 1
- Rolled out the 12 Largest Capacity Torpedo Ladle Cars for JSW (380 T molten metal capacity)
- The country's Highest Capacity Stacker-cum-Reclaimer (11,000 TPH) commissioned at JSW Jaigarh Project (Maharashtra)

Mansourah Massarah Gold Project, Saudi Arabia

- Full Span Launching equipment (4 sets – Straddle Carriers, Full Span Launching Girders, Girder Transporter) successfully commissioned and operational in MAHSR project in Gujarat

Significant Initiatives

- Concept of Plug & Play established in Stacker Reclaimer Machines – Hydraulic works and piping works done at Kancheepuram to ensure seamless assembly at the project site in Egypt
- Prestigious Quality Certification (as per European Quality Standards EN1090-1) received by Engineering Works (EWL), Kancheepuram, to serve as pre-requisite for CE (Conformité Européenne) marking on products
- Introduced Smart Health Station (IoMT-based Health Station) to enhance the health monitoring of employees, including workmen, through various data analytics

Outlook

Riding on high demand and improved margins, all major industry players are planning for capacity expansions. Economic revival has improved the demand sentiment and could possibly lead to a flurry of investments in the medium term. Tata Steel has plans to expand its capacity in newly acquired Neelachal Ispat's Angul facility and Kalinganagar plant. AMNS group is planning for capacity expansion at its Hazira facility as well as a new greenfield plant in Odisha. Similarly, JSW capacity augmentation is planned for all of its existing plants at Bellary, Dolvi and Jharsuguda along with plans for a greenfield plant at Paradip.

The Hindalco and Vedanta Groups are fully geared to set up new finishing lines in the non-ferrous sector as part of their expansion plans.

The Middle East market is emerging as a hub for the energy-sensitive minerals and metals sector, coupled with investment-friendly policies and financing options. With many of the proposed projects reaching advanced stages of feasibility study and board clearances, a spate of new project implementation processes is likely to be rolled out, offering many opportunities for the business.

The outlook remains positive for the Product business, with the user industry poised for growth, driven by a good demand outlook. The Government's focus on infrastructure development and housing construction drives the growth of the industry. Additionally, the Government's emphasis on the 'Make in India' initiative, which aims to promote domestic manufacturing, will also support growth.