RETHINKING VERTICAL MOBILITY IN INDIA

With over two decades in India, TK Elevator has grown in lockstep with the nation's vertical transformation—bringing global innovation, local manufacturing, and a strong sustainability focus to the heart of urban mobility. From predictive maintenance powered by AI and IoT to rope-free elevator technology that redefines architectural possibilities, the company has consistently pushed the boundaries of what elevators and escalators can deliver. In this exclusive conversation with Homes & Buildings Magazine, ***MANISH MEHAN,*** *CEO & MD – TK Elevator India, discusses the macro trends reshaping vertical mobility, the technologies setting new industry benchmarks, and the company's vision to make urban transportation smarter, safer, and greener for India's next decade of growth.*

TWIN, TK Elevator's dual-passenger system in a single shaft

Q Over the last two decades, TK Elevator has grown alongside India's vertical expansion. How would you characterise this journey, and in what ways has your product strategy evolved to address the country's increasingly complex urban mobility demands?

Our journey in India has been one of steady growth, innovation, and alignment with the country's urban transformation. Over two decades ago, TK Elevator entered the market with a long-term vision—to be more than just a supplier, to become a trusted partner in India's vertical mobility story.

We invested early in local operations and manufacturing with our state-of-the-art Pune facility, supporting the Make in India mission and ensuring we could respond rapidly to customer needs. Today, we operate through an extensive network of offices and service centres, giving us the reach and agility required in a high-density, high-demand market.

Our product portfolio has evolved with India's changing skyline—high-speed, gearless, and machine-room-less elevators, space-saving designs, and energy-efficient models for high-rise developments, complemented by durable escalators and moving walks for metro networks, airports, and high-traffic commercial hubs.

At the heart of this is innovation. Our MAX platform, a cloud-based predictive maintenance solution, uses AI and IoT to reduce downtime dramatically. We've rolled out touchless controls and connected systems to enhance safe-

Predictive maintenance has shifted our approach from reactive fixes to proactive, intelligent service.

MANISH MEHAN
CEO & MD,
TK Elevator India

ty and convenience, and our eco-efficient solutions—featuring regenerative drives and green materials—help buildings achieve LEED certification.

From iconic metro projects in Delhi, Bengaluru, and Pune to landmark high-rises in Mumbai and Hyderabad, TK Elevator has become synonymous with safe, efficient, and sustainable urban mobility in India.

TK Elevator India's Essen HQ

Q From rope-free elevators to advanced destination control, TK Elevator has introduced disruptive technologies globally. Which recent innovations in India stand out to you as true game-changers in terms of performance, safety, and space optimisation?

We've pioneered several innovations that are reshaping the industry. MAX remains a game-changer—predicting and preventing failures before they occur. Our AGILE Destination Control System optimises passenger flow by intelligently grouping users by destination, cutting wait times and easing congestion.

The TWIN system—two independent cabins operating in one shaft—boosts capacity while saving space. Globally, we've developed MULTI, the world's first rope-free elevator that moves both vertically and horizontally using linear motor technology, opening up new architectural possibilities.

Post-pandemic, we introduced touchless controls, smartphone integration, and open APIs for building system interoperability. Sustainability is embedded in all this—gearless traction machines, regenerative drives, and eco-friendly materials lower energy use and support green certifications.

Our escalators have also advanced—real-time monitoring, advanced safety features, variable-speed drives, and vandal-resistant construction for high-footfall public spaces. Together, these innovations underscore our vision: smarter, safer, and greener mobility.

Q Predictive maintenance and connected services are transforming lifecycle management for vertical transportation. How is TK Elevator integrating IoT, AI, and data analytics to deliver measurable gains in uptime, safety, and customer value?

MAX exemplifies our approach—IoT-connected sensors capture real-time performance data, which AI then analyses to predict issues before they cause downtime. This allows dynamic, need-based maintenance instead of rigid schedules, boosting uptime and efficiency.

Building managers get instant alerts, usage analytics, and predictive reports, enabling proactive planning. In emergencies, connected systems trigger immediate service notifications. Destination control systems like AGILE further enhance efficiency by streamlining passenger movement in busy buildings.

Our aim is simple: shift from reactive service to a predictive, intelligent maintenance model that maximises reliability and safety.

Q In high-rise towers and heavy-footfall infrastructure, equipment failure is not an option. What specific engineering redundancies, safety protocols, and traffic management systems do you deploy to ensure resilience in such demanding environments?

We engineer redundancy into safety—automatic emergency rescue devices, multi-level braking, overspeed governors, load sensors, and advanced door protection in elevators.

For high-traffic escalators, we use heavy-duty components, vandal-resistant materials, anti-slip steps, and multiple protective features like skirt deflectors, comb plate impact devices, and step gap lighting.

Our MAX platform ensures constant monitoring, enabling proactive interventions before failures occur. We also deploy AGILE in high-rises to manage traffic flow efficiently. All our solutions meet EN81, ISO, and NBC standards, backed by 24/7 service and genuine spare parts.

Q What steps are you taking to reduce energy consumption and carbon footprint?

We design with sustainability at the core—regenerative drives, gearless machines, LED lighting with auto shut-off, and smart group controls that optimise traffic and reduce idle runs.

In escalators, variable-speed drives and standby modes cut energy use during low-traffic periods. We're also investing in low-carbon manufacturing, eco-friendly materials, and digital solutions like MAX to reduce service-related emissions. Our goal is carbon neutrality by 2050.

Q Looking ahead, what major trends or disruptions do you foresee in vertical mobility, and how is TK Elevator preparing to lead?

We see four major shifts—AI-driven predictive service, green mobility, smart city integration, and mobility-as-a-service.

We're already delivering on AI and IoT through MAX, expanding our green portfolio, building APIs for integration, and designing scalable solutions for Tier 2 and Tier 3 cities.

Our vision is clear: to shape the future of vertical mobility—making it intelligent, sustainable, and universally accessible.