

people flow

Sustainable urbanization MYTH OR REALITY?

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TAPPING THE POTENTIAL OF URBANIZATION
INTELLIGENT MOVES
THE FLYING FISH OF SHENZHEN
KEEPING MEGACITIES ON THE MOVE
FOCUS ON SAFETY AT KARSTADT

people flow



Keeping pace with urbanization

The growth of urban cities presents exciting opportunities for KONE in all parts of the world. Cities are becoming denser and buildings are growing taller. All of which creates demand for elevators and escalators.

To meet the growing need, we work at all the important points of people flow – housing, public transportation, infrastructure and recreational spaces – and enable convenient, safe and swift movement of people in urbanizing cityscapes. In the pursuit of innovation, we constantly devise smart and energy-efficient ways to help congested cities function systematically. Our talented teams around the world contribute to the rhythm of cities, not missing a beat.

I strongly believe urbanization has the potential to make this world a more prosperous place, bring more people together and enhance their living standards. KONE assumes responsibilities to improve quality of life in urban environments by providing the best people flow experience. In this journey, we aim to leverage the process of urbanization and reach new pinnacles.

HENRIK EHRNROOTH
PRESIDENT & CEO, KONE CORPORATION

KONE IN BRIEF

KONE is one of the leaders in the elevator and escalator industry. The company has been committed to understanding the needs of its customers for the past century, providing industry-leading elevators, escalators and automatic building doors as well as innovative solutions for modernization and maintenance. The company's objective is to offer the best People Flow® experience by developing and delivering solutions that enable people to move smoothly, safely, comfortably and without waiting in buildings in an increasingly urbanizing environment. KONE is present in close to 60 countries with more than 47,000 dedicated employees and distributors to serve you globally and locally.

PEOPLE FLOW is KONE's stakeholder magazine. KONE Corporation, Keilasatama 3, P.O. Box 7, FI-02150 Espoo, Finland, +358 204 751
EDITOR-IN-CHIEF Liisa Kivelä **MANAGING EDITOR** Eveliina Linderborg **EDITORIAL BOARD** Max Alfthan, Liisa Kivelä, Karla Lindahl
EDITORIAL OFFICE AND LAYOUT Spoon Helsinki **COVER PHOTO** iStock **IN COVER** Traffic jam on the streets of Kolkata
PRINTED BY Kirjapaino Uusimaa, Porvoo **ISSN** 1798-4246 **ORDERS, ADDRESSES, FEEDBACK AND STORY IDEAS** media@kone.com
 People Flow issue 14 published in July 2015

www.kone.com



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Sustainable urbanization – myth or reality?

In a rapidly urbanizing world, there is a pressing need to build sustainable cities that connect systems, natural resources, infrastructure, utilities, economies and human societies efficiently. But is it as simple as it sounds?

TEXT ASHA GOPALKRISHNAN PHOTO ISTOCK

Boarding a local train in Mumbai, India, requires skill, agility and precision. Many call it an art, but it is a reality for about 7.5 million commuters who use rail services every day and maneuver their way through swarming crowds and crumbling infrastructure. Pedestrians navigate traffic-congested roads that are swallowed by thousands of buses, taxis, three-wheeler vehicles, motorists and over 700,000 cars. The air and water quality is getting poorer and natural resources are dwindling. Yet, this “city of dreams,” or megacity of 21 million, continues to grow at the rate of over 40 people an hour, attracting people from every nook and corner of the country. Other megacities in the global south are recording similar growth rates and are looking to positively leverage the flow of human capital and steer the process of urbanization toward sustainability.

“We cannot talk about sustainable urbanization if we don’t look at resource flows and understand what resources cities are

using, where these resources come from and how much is being used,” says **Fiona Woo**, Policy Officer – Climate & Energy, World Future Council. That means studying and analyzing urban metabolism. “We need to make a system that has a circular metabolism instead of a linear one,” she says, which will stem from the city’s understanding of its own capacity to regenerate.

The good news is it is possible to do so, as cities are using several data points to gain insights. “You can increasingly use technology to track the flow of every bit of material and energy, build better models and theory to understand the flows better and find points where they can be made more efficient,” says **Luis Bettencourt**, a Professor of Complex Systems at Santa Fe Institute. It is going to prove crucial in time, as megacities (and large and medium-sized cities) in Asia, Africa and Latin America get denser and project high rates of urbanization – between one and six percent a year. The United Nations’ World Urbanization Prospects (2014) report notes that by mid-century, the overall urban population of Africa is likely to triple

from the current 400 million, and Asia will see a 61 percent rise.

THE OTHER SIDE OF URBANIZATION

A large proportion of the global urban population will reside in informal cities or settlements like the favelas in Rio de Janeiro. Bettencourt says cities address this problem by improving streets, accesses, buildings and infrastructure in these neighborhoods or relocating people. "France and UK are typical examples of often unsuccessful public housing; it created several vertical slums on the outskirts of Paris and parts of London that over time caused many socioeconomic problems – it is crucial not only to build housing, but also understand how it 'runs' socioeconomically – this has been done better in places such as Hong Kong or Singapore," explains Bettencourt.

A 2014 report titled "Human Development in South Asia, Urbanization: Challenges and Opportunities" makes some key observations. In the past three decades,

Bangladesh witnessed the highest rate of urbanization (4.19%) in South Asia, leaving behind populous countries like India (2.87%), and Pakistan (3.41%), but 60% of its population resides in slums and 21% of its urban populace lives below poverty line. The report blames "unplanned" urbanization for inadequacies in infrastructure, public transportation, housing, water and sanitation, energy, solid waste management, and health and education among others.

"Issues that require less physical intervention are easier to resolve than those that need extensive physical planning and construction," points out Bettencourt. Take Mumbai for instance, he says. "The state is licensing an increasing number of tall buildings, but many of them don't have integrated sewage and regular water supply because that requires a lot of physical work – digging, laying pipes, etc. – but other things like electricity or telecommunications are much easier, so you find them even in poor neighborhoods," he adds, highlighting the contrast.

CROSSING BOUNDARIES

As cities expand across boundaries and spill over multiple jurisdictions, Bettencourt says they gather more complex political, municipal and bureaucratic undertones, which means it takes concerted efforts from various stakeholders to design a spatially integrated city with appropriate linkages. He cites the example of Medellín in Colombia, a city in a mountainous valley, which links its varied neighborhoods using public transportation like cable cars and metros.

"It's a system where the thinking is to improve and create a city that is more socially connected," he notes. European cities, such as Frankfurt and Rotterdam, and some American cities, such as Boston or Portland, have made their mark in building efficient systems. Southeast Asia's island country Singapore is another case in point. Its ambient living environment with parks and gardens around concentrated mini townships, its wastewater treatment initiatives (which meet 30 percent of the city's water needs)

and excellent connections via metro and bus systems make the modern city-state sustainable.

To establish an integrated view of development, some cities are also exploring participatory design, which extends to involve local communities. "People who live in cities they can feel proud of feel greater ownership of it, identify with it, become more interested in the outcome and work toward improving their own living environments," says Woo. "Adopting participatory design is a step toward improved urban development," she points out.

THE SMARTER WAY OUT?

Emerging economies in Asia Pacific and Africa are taking it a step forward and making huge investments in creating integrated cities often dubbed as "smart" cities.

"It's primarily an engineering concept about how to use data to run a better and more integrated operation, and I think it can be an enabler of better city government in

terms of service delivery," says Bettencourt. A recent report by Navigant Research notes that the cumulative investment in smart city technology in Asia Pacific will total \$63.4 billion during the period from 2014 to 2023. While Songdo in South Korea, Fujisawa in Japan, and Iskandar in Malaysia are prominent examples, India's upcoming 100 smart cities, South Africa's \$7.4 billion smart city Modderfontein, and Kigamboni, outside Dar es Salaam in Tanzania, are all gaining popularity.

Since cities, by nature, are constantly changing, developing countries that build cities swiftly have to be cautious. China, says Bettencourt, is rapidly building cities, highways, high rises, affordable homes and industrial zones. "It's like big cities that come out of a machine, which in the long run, may not do very well – at least it didn't in the West," he warns. The Chinese government is taking steps to adopt a new mechanism. Last year, it announced a renewed urbanization plan (2014–2020), which aims to be more

people-centric and embraces sustainable city management.

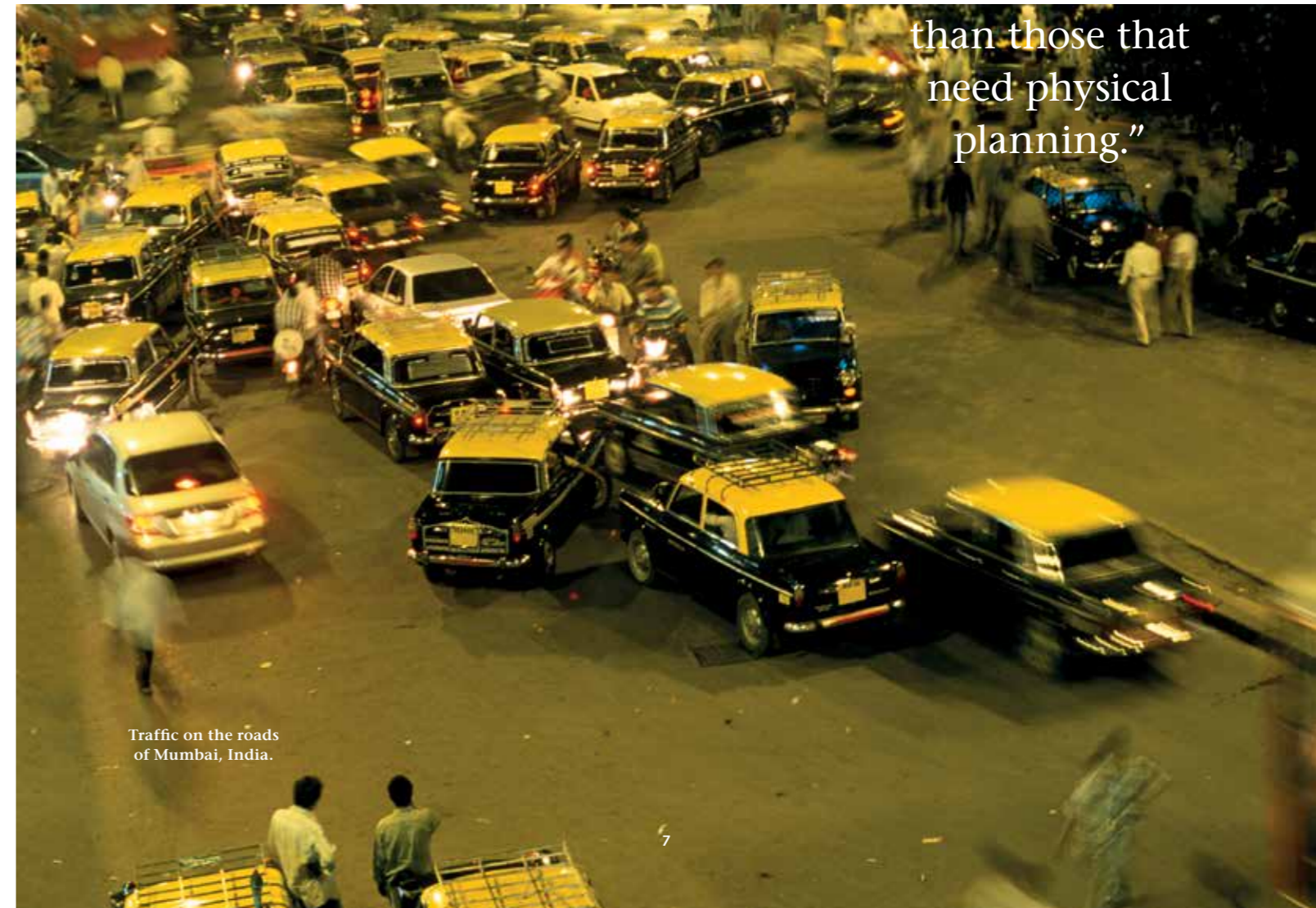
SUSTAINABLY YOURS!

After all, it is a matter of choice. "There are different ways of making cities livable, and several of those ways are sustainable and others are not," adds Woo. The onus then is on every country to understand its urban environments, find sustainable solutions within its own contexts and build cities that will stand the test of time. Clearly, boarding a local train in Mumbai seems easier in comparison. /

"Issues that require less physical intervention are easier to resolve than those that need physical planning."



7.5 million commuters in Mumbai use rail services every day.



Traffic on the roads of Mumbai, India.

Tapping the potential of urbanization

By 2050, almost 70 percent of the world's population will live in cities, and that presents a plethora of opportunities for the elevator and escalator industry. Henrik Ehrnrooth, President and ceo, KONE Corporation, explains how KONE is actively participating in creating livable and sustainable cities in different geographies.

TEXT ASHA GOPALKRISHNAN PHOTO KONE

Q: What does urbanization mean for KONE?

A: Urbanization is an enabler of economic growth, prosperity and well-being, and it creates a very significant business opportunity for us. Over the next 15 years, over a billion people will move into cities. Asia Pacific will house about 350 million of that, and Africa and the Middle East will be as big as Asia Pacific. These areas have very high population densities, and there is a need to build higher. As buildings grow higher, we have seen a significant rise in the number of elevators and escalators (E&E) being installed per million square meters built, which is a crucial driver of growth in our industry.

Take China, for instance. Since 2000, the E&E intensity doubled from 100 units per million square meters to 234 in 2013. It is driven by the growing share of mid and high-rise buildings, and the increased usage of E&E in low and mid-rise structures. So we see a massive potential, and our mission is to provide best people flow experience and help people move conveniently, safely and in the fastest way possible in these rapidly urbanizing environments. But we have to remember that although urbanization is strongest now in developing markets, Europe and the US continue to urbanize too.

Q: How are your markets in Europe and US different from emerging economies?

A: There is a new wave of urbanization in Europe and the US driven by two specific reasons – aging population and changing preferences of the younger generations. As people get older they are moving away from suburbs into cities, where services are closer. They get care and stay longer in their own homes, which means their buildings must have good accessibility, and our people flow solutions play a key role there.

There is a growing demand for single-person housing in the US and Europe, as people are living alone for longer periods of time. The younger generation now prefers to live in cities and opts for public transportation instead of cars. So you see the choices are changing, and that dictates the nature of urbanization.

Q: From densely populated countries to continents with changing demographics, KONE is present in dynamic locations. How do you manage the complexity of different markets while providing people flow solutions?

A: I think the most important thing is to constantly improve our understanding of how we can make urban environments better and this way support our customers globally. KONE is a global company with very strong local operations. Our broad network around the world helps us understand what is happening in specific markets. Our global solutions can be adapted to local needs to better support the development of each market. For example, buildings in Asia are on average much higher than those in Europe and North America. That calls for unique solutions in providing the best people flow experience while minimizing energy consumption.

Q: There is a lot of debate on how cities should be built, but there are no clear answers. How does KONE contribute to creating sustainable cities?

A: At KONE, we look at how we can help cities grow in a sustainable way and improve the quality of life for people. As buildings consume a very significant part of energy in the world, we provide best people flow experience that minimizes energy consumption. We help cities become more resource- and energy-efficient. We also look at how to make crowded cities function better. As travel or commuting consumes substantial time, our solutions for public transportation are planned meticulously to ensure that the movement of people is seamless, comfortable, pleasant and, above all, safe.

Q: On a more personal note, what do you think will be the new developments in urbanization?

A: Going forward, there will be an increased emphasis on diversity. It will become important to create a design that integrates people from different demographic backgrounds, because diversity provides better sustainability to the environment. Another point of focus will be to build the whole infrastructure network economy – education, healthcare and employment opportunities – as a part of the process of good urbanization. /



“The most important thing is to constantly improve our understanding of how we can make urban environments better and this way support our customers globally.”

Intelligent moves

As the world’s population grows – from 7.3 billion to an estimated 9 billion people by 2050 – cities are building up instead of out. For urbanites to move smartly in these changing urban environments, specialised people flow planning and innovative technologies are required.

TEXT EVELIINA LINDERBORG PHOTO KONE

Every day, more than 200,000 people migrate to cities. Urban centers from Europe to Asia, the Middle East and North America are going vertical. “We’re seeing unprecedented levels of urbanization; this combined with an aging population and digitalization is challenging cities with the task of making urban environments smarter in order to be easier to live in,” says Ari Virtanen who head KONE’s Access Control and Integrated Solutions Business. “Smart cities require intelligent design and technologies from city structures and systems. But at the heart of smart cities are intelligent buildings,” he says.

For KONE, a key aspect of providing intelligent people flow solutions is to integrate advanced technology into different building systems. The driving principles of elevator and escalator design nowadays are that they can communicate with KONE’s People Flow Intelligence portfolio solutions, including destination guidance, access control and equipment monitoring solutions.

PLANNING SUPPORT

Smart equipment is required for a building to be intelligent but having excellent elevators, escalators and related solutions is not enough. Dr. Marja-Liisa Siikonen, an acclaimed expert on planning for the smooth flow of people, leads an international network of traffic planning specialists at KONE, who help customers plan and implement the best possible People Flow® well before a building’s blueprints exist.

“More and more people are coming into cities, and that’s squeezing people into smaller spaces. Residents are expecting to be able to move smoothly through their day, and the more people we have in buildings the more intelligent transportation solutions are needed,” says Dr. Marja-Liisa Siikonen, Director, People Flow Planning.

“We help clients select the right type of transportation devices for their specific needs in the planning stage to ensure excellent vertical and horizontal People Flow®,” says Siikonen.

In huge complexes the planning stage can last several years. In the world’s third-tallest building, the Makkah Clock Royal Tower Hotel in Mecca, Saudi Arabia, the building planning stage continued for more than seven years, and Siikonen’s team provided hundreds of traffic

analysis revisions for the client. The busy multipurpose Makkah venue is next door to Masjid al-Haram, the world’s largest mosque, which can accommodate up to two million people.

“Visitors normally practice formal prayers five times a day,” says Siikonen. “The goal of the customer was to ensure that up to 75,000 people can exit all seven buildings through the podium in an organized and timely manner every prayer time.”

This required a thorough study of optimum people flow solutions, resulting in an extraordinary amount of equipment: more than 320 units of escalators and elevators in the podium and the towers. In addition, KONE implemented special group control software with artificial intelligence capabilities to learn and track passenger traffic patterns in order to optimize people flow. The elevators include large shuttles that can hold 54 passengers each and take visitors up to the 15th level’s sky lobby.

In these types of projects, innovativeness is needed to enable smooth traffic flows. According to Siikonen, sometimes a new solution is developed together with the client, which is what happened in Frankfurt’s Gallileo Tower, where the first KONE Destination Control System (DCS) was installed.

SMART SOLUTIONS

One of the building types that growing urban centres are increasingly embracing are tall multipurpose buildings that house a mix of residential and retail with hotel and office space. A combination of KONE’s people flow planning solutions and technological innovations have been used in many recent multipurpose projects around the world including the Leadenhall Building, the latest iconic addition to the London skyline.

“In a mixed-use building the majority of hotel guests will likely be away during the daytime whereas the majority of office workers will be present during the day and away at



“The conventional system is like a bus and DCS is like a dial-a-ride taxi that takes you directly to your destination floor.”

night,” Siikonen explains. “Often the people flow solution is a compromise between building floor layout, project budget and the traffic flow requirements depending on building usage while respecting ethnographic differences.”

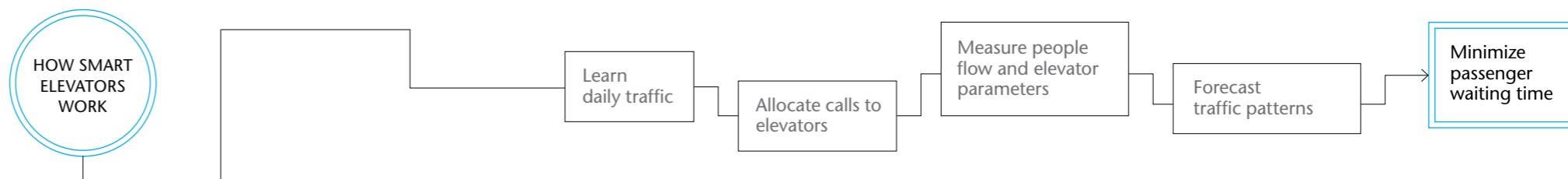
“For multipurpose buildings KONE’s intelligent control systems such as the KONE Polaris Destination Control System (DCS) allow elevators to prioritize service to serve certain parts of the building at peak times,” says Siikonen.

The DCS allocation algorithm searches for the optimum routes for the elevators to serve a destination call. The algorithm is able to identify the best routes for the elevators within milliseconds. Optimal call allocation decisions

guarantee short passenger waiting and journey times by using measured stopping times and elevator flight times.

“The benefit of KONE’s advanced DCS is that in addition to utilizing destination information to boost elevator handling capacity, it can also learn to recognize traffic patterns in a building, and, for example, forecast individual passenger journeys,” says Siikonen.

“When comparing a conventional elevator system to a DCS, it could be said that the conventional system is like a bus and DCS is like a dial-a-ride taxi that takes you to your destination floor in the fastest way without unnecessary stops at other floors,” says Siikonen. /



The flying fish of Shenzhen

Shaped like a manta ray – a fish that breathes and changes its own shape – Terminal 3 of Shenzhen Bao'an International Airport makes an iconic architectural statement.

TEXT SISSI TANG BEIBEI EDITED ASHA GOPALKRISHNAN ILLUSTRATION KONE

When viewed from the skies, Shenzhen airport's new terminal resembles a giant aircraft with wings and a tailplane. Sprawling over an area of 450,000 square meters, Terminal 3 handles up to 45 million air passengers annually and is touted to be the fourth-largest airport in China after Beijing, Shanghai and Guangzhou.

With 63 boarding gates, 192 check-in desks, extensive retail space and a plan that accommodates all kinds of aircraft, the terminal is expected to handle approximately 14,000 passengers per hour during peak traffic. It calls for focused attention on the capacity and flexibility of the airport's traffic flow configuration. That is where KONE steps in.

PEOPLE FLOW PLANNING

After careful analysis and design, KONE experts provided a complete tailored solution to minimize passenger walking distance, comprising elevators, inclined autowalks and heavy-load freight elevators. With teams working around the clock, mobilization of all possible resources enabled KONE to complete the installation and certification of 75 KONE MonoSpace® elevators in a short span of two months. A couple of months prior to the official opening, Shenzhen Airport organized three drills with 7,000 passengers to test the efficiency of the traffic flow plan, system and equipment. It had KONE technicians standing by on site and was executed smoothly.

"KONE equipment performed seamlessly in the drills, guaranteeing smooth people flow and receiving high recognition from

our client," says **Shang Ruilin**, KONE Project Manager. Shenzhen Airport Co. Ltd. also praised KONE for its outstanding service and resourcefulness in overcoming difficulties to ensure the airport was completed as scheduled.

DESIGN IN MIND

KONE excelled not only in people flow planning, but also in providing technology that matched the terminal's green aspirations. Every KONE system utilizes variable frequency technology to reduce unnecessary energy consumption in this busy transit hub. Terminal 3's innovative design integrates nature and technology to make the best of both worlds and presents an environment-friendly and sustainable structure. Its distinctive honeycomb skin displays

thousands of hexagonal skylights that regulate heat from the sun and allow natural light to enter the terminal, creating a playful dialogue with glass elevators. The cathedral-like concourse, designed by acclaimed Italian architects Massimiliano and Doriana Fuksas, creates a sense of space with roofs as high as 80 meters and white "trees" that serve as efficient air conditioning vents. All aspects of the terminal's plan prioritize high-level eco-performance, and KONE elevators' technology is among the most sophisticated. KONE's space-saving, machine-room-less design and energy-efficient KONE EcoDisc® motors contributes to a cleaner environment.

It is the use of such sustainable elements that makes the architecture of Shenzhen airport's Terminal 3 even more incredible. /

SUMMARY

CITY FACTS

- **Location:** Southern China's Guangdong Province in Pearl River Delta region
- **Proximity:** Hong Kong
- **Population:** Approximately 15 million
- **Urbanization:** One of the fastest-growing cities in the world
- **Highrises:** 26 buildings at over 200 meters tall, including the Kingkey 100 (the ninth-tallest building in the world)

FAST FACTS

- **Shenzhen Bao'an International Airport Terminal 3**
- **Completed:** 2013
- **Size:** 450,000 square meters
- **Floors:** 4 above + 2 underground
- **Flow:** 45 million passengers per year
- **Building owner:** Shenzhen Airport Co., Ltd.
- **Developer:** Shenzhen Airport Co., Ltd.
- **Architect:** Beijing Institute of Architectural Design, FUKSAS
- **Contractor:** China State Construction Engineering Corporation

KONE SOLUTIONS

- 131 KONE MonoSpace® elevators
- 8 KONE TranSys™ freight elevators
- 10 KONE TravelMaster™ autowalks

The terminal is expected to handle approximately 14,000 passengers per hour during peak traffic.

Keeping megacities on the move

A metropolis is like a giant sprawling organism. Every artery must pump in synchronized flow, or else the system grinds to a halt. We meet four KONE technicians who keep the critical organs functioning.

TEXT SILJA KUDEL



Nigel Stride
at London's
Heathrow Airport.

PHOTO JEREMY O'DONNELL



Bhagwati Prasad
Bhatt at work at
Delhi Metro station.

PHOTO MANPREET ROMANA

“Replacing a handrail quickly normally takes about 12 hours, but thanks to efficient planning, we finished the job in 10.”

It's morning peak hour at London's Heathrow Airport, and every elevator to the departures level is out of order – all of them, all at once. If the word “pandemonium” springs to mind, you get the picture. This was the “shocking” scene that greeted KONE service technician **Nigel Stride** on arrival at work one Monday morning. All four priority elevators in Terminal 1 were not responding because contractors working overnight had interrupted the controls. Crowds arriving on the Heathrow Express train link built up quickly. Beads of perspiration trickled down Stride's forehead as hundreds of nail-biting travelers jostled around him.

“It was a quick fix in the end, but that was the most stressful quarter hour I've ever experienced,” says Stride. He and 41 other engineers and technicians look after the airport's 1,035 elevators, escalators and autowalks, keeping Heathrow running like clockwork around the clock.

UNDERCOVER POLICE

With 191,000 people passing through Heathrow daily, there's rarely a dull moment. “Every breakdown has immediate impact. If something goes wrong, it's all hands

at the pump to get the unit up and running as quickly as possible,” says Stride.

He describes the equipment in the airport as the “critical link” connecting the city to the departure gates and the world beyond. “Without that key part in the middle, the whole jigsaw falls to pieces.”

A minor disturbance can have a major domino effect. “Airlines don't wait for late passengers these days. If someone misses a flight due to faulty equipment, it impacts many lives.”

Though safety is an absolute priority for KONE crews, this goes double at the airport. “We can't leave sharp tools lying around because of the security risks. We're even required to look out for unattended items and people behaving suspiciously. We're an extra pair of eyes for security personnel.”

Even with barriers placed around the worksite, Stride takes special precautions when working amid large crowds in confined spaces. “With luggage everywhere and excited children running around, things can turn nasty quickly.”

Doors account for a large percentage of repairs, he reveals. Damage is typically caused by customers who crash into elevators with luggage trolleys or disabled buggies.

“Once there was a man – who had perhaps enjoyed too

much inflight entertainment – who drove his car into the elevator in front of the lobby. We managed to repair the elevator, but the car was pretty much a wreck.”

KEEPING DELHI ON TRACK

If a delay at Heathrow can wreak havoc in London, the same applies exponentially in the Delhi Metro, which is used by 26 million commuters daily. Keeping this artery unclogged is the job of Technical Support Engineer **Bhagwati Prasad Bhatt**, who answers for the smooth operation of 264 elevators and 75 escalators.

“Many differently abled persons and senior citizens are totally dependent on us to reach their destinations. In the worst-case scenario, they would have to be carried out in wheelchairs via ramps,” he says.

The safety and comfort of Delhi's millions of commuters are ensured by KONE's efficient preventive maintenance. Technicians perform regular maintenance checks at specified intervals, following a rigorous checklist.

“We constantly update our technical know-how and carefully analyze every callout to plan improvement actions. Audits and continuous training are also a big part of our safety culture.”

To minimize inconvenience to commuters, maintenance is always carried out at night. “Providing the necessary resources for night work is our biggest challenge,” says Bhatt, who makes himself available 24/7.

Due to the nonstop torrent of commuters, speed is of the essence on daytime callouts. A broken escalator handrail at Chandni Chowk station was one of Bhatt's most memorable “fast fixes.” “Replacing a handrail quickly is always a big challenge. It normally takes about 12 hours, but thanks to efficient planning, we finished the job in 10.”

BANGKOK NEVER STOPS

The Thai metropolis is reliant on elevators to maintain its nonstop momentum. “My role is very important in keeping our megacity's wheels greased,” says KONE Service Supervisor **Sutee Sopajaree**.

He and his team take care of 182 units for 15 major customers around Bangkok, one of which is The River, an exclusive 868-apartment riverfront residential complex on the Chao Phraya River, where 1,500 residents are served by 15 elevators. A lengthy breakdown would meet with an instant outcry from these quality-conscious homeowners.

“Before things turn bad, we get in and solve the problem

“My role is very important in keeping our megacity’s wheels greased.”

Sutee Sopajaree at the residential complex The River.

PHOTO JONAS GRATZER



PHOTO MARTIN ADOLFSSON

Steven Culen and his crew are responsible for 51 escalators, 17 elevators, a stage lift, and 12 handicap elevators at Madison Square Garden.

immediately. If I visit the site and find even the slightest problem, I immediately tell the customer and suggest how to solve it,” says Sopajaree, who travels between sites carrying out quality and maintenance audits. He works a ten-hour day, as certain jobs can only be performed after hours.

Rapid spare parts availability is the biggest challenge for Sopajaree’s team. “We’ve solved this problem by storing critical parts in the customer’s building to ensure a quick fix without wasting a single precious moment.”

WORLD’S MOST FAMOUS ARENA

Madison Square Garden in Midtown Manhattan is like a miniature city within the Big Apple. Seating 20,000 in its Garden Arena and 5,600 in its Theatre, The Garden is a 24/7 operation hosting multiple shows every day. The buzz never stops: an ice skating matinee might be followed by anything from a Bruce Springsteen concert to the World Heavyweight Boxing Championships.

During a 24-hour period, up to 30,000 people enter and leave the complex. This includes not only visitors, but personnel, housekeeping, merchandisers, laborers, stage hands, electricians, performers, VIPs and media.

“We have over 30 tractor trailers here for certain concerts. The minute the show is over, they start breaking down the stage, and by morning we might have an ice rink set up. During this time, you also have routine daily and nightly deliveries going on. If the elevators aren’t

functioning, you’re looking at a huge traffic problem,” says Service Technician **Steven Culen**.

He and his crew are responsible for 51 escalators, 17 elevators, a stage lift, and 12 handicap elevators.

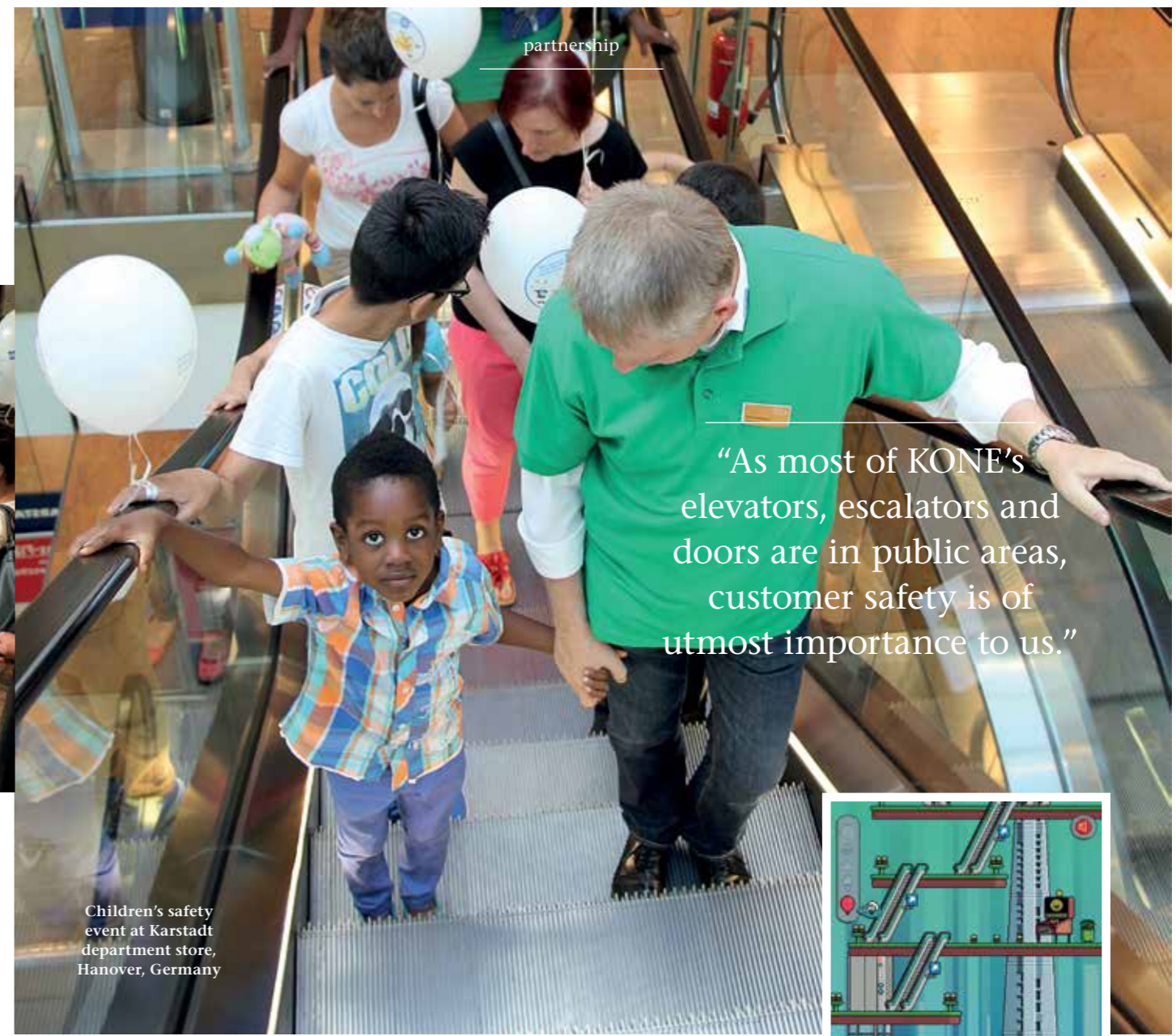
NO CORNER-CUTTING

“Most callouts affect large crowds, so having good communications with Garden security is imperative. They constantly observe the crowd flow and make adjustments so I can safely and efficiently correct the issue. Staying cool, calm and collected seems to work,” says Culen.

An ounce of prevention is worth a pound of cure, notes Culen, who tolerates no corner-cutting when units are serviced. “As they say: ‘If you don’t have time to do it right the first time, you must have time to do it twice.’ We’re always looking to clean, adjust, tighten and lubricate as needed. The Garden would rather we spend the time doing it properly than to have repeated disruptions.”

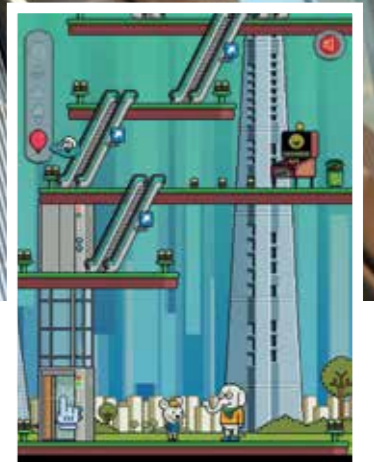
With his enviable ringside seat on big-name performers, Culen’s workdays are full of surprises – and surprising challenges.

“Many interesting people perform here, and you never know what you’re walking into. Recently during an NBA All-Star Game, a VIP had her high heel caught in an escalator step thread – I had no idea they can make a heel so thin! She wasn’t injured, the unit stopped properly, and I was able to extract the shoe unharmed. The couple was thrilled.” /



“As most of KONE’s elevators, escalators and doors are in public areas, customer safety is of utmost importance to us.”

Children’s safety event at Karstadt department store, Hanover, Germany



KONE’S DIGITAL GAME FOR CHILDREN ON ELEVATOR AND ESCALATOR SAFETY

Featuring: Safety mascots Max the mouse and Bob the elephant
Target Group: Children aged 4 to 10
Nature: Fun, educational, adventure
Game Plot: Max accidentally flies away with a balloon and Bob tries to find him in a tall building with the help of elevators and escalators
Aim: Educate children to use elevators and escalators safely
Platforms: Personal computers including tablets
www.kone.com/safety-game/

Focus on safety at Karstadt

In retail, nothing is more important than customer experience. When people are able to move effortlessly and safely, they are more likely to shop for longer and return to the same retail center.

TEXT ISABELLE KLIGER PHOTO KONE

With millions of people using its elevators, escalators and automatic building doors every day, customer safety is and has always been one of KONE’s top priorities. KONE’s people flow expertise, combined with its preventive maintenance solutions, helps businesses run smoothly year after year. KONE also works actively with its customers and partners to ensure the safe use of all its products. “As most of KONE’s elevators, escalators and doors are in public areas, customer safety is of utmost importance to us,” says **Nicole Köster**, Marketing & Communication Manager, KONE Germany. “We have a zero-accident strategy and work hard – both internally and with our customers – to make sure this target is achieved.” Köster explains that safety starts with

developing, manufacturing and installing safe products. One of the next steps is to inform the customers and make sure all the relevant safety documentation – including signs and stickers – is in place and up to date. **TRAINING YOUNG MINDS** KONE also creates optional services for customers, organizing training days, workshops and events for customers to ensure the safety of the people actually using the products. For example, it has designed a program that specifically targets elementary school and kindergarten children, who are brought in for training and awarded an “elevator and escalator driver’s license.” “I think we’ve all seen children playing on escalators, walking up in the wrong direction, sitting or playing on the steps,” continues Köster. “Other people at risk include elderly

people with walking frames and people wearing long skirts, or not holding on to the handrail. We see these unsafe behaviors every day and, as the manufacturer, it’s up to us to work with our customers to minimize the risks.” **PARTNERING WITH KARSTADT** One KONE customer that jumped at the opportunity to promote customer safety is the Karstadt department store in Hanover, Germany. Karstadt is one of Hanover’s top department stores, with 22 escalators and four elevators that are used by an estimated 2,000 customers a day. Last summer, KONE approached Karstadt Hanover to gauge its interest in organizing a children’s safety event. **Jana Bauer**, Karstadt Hanover’s Marketing Manager, explains:

“Approximately 120 children participated in the two-day workshop. We set up a play area with a huge TV, exciting coloring books, helium balloons, ice cream and lots of fun giveaways. Most importantly, each participant who completed the safety training received a certificate, issued by KONE and Karstadt.” “We used the existing elevators and escalators and held 30-minute training sessions for groups of 10 children at a time,” continues Köster. “I’m certain we increased their understanding of safety, and the feedback was really great – both from the participants and from Karstadt.” Köster recalls the story of a young girl, who had just completed the training being overheard on an escalator with her grandmother: “The girl was about four years old and

we heard her scolding her grandmother, saying, ‘You have to hold on to the handrail when you’re standing on the escalator!’ This proved that she’d listened and really learned something,” she says. **FUTURE COLLABORATIONS** Karstadt and KONE also received positive feedback from the manager of a local kindergarten, who expressed an interest in organizing similar training days for all their groups of children. “We’re very happy that KONE provides such great workshops that allow children to learn by doing,” adds Bauer. “Of course, we’ve put up signs indicating the correct use of elevators and escalators, but children learn best through play and by experiencing what works and what doesn’t. We hope to organize more, similar events in the future.” /

did you know?

KONE's Kingdom Tower progress card

THE FIRST PHASE OF ELEVATOR installations have begun at KONE's Kingdom Tower project in Jeddah, Saudi Arabia. Pre-installation activities for fitting the elevator system's guiderails have been initiated by the team.

Eventual installation of guiderails and KONE elevator cars will progress as Kingdom Tower's central structure rises in the coming years.

The next phases of the project will cover manufacturing and delivery of KONE's vertical transportation solutions – the world's fastest and highest DoubleDeck elevators, supported by revolutionary KONE UltraRope® technology – and the latest People Flow Intelligence solutions.

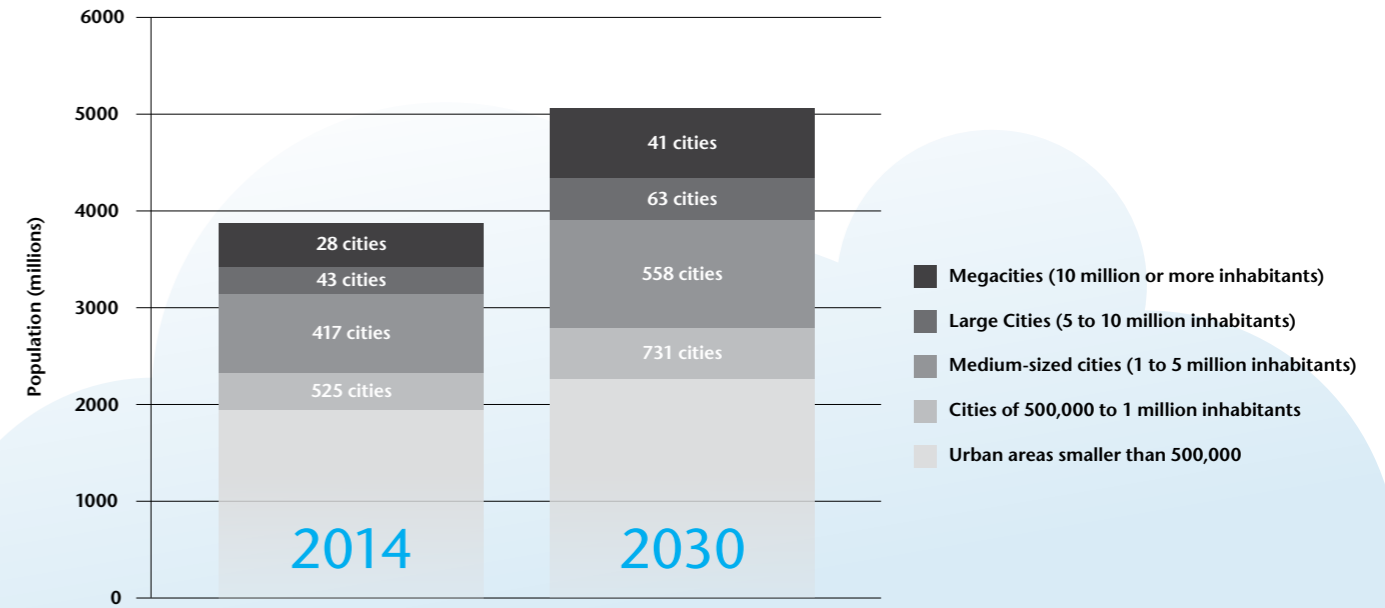
KONE's DoubleDeck elevators travel at a speed of over 10 meters per second to reach the highest livable floor in the world in 52 seconds. The high-speed elevators will rise 660 meters to the observation deck, making it the world's highest elevator rise. In total, KONE will manufacture and install 57 elevators and eight escalators at Kingdom Tower, which will be the world's tallest building once completed in 2018.

Over the past two years, KONE Areeco, KONE's Saudi Arabian joint venture, in conjunction with KONE's global experts, has been involved in the planning and design of all vertical transportation systems for Kingdom Tower that rise to a height of more than one kilometer.

The high-speed elevators will rise 660 meters to the observation deck, making it the world's highest elevator rise.

did you know?

GROWTH OF CITIES OF ALL SIZES



SOURCE: UN WORLD URBANIZATION PROSPECTS 2014

Beijing's tallest building to be equipped by KONE

China Zun, a 528-meter-high building in Beijing's central business district, derives its name and design from "Zun," an ancient Chinese wine vessel – a tall cup with a broad mouth, without any hands or legs. The 108-story skyscraper will provide office space, a private club and an observation deck, and will feature the latest energy-saving technologies. The building, to be completed by 2018, will house 101 elevators and 41 escalators provided by KONE and will include 21 eco-efficient KONE DoubleDeck elevators that can reach speeds of 10 meters per second.



Dedicated to People Flow™



IMPROVED SECURITY, GUIDANCE AND CONVENIENCE

KONE Turnstile solutions

In the modern buildings of urban environments, turnstiles are increasingly becoming an integral part of the people flow process. They are used to provide quick and comfortable access, guide people in the right direction, and even to verify access rights through integrated card readers.

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