

CW DESIGN BUILD

BUSINESS INTELLIGENCE FOR REALTY DECISION MAKING

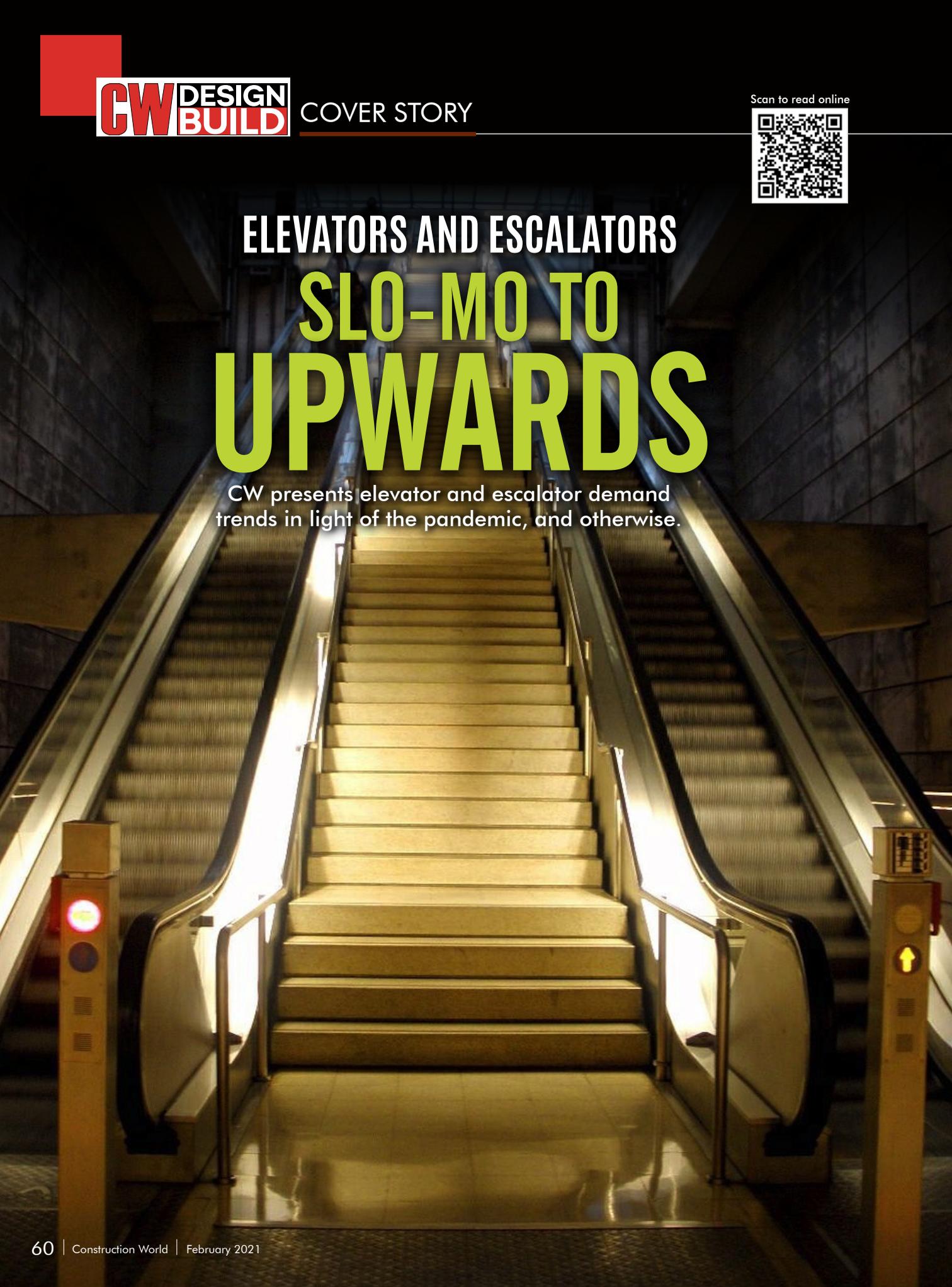


ELEVATORS AND ESCALATORS SLO-MO TO UPWARDS

CW presents elevator and escalator demand trends in light of the pandemic, and otherwise.

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ELEVATORS AND ESCALATORS SLO-MO TO UPWARDS

CW presents elevator and escalator demand trends in light of the pandemic, and otherwise.

It comes as no surprise that sales and supplies of elevators and escalators plummeted during Q2, a period coinciding with the complete lockdown of the economy. A cautious, slow revival started in Q3 with the recommencement of many stalled projects.

“New project launches grew 4.5 times and sales grew 2.5 times compared to Q2 of 2020, with the residential market displaying a better than expected recovery in Q3,” says **Manish Mehan, CEO & MD, thyssenkrupp Elevator (India)**.

Happening realty

In the past few months, we have seen a resurgence of real estate, which has been positive for the elevator industry, according to **Amit Gossain, MD, KONE Elevator India**. “Demand for elevators for mid-rise and high-rise residential and commercial buildings is the biggest driver and will continue to be so. However, commercial complexes like supermarkets and shopping malls and airports



“Otis recently integrated the Bluetooth-powered Otis eCall™ smartphone app with elevators at RMZ Infinity.”

- **Sebi Joseph, President, Otis India**

present opportunities to install the latest models.”

“In Maharashtra, the subsidy on real estate has spurred demand for residential units, and a lot of smaller developers have rushed to complete projects,” shares **Manoj Amale, Director, Vertis Elevators**.

“Affordable housing is a key driver; I expect this to continue,” says **Antony Parokaran, CEO, Eros Elevators**. “Residential real estate, in general, has picked up. People are trying to step up to larger properties as a result of working from home.”

At present, demand is being



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- **Manish Mehan, CEO & MD, thyssenkrupp Elevator (India)**

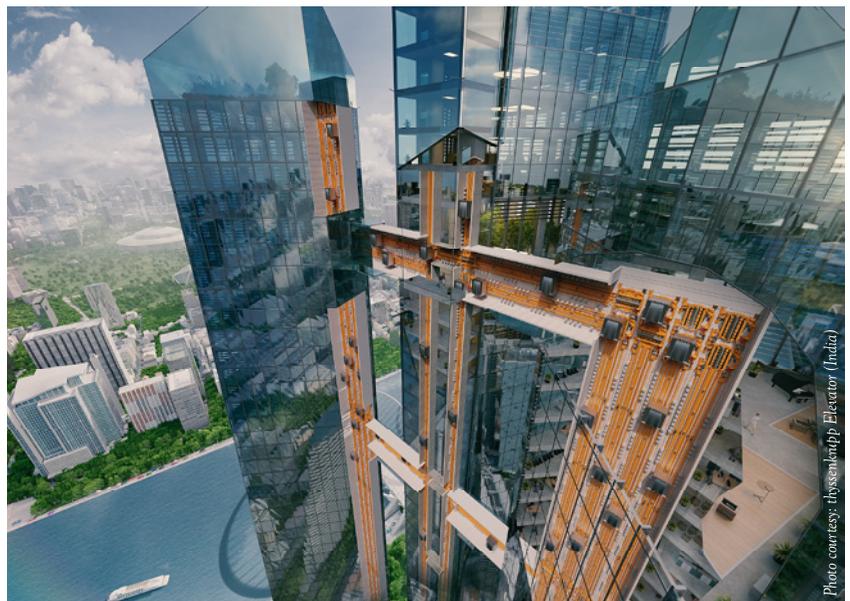
driven mainly by low-cost affordable residential housing projects, which are doing reasonably well, observes **Amit Maitra, Managing Director, Lerch Bates**. “We are upbeat about the growth of the affordable housing segment, as it has the potential to be a gamechanger,” agrees Mehan.

Infra push

Growth in the construction of new metro stations has increased demand for elevators and escalators directly and indirectly, by having a favourable impact on real estate, says Gossain.

QUICK BYTES

- The recent resurgence of real estate has had a positive impact on the industry.
- Metros, railway station upgradations, transit centres, FOBs and airports are expected to boost demand for both - elevators and escalators.
- Lifts with COVID-preventive features are in demand.



Companies are developing fast and energy-efficient elevator systems equipped with intelligent traffic control to ensure social distancing.



Photo courtesy: KONE Elevator India

Mid-rise and high-rise residential and commercial buildings are the biggest demand drivers for elevators.



“Commercial complexes like supermarkets and shopping malls, and airports

present opportunities to install latest models.”

- Amit Gossain, Managing Director, KONE Elevator India

For his part, Maitra believes demand from metro and airport projects is slow owing to lockdown-induced project implementation delays.

COVID-preventive features

Lifts with COVID-preventive features and machine room-less lifts offering different car interior finishes are in demand nowadays, says Maitra.

Future opportunities

We expect to get back to pre-COVID levels of business in the next two quarters, says **Antony Parokaran, CEO, Eros Elevators**. “Factors favourable for this include stable real-estate prices, lowest-ever interest rates and the Government’s encouragement of low-cost housing. Residential registrations in Mumbai are at an all-time high.”

The market for escalators has a good growth potential in view of the metros coming up, new airports especially in smaller cities and railway stations to ease people movement, he adds.

With site activities expected to further pick up in the first half of 2021 subject to the external environment and availability of labour, **Amit Maitra, Managing Director, Lerch Bates**, expects the offtake of vertical transportation equipment by other segments like malls, commercial and IT parks to increase commensurately.

PS Sudheer, Principal Consultant, AEC Asia Inc, expects the office segment in major towns in particular to continue to see low demand, an outcome of the continuing work-from-home trend. He too cites the lowest-ever interest rates and the Government’s focus on housing for all to spur demand for residential real estate, particularly affordable housing.

Other opportunities for elevators lie in retail, the

hospitality and medical segment and residential real estate, continues Sudheer. “Malls, retail and hypermarkets will need escalators and autowalks. In the infra segment, metros, railway station upgradations, transit centres, FOBs and airports will boost demand for elevators and escalators.”

Kriyang Patel, Director, Trio, lists airports, metro stations, railway stations, foot over-bridges, shopping malls and commercial buildings as potential drivers of demand. “In particular, the Indian Government targeting metros in 25 cities and new airports in Tier II and Tier III cities in addition to expanding or facelifting existing airports will substantially increase demand for elevators, escalators and moving walkways in the next five years.”

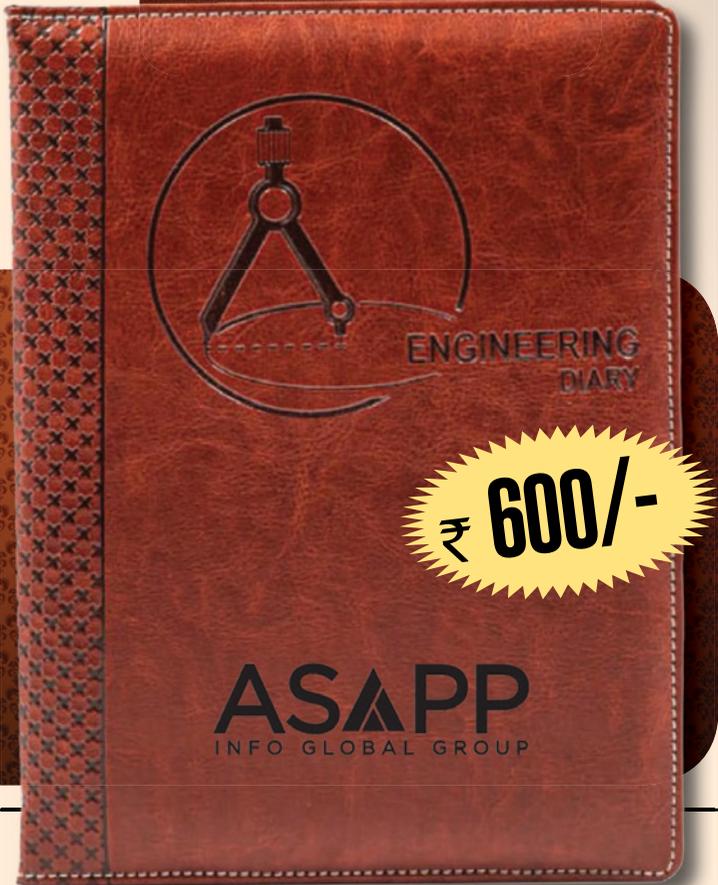
Manoj Amale, Director, Vertis Elevators, sees good opportunities in new government hospitals while **Amit Gossain, MD, KONE Elevator India**, sees great potential in the airport sector with the Government pushing for modernisation.

New metro rail stations in cities such as Delhi, Bengaluru, Hyderabad, Chennai and Pune and new airports will contribute to the growth of Indian real estate as well as the elevator industry, opines **Manish Mehan, CEO & MD, thyssenkrupp Elevator (India)**.



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“We have the expertise to handle larger projects such as the Tata Amantra with 40 plus elevators.”

- Antony Parokaran, CEO, Eros Elevators



“Omega introduced touchless technology in India, and now many indigenous

companies also offer automation.”

- Manoj Amale, Director, Vertis Elevators

What are some features that help further health and wellbeing?

Latest elevator control systems like destination despatch systems ensure less crowded elevators, while new ventilation systems and calling elevators using mobile apps or similar techniques make elevators safer to use, observes **PS Sudheer, Principal Consultant, AEC Asia Inc.**

Touch-free is the new normal, with clients looking for solutions that will help navigate the pandemic safely and comfortably, adds Gossain.

A case in point: Aurum Ventures’ commercial office buildings at Aurum Q Parc, a 7 million sq ft



“Touchfree has not been widely accepted even in the backdrop of corona.”

- Kriyang Patel, Director, Trio

Other innovations

This year Otis India added the Gen2 Stream to its Gen2 product family. This Bengaluru-built machine room-less model is optimised for the commercial segment and offered in two speeds (1 mps and 1.75 mps) in a wide range of designs so customers can easily match it with existing building aesthetics.

Eros Elevators recently launched a new machine room-less, gearless, passenger elevator for the low to mid-rise segment with superior aesthetic and safety features as part of its CHARVI series. Next, it will relaunch a product for home villas with better aesthetics and suitable for different shaft sizes.

thyssenkrupp’s fast and energy-efficient elevator system TWIN is equipped with intelligent traffic control that can help direct a certain number of users to the elevator based on social distancing requirements.

thyssenkrupp MAX is the industry’s first real-time, Cloud-based predictive maintenance solution. It increases elevator availability by evaluating the remaining lifetime of each key component and system, thus reducing out-of-service situations by up to 50 per cent.

Incidentally, artificial intelligence (AI) and machine learning with IoT technology have helped elevator companies to connect and monitor most new elevator installations in real time, observes **PS Sudheer, Principal Consultant, AEC Asia Inc.** This allows companies to focus on predictive maintenance rather than preventive/breakdown maintenance, ensuring higher equipment uptime and better equipment performance and user experience.

“We have seen rising demand for our AI-based 24/7 Connected Services, a solution providing valuable information on upcoming maintenance needs and identifying potential issues before they cause problems,” shares **Amit Gossain, MD, KONE Elevator India.**

Kriyang Patel, Director, Trio, believes energy-saving technology and predictive maintenance apps will be widely used in the near future. Trio has brought out navigation systems, group controllers and high-speed lifts.

And thyssenkrupp’s new elevator, meta200, combines German precision-engineering with reliable safety and security features, an advanced car design with a 360° vibration reducing system, inspiring designs, high-end materials, etched patterns and highly durable finishes for an all-round premium experience.

integrated township on Thane Belapur Road, Navi Mumbai, make use of destination port control elevators with touchless access control technology. With these, access points are all synced on a mobile application allowing occupants to travel to their respective offices without physically touching any call buttons. When an occupant flashes his or her mobile-based access control app on the flap barrier at the ground level, the elevator is called in for his or her office floor. Staying ahead of the

technology curve has helped us face the challenges posed by the COVID-19 crisis, affirms **Shreerang Athalye, Group President, Aurum Ventures.**

Here’s another example: “Otis recently worked with India’s RMZ Corp. to integrate the Bluetooth-powered Otis eCall™ smartphone app with elevators at RMZ Infinity, shares **Sebi Joseph, President, Otis India.** This app enables passengers to call certain elevators directly from their phone, creating a fast, safer touchless passenger experience.

Ways to improve elevator and escalator safety

In 1853, Elisha Graves Otis demonstrated his safety elevator at the New York Crystal Palace Exposition. With the declaration "All Safe, Gentleman", Otis laid the foundation for today's elevator industry. Undoubtedly, elevators and escalators (E&E) are the safest means of transport. Yet, over the years the script has taken a drastic turn for the worse, says **TAK Mathews, Director, TAK Consulting**. "India reported 31 fatalities in 2019 involving elevators and escalators. Despite the lockdown, there were another 21 fatalities in 2020. But with such news getting suppressed many times, the actual numbers could be higher."

Sketchy newspapers report these incidents as freak. But they are anything but freak and should never have happened, continues Mathews. "They happened because of deteriorating safety standards. The mantra for design, procurement and maintenance decisions is 'cheap, cheaper, cheapest'. Even toilet fittings and horticulture have higher priority than E&E. When faced with immense price pressure, E&E companies resort to borderline design and material and lowered maintenance effort to meet bottomlines."

Also, numerous E&E do not meet the minimum provision set by Indian Standards and the National Building Code, says Mathews. "The deaths of an MP-based industrialist and his five family members in 2019, the five-year-old boy in 2020 and others can be linked to non-compliant installations. Many involved in E&E supply, installation and maintenance are unaware of the minimum requirements. Many, including prominent suppliers and developers, choose to ignore the requirements, citing economic considerations."

Another key problem is low statutory oversight, Mathews points out. "Some states do not have legislation covering E&E, literally allowing murder. Some issue licenses without checking installations. Accident investigations, when carried out, are without adequate technical competency."

Inadequate technical competency is yet another concern. "Modern-day technical graduates do not want to get their hands dirty while the industry wants faster ROI," says Mathews. "Two decades ago, training would extend to years of hands-on field training but now this has been shortened and is often confined to classrooms."

To increase user awareness, the Elevator & Escalator Safety Trust was established in 2008. Unfortunately, except for a few companies like Johnson Lifts, Otis, Schindler and thyssenkrupp, it has found inadequate support.

Clearly, the industry has drifted away from the "All Safe, Gentleman" assurance. Unless we all act, Mathews wonders, "Who knows who will be the next fatality?"

Nevertheless, **Kriyang Patel, Director, Trio**, believes touch-free technology is still to gain wide acceptance even against the backdrop of the Coronavirus. Features like HEPA filters are still new and gradually being accepted for high-end projects. "While customers are enquiring more about touchless technology,

shifting to this way of operations will necessitate a change of mindset and the cost of retrofitting existing elevators, so I think it is some time away and may dissipate if the impact of COVID reduces," agrees Parokaran.

"We have installed HEPA air filters in elevators across all Runwal developments and properties,"



"At present demand is being driven mainly by low-cost affordable residential housing projects."

- **Amit Maitra**, Managing Director, Lerch Bates



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shares **Saurabh Runwal, Associate Director, Runwal**. However, the group is resorting to more traditional ways to protect passengers from touching surfaces. "Strategically placed tissues help passengers to avoid touching buttons," adds Runwal. Other safety measures include the installation of sensor-based hand sanitisation stations at elevator entry and exit points, the use of air disinfectant and the regular cleaning and disinfection of elevator buttons, doors and walls. Place markers usually restrict the number of passengers to four but passengers are encouraged to stand facing the wall if the elevator is fuller. In malls,



"Latest elevator control systems like destination despatch systems ensure less crowded elevators."

- **PS Sudheer**, Principal Consultant, AEC Asia Inc

CW DESIGN BUILD COVER STORY



Photo courtesy: Runwal

Safety measures include incorporation of place markers and regular cleaning and disinfection of elevator buttons, doors and walls.



“Across all Runwal developments and properties, we have installed

HEPA air filters in elevators.”

- Saurabh Runwal, Associate Director, Runwal

Runwal is practicing automated halt at all levels and protecting escalator passengers by social distancing and disinfection of escalator belts and railings twice or thrice hourly.

Wellness solutions

Otis' purification solutions include a purification fan for elevators, which uses an anion generator and ultraviolet lamp to kill germs and other microorganisms. For escalators and moving walks, a UV-C light handrail sanitiser is available.

KONE India's health and wellbeing solutions include elevator load adjustment; escalator handrail sanitiser (using UV-C ultraviolet light to gradually disinfect escalator handrails); elevator call using a social messaging channel like WhatsApp installed on a mobile phone; and elevator air purifier

based on an advanced photocatalytic oxidation process developed by NASA for air control on spaceships.

To cater to the demand for touchless elevator calling solutions, thyssenkrupp has developed Active IR, proximity sensor-based, Bluetooth-based, QR code scanner-based, IoT-based and voice recognition-based solutions.

Advanced air purification solution, LED thermal cameras, aerosol disinfectant solutions and escalator UV sanitising solutions help create healthier indoor spaces.

Indian versus global

The elevator market is populated by both international brands as well as indigenous players.

Both organised and indigenous players have their own clientele, opines Patel. “However, a very slow shift towards organised players is underway.”

International brands known for their reliable and efficient products and services dominate the market, opines Mehan.

“Indigenous companies usually cannot take on very large government projects where ISO mark products are mandated and terms typically involve full payment after completion as we cannot raise



“Staying ahead of the [elevator] technology curve has helped us to face the

challenges posed by the Covid-19 crisis.”

- Shreerang Athalye, Group President, Aurum Ventures

that kind of finance,” says Amale.

However, indigenous vendors bring their own advantages.

“Indigenous vendors are more flexible about schedules, size of the shaft and offer less expensive maintenance contracts,” observes Amale. “Overseas brands have a set way of working. Recently, we won a contract in Mumbai even though we were pitted against larger companies. Indigenous companies are now servicing government projects as well.”

“We are a smaller organisation and hence more flexible and capable of serving the need for niche solutions,” says Parokaran. “Customers look for a good, safe, reliable product delivered on time, backed by good after-sales service. We have been around since 1947 and have the expertise to handle larger projects such as the Tata Amantra with 40-plus elevators.”

What's more, “nowadays, indigenous brands are looking to upgrade their product lines to offer technologically advanced elevators with better aesthetics and customised finishes and options,” observes Sudheer.

“Omega introduced touchless technology in India, and now many indigenous companies also offer automation. Automation is not rocket science,” points out Amale.

Point taken!

- CHARU BAHRI



To share your views on the market for Elevators and Escalators in India, write in at Feedback@ConstructionWorld.in

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“Technological development has changed customers’ expectations of speed, transparency and predictability.”

- Amit Gossain, Managing Director, KONE Elevator India

With the advent of COVID-19, the entire focus of the industry is now on hands-free, seamless access through built spaces. The most common surfaces we touch in our daily life are door handles and elevator buttons. And these are probably the surfaces most susceptible to the spread of viruses. No wonder touchless safety solutions, like KONE’s Health and Wellbeing Solutions, are trending! **Amit Gossain, Managing Director, KONE Elevator India**, shares more about recent trends, company offerings and more...

How do you view the current market for elevators and escalators in India?

With a resurgence expected in the real-estate sector, the outlook looks positive for the elevator and escalator industry. The COVID-19 pandemic will redefine certain trends in the realty sector and we expect hygiene and wellness to be key factors in assessing properties in both commercial and residential segments. We will experience elevators a lot more differently now and COVID-19 will push us to fast-track digital transformation, making elevators more sophisticated and cutting edge. The focus will be on touchless elevator control solutions to enhance safety,

security and convenience. Also, we see COVID-19 hastening demand for artificial intelligence (AI)-based analytics to make smarter proactive maintenance decisions that take people flow to a whole new level. With new technologies and connectivity, we can provide an opportunity to add value to customers in new ways that meet their specific needs; at the same time, technological development has changed their expectations of speed, transparency and predictability.

What is trending in vertical transportation for various segments (airports, metros, residential and commercial buildings, malls) and how do these reflect in your offerings?

What’s trending today is technology and innovation. From the perspective of vertical transportation, it means looking at safer, smarter, technology-enabled building solutions. When it comes to vertical people flow, several technological innovations are already taking place. And we anticipate many more to come. There is no limit to the kind of exciting technology-led innovations we can expect in the elevator and escalator segment. Smart digital buildings will help bring people

together, be conducive to collaborative working by increasing interaction, and save precious resources.

We have also seen rising demand for our AI-based



24/7 Connected Services, which provides valuable information on upcoming maintenance needs and identifies potential issues before they cause problems. It connects elevators or escalators to our Cloud-based service and uses AI-based analytics.

What kind of R&D is undertaken to understand user preferences?

Innovation has been one of the most significant aspects of KONE and there is always a lot of focus on R&D. While designing products for the Indian market, we provide a unique mix of global expertise and Indian requirements. KONE's global technology and engineering centre in Chennai (Technology and Engineering Center [ITEC]) supports the latest technology and development for KONE's future solutions. It works with customers, suppliers, strategic partners and research institutes to provide best-in-class people flow solutions. The process always begins with research to understand customer and user needs over the lifespan of a building. Through design, we can offer solutions that can adjust to possible changes—this is a differentiator for us. As we strive to perfect our solutions and customer service, we are also exploring technologies that support future trends.

Any new launches this year from the company that have benefitted the industry at large?

KONE's recent launch of its Health & Wellbeing solutions was a response to the prevailing COVID-19 environment. Understanding that the way people interact with everyday surroundings will be challenging as we re-enter public buildings, we looked at trying to recreate safer user journeys and healthy spaces in buildings.

Considering physical distancing measures as well as the need for people to be able to move around in shared spaces safely, KONE's technical knowhow and innovation came together to create solutions that can be used to encourage physical distancing while enabling a safe and convenient return to public settings. These solutions that can be added to all KONE elevators range from escalator handrail sanitiser to elevator air purifier. KONE handrail sanitiser, an escalator handrail cleaning solution, uses a type of ultraviolet light (UV-C) to gradually disinfect escalator handrails. To remove the need to touch possibly contaminated buttons



What's trending today is technology and innovation. From the perspective of vertical transportation, it means looking at safer, smarter, technology-enabled building solutions.



or displays, the elevator call feature allows users to call an elevator using a social messaging channel like WhatsApp. The KONE elevator air purifier uses technology—including an advanced photocatalytic oxidation (PCO) process developed by NASA for air control on spaceships—to improve air quality in the elevator car by removing most potential pollutants, like bacteria, viruses, dust and odours, in the air.

This will be the year of digital transformation at KONE India, as we will seamlessly integrate physical and digital capabilities to provide new experiences, new business models, and new offerings for our customers.

How do you ensure safety and quality?

At KONE Elevator India, we pride ourselves on our deep understanding of both equipment and customer needs. This ensures that equipment is kept running smoothly throughout its lifetime. When we design and conceptualise such elevators, we design them for the future. At KONE, safety is one of the highest priority areas and our equipment is designed to maximise passenger safety and enable easy inspection to ensure safe operations at all times. We ensure that our safety policies are clearly communicated to employees and subcontractors to preclude deviations in any process. Risk assessment and regular safety audits are done at every stage.

KONE Care Maintenance is designed to detect issues before problems arise, reduce hazards, and prevent accidents from taking place. We also use one of the most advanced preventive maintenance methods in the industry: KONE Modular Based Maintenance (MBM). Every KONE service technician takes ownership of quality and is driven by continuous quality initiatives and training. It is important that our employees and customers return home safely every day.

Taking a step further in safety, KONE 24/7 Connected Services was introduced, where the system enables vast amounts of data from elevator and escalator sensors to be monitored, analysed and displayed in real-time, improving equipment performance, reliability and safety. If a problem occurs, detailed information tells us what's causing the issue and how urgent the matter is. By keeping constant watch 24/7, we can respond quickly in case of sudden failures.