

IMPROVING CITIES ONE PROJECT AT A TIME



KONE REFERENCES

KONE is proud to present these selected achievements from around the world. Join us on a journey through 2015.

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OTKRYTIYE ARENA – MOSCOW, RUSSIA

A NEW HOME FOR SPARTAK MOSCOW

As reflected in its resplendent red-and-white color scheme, the new Otkrytiye Stadium in Moscow is home to Spartak Moscow, one of the most emblematic soccer teams in Europe. It will also be one of the main venues for the 2018 FIFA World Cup.





SUMMARY

Challenge

- To deliver a top-quality, eye-catching solution for the high-profile Spartak Stadium project
- To ensure that the elevators would continue to work efficiently even in sub-zero temperatures
- To ensure continuous and smooth operation of the stadium and its transportation solutions

Solution

- High-end VIP elevators designed in red and white club colors, while standard elevators benefit from KONE's anti-vandal stainless steel finish
- A combination of heated seals and heaters and ventilators in the elevator shaft ensure the performance of the elevators during harsh Russian winters
- A five-year maintenance agreement, with regular preventive maintenance visits, ensures that equipment functions smoothly at all times

FAST FACTS

Otkrytiye Arena (Spartak Stadium)

- Completed: 2014
- Capacity: 45,000 seats
- Building owner: Leonid Fedun
- Developer: Lukoil
- Architect: Aecom
- Contractor: Stadion Spartak

KONE Solutions

- 4 KONE MonoSpace® 700 elevators
- 10 KONE TranSys elevators
- 6 KONE MonoSpace® 500 elevators
- 2 KONE TravelMaster™ 110 escalators
- KONE Care™ Maintenance Service



Echoing the sentiment of its iconic football club, Otkrytiye Arena boasts of a 'gladiator' style series of armor plates that fold over one another and fit the overall multi-curvilinear facade shape. Around 600 giant diamond-shaped shingles – similar to Spartak Moscow's logo – each measuring approximately 8m in width and 5m in height, cover the whole structure and provide a burst of color and energy to the sports stadium.

Inaugurated in September 2014, Otkrytiye Arena will host Spartak Moscow's home soccer matches, as well as those of the Russian national team. With seating for 45,000 spectators, it will also be a key venue for the FIFA Confederations Cup in 2017 and the FIFA World Cup in 2018. But hosting such large events, where thousands of people enter and exit the stadium all at once at a set time, requires meticulous planning, creative thinking and foresight. This is where KONE stepped in to ensure the smooth flow of people inside the stadium during events.

KONE will also conduct regular preventive maintenance visits as part of a five-year maintenance agreement to make certain its equipment functions smoothly at all times and to ensure that the flow of people is seamless during the stadium's biggest sporting events.

Attention to detail

"KONE has a strong brand in Russia, as the name stands for quality and excellent design," says **Oleg Romanov**, Project Manager for KONE Russia. "The customer, Stadion Spartak, sought to work with a vertical transportation

provider who was a partner both in installation and in maintenance, and we were a perfect fit," he notes.

After a detailed analysis, KONE supplied a total of 22 elevators and escalators to the stadium. "We provided data to the architects on escalator capacity and elevator traffic. We also designed special features such as reinforced motors and electrical components for the escalators, special robust decoration in elevator cabins and additional IP protection of the electrical components in the elevator shaft," says **Alexander Lopatin**, KONE's Sales Manager on the Spartak Stadium project.

Visual appeal

"An eye-catching construction such as this requires high-quality, visually appealing equipment," says Lopatin, who admits that "visual appeal" was a key priority for the client when it selected KONE as a partner.

"For the VIP elevators, we delivered one of our most high-end products in a striking red-and-white color scheme – a perfect match for the club colors – with TV



© Otkrytiye Arena



© Otkrytiye Arena



© Otkrytiye Arena

monitors placed behind the mirrors,” explains Lopatin. Spectator elevators were designed with KONE’s anti-vandal brushed stainless steel finish to add value to the overall aesthetics.

The project team comprising a group of experienced and highly qualified experts also paid special attention to quality and safety-related issues. For instance, unique heating solutions such as heated landing door seals and a series of heaters and ventilators in the elevator shaft were introduced to ensure smooth and safe operation during Moscow’s harsh winters.

Both Romanov and Lopatin agree that KONE’s customer-centric approach was its biggest strength in winning the project. “The key success factor was timely communication with the client regarding any issues that arose,” says Romanov, indicating signs of a healthy and long-lasting partnership.

Armed with customized solutions to enhance aesthetics, and specially designed equipment to improve safety and people flow inside the stadium, Otkrytiye Arena will be ready and able to host some of Russia’s largest sporting events in the coming years.

SKY TOWER – AUCKLAND, NEW ZEALAND

A FASTER RIDE TO THE TOP OF NEW ZEALAND

Auckland's Sky Tower is the centerpiece of the SKYCITY Auckland complex and an iconic tourist attraction in its own right.







Thanks to 365-day opening, adventure activities like 'SkyJump' and 'SkyWalk,' a dining area that rotates 360 degrees and a premium restaurant by esteemed New Zealand celebrity chef Peter Gordon, demand for access to the Sky Tower has been steadily growing over the past few years.

Three glass-fronted elevators take visitors up to the seven public floors located between levels 50 and 60. A fourth elevator serves a dual purpose as the building's service elevator and shuttle service between the observation decks.

Because the critical fourth lift, which has the longest travel in the building at 229 meters, doubles as a service elevator to the entire structure, Sky Tower visitors had to wait longer than ideal to transfer between the observation decks. This was a challenge for a business that relies heavily on its elevators to move people efficiently.

"As an extremely busy, iconic tourist destination in New Zealand, it's critical that visitors are able to use all of our facilities," says **Arron Money**, Executive Manager Capital Development & Facilities at SKYCITY. "We wanted to partner with an escalator and elevator provider that really met our business needs and that complements our values in terms of modern technology, energy efficiency and a world-class experience. It was a really easy decision for us to partner with KONE on this project."

Finding the right solutions

Once it was awarded the modernization project, KONE swung into action and modernized the Sky Tower's three passenger lifts with conventional ropes. The fourth

service elevator was initially going to be modernized with conventional ropes as well; however, KONE's innovative UltraRope technology was released right at the opportune moment to be included in the service elevator modernization.

KONE UltraRope is a new and innovative hoisting technology, made of a lightweight carbon fiber core, which reduces elevator moving masses, cuts energy consumption and reduces the effects of building sway. With these benefits, the modernized elevator was able to shed over 3,600kg of rope weight compared with conventional steel cables, and the Sky Tower elevator could now be used in higher wind conditions than in the past. The newly installed KONE EcoDisc hoisting machine was also over 5,000kg lighter than the previous hoisting machine.

Greener, safer and more reliable

As part of the modernization, Sky Tower's service elevator speed also increased from 3.5 to 5m/s. But speed was not the only concern. SKYCITY has a strong focus on energy efficiency and reducing its energy consumption where possible. As a direct outcome of the entire project, the modernization has enabled energy savings of more than 20%.



“At the time of the modernization tender, energy use was very much in the public eye, especially for high-profile commercial businesses like SKYCITY,” explains **Terry Viccars**, Business Manager New Equipment and Modernisation Solutions, KONE New Zealand. “With this elevator modernization, the elevator energy consumption has been reduced by half. Now, the owners can move materials around the tower in a faster and more efficient way, and the visitors don’t have to wait for too long to travel to the upper levels.”

Winds of change

As the tallest man-made structure in the southern hemisphere, Sky Tower is also built to withstand winds of up to 200 km/hr. Even so, winds can be strong enough to close the tower a few times a year. But with KONE UltraRope, elevator downtime caused by building sway can potentially be reduced as carbon fiber resonates at a completely different frequency than steel and most other building materials.

“The former service company had to send someone up the tower to take measurements on building sway. Our automated solution cuts elevator speed by half when wind speed is high. If wind speed exceeds safe limits, the elevators will automatically park at a safe floor,” explains Viccars.

With safety, speed and eco-efficiency all improved, visitors to the Sky Tower can now look forward to an improved user experience, while for SKYCITY, happier customers and improved people flow leads directly to increased revenue.

SUMMARY

Challenge

- Every second of downtime is directly related to lower visitor volumes at this iconic entertainment complex
- Eco-efficiency was a vital consideration for SKYCITY as a company strongly focused in protecting the environment

Solution

- KONE UltraRope to speed the service elevator and improve people flow
- A substantial weight reduction helping with energy efficiency
- Building sway detection technology automates speed and a previously manual process

FAST FACTS

Sky Tower at SKYCITY

- Completion: 1997
- Modernization: 2015
- Height: 328 m
- Building owner: SKYCITY Entertainment Ltd

KONE Solutions

- 3 KONE ReGenerate™ 800
- KONE Polaris™ Destination Control System
- 1 KONE Long travel ReGenerate™ 800 service elevator
- KONE UltraRope™ technology
- KONE ReNova™
- KONE ReVive™

SMOOTH FIRST IMPRESSION

First by name, first by nature: Rotterdam's newest skyscraper is the very first Dutch high-rise to feature an integrated People Flow Intelligence solution allowing tenants to move about as if by magic.

Office workers are still moving boxes into Rotterdam's newly opened premier commercial space in the heart of Rotterdam's Central Business District, but space is filling up fast. Situated in a gateway location opposite the central station, the 120 m high-rise complex is a coveted business venue that converges on a restaurant, café and clean-lined lobby with efficient access control.

There's no waiting or hassle as tenants flow effortlessly to their offices. This is thanks to KONE's efficient destination control system (DCS) and new KONE KT100 turnstiles with advanced People Flow Intelligence (PFI) integrated into a third-party access control system.

Drifting on air

Unauthorized visitors cannot pass beyond the lobby, yet tenants glide to their destinations without any button-pushing. After a swipe of their ID card, an elevator promptly arrives, knowing exactly where to take them. "This is our very first PFI-integrated project in the Netherlands. Initially the client had reservations, but the Dutch PFI team put a lot of time and energy into convincing them of the benefits of our PFI solutions," says **Harold Bussing**, Managing Director for KONE Netherlands.

The project was awarded to KONE on the heels of another recent skyscraper project completed two years ago, De Rotterdam, the largest building in the Netherlands. During this project, KONE established a trusted partnership with the developer, MAB.

KONE rules Rotterdam

"Again KONE's project management team went the extra mile to assist the consultants and architects with the elevator layout in the early draft phases. We prepared detailed traffic simulations and thoroughly discussed every possible alternative. The builder was in fact selected after the elevators were chosen," Bussing says.

The client expressed special appreciation of the fresh ideas contributed by KONE throughout the project. "Thanks to their positive, proactive attitude, the elevators and turnstiles are state-of-the-art and contribute to the high quality of the First Rotterdam project. In line with our earlier collaboration with the KONE engineering and realization team, they again proved to be a reliable partner," says **Jan van 't Westeinde**, MAB's Senior Manager for Sustainability at the time of the project.

The key challenge was developing a traffic flow solution to meet the complex needs of a multi-tenant facility while achieving maximum space efficiency. "We tackled this task with our PFI system and by installing two elevators in one shaft. One elevator will serve floors 0 and 8 to 20, and the other floors 22 to 30 to increase capacity."

Bussing sees FIRST Rotterdam as an important reference project showing customers the highly advanced, user-friendly solutions that KONE is capable of delivering. "In fact the whole of Rotterdam is an important showcase for us. It is the Dutch city with the highest density of KONE projects, many of them high-profile references for our company."





SUMMARY

Challenge

- To provide a variety of tenants with fluent access to their offices while guaranteeing efficient access control in a busy office hub
- Elevator capacity had to be maximized without sacrificing an inch of office space

Solution

- Elevators equipped with a Destination Control System and integrated PFI solution with access control to prevent unauthorized entry
- Close collaboration with the architects at a very early stage of the project to plan the layout of the elevators inside the building

FAST FACTS

FIRST Rotterdam

- Completed: 2015
- Height: 120 m
- Floors: 30
- Architect: De Architecten Cie
- Building owner: KONE
- Developer: MAB Development
- Contractor: Boele & van Eesteren

KONE Solutions

- 13 KONE 700 elevators with a max travel of 115m and 6m/s
- 3 KONE Turnstile 100 with KONE Polaris™ DCS and KONE E-Link integration
- KONE Polaris™ Destination Control System with touchscreens
- KONE E-Link™ monitoring system
- 1 hermetic KONE/Markus door



GREENLAND PULI CENTER – JINAN, CHINA

ROOT OF SPRING CITY

Located in the heart of Jinan, the century-old capital of Shandong province, Greenland Puli Center is the tallest building in the city. Designed by world-renowned architectural design firm Skidmore Owings & Merrill, this 300-meter-tall building has changed the skyline of the city.





The ancient city of Jinan, fondly called 'Spring City' because of the 72 famous artesian springs in the capital, is formally entering the era of skyscrapers. The design of its latest and tallest addition, the Greenland Puli Center, is inspired by the natural hot springs of Jinan.

The building reaches for the sky like a geyser and powerfully anchors the complex at its most urban corner. The elegant triangular tower wears a repetitive pattern of metal fins which create a wave-like texture across the facade. The fins serve both as shades to the exterior and light absorbers when the sun moves around the building. The design leverages the movement of the sun to get a shimmering effect across the building, much like glittering light on water.

Water forms the central theme of this project not only in design but also in operation. This super tall and high-end commercial complex, which houses a shopping mall and an office tower, is expected to see thousands of people access the building every day. The challenge then is to keep the flow of people seamless – just like water.

Speeding into the sky

To cope with massive people flow, experienced KONE experts meticulously planned the elevator solutions for the Greenland Puli Center. They studied different areas of the building, noted its requirements and then equipped elevators that matched specific needs. For instance, to reach the scenic lobby on the 60th floor, KONE delivered two high-rise elevators that travel at a speed of 6m/s. It only takes a dozen seconds to get from the ground level into the clouds. A truly thrilling experience, for those who take the ride.

KONE's solutions also integrated technology with design to provide the building with a smooth travel experience. For instance, the KONE E-Link™ monitoring system makes it possible to conduct real-time monitoring of the elevator performance and capacity in order to ensure there are no delays for tenants. In addition, a multimedia

screen installed in the car helps customers communicate information to passengers quickly and conveniently.

"The elevator solutions inside the building have been critical to the project's overall success," says the developer, Shanghai Greenland Group. "What Greenland Puli Center has achieved is not only the height of the building but also the peak of architectural technology."

Model for safety and reliability

Greenland Puli Center's emphasis on elevator safety during operation and maintenance was also addressed using a well-known rescue technology known as 'Car to Car Mutual Rescue' for high-rise elevators.

"When there are multiple elevator cars in one shaft, these elevator cars are specially designed, so that if one of them is out of order, an 'air bridge' can be built with other cars in the shaft for rescue," says **Cheng Yong**, KONE's supervisor on the Greenland Center project. "This function can not only significantly increase the rescue efficiency if elevators are suddenly out of order but also improves the safety of the elevators in use."

In addition, KONE jointly built a custom-made elevator machine room with the customer for this project. "To enhance the safety of our technicians in the machine room, we posted special warning labels, made custom cable protection covers and customized boards and nets for protection in front of and around each of the machines," explains Yong.

Good proof that KONE left no stone unturned to ensure the building remains an architectural marvel and masterpiece for the Spring City.



SUMMARY

Challenge

- To provide elevator solutions for the most high-end office building in Jinan.
- To meet the client's demands for elevator safety during operation and maintenance in this high-quality building.

Solution

- Two high-rise elevators with a speed of 6 m/s, to ensure smooth and efficient vertical transportation during the construction period and for daily use.
- Customized elevator cars with a 'Car to Car Mutual Rescue' solution and custom-made elevator machine rooms to enhance the safety of the elevators during operation and maintenance.

FAST FACTS

Greenland Puli Center

- Completed: 2015
- Developer: Shanghai Greenland Group Shandong Real Estate Co.,Ltd
- Owner: Shanghai Greenland Group Shandong Real Estate Co.,Ltd
- Contractor: The 4th Bureau of Shanghai Construction Group
- Architect: Skidmore, Owings and Merrill
- Height: 300 m
- Total floor area: 200,000 sq m

KONE Solutions

- 24 KONE MiniSpace™ elevators
- 2 KONE MonoSpace® elevators
- KONE E-Link™ monitoring system

ELEVATORS AS INTERIOR DESIGN

In a district where the sky-high rents are only beaten by New York's Fifth Avenue, even the elevators need to have a luxurious touch. So when KONE supplied three glass elevators to Lee Garden One, which houses a high-end mall and top quality offices in Hong Kong's Causeway Bay, design was paramount.



Lee Gardens is a premium destination offering first-class business and retail facilities. As a magnet for exciting fashion, lifestyle products, hospitality and dining, as well as Grade A offices, its flagship building Lee Garden One represents the heartbeat of Hong Kong and is designed with great panache. So when this glamorous building underwent a renovation, it was time to get stylish elevators that matched the elegant décor. KONE experts were called in to work with the customer in equipping the offices with high quality elevators.

"Almost all the metallic parts – the light, the fly wheel, the car top, and all the moving parts – had to be covered by cladding made of bronze-colored stainless steel, and our hoisting machine was also painted white to suit the surrounding design," says **Simon Cheung**, KONE's senior project manager, involved in the Lee Garden One project. "The big challenge was time. The building's owner, Hysan Development, wanted to complete the renovation in a timely fashion to minimize the impact on the offices and retailers."

To stay on schedule, KONE shortened the time needed to develop the design of the elevators and coordinated with its factory by drawing on its experience working in Hong Kong's top buildings. KONE equipped Lee Garden One with KONE MonoSpace® Special elevators and

offered a broad collection of interior car designs – both of which give enormous freedom to architects and interior designers respectively – to provide an aesthetically pleasing experience for the users.

Working with architects and designers

KONE's MonoSpace® Special elevators do not have a separate machine room, which means architects can allocate space only for the shaft and are free to use the remaining space creatively. Interior designers too have the freedom to get imaginative with elevator cars by selecting from KONE's Design Collection. It combines different colors and shades to reflect different moods and materials while offering varied alternatives to create the desired architectural feel.

At Lee Garden One, Hysan's design team wished for a tailor-made solution with both the interior and exterior of the elevator seamlessly matching the rest of the mall and office interiors. KONE coordinated with architects Wong & Ouyang and contractors Hsin Cheong Interiors to make this happen.

"The new elevators inside Lee Garden One are truly spectacular, one-of-a-kind elevators," Cheung says. "To ensure the lifts would truly be a unique experience, we coordinated closely with the project's interior designer for the decoration inside the elevator shaft as well as inside the car because some elements of the car were custom-made for these special scenic elevators."

Coordinating with different stakeholders involved in the project could have generated a host of design challenges and potential cost issues. But the excellent working relationship between Hysan and KONE's project managers allowed for great collaboration between both parties. The two sides worked closely together, in weekly planning meetings, to ensure that any potential issues would be solved at the very early stages of the project. With a clear focus on the desired outcomes and a detailed plan, the project was kept on track and successfully completed without any delays in 2015.

As a luxury retail venue and Grade A office building, Lee Garden One, is back in action with renewed zest and stands out in the heart of Hong Kong by providing a top-class experience for its customers and office workers.



SUMMARY

Challenge

- KONE was asked to deliver a tailor-made elevator with a unique design that would appeal to customers in one of the highest-profile commercial districts in the world
- The project had to be delivered at a rapid speed

Solution

- KONE delivered a tailor-made KONE MonoSpace Special elevator which improved the people flow in the shopping arcade
- KONE worked with architects, interior designers and luxury component suppliers
- KONE saved time by drawing on experience from similar projects in Hong Kong
- The customer, Hysan Development, sent its project manager to all meetings, enabling rapid cost decisions

FAST FACTS

Lee Garden One

- Completed: 2015
- Building size: Three landings
- Architect: Wong & Ouyang (HK) Ltd.
- Building owner: Hysan Development Limited
- Developer: Hysan Development Limited
- Contractor: Hsin Cheong Interiors (Hong Kong) Ltd.

KONE Solutions

- 3 KONE MonoSpace® Special elevators
- KONE Care™ Maintenance Service

180 BRISBANE – BRISBANE, AUSTRALIA

NEW LANDMARK FOR BRISBANE

One thing is certain about Brisbane's newest premium office building – it's like nothing you have ever seen before. From the elevator cars to its smallest design details, every feature of 180 Brisbane's new commercial tower has been customized.







180 Brisbane offers the most exclusive office space in Australia's third-largest city. The 152-meter, 34-story commercial tower at 180 Ann Street was developed by the Japanese property developers Daisho Group, which also own the neighboring 192 Ann Street building and one of Australia's most prestigious hotels – the Park Hyatt in Sydney.

Exclusivity and distinctive appearance of its constructions were a top priority for the Daisho Group. That's perhaps why the unique design of 180 Brisbane, created by renowned architects Crone Partners, includes a huge artistic imprint of the Brisbane River on its facade, an "artistic stone wall" and a public plaza that connects the ground plane with neighboring buildings.

The dynamic new building masterfully integrates striking architectural design, smart technology, comprehensive amenity for tenants and exceptional environmental sustainability. It has been awarded a 6 Star Green Star Office rating, making it the first building in Brisbane to achieve this level of environmental accreditation.

Complementing the building's exquisite features are KONE's smart and eco-efficient solutions that are customized to make commutes smoother for the residents and visitors.

Exclusive appearance

"Our instructions were very clear. Daisho didn't want anything in 180 Brisbane that could be seen in another building," says **Charlie Torrisi**, Project Manager, KONE Australia. "Everything was custom made: from the onyx

ceilings in the lift cars, to bespoke Destination Control System (DCS), Destination Operating Panel (DOP) and pedestals with LED lighting and elevator identifiers on the ground floor," he explains.

Torrisi says that to achieve this high level of customization – and ensure the specially made equipment was suitable for the applications – a great deal of emphasis was placed on design and prototypes. For instance, 14 air-conditioned, gearless passenger elevators were designed with premium stone and metallic finish, rarely seen in commercial offices.

Contemporary and sustainable

"Our partners at KONE played an important part in this landmark project, and we're very happy that they were able to execute it according to our very precise specifications," says **Ikuo Morito**, Daisho Project Director, who was personally involved in most aspects of the extensive design process.

"This central, contemporary and environmentally sustainable commercial space is the future of business in Brisbane," says Morito. "I'm extremely proud of its uniqueness and the fact that KONE used custom elements to set it apart from other more standard builds."

In addition to the equipment for 180 Brisbane, KONE also delivered a complete lift car interior upgrade for the sister building at 192 Ann Street and will continue to provide service to both buildings as part of a long-term maintenance contract.



SUMMARY

Challenge

- 180 Brisbane was interfaced with its neighboring building at 192 Ann Street
- The developer wanted every detail in this landmark building to be unique

Solution

- The two buildings have a new bridge linking them and a new landscaped walkway to join Turbot Street and Ann Street
- KONE delivered customized LED backlit onyx ceilings, bespoke lift identifiers, Destination Control System (DCS), Destination Operating Panel (DOP) and pedestals with LED lighting
- Extensive design involvement from KONE's Design team to ensure client expectations were met

FAST FACTS

180 Brisbane

- Completed: 2015
- Height: 152 m
- Floors: 34
- Architect: CRONE Partners
- Building owner: Daisho Group
- Developer: Daisho Group
- Contractor: Watpac
- Environmental certification: 6 Star Green Star Office rating

KONE Solutions

- 15 KONE MiniSpace™ elevators
- 4 KONE MonoSpace® elevators
- KONE Polaris™ Destination Control System
- KONE E-Link™ monitoring system
- KONE Care™ Maintenance Service
- 6 KONE TravelMaster™ 110 escalators

MEXICAN MILESTONE

When a relationship reaches the ripe old age of 20, something about the chemistry must be right. Next year, KONE celebrates two decades of servicing Mexico's most exclusive commercial complex.



Arcos Bosques is a two-tower luxury office complex near the Santa Fe business district in the Mexican capital. Torre 1 – affectionately dubbed *El Pantalón* (“The Trousers”) – consists of two columns linked at the top by a lintel. When completed in 1996, this 36-story landmark was the tallest building in Mexico City. Torre II, which is part of the same complex, consists of twin towers housing a five-star hotel and one of Mexico's most elite shopping malls, the Paseo Arcos Bosquesa. It is a busy hub housing a cinema multiplex and luxury retail shops.

“Average” is clearly not what tenants and shoppers expect from this upscale oasis of retail therapy. Where transit equipment is concerned, high-end performance is assured by KONE, the supplier of the original equipment, which has been working behind the scenes for two decades to assure the smoothest people flow possible.

Failure is not an option

A dedicated team of four KONE technicians works in three shifts to service 36 elevators whenever needed, 24 hours a day, 365 days a year. Equipment is kept in pristine order with stringent routine checks and systematic preventive maintenance. KONE's ability to maintain a solid relationship with the complex for 20 years is proof of absolute commitment.

“Arcos Bosques was KONE's first major new equipment installation in Mexico. Our ability to deliver an excellent

customer experience led to a servicing contract which has now lasted longer than many marriages,” says **Raul Ortega**, Service Manager for KONE Mexico. “Failure is not an option. We deliver the best service every time we arrive, doing our utmost to keep downtime to a strict minimum. Our target is 100% availability of the equipment.”

Rapid response team

“What makes this relationship special is the attention and sense of urgency with which we address demands for on-site assistance,” notes Ortega. A recent example was the rapid response of the KONE team during heavy rains. When water flooded an elevator shaft, the team arrived just in time to save the equipment, avoiding high repair costs for the customer.

Another recent case involved a problem with the door controller. “We responded proactively by delivering a proposal for a new electronic curtain for the door system. The client was very happy with the attention and service we provided,” says Ortega.

This high level of personalized attention is the secret to the longevity of the relationship, Ortega says. “Not only do we respond efficiently and promptly, but we also track client requests and hold immediate follow-up meetings. We are always working harder to sharpen our focus with the customer, even after 20 years.”



SUMMARY

Challenge

- To guarantee smooth people flow in both the corporate offices and the shopping mall, serving the needs of corporate personnel, shoppers and floating staff.
- To keep downtime to a minimum, with a target of 100% equipment availability.

Solution

- A team of four KONE technicians is on call 24/7 for rapid on-site assistance.
- Routine preventive maintenance keeps equipment in prime working order.
- The customer receives attentive, personalized service. Satisfaction is tracked and followed up in meetings.

FAST FACTS

Arcos Bosques Torre 1

- Completed: 1996
- Height: 161.5 m
- Floors: 36
- Architect: Teodoro González
- Building owner: Multiple stakeholders
- Property manager: Sandra Mendoza, Alberto Ramón Hernandez

KONE Solutions

- 64 KONE elevators
- 35 KONE elevators
- KONE Polaris™ Destination Control System
- KONE Care™ Maintenance Service



GOTHIA TOWERS – GOTHENBURG, SWEDEN

ESCALATING AMBITION

When the Nordic region's biggest hotel, Gothia Towers in Gothenburg, prepared to renovate a tower and build a third one, KONE was asked to upgrade and add elevator capacity to the entire complex. Today, KONE has responsibility for the upkeep of the entire fleet of 58 elevators.



Gothia Towers takes pride in being home to Europe's largest fully integrated hotel, exhibition and conference center. The recent addition of a new tower has made it one of the most sought-after elite venues for international meetings and has turned Gothenburg into a world-class conference city.



This means the constant flow of visitors attending trade fairs, conferences and lavish events has to be managed efficiently to ensure people get to experience the various offerings of the venue. KONE has been working closely with Gothia Towers to make this possible.

A calculated approach

The first step was to modernize the elevators in the first tower, built in 2000. KONE replaced the elevator cars and certain parts, and upgraded the control system for the tower's seven elevators in 2012.

The second tower, built already in 1983, needed a more thorough overhaul, in part because the hotel decided to add six stories. Guests and spa visitors needed to be able to reach the new glass-bottomed swimming pool, hovering 19 stories above the cityscape.

The 29-story third tower was completed in late 2014. The addition of 450 rooms has made Gothia Towers the biggest hotel in the entire Nordic region. The hotel lies next to the Swedish Exhibition & Congress Centre, part of the same consortium, which sports 34 additional elevators.

Full house

"The most important aspect for us was accessibility," says **Mikael Carlen**, Technical Administrator for Gothia Towers. "We have 1,200 rooms, and all of them are occupied during the summer. That means all the elevators need to be up and running.

"Previously we worked with many different

subcontractors for service and maintenance, but a few years ago we decided to bundle the tasks together and use one company," adds Carlen. "Now we only employ KONE, who assigned a customer representative to work primarily with us. Knowing that it's the same person who has an overview of what has been done from one visit to another lends a sense of security for us."

Working in tandem

The thrilling addition of the hotel's third tower did not happen in isolation, though. It posed challenges because the hotel was still welcoming guests who could not be disturbed or inconvenienced by the work in progress.

"To make sure the elevator work wasn't noisy, we used special tools that didn't make too much noise when drilling," explains KONE's Project Manager **Ronny Schorling**. "Logistics was another big challenge. We didn't have storage in the vicinity, so we had to arrange a big storage facility outside of the city and drive the materials to the site every day."

Since the hotel was also adding rooms simultaneously, it was imperative to add elevator capacity. The elevators were already being used to full capacity, so KONE added two panoramic elevators that now grace the exterior of the tower.

"All this took place during the construction of the elevator shaft for the third tower," says Carlen. "To achieve better capacity, the tower now has 10 elevators – five for the guests, two panoramic elevators and three staff elevators."



SUMMARY

Challenge

- Upgrading and adding elevator capacity to the entire complex, without inconveniencing the guests.
- Arranging logistics for the project due to the lack of storage in the vicinity.
- Making sure the constant flow of visitors experienced all the offerings of the venue.

Solution

- KONE used special tools that didn't make much noise when drilling to make sure the guests weren't disturbed.
- KONE arranged a big storage facility outside of the city and drove materials to the site every day to complete the project on time.
- KONE added two panoramic elevators to improve the overall travel experience.

FAST FACTS

Gothia Towers

- Completion: Tower 1: 1983, Tower 2: 2000; Tower 3: 2014
- Modernization: Tower 1: 2012
- Height: 77–100 m
- Floors: Tower 1: 23; Tower 2: 26; Tower 3: 29
- Building owner: The Swedish Exhibition and Congress Center
- Developer: The Swedish Exhibition and Congress Center
- Architect: White
- Contractor: Peab

KONE Solutions

- KONE Care™ Maintenance Service for 58 elevators and 14 escalators

AL FATTAN CURRENCY HOUSE – DUBAI, UAE

SMART FINANCE HUB FOR DUBAI

Located at the heart of the world's newest financial center and free zone,
the Al Fattan Currency House is helping place Dubai on the global financial map.







Over the past three decades, Dubai has experienced rapid growth thanks to its strategic location linking west to east and its world-class infrastructure projects. The Dubai International Financial Centre (DIFC) aims to develop the same financial stature as New York, London and Hong Kong by servicing the vast Middle East and North Africa region.

Established in 1974, Al Fattan Properties specialize in creating spectacular landmark projects both in their home market and around the world. Located at the very heart of DIFC just 17 km from the world's busiest international airport, the Currency House complex is a prized asset in the Al Fattan property portfolio.

A shining symbol of the success of Dubai, the Al Fattan Currency House consists of a 34-story commercial tower, a 10-floor office block and a 25,000-square-foot retail pavilion with high-end stores and fine dining.

Intelligent building

The state-of-the-art building, featuring a suite of KONE elevators, was only completed in 2009, but the breathtaking pace of change in Dubai means owners of commercial property are under constant pressure to keep innovating to stay ahead of the competition. Just six years after it opened, KONE was requested to upgrade the equipment with its latest People Flow Intelligence solutions.

"Al Fattan Properties became aware of several incidents where uninvited people entered the offices on the upper levels of the tower looking to access some of the various offices," explains **Ahmad Ayed**, Senior Modernization Sales Engineer for KONE Middle East. "We were asked to develop an access control system that could be integrated with our elevators, essentially adding a further level of security and intelligence to the building."

KONE installed intelligent turnstiles that require an access card to pass through. Once a person is through the turnstile,

a display screen on the turnstile directs the passenger to an assigned elevator and automatically takes them to the correct floor. For visitors to the Al Fattan Currency House, temporary cards are programmed and issued at the building's reception.

Improving people flow

In addition to security improvements, the KONE solution provides a further efficiency benefit.

"At peak times before the modernization, the lobby areas would become very busy and there could be quite a wait for the elevators to arrive. By installing the intelligent turnstiles around 20 meters away from the elevators, the passenger uses up the waiting time by walking to a designated elevator instead of waiting by the elevator bank," adds Ayed.

This was the first such project in the Middle East region, and it further cemented the positive working relationship between KONE and Al Fattan Properties.





SUMMARY

Challenge

- To improve and secure the access control to the building's private offices
- To improve the efficiency of people flow and reduce overall waiting times for elevators

Solution

- Access control system integrated into the existing KONE Destination Control System
- Smart placement of integrated turnstiles to maximize walking time and reduce the waiting time at the elevator bank

FAST FACTS

Currency House

- Completion: 2009
- Modernized: 2015
- Complex size: 544,000 ft² offices + 25,000 ft² retail
- Building owner: Al Fattan Properties
- Architect: DSA Architects International
- Contractor: Peremba Construction SDN BHD
- Consultant: CKR Consulting Engineers, LC Consulting, Gensler

KONE Solutions

- 8 KONE MiniSpace™ elevators
- 11 KONE MonoSpace® elevators
- 2 KONE TravelMaster™ 110 escalators
- KONE Polaris™ Destination Control System.
- KONE turnstiles
- KONE Access™ control system

FAST LANE FOR VERTICAL COMMUTERS

The 75-story condominium tower, One Bloor East, in downtown Toronto rises from one of the best-known intersections in Canada. Long before its completion, the project has become the city's most sought-after residential address.

To complete one of the most prestigious addresses in Toronto on time, construction workers can't afford to waste up to an hour of their valuable shift time every day waiting for transportation to higher floors. Yet that's exactly what happens at construction sites across the globe as skyscrapers reach ever higher heights.

To meet its demanding construction schedule, developer Great Gulf chose the innovative KONE JumpLift solution to accelerate construction work and enhance safety at its construction site. Unlike a traditional external hoist often seen at construction sites, the KONE JumpLift uses a mobile machine room within the building's permanent hoistways, which are moved up as the construction work progresses. Once construction is complete, the KONE JumpLift machine is converted into a permanent elevator ensuring an efficient use of space in a prime real-estate location.

"At four meters per second, KONE JumpLift runs four times faster than a traditional external hoist, making

a real difference at the beginning and end of shifts," explains **Ebbey Jacob**, Project Manager for KONE Major Projects Americas. "Our joint analysis with the customer of the three phases of construction showed an estimated saving of 80,000 man-hours thanks to our KONE JumpLift solution, which is significant."

Beating the odds

Taking advantage of the internal structure also helped combat two of the project's other challenges: the building's wavy design and the often unpredictable Canadian weather. Last year alone, Great Gulf lost more than 30 days of work to wind and weather that forced the closure of external hoists.

"With our KONE JumpLift, you eliminate the outside environmental issues. You don't have to worry about snow and rain and cold," adds Jacob. "Great Gulf is always on the lookout for innovative solutions. When they heard about the KONE JumpLift they were keen to test it out. As a company, we have experience installing KONE JumpLifts at sites around the world, yet this was the first time the technology was used in North America. As such, there was a lot of collaboration between our engineering teams."

Meeting expectations

On completion, One Bloor will be home to a total of 11 KONE elevators and two KONE escalators, but it's the benefits gained during construction that have already delighted the customer.

"We decided to implement the KONE JumpLift system into our construction for the One Bloor project because it was very important for us on a tight site to be able to construct in a safe, quick and secure manner," says **Christopher Wein**, President, Great Gulf Residential.

"KONE JumpLift is a perfect example of how technology is helping us better manage our construction site. We had more efficiency, more productivity, a safer interior environment and we didn't have to worry about the outside elements. We are very pleased with everything that has happened with our use of the JumpLift and we would definitely use it for future projects," concludes Wein.





SUMMARY

Challenge

- Meet a tight construction schedule in a logistically challenged site due to its prime location and unique design
- Reduce working time lost due to the extensive waiting times for construction workers

Solution

- KONE JumpLift accelerated construction time by speeding up the transportation of construction workers
- The conversion of the KONE JumpLift into a regular elevator reduces wasted space during the construction phase

FAST FACTS

One Bloor East

- Opening: 2016
- Size: 83,640 sq m
- Height: 257 m
- Floors: 75 above ground and 6 parking levels
- Building owner: Great Gulf
- Developer: Great Gulf
- Architect: Hariri Ponterini Architects
- Contractor: Tucker Hi-Rise

KONE Solutions

- 2 KONE JumpLift elevators
- 6 KONE EcoSystem MR™ elevators
- 4 KONE MonoSpace® elevators
- 1 KONE EcoSpace™ elevator
- 2 KONE TravelMaster™ 110 escalators

TOMORROW'S ELEVATORS HERE TODAY

Whatever the future of high-rise technology might hold, this is where you'll see it first. KONE's Test Tower in Kunshan is purpose-built for a single mission: testing elevators to make them better, smarter and faster.

Welcome to the Silicon Valley of high-rise technology. The KONE Park manufacturing and R&D center in Kunshan, China, is where cutting-edge high-rise innovations undergo rigorous testing.

In the middle of it all, towering 235 meters above the flat landscape, is the newly inaugurated 36-floor Kunshan Test Tower. This is literally a skyscraper like no other: You'll find no offices, apartments or commercial space inside, only a vast machine room and 12 elevator shafts. And – here's the twist – what you'll find inside those shafts is liable to change from one month to the next.

"The whole tower is basically a technical chameleon. The elevators in the test shafts will be constantly reconfigured. We'll be dismantling and installing new elevators, or at least new components, on a monthly basis," says **Antti Hoppania**, Director for Reliability and Quality at KONE.

Technical chameleon

Among the few permanent installations is a super-fast 10 m/s DoubleDeck elevator which carries visitors from the ground level to the sky lobby and showroom. This is one of the world's very first DoubleDeck elevators to feature the super lightweight KONE UltraRope™ technology.

The test tower in Kunshan is the "Asian twin" of the KONE high-rise laboratory in Tytyri, Finland. The tower also provides KONE with a unique location to invite customers to see its latest innovations in action. Another permanent fixture is a service elevator that travels the full distance up to the 36th floor and is reserved solely for R&D activities.

"We needed additional capacity and capability to support our high-rise testing efforts. Earlier, we were dependent on our Finnish unit and smaller test shafts in Kunshan, but their heights were nothing compared to this," explains Hoppania.

New heights in R&D

Having the test tower located in the middle of an existing R&D and production park will significantly boost KONE's agility. "Now that we have more capacity, muscle and

speed, we'll be able to deliver new products to the market faster than ever before," adds Hoppania.

The geographical location is also ideal, as it unites KONE's two research units in Finland and China. "Now we are physically closer to our Asian customers and have two teams working as a close-knit unit across the eastern and western hemispheres," he adds.

"KONE is a major player driving technological development in the mid- and high-rise market. This new landmark dedicated exclusively to R&D is a visually powerful symbol of our commitment to taking elevator technology to truly new heights."

SUMMARY

Challenge

- KONE needed additional R&D capacity to test its future high-rise solutions.
- A state-of-the-art facility was needed to demonstrate innovations on-site to Asian customers.

Solution

- KONE constructed its own skyscraper devoted exclusively to testing its new high-rise solutions.
- The tower contains 12 test shafts that can be reconfigured on a monthly basis.
- A 10 m/s KONE DoubleDeck elevator featuring UltraRope™ technology takes visitors to the showroom.

FAST FACTS

KONE Kunshan Test Tower

- Completed: 2015
- Height: 235.6 m
- Floors: 36
- Maximum elevator speed: 15 m/s
- Architect: Suzhou Industrial Park Design & Research Institute Co., Ltd
- Building owner: KONE
- Developer: KONE
- Contractor: JiangSu Wannian Construction Group Co., Ltd

KONE Solutions

- KONE DoubleDeck elevators
- KONE UltraRope™ technology
- KONE service elevator for R&D activities
- A variety of new KONE solutions will be tested in the reconfigurable elevator shafts



THE TALLEST JOURNEY

Standing at over a kilometer high once completed, the Jeddah Tower will be the glittering centerpiece of Jeddah's Kingdom City development. KONE is heavily involved in the project as the exclusive vertical transportation provider.

Last year, KONE initiated the very first phase of its elevator installations at the construction site of the impressive Jeddah Tower in Saudi Arabia, formerly known as the Kingdom Tower. The project, which is owned and developed by the Jeddah Economic Company (JEC), will be the world's tallest building once completed in 2018 and is expected to rise to a height of more than one kilometer.

For such a historic landmark project, KONE will deliver 57 elevators and eight escalators as well as uniquely advanced technology: the world's fastest and longest DoubleDeck elevators and the latest People Flow Intelligence solutions. The DoubleDeck elevators will travel at more than 10 meters per second. At 634 meters, the elevator travel will be the world's longest. KONE Areeco, KONE's Saudi Arabian joint venture, has been involved in the planning and design of all vertical transportation systems for Jeddah Tower over the past two years in conjunction with KONE's global experts.

Laying the groundwork

KONE's project team arrived on site in January 2015 and worked throughout the entire year on pre-installation

activities concerning the fitting of the elevator system's guiderails and the first elevator cars for the lowest elevator groups.

"We are absolutely thrilled at having our operations up and running at the Jeddah Tower construction site and to have started our installation activities alongside the construction of the tower's core structure," says **Sascha Brozek**, who heads the Major Projects unit at KONE.

"Without a doubt, this is a project that pushes the industry's limits to new heights, and we are very proud to be an integral part of that journey."

The actual installation of the guiderails and KONE elevator cars will begin in the summer of 2016 and will progress as the tower's central structure rises over the coming years.

Working with the best

"Building the tallest tower in the world is about human ingenuity and the strength of the materials used," says **Mounib Hammoud**, CEO of the Jeddah Economic Company, owner and developer of the Jeddah Tower. KONE is the only vertical transportation service provider in the world capable of delivering what we need at the



Jeddah Tower – specifically the capability of traveling at a speed of over 10 meters per second with DoubleDeck elevators to reach the highest livable floor in the world in 52 seconds. In addition, the high-speed elevators will rise 660 meters to the observation deck, making it the world’s highest elevator rise. We are immensely proud to be associated with KONE in a relationship that will set many industry records.”



SUMMARY

Challenge

- To provide an innovative solution for fast vertical transportation in the world’s tallest building once completed
- To provide a premium people flow solution for a high-profile building, featuring a full range of intelligent solutions

Solution

- Strong collaboration between global resources and experienced local experts
- Revolutionary new elevator rope technology that will enable a 660-meter elevator rise
- Industry-leading technology that delivers a smooth experience, including the KONE Polaris™ Destination Control System, KONE InfoScreen displays and the KONE E-Link™ monitoring system

FAST FACTS

Jeddah Tower

- Year of completion: 2018
- Construction area: 530,000 sq m
- Total gross floor area: 258,000 sq m
- Height: over 1 km
- Apartments: 530
- Hotel rooms: 200
- Maximum elevator speed: above 10 m/s
- Building owner: Jeddah Economic Company
- Developer: Jeddah Economic Company
- Architect: Adrian Smith and Gordon Gill Architecture
- Contractor: Saudi Bin Laden Group
- Construction supervisor: Dar Al Handasa
- Project management: E.C. Harris / Mace JV

KONE Solutions

- 29 KONE MiniSpace™ elevators
- 21 KONE MonoSpace® elevators
- 7 KONE DoubleDeck elevators
- 8 KONE TravelMaster™ 110 escalators
- KONE UltraRope™ technology
- KONE Polaris™ Destination Control System
- KONE InfoScreen displays
- KONE E-Link™ monitoring system
- KONE Care™ Maintenance Service



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