



UP voter pulse says work is worship ▶ P12



How Subrahmanyan is driving an AI revolution at L&T ▶ P7

How L&T is engineering an AI-driven conglomerate

Technology helps reduce waste and pilferage, increase productivity for all its low-margin biz.

Leslie D'Monte

leslie.d@livemint.com

BENGALURU

Most buildings across the campuses of the \$25-billion Larsen & Toubro Group (L&T) in India resemble those of any typical engineering and construction company. But here's where much of the similarity ends. When you drive into the Chennai campus that is the digital hub of L&T, for instance, the person you meet would already know that you have arrived, thanks to automated geofencing that monitors your location.

This is just an example of how India's largest engineering and infrastructure conglomerate has been using digital technologies, such as radio frequency identification (RFID) tags, geofencing, internet of things (IoT) devices, drones, robotic process automation, as well as augmented reality (AR) and virtual reality (VR) tools to keep a hawk eye on its assets across the country.

These tools are all aimed at reducing waste and pilferage, increasing productivity and growth of L&T's low-margin businesses. "Digitization is impacting our business, qualitatively and quantitatively, tangibly, and intangibly," said S.N. Subrahmanyan, who took over as the group's chairman and managing director on 1 October 2023, after A.M. Naik stepped down as non-executive chairman.

Digitalization "is empowering teams to predict better, improve productivity, reduce cost and wastage, make more informed decision, enhancing efficiencies, and deliver faster to customers," Subrahmanyan said in an interview with *Mint*.

The firm's digital journey primarily revolves around materials, machines, and people. For one, L&T's command centre, that provides a one-stop dashboard for Subrahmanyan while review-



S.N. Subrahmanyan, CMD, Larsen & Toubro.

ing the group's leaders, is connected to about 14,000 devices (total of 30,000) on an IoT platform. This dashboard also enables team leaders to detect fuel pilferage at any of the company's 600 sites within 10 seconds—the fuel dispensed

and delivery. Besides, the group has over 300 fully-automated digital weigh-bridge systems, and computer vision cameras to measure the net weight of materials worth ₹1.2-billion purchased annually, including concrete or cement,

training to upgrade their skills.

By leveraging the strengths of group companies, including LTI Mindtree, "who are system integrators", and L&T Technology Services, that "focuses on product engineering", the savings from the use of digital technologies is huge, said Mahesh Chikodi, the group's chief digital officer.

"Just 1% savings in fuel amounts to nearly \$9 million; 1% saving in concrete saves us roughly \$12 million; and 1% savings amounts to about \$19 million in steel, which is the costliest."

With L&T tracking all hardware and assets, including cranes, earth-moving equipment, cameras, and road rollers "deployed even in the remotest parts of India", "we get to know if any pilferage has happened within seconds. We then get a snapshot and send it to the hiring agency (contractors) and penalise them", he added.

According to Chikodi, L&T recovers around ₹4 crore from hiring agencies in terms of penalties every quarter. "Other than getting the money back, it also dissuades more pilferage." L&T aspires to become an AI-driven company to further its digital journey, he added.

"The ultimate destination of our journey of digital transformation is to significantly enhance the efficiency of our expansive operations, widely implementing a suite of digital solutions, developed in-house, based on AI, ML, IoT, cloud computing, predictive analysis, big data, geospatial technologies, said Subrahmanyan.

Risk-prediction is a case in point, he said, "where AI is already making a huge difference in our ability to assess, pre-empt and combat risk".

The firm has "moved from a stage of descriptive analytics to predictive analytics, and now to prescriptive analytics", Chikodi said. L&T is already using ML in supply chain, finance, HR, customer relationship management, and project management, he added.

DIGITAL FIRST

DIGITIZATION is impacting business, qualitatively, quantitatively, tangibly, intangibly, says CMD

THE move will also empower teams, boost productivity, reduce costs and minimise wastage

L&T'S digital journey primarily revolves around materials and machines, as well as people

THE firm seeks to enhance efficiency of expansive ops, and implement digital solutions

gets tracked and captured with the help of active RFID tags.

L&T can also digitally measure the exact quantity of concrete produced at its plants with the help of sensors, giving its business heads a complete footprint of cement production, transportation

steel, diesel, aluminium and copper.

The group has onboarded 2.5 million contractual workers on its so-called Worker Induction and Skill Assessment (WISA) system, which helps managers track the location of each worker, monitor daily productivity, and even suggest