

Dedicated to People Flow™

KONE

MOSCOW

Reaching for the skies

High-rise buildings have a unique set of requirements, when it comes to vertical transportation. KONE takes its technology to new heights with innovative solutions. The Capital City project utilizes the latest in access and destination control systems to boost people flow capacity.

KONE References

2010

KONE References

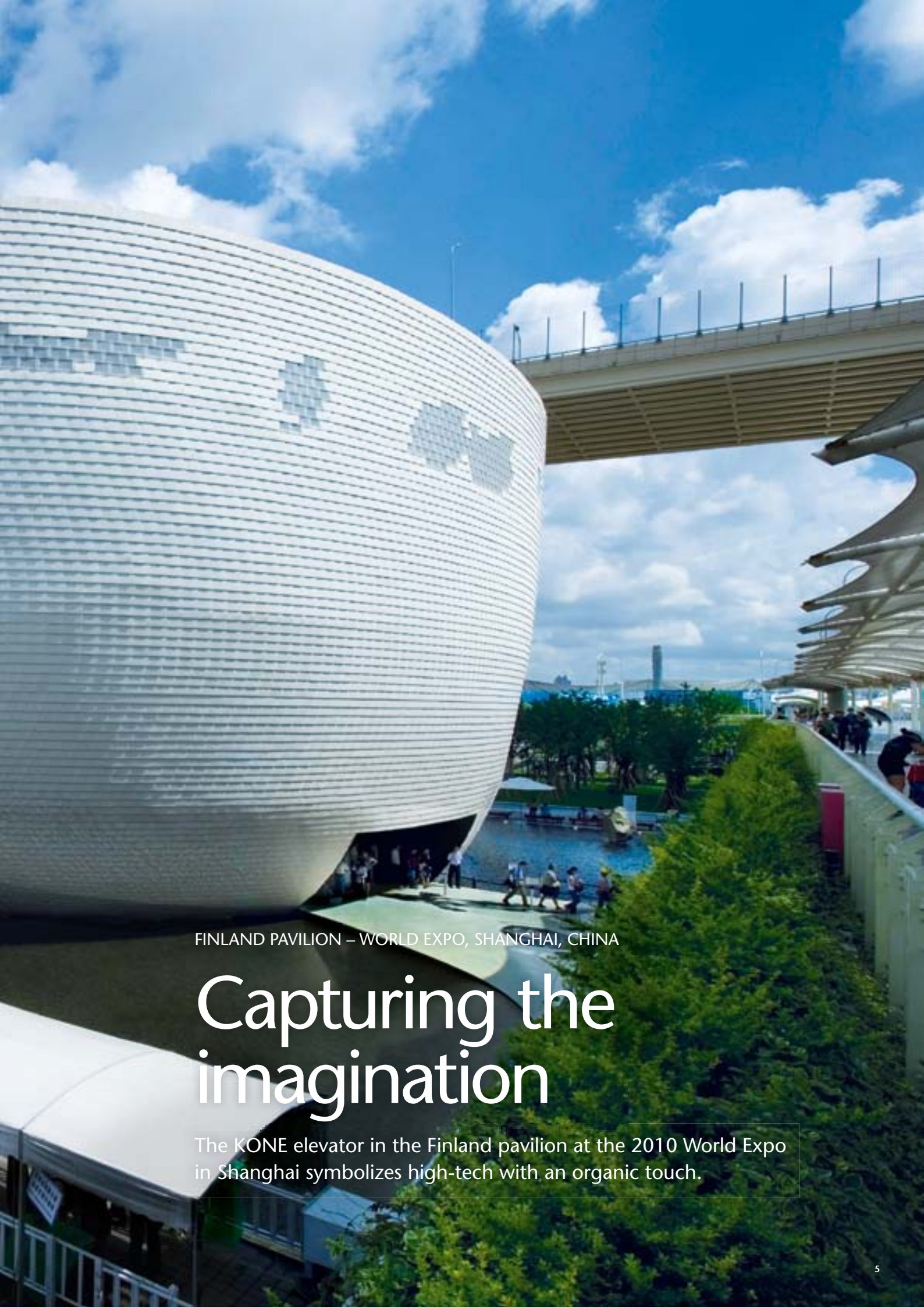
KONE is proud to present these selected achievements from around the world. Join us on a journey through 2010, as well as catch a glimpse into our future. Enjoy your visit.

Capturing the imagination – Finland pavilion – World Expo, Shanghai, China	4
A towering success – Capital City – Moscow, Russia	8
Maintenance team makes a difference – Lucas Oil Stadium – Indianapolis, USA	10
313@somerset – Singapore	14
Gateway to China’s future – Hongqiao Transport Hub – Shanghai, China	16
Towering above energy efficiency benchmarks – OpernTurm – Frankfurt am Main, Germany	20
Best in care all around – Children’s Hospital of Illinois – Peoria, USA	22
The sky’s the limit – International Finance Center – Shanghai, China	24
Making a mark in India – Ashok Towers – Mumbai, India	28
Quality of life – Calle Calatrava 13 – Madrid, Spain	30
Meaningful maintenance – Schiphol Group – The Netherlands	32
High performance in the Windy City – 300 North LaSalle – Chicago, USA	36
Always an experience – Danube Tower – Vienna, Austria	38
A statement rising in central London – Walbrook Building – London, U.K.	40









FINLAND PAVILION – WORLD EXPO, SHANGHAI, CHINA

Capturing the imagination

The KONE elevator in the Finland pavilion at the 2010 World Expo in Shanghai symbolizes high-tech with an organic touch.

Kirnu, the Finland pavilion created especially for the Shanghai 2010 World Expo, represents an achievement in advanced technology and handcrafted design. From a distance, the distinct rounded structure appears to float on the water that surrounds the building.

Step inside Kirnu and the enticing space awakens the senses. An imaginative array of sounds and exhibits convey a vision for our cities that focuses on the harmonization between nature and architecture. Kirnu, which is meant to represent a giant cauldron, is both a work of art and a complex urban environment that has a marked human touch.

Eye-catching art design

For a building of this caliber, no ordinary elevator will do, which is why KONE set about to create something that measures up to the remarkable beauty of the building's frame. A walk into the main hall reveals KONE's MonoSpace® Special elevator.

An integral part of the architecture, the KONE elevator stands on its own as a lantern-like light sculpture. The distinctive glass shaft is a centerpiece for the space, drawing attention to the interior of the pavilion.

A step inside the elevator reveals a hand-made ceramic floor and fiber-patterned wall decoration adorning the side walls. The specially created shaft features unique lighting and graphic design patterns that catch the eye.

Hidden high-tech

The challenge for this project was creating an elevator that was functional in form yet could represent state-of-the-art design sculpture. On average, 30,800 people visited the pavilion each day. "The main goal was to create a unique user experience which will change the way people look at elevator design," comments **Anne Stenros**, Vice President, KONE design.

The detailing of the elevator even extends to what is not seen. This one-of-a-kind elevator introduced the new KONE destination concept, which integrates a personal operating card with RFID technology for secure access to VIP areas.

At Kirnu, the destination control system is connected to KONE E-Link™, an advanced elevator monitoring system that provides real-time information on the status of elevators and statistical reports on performance. Additionally, all elevator components met KONE environmental excellence standards.

An expression of excellence

KONE was part of the design phase of the project from the beginning. The KONE team worked closely with JKMM Architects in making sure the design of the glass shaft and elevator car support the visual identity of Kirnu.

The essence of the project was simple. KONE created a technological solution to enable a smooth flow of people using an inviting design that did not compromise on eco-efficiency. In the end, KONE's elevator succeeded in meeting the creative collaboration needed for this special project.





SUMMARY

Challenge

- To design a one-of-a-kind elevator for a highly anticipated event, integrating advanced technology with aesthetics

Solution

- Development of a collaborative creative team who worked with various project parties from architects to suppliers, to install a state-of-the-art designer elevator

FAST FACTS

Finland pavilion Kirnu

- Duration of Expo: 1 May to 30 Oct, 2010
- Size: 3,000 sqm
- Floors: 3
- Owner: Finland at Expo 2010, Finpro
- Architect: JKMM Architects
- Total visitors: 5,742,800

KONE Solutions

- 1 KONE MonoSpace® Special elevator
- KONE E-Link™ monitoring system
- InfoScreen
- KONE Polaris™ destination control system
- KONE destination concept (future concept prototype)
- Maintenance for the duration of the Expo

A towering success

Moscow's skyline is seeing a dramatic change. Europe's tallest building, the 73-story Moscow Tower, has been built as part of the new Moscow International Business Center, or Moscow-City. Employees and residents alike have a prime view of the impressive Russian capital.

Moscow-City is a massive undertaking. This city within a city comprises 19 multi-purpose complexes creating nearly four million square meters of new real estate. The Capital City project, the first to be completed out of the 20 projects that make up Moscow-City, includes the 73-story Moscow Tower and its 62-story companion, Saint Petersburg Tower.

Living large

Capital City is an elegant combination of luxury and function at the heart of Moscow just four kilometers from the Kremlin. High-scale apartments fill the middle and upper segments of the 62 and 73-story twin towers of Capital City. The lower portions of the buildings house office space and a retail center, in addition to a full spa and numerous restaurants, bars and cafés.

With its multi-story base and two skyscrapers, Capital City is a massive building by any standards. For KONE Russia, it has been the biggest project to date both in size and number of elevators. A total of 50 elevators and six escalators were installed to ensure smooth flow of people throughout this multifaceted complex.

High-tech all the way

In addition to using KONE's remote elevator and escalator monitoring and management software, KONE E-Link™, Capital City has the latest in access and destination control systems. These systems help manage traffic to ensure the best possible service level with minimal passenger wait times.

Among the 50 elevators is something new. Capital City is the first building in Russia to feature KONE DoubleDeck elevators. Four KONE DoubleDeck elevators have been installed in the residential towers to boost traffic flow capacity.

Speed, comfort, style, as well as safety are strong themes throughout in the design of Capital City. Top of the line technical solutions from KONE combined with high-end decorum make the end user experience a dream.

Commitment to customer

To get a solid hold on the Capital City project, KONE appointed two project managers, and assigned specific responsibilities to each. KONE supervisors were also selected for each installation subcontracting company. And for good measure, a very experienced KONE expert was hired as a quality engineer to handle quality control.

SUMMARY

Challenge

- To install complex elevator and escalator solutions for multi-purpose skyscrapers, working together with general contractor Ant Yapi

Solution

- Use the latest KONE elevator technology, including KONE DoubleDeck solutions, to maximize speed and capacity
- Install integrated access and destination control systems

FAST FACTS

Capital City

- Multi-purpose buildings: residential, offices and retail
- 2 towers: 73 and 62 stories
- Maximum speed: 7 m/s
- General Contractor: Ant Yapi (Turkey)
- Architect: NBBJ (Seattle and Moscow offices)
- Engineer: Arup (UK)
- Developer: Capital Group (Russia)

KONE Solutions

- 35 KONE MonoSpace® Special elevators
- 6 KONE MiniSpace™ elevators
- 5 KONE TranSys™ freight elevators
- 4 KONE DoubleDeck elevators
- 6 KONE ECO3000™ escalators
- KONE Polaris™ destination control system



LUCAS OIL STADIUM – INDIANAPOLIS, INDIANA, USA

Maintenance team makes a difference

The demanding logistics of a world-class sports facility leave no margin for error. Serving crowds of 70,000 in concentrated bursts, the building transportation systems must deliver efficient People Flow™ – and that means maintenance specialists must be at the top of their game all day, every day.





Home to the American National Football League's (NFL) Indianapolis Colts, Lucas Oil Stadium (LOS) is a state-of-the-art, multi-purpose facility linked to a newly expanded convention center, hotel and entertainment district. With seating capacity up to 70,000, LOS offers an exciting venue for high-profile events, such as the 2012 NFL Super Bowl, in Indianapolis, Indiana.

Relentless attention to detail

"Well before the first kick-off in 2008, our KONE service team began developing its partnership to secure a smooth equipment transition from installation to game day operations," comments **Ryan Schenk**, Account Manager for KONE.

To ensure that equipment is at the highest level of readiness during peak demand, approximately 75 percent of the stadium's preventive maintenance is conducted monthly during the professional football season. Such relentless attention to detail anticipates specific needs of equipment in an aggressive-use environment.

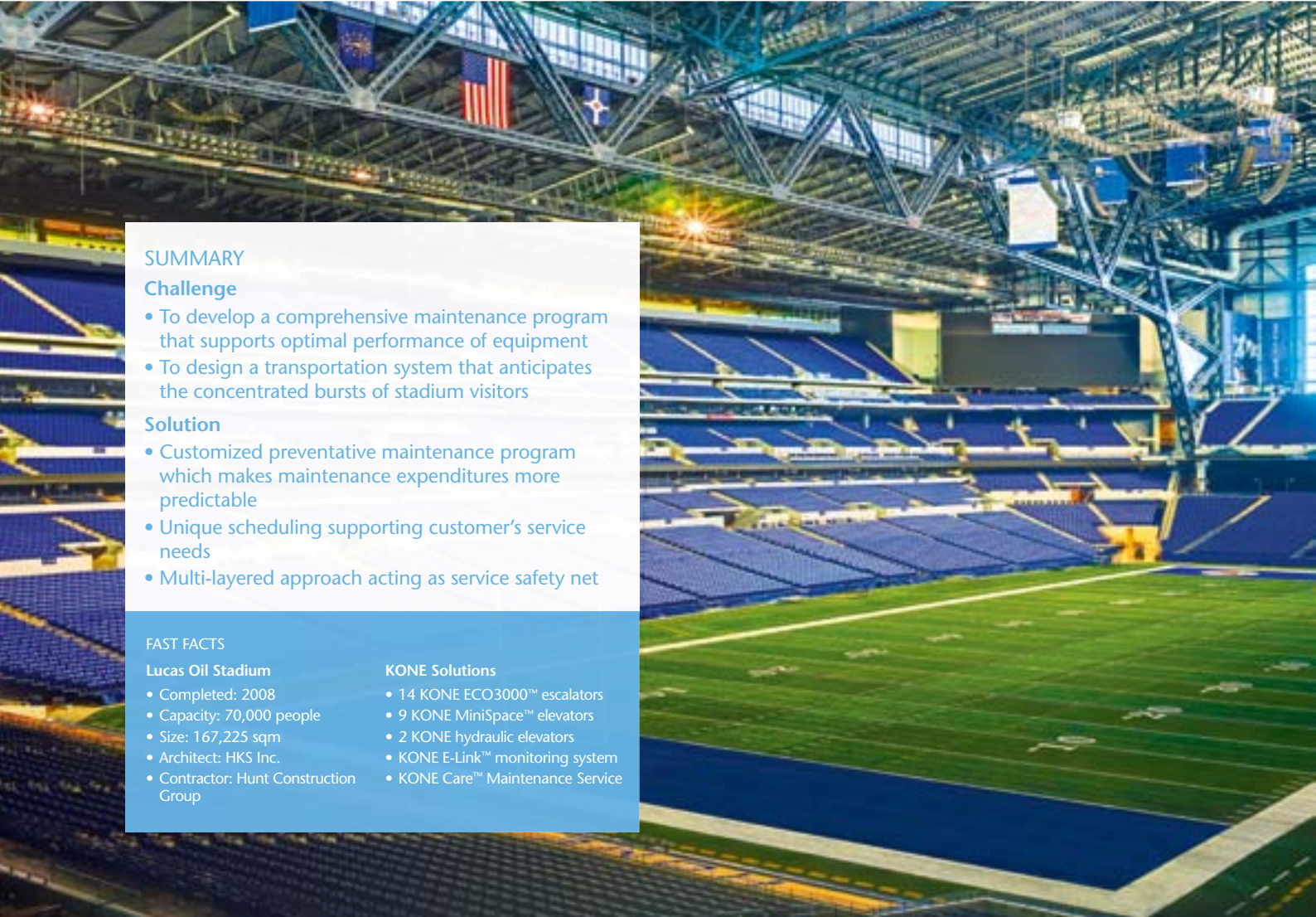
A total of 28 energy-efficient elevators and escalators undergo 324 hours of maintenance each year. The KONE Care™ maintenance agreement targets equipment needs with a uniquely responsive schedule, covering all maintenance visits, service calls and large repairs. Additionally, two levels of KONE management conduct equipment audits for quality assurance.

Preparation guarantees readiness

Pre-event inspections and advance problem resolution are conducted prior to each game. Every component of each piece of equipment is examined at the proper frequency in accordance with building usage and environment.

Because the equipment is operating at full capacity, bottlenecks, lines and crowding are minimized. Technicians also provide stand-by support on game day, ensuring immediate response to any equipment needs.

The stadium is serviced by a dedicated team of technicians. Each team member receives specialized training aligned with the equipment types, maximizing strong skill sets.



SUMMARY

Challenge

- To develop a comprehensive maintenance program that supports optimal performance of equipment
- To design a transportation system that anticipates the concentrated bursts of stadium visitors

Solution

- Customized preventative maintenance program which makes maintenance expenditures more predictable
- Unique scheduling supporting customer's service needs
- Multi-layered approach acting as service safety net

FAST FACTS

Lucas Oil Stadium

- Completed: 2008
- Capacity: 70,000 people
- Size: 167,225 sqm
- Architect: HKS Inc.
- Contractor: Hunt Construction Group

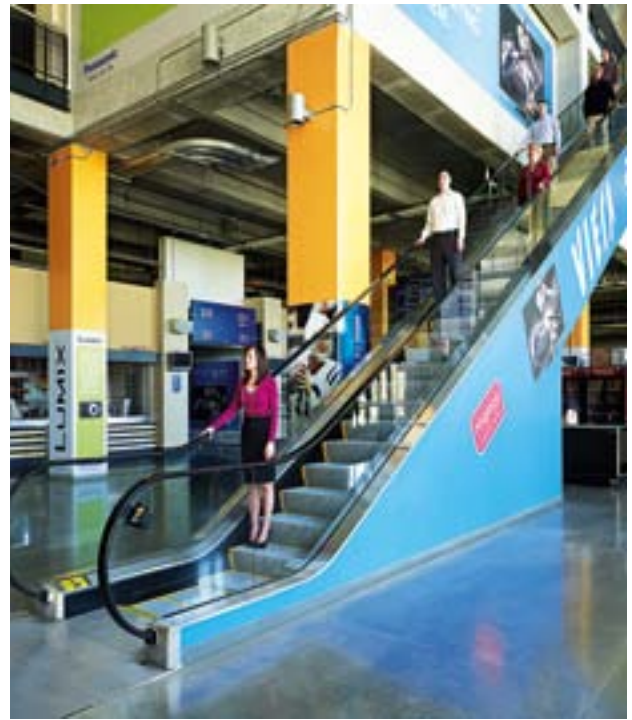
KONE Solutions

- 14 KONE ECO3000™ escalators
- 9 KONE MiniSpace™ elevators
- 2 KONE hydraulic elevators
- KONE E-Link™ monitoring system
- KONE Care™ Maintenance Service Group

Focused monitoring

KONE equipment in the stadium is connected to KONE E-Link™, an advanced monitoring system that provides real-time information on the status of elevators and escalators and statistical reports on performance. It also allows segmented use of the facility through lock-off access controls.

A dedicated workstation in the stadium's building control room allows building managers to monitor elevators and escalators at all times. If there is a problem, managers can easily spot the location and call a KONE service technician for immediate troubleshooting.



Green business is good business

Building a new shopping mall is never an easy assignment. Positioning of the anchor stores and making sure that pedestrian traffic flows evenly through all retail outlets are just some of the considerations. But these days, environmental responsibility is just as important.

The construction of 313@somerset, a premier retail shopping mall in Singapore, was on a fast track from the beginning. The mall has eight floors in total and accommodates 177 retail outlets. Easy access is possible from the basement level, which has a direct link to the Somerset MRT metro station.

Thorough planning and scheduling

313@somerset, managed by Lend Lease, was planned and built with people flow clearly in mind. KONE carried out a comprehensive traffic planning analysis to determine the optimal number of elevators and escalators to effectively cater to the needs of shoppers.

However, actual construction of the shopping mall required a bit more planning. Not only did the Stamford Canal run through the core of the property; but the local metro station was open during the entire construction process, moving approximately 55,000 commuters per day, all walking past the construction site.

Structural design constraints and waterproofing concerns resulted in challenges to the schedule. It was necessary that all project teams worked together to assure check point and handover timetables were completed as agreed. As **Murray Woolcock**, Project Director, Project Management & Construction, Lend Lease, pointed out: "With such a time challenged and complex project, it takes an understanding and collaborative partner to have achieved our demanding objectives."

All about the flow

In a shopping mall where traffic is heavy throughout the day, it is essential that a maximum flow-through of people is made possible with minimal effort. Shoppers need to easily find the stores they want, and depart the complex with ease. Seamless integration of elevators and escalators based on estimated incoming and outgoing traffic help to ensure that not only do shoppers have a positive retail experience but store owners benefit as well.

Sustainability as cornerstone of design

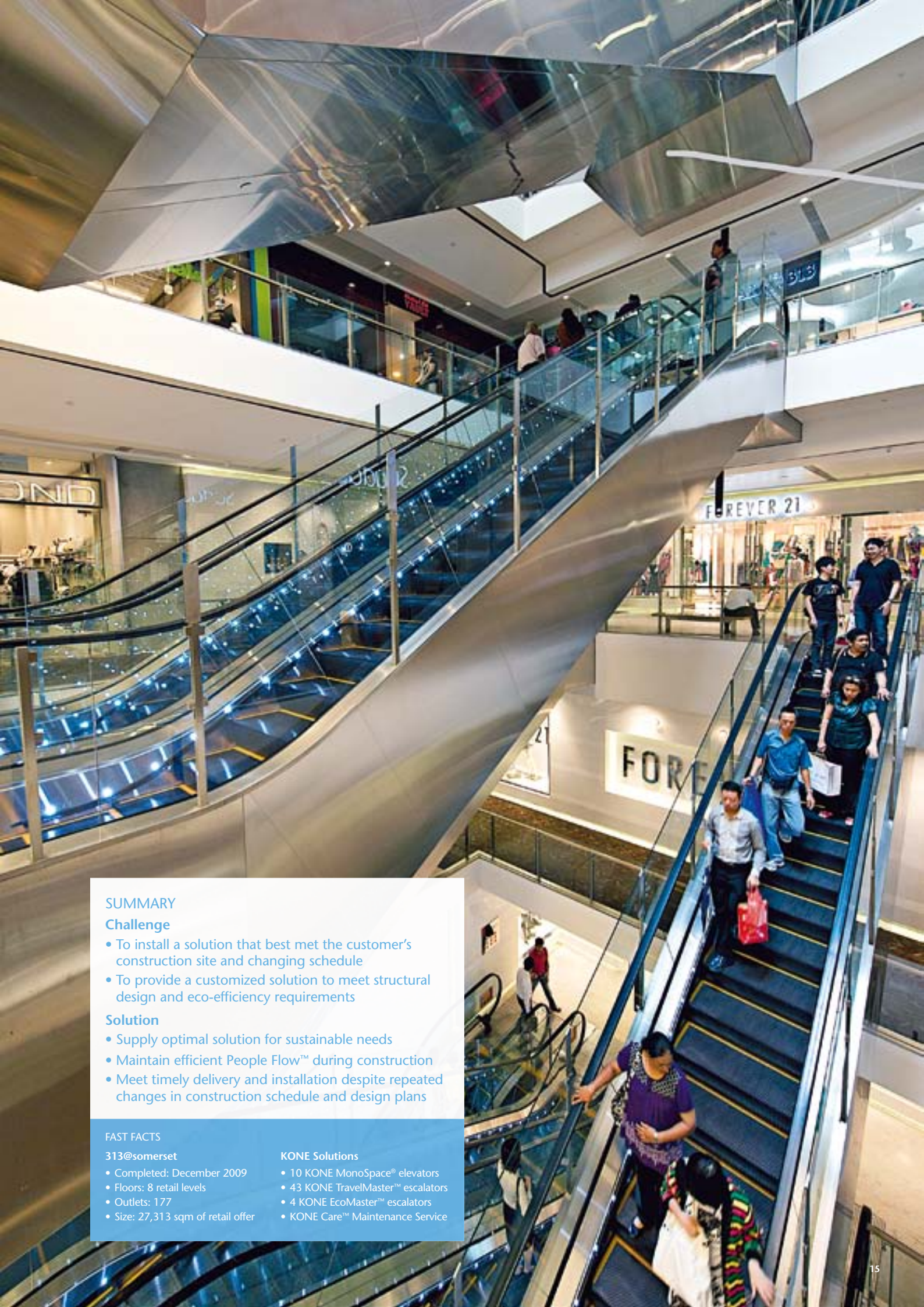
First impressions are important in the retail environment. KONE was able to meet and exceed customer expectations by delivering customized products that met capacity needs of the retail center plus were energy efficient, playing an important role in reducing the carbon footprint of the shopping mall.

To support the mall's green credentials, KONE installed 10 energy-saving KONE MonoSpace® elevators. These elevators save up to 25 percent of the energy consumed by a typical elevator. To further enhance the reduction of carbon footprint in the building, escalators were equipped with variable speed drives that automatically put the equipment in stand-by mode during times of off-peak hours, helping to significantly lower energy costs.

Enticing design elements were also integrated into the delivered solutions. All KONE TravelMaster™ escalators feature energy-efficient LED white-skirt lighting. The potential savings can amount from 600 to 1500 kWh per year using LED lights and stand-by operation. These lights are not only a necessary safety provision, but they are also an attractive architectural feature of the retail center.

In 2009, 313@somerset was granted the BCA (Building & Construction Authority) Green Mark Platinum award, the highest recognition for environmentally friendly buildings in Singapore. BCA evaluates buildings for their environmental impact and performances.





SUMMARY

Challenge

- To install a solution that best met the customer's construction site and changing schedule
- To provide a customized solution to meet structural design and eco-efficiency requirements

Solution

- Supply optimal solution for sustainable needs
- Maintain efficient People Flow™ during construction
- Meet timely delivery and installation despite repeated changes in construction schedule and design plans


FAST FACTS

313@somerset

- Completed: December 2009
- Floors: 8 retail levels
- Outlets: 177
- Size: 27,313 sqm of retail offer

KONE Solutions

- 10 KONE MonoSpace® elevators
- 43 KONE TravelMaster™ escalators
- 4 KONE EcoMaster™ escalators
- KONE Care™ Maintenance Service

A photograph of the Hongqiao Transport Hub in Shanghai, China. The image shows a multi-level structure with glass railings and escalators. The architecture is modern and sleek, with a focus on glass and metal. The lighting is bright, and the overall atmosphere is clean and futuristic. A person is visible on an escalator in the foreground, and other people can be seen on different levels in the background.


HONGQIAO TRANSPORT HUB – SHANGHAI, CHINA

Gateway to China's future

With an annual passenger turnover predicted to exceed 50 million by 2020, China's newest and largest travel hub puts a new spin on the concept of mass transit.




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SUMMARY

Challenge

- To provide reliable and integrated elevator and escalator solutions within a very strict time frame for a complex infrastructural development, while ensuring uninterrupted traffic in an already-busy travel hub

Solution

- A seamlessly integrated package of reliable and spacious elevators, escalators and autowalks
- Efficient and flexible project management
- Highly responsive 24 hour maintenance package

FAST FACTS

Hongqiao Transport Hub

- Completed: 2010
- Flow:
 - 40 million air passengers yearly
 - 140 million rail passengers yearly
 - 1.1 million people daily
- Land area: 26 sqkm

KONE Solutions

Hongqiao Airport (Terminal 2):

- 99 KONE MonoSpace[®] elevators
- 64 KONE TransitMaster™ escalators
- 32 KONE TravelMaster™ escalators
- 40 TransitMaster™ autowalks
- KONE E-Link™ monitoring system
- KONE Care™ Maintenance Service

Hongqiao Station

- (Beijing-Shanghai express railway)
- 115 KONE TransitMaster™ escalators



Opened for the 2010 World Expo, the Hongqiao Transport Hub is one of the world's most uniquely integrated transport centers. Covering a land area larger than 26 square kilometers, it comprises Hongqiao Airport and serves as an interchange for five subway lines, a bullet train to Beijing and the Maglev Train connection to Pudong Airport.

Well thought-out investment

With the world's eyes turning to Shanghai for the 2010 World Expo, China was eager to complete the project in time to guarantee 80 million Expo visitors an unforgettable ride. KONE was selected to deliver a complete solution consisting of more than 400 units of elevator and escalator equipment for this mammoth, fast-paced project.

Flexible, efficient project management was crucial not only because of the project's massive scale, complexity and extremely strict deadline, but also due to the challenging location. Installation was carried out in an already-busy area of China's most populous city, right next to an operational airport.

Easing the flow and beating bottlenecks

People-focused design is the key to assuring smooth transit in a hub as complex as Hongqiao, which serves a population larger than that of most countries.

With seamless integration of 350 spacious elevators, escalators and autowalks, KONE delivered a user-friendly solution enabling people to move through the hub smoothly, safely and without disruption – at all times of the day and night.

KONE TransitMaster™ escalators and autowalks were the ideal solution for the project's extensive infrastructure. The 155 autowalks are positioned so that walking distances never exceed 300 meters, and transit between the airport and rail connections should never take longer than 15 minutes.

With tens of millions of people using the hub every year, even the briefest downtime can cause serious bottlenecks. KONE's reliable solutions are complemented by extensive support services and a fast-response maintenance team on hand 24 hours a day.

Solutions for a lifetime

In addition to new solutions, KONE also provided modernization services in the older part of the Hongqiao Airport terminal. These incorporate contemporary design features and include a special scenic elevator designed in collaboration with the architect.

Towering above energy efficiency benchmarks

Completed in late 2009, OpernTurm is one of Germany's most heralded buildings due to its stunning, spacious design and prime location. It is also considered one of the most rentable properties in Frankfurt.

OpernTurm is located at the historically-important Opernplatz, an enviable location in downtown Frankfurt. The complex comprises a 170 meter skyscraper and a 28 meter low-rise perimeter development, both accessible by an 18 meter-high lobby. The building's unique façade, clad in elegant natural stone, enables it to meld smoothly with the protected historic opera house opposite it, as well as with the other buildings of the square.

Thinking efficiently

OpernTurm is turning heads in Europe thanks to its energy efficiency. Two of KONE's elevators have achieved A-class energy certification adhering to the VDI 4707 guideline created by the German Association of Engineers. This merit denotes an extremely high level of efficiency and performance. And overall, the building consumes 23 percent less energy than the German government's EnEV 2007 energy regulation.

The high-rise is certified as one of the first office buildings in Europe with the environmental standard Leadership in Energy and Environmental Design (LEED) Gold – a standard for environmentally friendly and resource-efficient construction.

Particular challenges

Implementation of the 15 KONE MiniSpace™ elevators in the tower area, and 8 KONE MonoSpace® elevators in the lower area was carried out without a hitch.

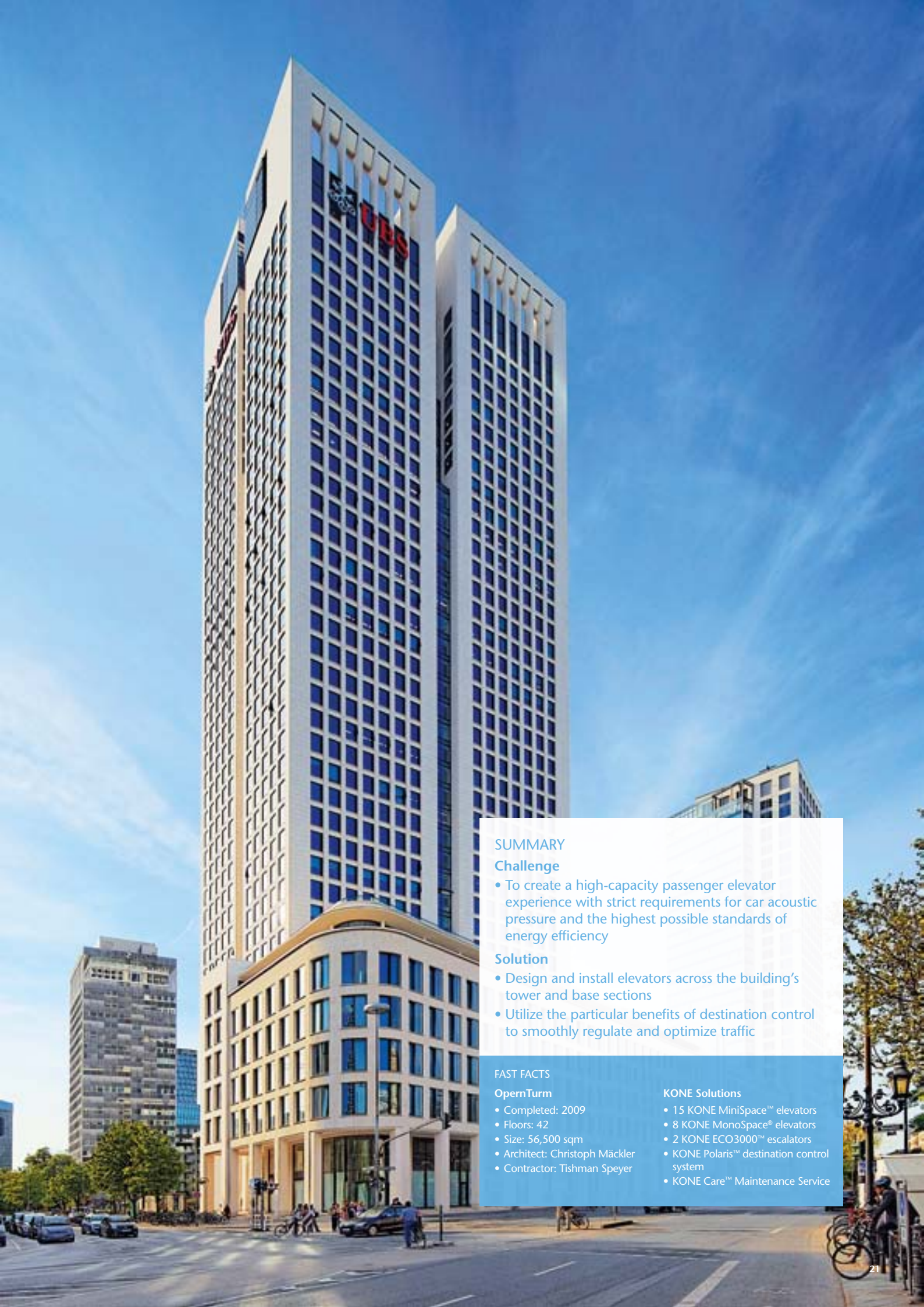
In terms of challenges, optimizing the anticipated high traffic capacity of the elevators was essential. KONE designers skillfully engineered a solution that succeeded in carrying the required traffic, combining the four lower-floor elevators and the six upper-floor elevators into a group of ten elevators on the entrance levels. The KONE Polaris™ destination control system played a critical role in optimizing elevator traffic throughout the building. Another important consideration was the car design, which required the installation of walls and a floor made of natural stone and the car operating panel made of bronze-colored brass.

Acoustic pressure both inside and outside the car doors had to be carefully controlled. And devising the size and location of machine rooms for the high-rise elevators took time and careful planning; compact KONE MiniSpace units provided the optimal solution.

Working toward the same goal

Collaboration between KONE and the client went smoothly. KONE saw to a seamless integration of the elevator installation with the construction of the rest of the building. The partnership continues with a KONE Care™ maintenance contract.





SUMMARY

Challenge

- To create a high-capacity passenger elevator experience with strict requirements for car acoustic pressure and the highest possible standards of energy efficiency

Solution

- Design and install elevators across the building's tower and base sections
- Utilize the particular benefits of destination control to smoothly regulate and optimize traffic

FAST FACTS

OpfernTurm

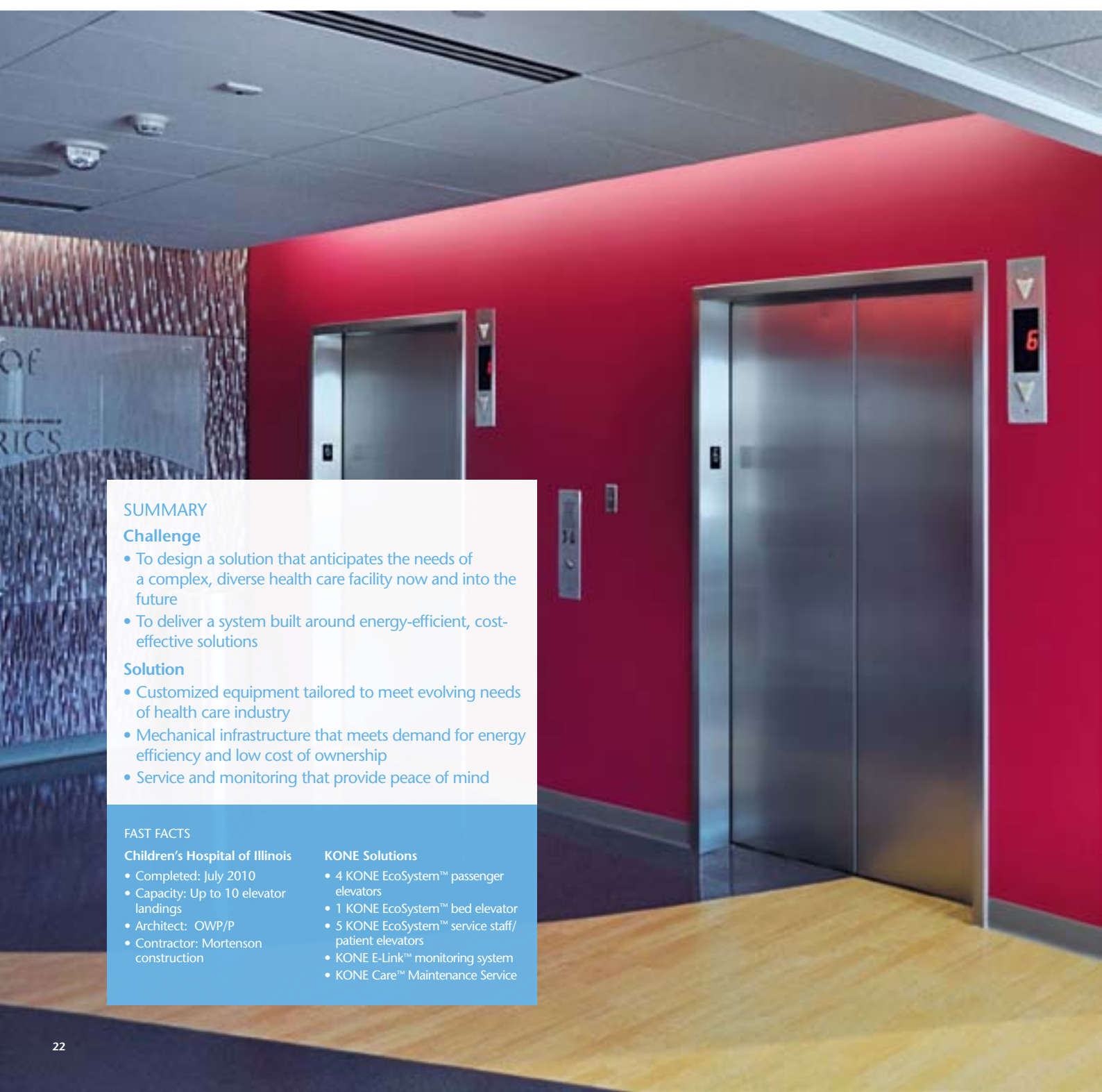
- Completed: 2009
- Floors: 42
- Size: 56,500 sqm
- Architect: Christoph Mäckler
- Contractor: Tishman Speyer

KONE Solutions

- 15 KONE MiniSpace™ elevators
- 8 KONE MonoSpace® elevators
- 2 KONE ECO3000™ escalators
- KONE Polaris™ destination control system
- KONE Care™ Maintenance Service

Best in care all around

Modern health care facilities are supported by highly sophisticated systems – and that includes vertical transportation. Open around the clock, hospitals demand fast and safe movement of people in an environment that must be sensitive to both technological and human needs.



SUMMARY

Challenge

- To design a solution that anticipates the needs of a complex, diverse health care facility now and into the future
- To deliver a system built around energy-efficient, cost-effective solutions

Solution

- Customized equipment tailored to meet evolving needs of health care industry
- Mechanical infrastructure that meets demand for energy efficiency and low cost of ownership
- Service and monitoring that provide peace of mind

FAST FACTS

Children's Hospital of Illinois

- Completed: July 2010
- Capacity: Up to 10 elevator landings
- Architect: OWP/P
- Contractor: Mortenson construction

KONE Solutions

- 4 KONE EcoSystem™ passenger elevators
- 1 KONE EcoSystem™ bed elevator
- 5 KONE EcoSystem™ service staff/patient elevators
- KONE E-Link™ monitoring system
- KONE Care™ Maintenance Service



Completed in July 2010, Children's Hospital of Illinois at OSF, Saint Francis Medical Center, is the only full service children's hospital in Illinois outside the Chicago area. This hospital within a hospital is the majority of a new eight-story building (40,877 square meters) that offers comprehensive health care to children on the OSF Saint Francis campus in Peoria, Illinois.

Demanding environment

Health care facilities have unique needs when it comes to ensuring a smooth flow of people. Hospitals cater to a diverse audience of patients, visitors, staff and material at all hours. Periodic traffic spikes at mealtimes and during visiting hours must be absorbed smoothly. Furthermore, the hospital is accessed from literally every side, including the roof, which is home to the hospital's heliport.

The nature of the facility introduces additional challenges when planning vertical transportation systems. Medical equipment is big and getting bigger. Common surfaces and finishes must be durable, visually soothing and easy to clean. Lower cost of ownership throughout the lifetime of the equipment is also an important factor.

Custom-fit solutions

Specialized KONE EcoSystem™ elevators were tailored to serve various mobility requirements. The shining star at OSF Saint Francis is a custom-designed bed elevator. Designed by KONE specifically for this installation, the hospital's bed elevator has a capacity of 5,000 kilograms and is accessed by a two-speed center opening for rapid access. With platform space of more than 9 square meters, the bed elevator can easily accommodate a gurney, medical personnel and multiple pieces of equipment.

The hospital is also served by four 25-person capacity passenger elevators and four 40-person capacity staff/patient elevators. Custom cabins made of stainless steel and bronze woven mesh in the passenger elevators and a revolutionary surface application in the staff elevators create modern, durable finishes. An additional service elevator covers every floor of the building, from the mechanical room to the rooftop heliport.

Energy-efficient, heavy-duty drives and hoisting systems deliver cost savings and premier ride quality for specialized equipment. Accurate leveling of the elevator and the landing floor improves safety, comfort and ease of use, especially important when transporting patients.

A complete approach

Preventive care is the key to equipment maintenance in the health care environment, where elevators must operate without interruption 24/7. As part of a campus served entirely by KONE maintenance, the new building benefits from KONE's modular based maintenance solution. This service takes into account the hospital's numerous technical characteristics and customer-specific requirements. Highly trained KONE service technicians are available to solve problems before they lead to downtime.

All KONE equipment at OSF Saint Francis and Children's Hospital is connected to facility security systems as well as to KONE E-Link™, an advanced monitoring system that provides real-time information on the status of elevators and statistical reports on performance.





INTERNATIONAL FINANCE CENTER – SHANGHAI, CHINA

The sky's the limit

Shanghai's International Finance Center (IFC) is an architectural statement matching the city's dramatic rise as an economic powerhouse. Customized KONE DoubleDeck elevators complement this marvel of modern engineering.





Located in the Lujiazui financial district in Pudong, the Shanghai IFC is a striking complex of three ultra-modern buildings, the tallest of which measures 260 meters. This mixed-use commercial development will host offices, two high-end hotels and one of the most exclusive shopping malls in the city.

The Shanghai IFC is a landmark project not only for the city of Shanghai, but also for the developer, Sun Hung Kai Properties (SHKP). Winning this high-profile contract in mainland China was a major break for the Hong Kong-based company – and an important test of its capabilities.

Going the extra mile

Only the best international players and suppliers were used. KONE's global support system was a critical success factor in the project. Commitment and support came from all areas – quality, service, flexibility and after-sales. KONE was chosen for its ability to communicate with the technical consultants involved in the project and go the extra mile for the customer.

Numerous traffic analyses were conducted to help the customer optimize the flow of people in the building. KONE catered to all special requests, delivering an energy-efficient, high-speed 8 m/s solution with a compact, space-saving hoisting machine. The design of the elevator car interior was also tailored to the customer's specifications.

Conquering challenges

A milestone project in many respects, the Shanghai IFC is the first building in China equipped with KONE DoubleDeck elevators. Two floors are served simultaneously, which triples traffic handling capacity during rush hours.

Already a technical challenge, the project was also demanding in its schedule. A task that would normally take five months had to be completed in two. KONE nevertheless delivered ahead of the target date.

According to SHKP, the KONE team responded promptly and efficiently to any complications at the site.

The IFC project is yet another example of KONE's solid project management procedures and experience in serving the world's high-rise markets.

SUMMARY

Challenge

- To deliver a customized, space-efficient, high-speed solution for a high-profile landmark site on an extremely tight schedule

Solution

- Customized design and installation of special high-speed KONE DoubleDeck elevators for both passenger and service use
- Intensive collaboration with the customer to optimize the flow of people in the building

FAST FACTS

International Finance Center

- Completed: Tower 1 in 2009, Tower 2 scheduled for completion in 2011
- 3 buildings: 260, 250 and 85 meters high
- Architect: Pelli Clarke, Pelli Architects
- Developer: Sun Hung Kai Properties (SHKP)

KONE Solutions

- 83 KONE MiniSpace™ elevators
- 16 KONE MonoSpace® elevators
- 4 KONE DoubleDeck elevators
- KONE Care™ Maintenance Service



ASHOK TOWERS – MUMBAI, INDIA

Making a mark in India

Mumbai is known as India's "city of dreams" and home to a growing population of over 14 million people. In order to cope with this significant influx, the city is constantly developing – be it a new sky walk, metro, overpass or high-rise adorning its skyline.



The latest in a line of Mumbai's urban marvels are the prestigious Ashok Towers located in South Mumbai's Parel region. The remarkable construction comprises four residential buildings: one boasts 54 floors; the other three are 34 floors each; totaling slightly over 103,000 square meters of space.

Efficient construction-time solution

The project was completed on a fast track basis within a pressing two and a half year time frame. KONE used a stage installation method to advance construction work. Three temporary platforms were utilized.

Stage installation allowed the KONE team to work on the elevators while the building itself was constructed. This method reduced the overall installation time as installation of the elevators started before the machine room was even constructed. The building owner also received clearance to work on the lobby area in advance. Installation work was done concurrently with the builders – utilizing a shared infrastructure.

Increased performance

Efficiency is both a method and a goal within itself. KONE has taken this message seriously.

KONE MiniSpace™ elevators provided a highly competitive and eco-efficient solution for the building. The compact KONE MiniSpace concept has a small machine room and utilizes KONE EcoDisc® gearless technology that is up to 70 percent more energy-efficient than conventional elevator solutions.

Each elevator incorporates a conventional group control system with an Uninterrupted Power Supply (UPS) setting. This setting ensures that if an elevator stops in the middle of two floors due to a power cut, UPS will sense the interruption and automatically supply necessary power to the elevator. The elevator will then stop at the nearest floor so that passengers can be let out safely.



Customer satisfaction an attainable goal

The KONE team delivered an outstanding solution. The elevators safely move up 180 meters in 50 to 55 seconds. The most frequent compliment from users is that the ride is extremely comfortable.

As KONE's Project Manager, **Gyan Singh**, admires the construction, he smiles and explains: "The tallest of the Ashok Towers is one of the highest residential buildings KONE has ever worked on in India."

SUMMARY

Challenge

- To construct a multi-functional high-rise building in Mumbai using a shared infrastructure among many project teams
- To install elevator solutions which save space and improve handling capacity and passenger comfort

Solution

- Efficient stage installation method during construction-time, reducing installation time
- High-speed and energy-efficient elevators transporting residents and guests quickly and comfortably to their destinations

FAST FACTS

Ashok Towers

- Size: 103,193 sqm
- Floors: 3 towers 34 floors, 1 tower 53 floors
- Architect: Kapadia Associates Pvt Ltd
- Contractor: M/s B E Billimoria & Co

KONE Solutions

- 21 KONE MiniSpace™ elevators
- Stage installation method

Quality of life

The elderly residents of Calle Calatrava 13, a historical building in central Madrid, used to have a painful choice – take the stairs or forgo the errand. With a new elevator, they now have peace of mind and newfound independence.

Calatrava 13 is beautiful example of early 20th century Spanish residential architecture. Apartments line the perimeter of the building, interconnected by passageways that lead to a central courtyard. This particular building is under historical protection, so the elevator solution could not impact the original architecture.

Preserving history downtown

Installation of an elevator had become an urgent priority. The project came at the request of the residents, who had to rely on neighbors to perform daily tasks such as going shopping, taking out trash or just going out for a walk.

To minimize the impact of a modern elevator on the architectural heritage of the building, KONE installed the elevator in the central courtyard. KONE MonoSpace[®] with a glass panel design was the elevator of choice. The absence of a machine room allowed for greater design freedom and saved on construction costs.

Being located in the center of Madrid brought the typical logistical problems of downtown projects due to heavy traffic and narrow streets. The installation needed to be simple, clean and quick. Using its fast track process, KONE completed the project within just six months, from March to August 2010.

KONE provided additional work, constructing the shaft where the elevator would be installed, as well as making improvements to electrical system of the building in order to supply power to the elevator.

Resident expertise

One of the residents, **Hector Salas de la Hera**, was also the project architect. This really was an unusual aspect of the project, as the project implementation was closely controlled and monitored by de la Hera. And this surely contributed to the fact KONE met all deadlines and quality requirements.

“As an architect,” says de la Hera, “this elevator solution fits well with the existing elements of the community. Choosing an aesthetically pleasing design which incorporated a panoramic glass wall on one side was definitely the right choice.”

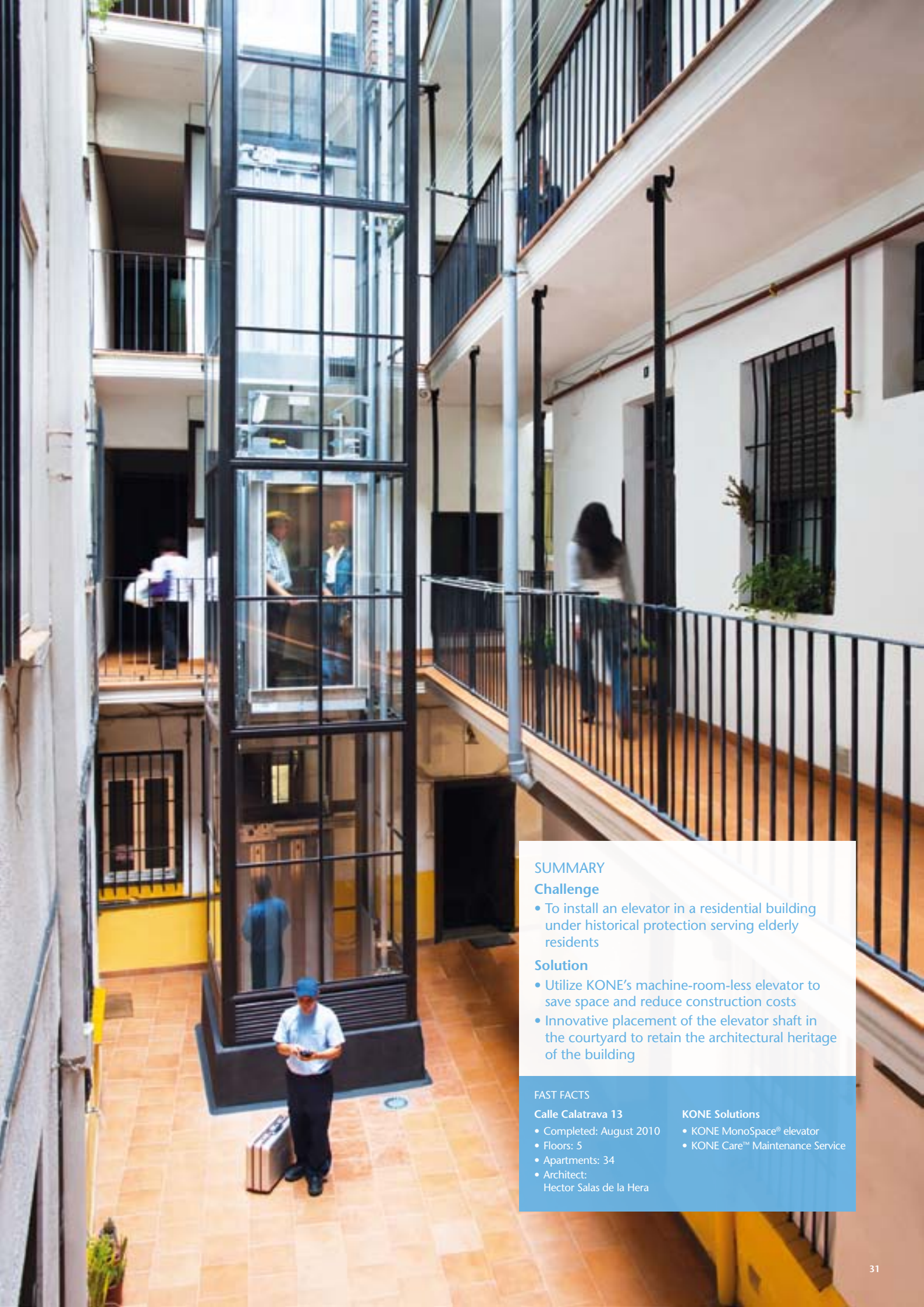
Meaningful change

Residents are pleased. The new elevator means they are more independent and can enjoy a social life.

“I can tell you that it has been of fundamental importance to their daily life and clearly has reduced their stress,” comments de la Hera after talking to neighbors.

KONE will handle all maintenance of this new elevator as part of the KONE Care[™] maintenance agreement to ensure the residents of Calatrava 13 continue to enjoy their new quality of life.





SUMMARY

Challenge

- To install an elevator in a residential building under historical protection serving elderly residents

Solution

- Utilize KONE's machine-room-less elevator to save space and reduce construction costs
- Innovative placement of the elevator shaft in the courtyard to retain the architectural heritage of the building

FAST FACTS

Calle Calatrava 13

- Completed: August 2010
- Floors: 5
- Apartments: 34
- Architect: Hector Salas de la Hera

KONE Solutions

- KONE MonoSpace® elevator
- KONE Care™ Maintenance Service



FOODCOURT
RESTAURANTS

Foodcourt
Airline lounges 20-21
By invitation only

BC

Foodcourt
Airline lounges 20-21
By invitation only



SCHIPHOL GROUP – THE NETHERLANDS

Meaningful maintenance

KONE's customer commitment and excellent performance help Schiphol Group achieve its strategic objectives.

Schiphol Group has a clear vision: improve customer experience at their airports while at the same time reduce life-cycle costs. This is a challenge requiring top contractors. Schiphol Group selected KONE as its key maintenance provider for all Schiphol airports in the Netherlands, including Amsterdam Airport Schiphol, the fourth largest in Europe.

Proactive commitment

In 2005, KONE began servicing third-party equipment in addition to its own elevators at Schiphol Airport. After moving to a 24/7 year-round service model, KONE took over the entire equipment portfolio at the airport becoming the single service provider for elevators, escalators, doors, baggage systems and more.

Service performance is evidence of the commitment. Reliable operation of equipment is crucial for airports where any disruption in traffic flows can have a major impact on the entire airport. An on-site team that has extensive knowledge of all installations means KONE can get service personnel and materials to the right location in no time. "We can be anywhere in the airport within 30 minutes," emphasizes **Michiel Bos**, Schiphol Account Manager at KONE.

Planning is also a major part of the relationship. KONE address all aspects of development, from individual processes and tools for invoicing and reporting, to major equipment projects. "We go beyond the traditional performance measures," emphasizes Bos. "We tailor our services and take initiatives to the next level."

Customer insight

Schiphol and KONE work together on improvements by sharing visions, innovations and insights. "Without customer expertise, you cannot be a good supplier. With the right installation and right maintenance, you get the right functionality," says **Jos Scheffelaar**, Department Manager for Schiphol Terminal Real Estate.

"We can respond quickly as well as advise on future investments, offering solutions based on the life-cycle costs and the underlying causes of call outs," adds Bos.

KONE presented its KONE InnoTrack™ solution that would mean savings in construction, space and energy, not to mention freedom in locating autowalks. "But most of all, their trust in KONE and its international support team led them to choose our solution," recalls Bos.

Trust in the future

With a strong relationship based on quality performance comes a lasting confidence. "We are looking at the bigger picture, and offering a long-term partnership," remarks Bos. "Our transparent operations and open book policy mean there are no surprises for Schiphol. They know exactly what we do and why."

"We must optimize the accessibility and safety of all assets in our maintenance contract," remarks Scheffelaar. "We face the challenge of providing smooth connections for the passengers as well as getting our money's worth for Schiphol Group. Together with KONE, we believe this is an opportunity that we can benefit from."

SUMMARY

Challenge

- To take full control and responsibility of all equipment installations as opposed to being a basic maintenance provider handling service

Solution

- 24/7 first and second line call out support on site for all types of equipment, and when needed, off-site second line support for equipment other than elevators and escalators
- Complete open book policy with customer with regular short and long-term planning
- Single line of communication to Schiphol management through account management structure with tightly integrated site manager and project leaders

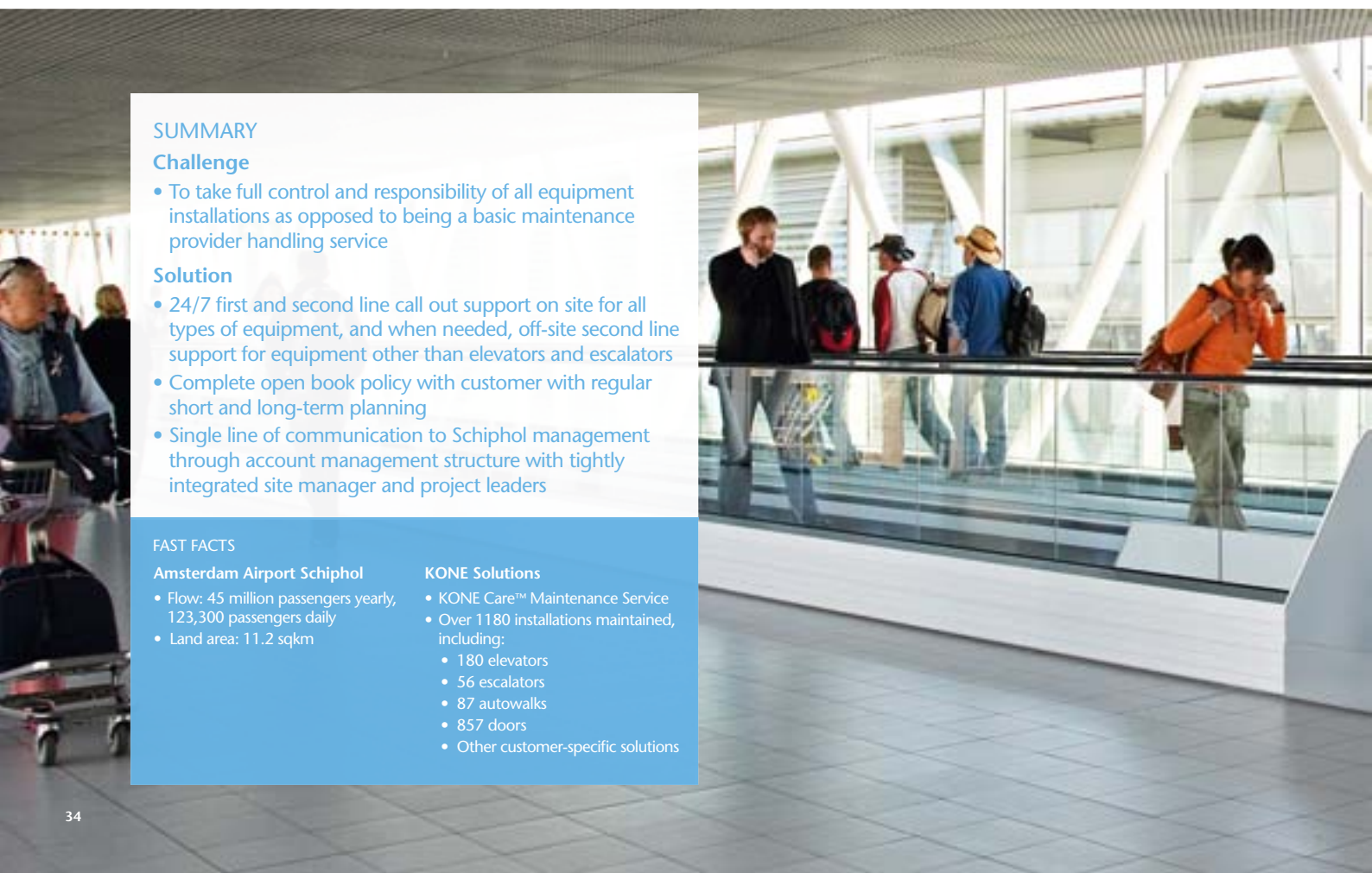
FAST FACTS

Amsterdam Airport Schiphol

- Flow: 45 million passengers yearly, 123,300 passengers daily
- Land area: 11.2 sqkm

KONE Solutions

- KONE Care™ Maintenance Service
- Over 1180 installations maintained, including:
 - 180 elevators
 - 56 escalators
 - 87 autowalks
 - 857 doors
 - Other customer-specific solutions





300 NORTH LASALLE – CHICAGO, ILLINOIS, USA

High performance in the Windy City

Located near the historic commercial center in Chicago, Illinois, the high-rise at 300 North LaSalle is a showpiece of urban architecture, state-of-the-art technology and eco-efficiency.

The 60-story office tower fits so elegantly into its environment that it's hard to imagine the city didn't grow around it. In fact, the tower opened for occupancy as recently as March 2009. Bordered on three sides by a river, a bridge and a public thoroughfare, the building site presented more than its share of logistical challenges.

Project management assures goals are met

A tight construction schedule of just 31 months necessitated exceptional collaboration among all parties. Those efforts balanced well with KONE's customer-centered approach. According to **Stephanie Calhoun**, Senior Project Manager of the Clark Construction Group, KONE successfully streamlined the process and made sure installation went in as efficiently and safely as possible.

The KONE project management team coordinated delivery schedules and logistical considerations with attention to detail. Monthly meetings with all key decision makers accelerated review and approval functions. And a demonstrated record of excellence in regulatory compliance helped KONE to obtain a certificate of occupancy in a timely manner. The 300 North LaSalle project was completed on time and within budget.

Enhanced elevator group functionality

Pulsating through the building, KONE elevators and escalators get office workers and visitors where they need to go – with minimal wait times, even during early morning and late afternoon rush hours.

To accommodate high daily traffic volume in a compact area, low-, mid- and high-rise elevator groups were designed to channel traffic and avoid congestion. Each of the three groups contains eight large-capacity passenger elevators. Banks of elevators serve specific floors, delivering maximum capacity fast.

Providing superior ride comfort within tight space constraints requires heavyweight solutions. KONE provided custom-engineered hardware that could handle demanding use with minimal wear and tear. Paired with quick, smooth door operation, the solution represents a premium experience in vertical transportation.

Committed to eco-efficiency

Awarded gold-level LEED certification, the tower at 300 North LaSalle demonstrates a progressive approach to sustainability in the urban high-rise environment. Thirty-one of the building's 32 elevators use KONE gearless hoisting technology. High-efficiency KONE EcoDisc® hoisting machines and regenerative drives boost sustainability through reduced energy use. Additionally, the building's two high-efficiency escalators feature gear technology that saves energy and lubrication-free step chains that don't require oil.

Strong professional relationships are at the heart of the success of the 300 North LaSalle project. KONE's relationship with the building owner continues as a long-term maintenance agreement, a full chain solution symbolic of KONE's experience and commitment to excellence.



SUMMARY

Challenge

- To meet an aggressive construction schedule
- To deliver an energy-efficient system enabling a smooth and efficient flow of people in a 60-story office tower

Solution

- Broad-based collaboration in a customer-centered approach
- Banks of elevators that channel traffic and avoid congestion
- Custom-engineered components designed to deliver ride comfort

FAST FACTS

300 North LaSalle

- Completed: 2009
- Floors: 60
- Contractor: Clark Construction Group

KONE Solutions

- 24 KONE EcoSystem™ passenger elevators
- 2 KONE EcoSystem™ service elevators
- 3 KONE MonoSpace® passenger elevators
- 1 hydraulic passenger elevator
- 2 KONE ECO3000™ escalators
- KONE Care™ Maintenance Service

Always an experience

The celebrated Danube Tower in Vienna has been a tourist magnet since it was constructed in the early 1960s. Standing at 252 meters, still it remains Austria's tallest free-standing structure, offering unique views of the city.

Along with the beautiful panoramic views, the Danube Tower has two revolving restaurants serving fine Viennese delicacies. Getting to the food and those lovely views has been remarkably fast. Two high-speed elevators ferry visitors up and down the tower in record time.

“After nearly half a century of faultless operation, the tower's elevators needed modernization,” says **Norbert Höllisch**, Project Manager from KONE Austria. “With this project, we've taken what was at the time (1962) Europe's fastest elevators and brought them into the 21st century.”

High-tech and eco-efficient

This was a very unique project, a first in the history of KONE Austria. Because the tower is a site of historic interest, there are special preservation requirements. The cabins had to be retro-designed to its original 1962 look with careful addition of today's state-of-the-art elements for safety and communication.

KONE DoubleDeck elevators equipped with energy-efficient KONE EcoDisc[®] hoisting machines were central to the success of this modernization. These heavy duty elevators are capable of carrying 15 persons each at a speed of 6.2 m/sec. The upper decks are used for transporting visitors, while the lower decks are used for carrying personnel and supplies for the restaurants.

Despite all the additional technology, the Danube Tower can not only boast one of Austria's first double-deck elevators, but also the first ever elevators in Austria to achieve energy class A (according to the VDI 4707 guideline created by the German Association of Engineers), saving up to 70 percent in energy compared to conventional elevators.

The new, air-conditioned cars feature a state-of-the-art information system allowing passengers to view things such as travel speed, altitude and restaurant menus on the ride up. The cars are fitted with glass ceilings allowing a thrilling view as visitors speed to the top.

A unique sway-detection system utilizing a pendulum mechanism helps to ensure smooth and reliable vertical travel. Safety has also been boosted in the new solution. The two elevators are also installed in a single shaft, which forms the basis of a special automatic rescue system. If one car gets stuck, the other car uses an auto-search and docking system to find that car and dock with it.

Smooth transition

The Danube Tower attracts close to half a million visitors a year. How do you modernize the elevators of such a busy tourist stop? Without functional elevators, the entire site would come to a halt. It was crucial to keep the site open during the project, not only for the sake of the visitors, but also the site employees. They could face termination if business stopped for the duration of the half-year modernization.

To ensure minimal disruption and a speedy installation, a solid year was spent carefully planning the modernization. The project itself was fully executed in just five months. Complete modernization had to be carried out after business hours (midnight – 10 am) to allow full operation of the site.

There was a small window of just 10 days during low season when the tower had to be closed to the public for safety reasons. KONE had to dismantle the old machine room and install the new machine room equipment plus the hoisting system in that short period of time.

KONE managed the entire project from beginning to end. The project was a complete success. All targets were met, and the project was completed almost a month ahead of schedule.

“Living up to a good partnership is mainly based upon a proactive communication,” says Höllisch. As a further sign of this strong partnership, KONE has entered into a comprehensive maintenance contract.



SUMMARY

Challenge

- To modernize elevators in a popular tourist attraction without disrupting normal operations

Solution

- Main modernization work during night hours
- Specially designed elevator cars and advanced information technology
- A-class energy classification with the help of KONE's eco-efficient hoisting technology and regenerative drive

FAST FACTS

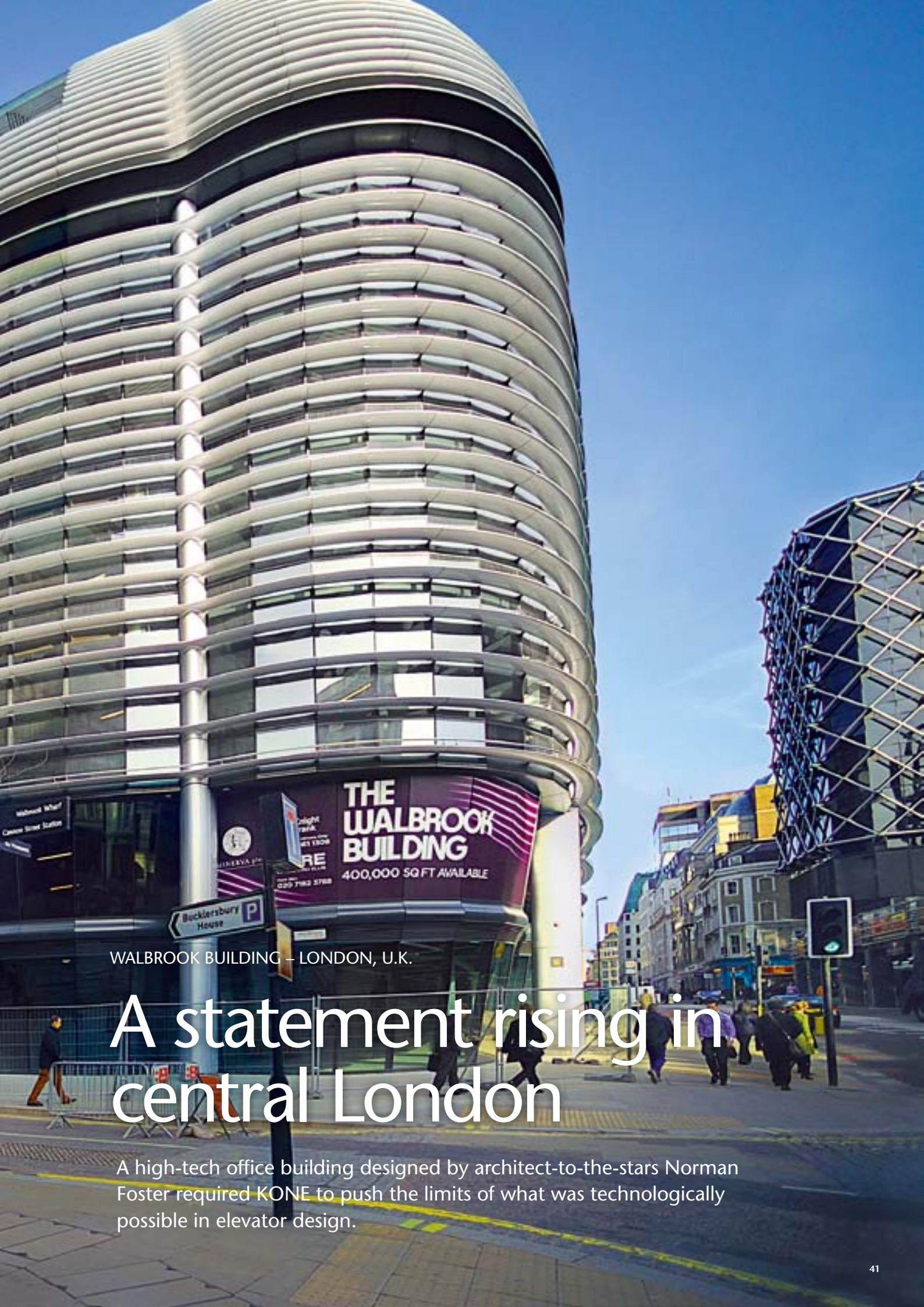
Danube Tower

- Tower height: 252 m
- Two restaurants: Donauwalzer (170 m) and Panorama (160 m)
- Visitors: 450,000 yearly

KONE Solutions

- 2 KONE MiniSpace™ elevators, of which 1 is a KONE DoubleDeck elevator
- Special software for automatic rescue system
- KONE Care™ Maintenance Service





WALBROOK BUILDING – LONDON, U.K.

A statement rising in central London

A high-tech office building designed by architect-to-the-stars Norman Foster required KONE to push the limits of what was technologically possible in elevator design.

Enter the Walbrook, whose lobby more readily calls to mind an art gallery than an office entrance, and KONE's customized elevators are the first things that capture the eye. Arranged in L-shape at the core of the building, KONE designed, constructed, installed and implemented 10 KONE MiniSpace™ scenic elevators featuring floor-to-ceiling glass that allows for direct viewing of the elevators' complex mechanisms. And each glazed, LED-illuminated car features reflective ceilings that provide the sensation of infinite empty space above.

The need to innovate

The fast-paced Walbrook project was a first for KONE, taking two years to complete and involving a series of on-the-go decisions and design solutions. The developer and architects conceived of and installed thousands of square meters of glass panels in the elevator lobbies, in addition to twelve floors of aluminum glazing and cladding inside the shafts. And thousands of unique LED narrow spectrum lights were integrated into the curved glass walls of the elevators.

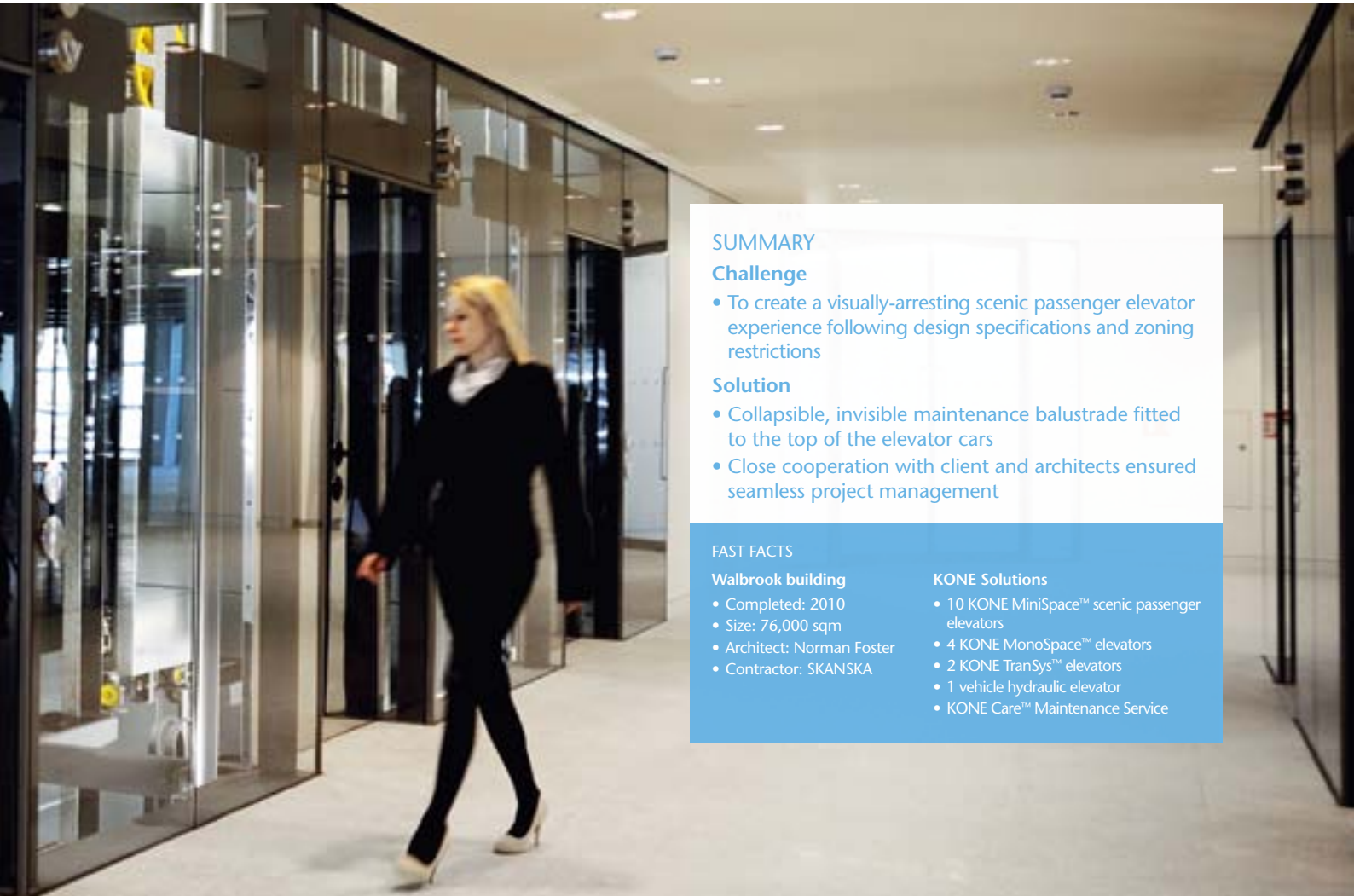
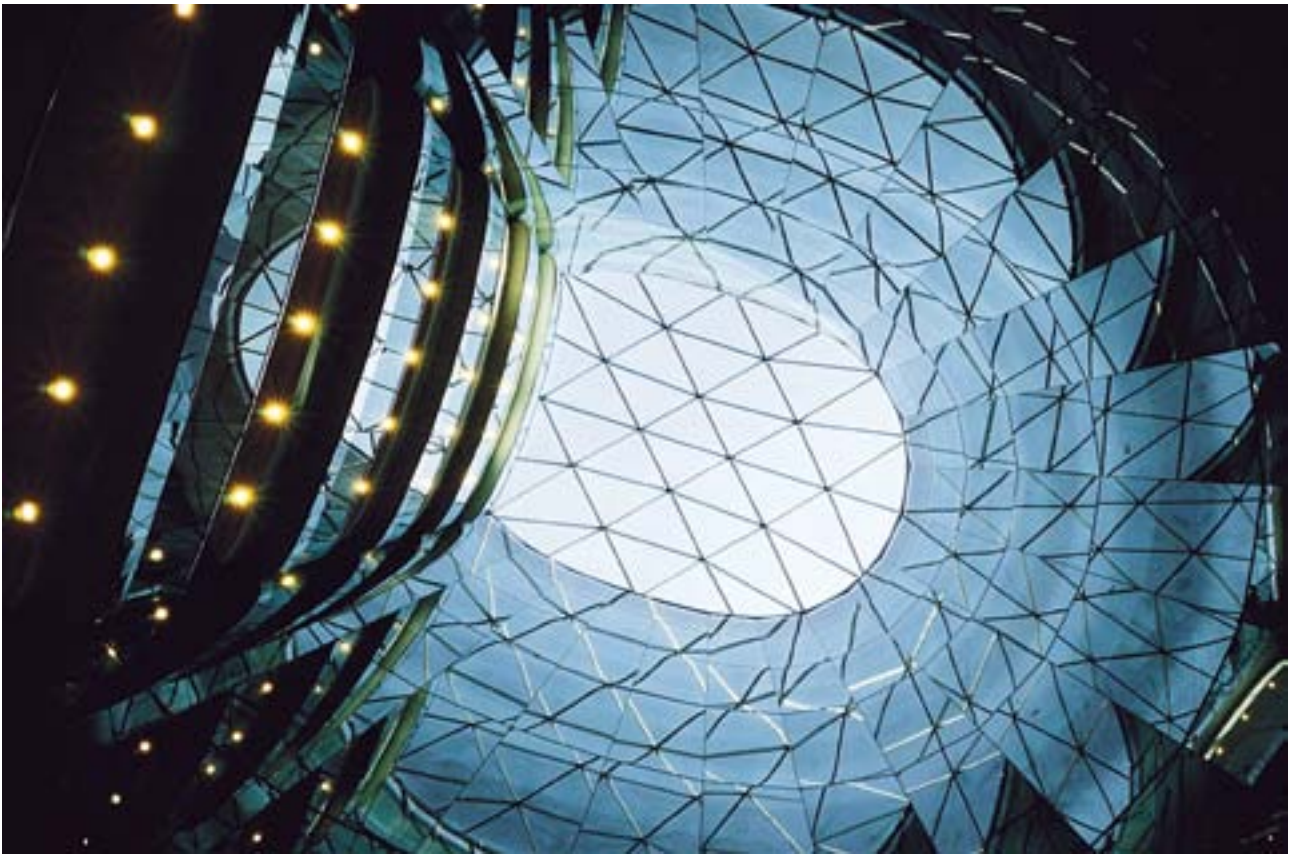
Despite the architects' vision calling for reduction in elevator speeds by some 50 percent in order to provide passengers a prolonged view of the illuminated elevators ascending and descending the scale of the building, KONE's solution enables the Walbrook to easily cope with projected public traffic.

Due to zoning restrictions on the building's height – it lies very near to St. Paul's Cathedral – KONE designed a special collapsible maintenance balustrade fitted to the top of each elevator car that would remain concealed during normal use. Furthermore, KONE specially manufactured the installation tooling locally in order to install the cars safely and without any damage. Due to the already outstanding efficiency of KONE equipment, there were no major energy-specific challenges to overcome during design and implementation.

Lessons learned and results

The Walbrook project reiterated the need for quality control of suppliers' material, and of the importance of client management and architects' involvement. Despite the challenges involved, KONE hit all major project milestones and deadlines, and both architects and client have again expressed continued interest in working with KONE on future projects.





SUMMARY

Challenge

- To create a visually-arresting scenic passenger elevator experience following design specifications and zoning restrictions

Solution

- Collapsible, invisible maintenance balustrade fitted to the top of the elevator cars
- Close cooperation with client and architects ensured seamless project management

FAST FACTS

Walbrook building

- Completed: 2010
- Size: 76,000 sqm
- Architect: Norman Foster
- Contractor: SKANSKA

KONE Solutions

- 10 KONE MiniSpace™ scenic passenger elevators
- 4 KONE MonoSpace™ elevators
- 2 KONE TranSys™ elevators
- 1 vehicle hydraulic elevator
- KONE Care™ Maintenance Service



KONE provides innovative and eco-efficient solutions for elevators, escalators and automatic building doors. We support our customers every step of the way; from design, manufacturing and installation to maintenance and modernization. KONE is a global leader in helping our customers manage the smooth flow of people and goods throughout their buildings.

Our commitment to customers is present in all KONE solutions. This makes us a reliable partner throughout the life-cycle of the building. We challenge the conventional wisdom of the industry. We are fast, flexible, and we have a well-deserved reputation as a technology leader, with such innovations as KONE MonoSpace® KONE MaxiSpace™, and KONE InnoTrack™. You can experience these innovations in architectural landmarks such as the Trump Tower in Chicago, the 30 St Mary Axe building in London, the Schiphol Airport in Amsterdam and the Beijing National Grand Theatre in China.

KONE employs approximately 34,000 dedicated experts to serve you globally and locally in over 50 countries.

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