URBANIZATION DRIVES GROWTH
OUR YEAR 2018

SUCCESSFUL
CHF 7,085 MN NET SALES
CHF  946 MN EBIT
CHF  687 MN NET PROFIT

GLOBAL
GROWTH IN ALL REGIONS

INDEPENDENT
TAKEOVER ATTEMPT BY SAINT-GOBAIN
RESOLVED AMICABLY
INTRODUCTION OF UNITARY SHARES

INNOVATIVE
> 900 EMPLOYEES IN RESEARCH & DEVELOPMENT
85 PATENTS, 133 INVENTIONS

SIKA.COM/ANNUALREPORT
+13.6%  
NET SALES  
IN LOCAL CURRENCIES

4  
ACQUISITIONS

+5.9%  
NET PROFIT

85  
NEW PATENTS

-5.8%  
ENERGY CONSUMPTION  
OF SALES IN  
EMERGING MARKETS

16.8  
HOURS OF TRAINING PER EMPLOYEE

Letter to Shareholders 4  
New Record Figures 6  
Strategy 8  
Regions 14  
Cities drive growth 18  
Urbanization Facts and Figures 20  
Densification More efficient, taller, and denser 24  
Hudson Yards project. Potential and solutions 26  
“Cities are going vertical” 28  
Living Environment Logistical masterpiece thanks to Sika system solutions 30  
“I always have a Sika engineer with me” 32  
Forward-looking concrete reinforcing fibers 34  
Public Infrastructure Ready for the commuters of tomorrow 36  
Refurbishment The built city is being renewed 40  
Maintaining and expanding infrastructure 42  
“Permanent endurance test” 44  
Automotive Cars are improving 46  
China Demand for parking garages 48  
Urbanization drives success 50  
Solving customer challenges  
Leadership 58  
Organizational Chart 60  
The Sika Share 61  
Balance Sheet and  
Consolidated Income Statement 62  
Imprint 64
Dear Shareholders

The Sika success story continued in 2018. Sales in local currencies rose by 13.6% year-on-year to CHF 7,085 million, while operating profit increased by 5.5% to CHF 945.9 million. Net profit also exceeded the previous year’s value by 5.9%, totaling CHF 687.1 million.

2018 was a historic year for Sika, during which the course was set for further growth and sustainable success. The three- and a half-year takeover dispute between the Burkard family, Saint-Gobain, and Sika ended in May with a solution that is fair to all parties. The end of the legal dispute brought independence for Gobain, and Sika ended in May with a solution that is fair to all parties involved.

GROWTH TRAJECTORY IN ALL REGIONS
All regions contributed to Sika’s growth, with EMEA achieving an unexpected rate of 14.1% growth in local currencies. We took successful advantage of business opportunities in the region, emerging economies with high double-digit growth in Eastern Europe (27.9%) and Africa (23.9%).

In the Americas region, North America achieved a growth in local currencies of 12.3% and significantly exceeded the one billion sales mark posting excellent EBIT. Latin America also achieved a very good growth in local currencies at 9.6%.

Asia/Pacific set out in a solid performance, growing both sales – by 5.5% in local currencies – and EBIT. The result in China was particularly pleasing, with growth of close to 10%.

Growth in local currencies in the new Global Business segment amounted to 29.2%, while the acquired Faist ChemTec, a leading provider of acoustic systems for the automotive industry, contributed 23.1% of sales. The integration of Faist ChemTec and the synergies that it should unleash will have a positive impact on the 2019 result.

NEXT GROWTH ACCELERATOR
We are particularly pleased that the planned takeover of Parex, which we announced at the start of this year, will enable us to create a first-class growth platform. The acquisition marks a very important strategic step forward in efforts to secure our long-term market position, and is also the biggest acquisition in Sika’s history.

With sales of CHF 1.2 billion and an EBITDA margin of 16.3%, Parex is a leading mortar producer with a first-class market position, especially in facade mortars, tile adhesives, and waterproofing systems.

Parex is particularly strong in the distribution business, and combines reputable brands with innovative technical solutions. The company operates in 23 countries and holds a key position in eight of these. In total, Parex operates 74 production plants worldwide and employs 4,620 people.

By using Parex’s technologies as a growth platform in the 101 countries in which Sika operates, and by cross-selling Sika products through Parex’s established distribution channels, we will be able to generate sustainable, profitable growth and substantial synergies. Our goal is to combine two “growth engines” that have highly complementary product portfolios and distribution channels. By doing so, we will be setting our future course and gearing the organization up for the next level of growth.

One key task this year is to prepare the Strategy 2023 and roll it out throughout the company. The Board of Directors and Group Management initiated the process last September, and will complete the strategy in the first half of 2019.

DIVIDEND INCREASE AND OUTLOOK
The Board of Directors will be proposing a 10.8% increase in gross dividend to CHF 2.05 per share at the Annual General Meeting of April 9, 2019.

Sincerely

DR. PAUL HÄLG
Chairman

PAUL SCHULER
CEO

By investing in eleven new factories, one additional national subsidiary, and four acquisitions, Sika has laid the foundations for continued growth. These 16 key investments, the well-filled product pipeline, and the strong sales organization give us reason to look ahead with optimism.

Sika expects sales to increase by 6–8% in 2019, in accordance with the Group’s 2020 growth strategy, and anticipates an over-proportional rise in profits. Depending on when the Parex transaction is completed, sales are expected to exceed CHF 8 billion. Implementation of the growth strategy will continue in 2019, with the opening of seven to nine new factories and further acquisitions.

We are committed to continuing the Sika success story, to generating sustainable growth in value, and to enhancing Sika’s excellent reputation among customers, shareholders, and business partners.

We are looking forward to tackling the business challenges that await us this year, and would like to assure you, our shareholders, that we will do so with dedication, enthusiasm, and tenacity so that 2019 becomes another successful year for all of us.

Chairman

PAUL SCHÜLER
CEO
Sika continued its strong track record of growth in 2018. Positive business performance in all regions, further investments, and a deliberate strategic focus on large cities all contributed to the excellent result.

7,085.4 Net sales +13.4%
945.9 Operating profit (EBIT) +5.5%
687.1 Net profit +5.9%
513.2 Operating free cash flow +3.3%
26.2% ROCE

11 New factories
1 New national subsidiary
4 Acquisitions
85 New patents, 133 Inventions

20,060 Employees
16.8 Hours of training per employee
952 Employees in R&D
20 Global Technology Centers

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**OUR YEAR 2018**

New Record Figures
The Sika growth model is synonymous with long-term success and profitable growth. By focusing on market penetration, innovation, expanding emerging markets, and acquisitions – and driven by its strong corporate values – Sika is growing successfully. With the positive development of business, the establishment of one further national subsidiary, and the commissioning of eleven new factories and four acquisitions, Sika took a further major step forward in the implementation of its strategic targets for 2020.
As a successful global corporation, Sika is committed to sustainability. The company honors its responsibilities by offering sustainable solutions for energy-efficient construction and environmentally friendly vehicles, as well as by means of numerous projects and measures aimed at boosting economic, social, and ecological sustainability. With its sustainability strategy geared to “More Value – Less Impact”, Sika’s aim – through its products – is to maximize long-term benefits and added value for all stakeholders and, at the same time, reduce resource consumption and the environmental impacts associated with production. In this way, Sika’s future will be secured through sustainable, profitable growth.

### More Value

**Sustainable Solutions**

We are leading the industry by pioneering a portfolio of sustainable products, systems, and services.

**Target**

All new projects are assessed in accordance with Sika’s Product Development Process. All local key projects are implemented.

### Less Impact

**Energy**

We manage resources and costs carefully.

**Target**

3% less energy consumption per ton and year.

**Energy Consumption**

-5.8% 2018

-22% 2014 – 2018

**Water/Waste**

We increase water and material efficiency.

**Target**

3% less water consumption and waste per ton and year.

**Water**

+23% 2018

-42% 2014 – 2018

**Waste**

-1.6% 2018

+0% 2014 – 2018

**Workplace Accidents**

+19.5% 2018

-13% 2014 – 2018

As part of its “More Value – Less Impact” sustainability strategy, Sika has been measuring six parameters for the last five years. In 2018, the targets for sustainable solutions, local communities/society, and energy were met, whilst in terms of waste utilization, water consumption, and occupational safety the goals were not achieved. The higher number of accidents in the year under review has negatively impacted the 5-year result, whereas between 2014 and 2017 there was a significant decrease of 27%. Overall Sika could reduce the amount of waste per ton sold in 2018 by 1.6%. Considering all acquisitions since 2013, Sika could keep the waste rate per ton sold at the same level. The increase in water is mainly caused by acquisitions processed in 2017 which were taken into account in 2018. In the period of 2014 to 2018, the water consumption was reduced by 42%.

**Economic Performance**

Our success directly benefits all stakeholders.

**Target**

Operating profit (EBIT) 14–16% of net sales.

**EBIT Margin**

13.4% 2018

**Local Key Projects**

**All Implemented**

2018

### Local Communities/Society

We build trust and create value – with customers, communities, and with society.

**Target**

5% more projects per year.
Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing, and protecting in the building sector and motor vehicle industry. Sika is active in the following seven target markets.

CONCRETE
Sika develops and markets a complete range of admixtures and additives for use in concrete, cement, and mortar production. These products enhance specific properties of the fresh or hardened concrete, such as workability, workability, durability, load-bearing capacity, or early and final strength. The demand for admixtures and additives is currently on the rise, particularly due to the increased performance requirements placed on concrete and mortar, especially in urban areas and for infrastructure construction. Furthermore, the increasing use of alternative cementitious materials in cement, mortar, and therefore also in concrete, leads to a growth in the need for admixtures.

WATERPROOFING
Sika’s system solutions for waterproofing cover the full range of technologies used for below and above-ground waterproofing: flexible membrane systems, liquid-applied membranes, waterproofing admixtures for mortars, joint sealants, waterproofing mortars, injection grouts, and coatings. Key market segments include basements, underground parking garages, tunnels, and all types of water-retaining structures (for example reservoirs, storage basins, and storage tanks). Waterproofing systems face increasingly stringent requirements regarding sustainability, ease of application, and total cost management. Therefore the selection of appropriate waterproofing systems to suit the needs and requirements of owners, as well as the treatment of specific project-related details, is key for long-lasting and watertight structures.

ROOFING
Sika provides a full range of single-ply and built-up flat roofing systems incorporating both flexible sheet and liquid-applied membranes as well as thermal insulation and various roofing accessories. A more than 50-year history has documented that Sika roofing solutions are outstanding performers, reliable, sustainable, and long-lasting. Demand in this segment is driven by the need for eco-friendly, energy-saving solutions such as green roof systems, cool roofs, and solar roofs, which simultaneously help to reduce CO₂ emissions. While refurbishment projects continue to gain significance in the mature markets, the emerging markets are moving towards higher-quality roof solutions for new build structures.

FLOORING
Sika’s flooring solutions are based on synthetic resin and cementitious systems for industrial and commercial buildings, for example pharmaceutical and food-sector production plants, public buildings such as educational and healthcare facilities, parking decks, and private residential properties. Each market segment is subject to its own particular requirements in terms of mechanical properties, safety regulations (for example slip resistance), antistatic performance, and chemical or fire resistance. Trends in the flooring market are being dictated by the growing significance of safety and environmental regulations, as well as customized technical requirements. The high volume of building alteration and conversion projects nowadays has boosted the importance of efficient solutions for the refurbishment of existing flooring systems.

SEALING & BONDING
Sika offers a wide range of high-performance and durable sealants, tapes, spray foams, and elastic adhesives for the building envelope, for interior finishing and for infrastructure construction. Typical applications include the sealing of movement joints between facade elements to make buildings weatherproof, the bonding of wood floors to reduce noise, or the sealing of joints in airport runways. The growing demand in this market is fueled by an increasing awareness of the importance of high-performance sealants for the overall durability and energy efficiency of buildings, the increasing urbanization including the larger volumes of high-rise projects, and the continued replacement of mechanical fastening systems by adhesives due to better performance.

REFURBISHMENT
This segment features concrete protection and repair solutions, for example repair mortars, protective coatings, grouts, and structural strengthening systems. It also includes products for interior finishing, such as leveling compounds, tile adhesives, and tile grouts as well as facade mortars for external use. Sika provides technologies for the entire life cycle of commercial buildings, residential properties, and infrastructure constructions. Especially in developed markets, many structures are decades old and need to be refurbished. The present upward trend in demand is attributable to a rising volume of infrastructure rehabilitation projects in the transport, water management, and energy sectors. The global urbanization trend and the increasing need for renovation in developed markets are also fueling demand.

INDUSTRY
The markets served by Sika include automobile and commercial vehicle assembly (structural bonding, direct glazing, acoustic systems, reinforcing systems), automotive aftermarket (auto glass replacement, car body repair), marine vessels, industrial laminating, renewable energies (solar and wind), and facade-engineering (structural glazing, sealing of insulating glass units). Sika is a technology leader in elastic bonding, structural adhesives, sealants, reinforcing, and acoustic applications – serving the world’s leading industrial manufacturers. Customers rely on Sika solutions to enhance product performance and durability while optimizing manufacturing efficiency. For example, Sika’s solutions address key megatrends in vehicle design, leading to lighter, stronger, safer, quieter, and more efficient vehicles, while fast-processing materials and compatibility with automation optimize productivity.

STRATEGIC TARGET MARKETS

in the following seven target markets.

the building sector and motor vehicle industry. Sika is active
All regions contributed to the growth, driving local strategy implementation with strong initiatives. In the new Americas region, Honduras became the 101st national subsidiary to be founded by Sika.
The historical basilica "La Basilica del Salvador" in Santiago de Chile built in 1882 was refurbished using Sikagard®-550 W Elastomer and Sikacrete®-114 free flowing micro-concrete grouting. Upon completion the bridge will be comprised of six lanes in each direction as well as two lanes for buses and a metro line.

In the construction of the Rod-Al-Farag bridge in Cairo, Sikagard®-100 W Elastomer was applied for the construction of the bridge as well as Sikacem®-154 flow free micro-concrete grouting. Upon completion the bridge will be comprised of six lanes in each direction as well as two lanes for buses and a metro line.

EMEA
Construction markets in the eurzone countries continued their solid performance on the back of growth in gross domestic product of around 2%, while persistently low interest rates and associated high levels of investment in residential and infrastructure projects had a positive impact. Above average construction activity was seen in the growth markets of Eastern Europe and Africa in particular. A further rise in raw material prices made for a challenging market environment. Of the five biggest European construction markets – Germany, France, the UK, Italy, and Spain – the UK was as yet the only one to equal pre-2007 levels of construction.

In 2018, Sikas’s sales in the EMEA region (Europe, Middle East, Africa) were up by 14% in local currencies (previous year: 75%). The core markets of Spain and the UK recorded high single-digit growth, while double-digit rates were achieved in Eastern Europe. In particular, the recently founded national subsidiary contributed to double-digit growth in Africa. All Sikas’s target markets contributed to the good result with high single-digit rates of organic growth.

In 2018, sales growth in the newly set up Americas region amounted to 17.1% (previous year: 12.6%). Investment in the country’s rapidly growing metropolitan areas was the driving force behind double-digit growth in the United States. Business performance in Brazil and Colombia was higher than average. The organizational amalgamation of the formerly separate North America and Latin America regions to form the larger Americas region resulted in improvements through various new initiatives in procurement, innovation, talent development, and operations.

The foundation for further growth in Central America was laid with the establishment of a new national subsidiary in Honduras. The acquisition of Propex Holding LLC’s worldwide concrete reinforcing fiber business marks a further investment by Sikas in this fast-growing market. Concrete admixture and mortar factories were opened in Peru and Guatemala.

ASIA/PACIFIC
Large-scale infrastructure projects continue to stimulate the construction industry in most countries in the region. In China in particular, persistently low interest rates and a solid level of investment in construction led to the implementation of a large number of infrastructure projects. China’s trade dispute with the United States and intensified checks on capital good production by the environmental authorities had a dampening effect on the country’s gross domestic product. Most Southeast Asian countries with the exception of Singapore and Thailand saw gross domestic product grow by more than 5%. Consequently, a large number of infrastructure upgrade projects were initiated.

Sikas’s sales in the Asia/Pacific region rose by 15.5% (previous year: 5.4%). The region’s ongoing growth during the fourth quarter of 2018 reached 7.9%, the highest quarterly figure for the past three years. India, Indonesia, and China recorded the strongest growth rates. The national subsidiary established by Sikas in Bangladesh in 2017 has already made a name for itself as a leading supplier of high-performance system solutions in major infrastructure projects such as expressways, railways, lines, and energy supply facilities.

Sika in supporting the facade refurbishment of 15 blocks of high-rise buildings in Hong Kong by providing sealing, bonding, and waterproofing systems. In many large cities there is a need for repair and maintenance of buildings and infrastructures. Restoration of building envelopes improves energy efficiency, durability, and safety.

INNOVATIVE STRENGTHS AS COMPETITIVE ADVANTAGE
Innovation has a long-standing tradition within Sika and “courage for innovation” is one of the corporate values. Sika maintains exclusivity over its innovative products through the systematic registration of its intellectual property rights. 131 new inventions were reported in 2018 (previous year 135) and 85 new patent applications were filed (previous year: 81). By the end of 2018, Sikas’s patent portfolio included more than 800 unique patent families with more than 3,400 single national patents.

Total expenditure on research and development for the Group in the year under review totaled CHF 189.5 million (previous year: CHF 184.6 million), equivalent to 2.7% of sales.

The research and development of new products, systems, technologies, applications and production processes form the basis of Sikas’s innovations. Its research activities are carried out by more than 900 employees at 20 global technology centers. 44 local and 20 regional research and development facilities are globally aligned to Sika Technology AG. Sika Technology targets the development of proprietary technology that provides key performance benefits and allows Sikas’s product platforms to respond to global trends such as resource-saving building methods, energy-efficient and low-emission construction materials, high-speed manufacturing methods, or lighter and safer vehicles.

Today car manufacturers use many different materials to make vehicles lighter and reduce fuel consumption. “Traditional joining methods such as welding are being increasingly replaced by adhesive bonding in multi-material design. Sikas is a long-standing partner of various car manufacturers, and its product technologies are to be found in many new models.”

Sika is supporting the facade refurbishment of 15 blocks of high-rise buildings in Hong Kong by providing sealing, bonding, and waterproofing systems. In many large cities there is a need for repair and maintenance of buildings and infrastructures. Restoration of building envelopes improves energy efficiency, durability, and safety.

GLOBAL BUSINESS
Compared with 2017, there was a slight decline of 0.5% in the number of new vehicles sold in 2018. Automotive sales in the major markets of Europe, the United States, China, and Brazil fell far more sharply than forecast, particularly in the second half of the year, owing to factors such as economic uncertainty, new drive systems, and changes in test procedures. Electromobility is gaining ground, and the technology was the main source of impetus behind drive systems once again in 2018. Virtually all automotive manufacturers are investing heavily in developing electric vehicles and expect to bring new platforms to market over the next few years. Unofficially by announcements of bans on diesel vehicles in European large cities and erroneous fuel consumption estimates for new cars, many consumers have postponed the purchase of a new vehicle for the time being.

Sika’s growth in the new Global Business segment was 29.2% (previous year: 11.9%), of which 23.3% is attributable to the acquisition of Faist Chem Tec. The segment comprises the globally managed Automotive business plus Advanced Resins (formerly Axens Technologies) and Faist Chem Tec, both established suppliers of components and solutions to the automotive sector and other industries. Overall, Sika continued to gain market share in the automotive sector in 2018, while projects in hand for 2019 reached new record levels. Sikas’s product technologies for lightweight construction and electromobility are among those that harbor strong growth potential, alongside its comprehensive acoustic solutions for modern vehicle construction. Sikas is set to benefit substantially from the megatrend toward electromobility and aims to increase its sales per vehicle by 20% compared to the content in conventionally powered cars.

In order to derive even greater benefit from the fast-growing Mexican automotive market, Sikas opened a new acoustic system and body reinforcement factory in Queretaro.
Urbanization is one of the most prominent megatrends. It is characterized by greater densification, more high-rise buildings, larger building complexes, and growing demand for infrastructure services. At the same time, the quality requirements that buildings have to meet are rising in response to increased safety and sustainability regulations, lack of space, or dense traffic. Sika has the solutions to overcome these challenges in partnership with customers and is set to benefit from this trend.
is how much land prices have risen in Shenzhen since 2008. The southern Chinese metropolis is attracting even more people, as well as domestic and foreign investment.

300% is how much government and private investors in New York spent on construction activities in 2018. Adjusted for inflation, this is the highest level of investment in construction seen in the city since 1995.

USD 61.8 BN

is how much São Paulo’s subway and monorail network is set to grow in the next eight years. It is planned to build six new lines, and extend four existing lines.

Twice as long as now. This is how much new high-rises are currently at the planning stage in London. 510 of these 20-plus-storey buildings are already under construction.

510
Urbanization means centralization. And centralization means densification. In Paris, the number of people per hectare increases disproportionately the closer you get to the city center. Building in a confined space is a huge challenge in terms of safety, comfort, logistics, and engineering. That makes it the perfect environment for Sika’s innovative, high-grade solutions.

The number of people moving to cities shows no sign of slowing as urbanization progresses throughout the world. There is strong demand for new residential units, efficient infrastructure, and additional energy supplies. Sika has long been present in today’s major cities, speeding up construction processes with its efficient, high-grade solutions.

By 2009, much of the residential and working space in Manhattan had already become unaffordable. Since then, prices in city-center New York have risen again by a further 30% or so. Heavy demand combined with building height and growing comfort, sustainability, and safety standards are resulting in high levels of investment from which Sika will benefit thanks to its technologically leading solutions.
Major cities are going vertical. This is the only way to create space for the growing number of people being drawn to urban living. The Hudson Yards project in Manhattan illustrates perfectly the opportunities provided by densification and the challenges associated with it.

A supertall skyscraper is a high-rise that is at least 300 meters tall. In 2010, there were 50 of them worldwide; but numbers have been growing rapidly in the meantime. Sika technologies are making these high-rises safer, more comfortable, more climate-efficient, and more economical.

HOW DENSIFICATION WORKS
At USD 25 billion, Hudson Yards is the biggest private real-estate project in US history and a textbook example of densification.

Population density has been rising in Manhattan since the 1980s, and the skyline is changing at breathtaking speed. Two thirds of the world’s supertall towers – those measuring 300 meters or more in height – have been built since 2010. By 2030, numbers will have quintupled to 800.

MORE COMFORT, GREATER SAFETY
When people live closer together, the requirements that buildings have to meet increase. Quality, safety, and sustainability become more important, as the Hudson Yards project shows. Given the stringent standards that skyscrapers have to meet in terms of strength, concrete becomes a key construction material. The site’s proximity to the Hudson River makes robust and reliable waterproofing a must. The skyscrapers’ glass facades must be able to withstand strong winds and steep fluctuations in temperature.

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The Hudson Yards project in New York is the biggest private real estate development in US history with 15 planned high-rises.

**USD 25 BN**

is the estimated total amount being invested in the Hudson Yards project.

**43’000 M²**

is the area of the glass facade of 35 Hudson Yards, the highest residential building in the development. Most of the high-rises will have glass facades.

**113’000 M²**

or 16 soccer pitches is the area covered by the urban development project on Hudson River. Hudson Yards is being erected on platforms above a rail yard belonging to the Long Island Rail Road.

**300**

is how much the City of New York is investing in extending Subway line 7 to Hudson Yards. Having a Subway connection was one of the project prerequisites. The new line runs about 40 meters below ground.

**>20 YEARS**

is how long construction will last and generate demand for high-quality building materials. This is why it is important to engage reliable suppliers who can guarantee and deliver top-quality products over a long period of time.

USD 2.1 BN

is how much the City of New York is investing in extending Subway line 7 to Hudson Yards.

Solutions

- **High-Performance Concrete**
  - Using Sika additives to create the right mix design guarantees high-performance concrete that requires less water, stays transportable for longer, can be pumped several hundred meters vertically, cures quickly after pouring, and has a high compressive strength.

- **Self-Leveling**
  - Thus far, self-leveling mortars from Sika have been used on surfaces of 100,000 m². They reduce the time needed to construct a story. This is important because concrete suppliers only get paid when the story is complete.

- **Sealing**
  - Sikasil® was used to insulate the glass facade elements in all five of the high-rises constructed to date – a total facade area of 228,500 m². The system delivers high climate efficiency and compensates for dynamic effects such as wind load or temperature fluctuations.

- **Technical Advice**
  - Sika’s experts are providing technical advice and professional support throughout the 20-plus years of planning and construction.

- **Waterproofing**
  - Sika supplied over 110,000 m² of Sikaplan® membranes, Sika® Greenstreak® waterstops, and other waterproofing systems for the Subway line 7 extension. In so doing, it helped fulfill the requirements for deep construction by the Hudson River.

- **Longevity**
  - Because Sika’s high-quality solutions are designed for a long service life, they help to reduce total cost of ownership.

Sika has the technologies, systems, products, and experts needed to provide full support for a project of this kind.
"CITIES ARE GOING VERTICAL"

The architectural engineering practice of Skidmore, Owings & Merrill has designed the tallest residence building in the large-scale Hudson Yards development. The company’s Associate Director of Structural Engineering, Preetam Biswas, talks about the challenges of high-density construction, and the role played by concrete in high-rise construction.

High-density construction is essential, particularly in large cities. What does this mean for architecture? Because it avoids large, expansive cities, going vertical will be one of the most sustainable solutions to rapid urbanization in the years ahead. Cities are now embracing integrated commercial and residential zones that allow people to work and live in close proximity. The challenge architects and engineers are facing is to construct functionally mixed-use, vertically stacked buildings and developments that offer a very high quality of life on land that has become scarce.

What opportunities does this development present for SOM? Skidmore, Owings & Merrill is known for designing and engineering various large-scale projects throughout the world, from supertall buildings and hospitals to airports, schools, and convention centers. One of SOM’s biggest strengths is its multidisciplinary approach. Being an architectural engineering firm gives us a unique advantage in the age of vertical cities, as buildings such as Burj Khalifa in Dubai, the world’s tallest building, or the Manhattan West Development in New York prove.

Looking at New York, it is clear that the city is already very densely populated. What specific urban planning and construction requirements apply here? Air-rights construction has made it possible to extend the Midtown Business District as far as the Hudson River. The Hudson Yards and Manhattan West developments alone are creating more than a million square meters in additional real estate. In the last ten years, new construction in Manhattan, Brooklyn, and Queens have added real estate square footage equal to the whole of downtown San Francisco. In other words, an entire city has been built within one of the densest cities in the world. And this phenomenon is not unique to New York City. Over the next decade, we will see more and more cities growing vertically as their populations grow.

Manhattan West and Hudson Yards are prime examples of concentration, and SOM is building two office buildings, both over 300 meters high, as well as 35 Hudson Yards, the tallest residential building. What do investors demand from projects like these? Investors are usually extremely aware of the premium that can be generated in the lucrative real estate market, and therefore look to capitalize on every square centimeter of floor space. This is where high-performance building materials such as high-strength concrete play a very important role. By using these materials, we can gain space because we can make structural elements—say walls and columns—smaller.

How can suppliers and partners support you in projects like these? Developments in Real Estate have sped up considerably in recent years. Developers want to see a return on their investment as quickly as possible. That means using building materials that complement the ambitious timelines. Producers of such materials are our natural partners. As designers, we particularly value our relationships with companies like Sika, who invest specifically in research and development and constantly innovate.

Concrete is becoming increasingly important in high-rise construction. 35 Hudson Yards also relies heavily on this material. Why is that? This 72-story tower was built at a rate of one floor every two or three days. When you’re building at this speed, you need concrete admixtures and additives with very specific properties. The availability of high-strength concrete coupled with its long-term durability has also contributed to its increased demand in high-rise construction.

What benefits does concrete offer in terms of design? Concrete is not just an economical building material, it is one of the most versatile there is. Demand for concrete is growing because various admixtures have broadened the options for using it in high-rise construction. Today, concrete is the material of choice for high-rise residential buildings. It provides an inherently stiff building structure with effective sound damping to minimize building movement and to make buildings quiet, characteristics that are a must for tall residential buildings.

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Skyscraper construction demands perfect concrete that delivers maximum strength, is efficient to process, and emits minimum emissions. To ensure that the right quantities of consistently high-quality concrete are available on city-center construction sites whenever they are needed, Sika experts are assisting ready-mix concrete suppliers with their in-depth knowledge and innovative additives.

Driving a concrete mixer is a job that requires maximum concentration. Drivers have to deliver their load right next to Grand Central Station, just where pedestrians hurry across the street with their phones pressed to their ears and where tourists stop without warning to take a photo. Tec Crete delivers up to 100 truckloads of concrete a day to the site of the One Vanderbilt office skyscraper in Manhattan. The building is growing at a rate of up to three stories a week, and at 427 meters, it is the tallest building currently being constructed in New York.

ULTRASTABLE IN ALL TRAFFIC CONDITIONS

The demands the project places on the concrete are huge and start with the logistics. If a truck gets stuck in traffic on its way from the ready-mix plant in Queens, the quality of the concrete must not change in any way. Since space is tight on the building site itself, with no parking or storage areas, every delivery has to follow a strict timetable. Compliance with this timetable is only possible if every load of concrete matches up perfectly to the specifications. If concrete had to be rejected for quality reasons, work would be delayed across the entire site. Furthermore, the concrete has to flow well enough that it can be pumped up to the appropriate story. And once it’s there, it has to cure quickly and satisfy the extremely stringent compressive strength requirements. Three levels of quality control – at the ready-mix plant, on delivery to the site, and when the concrete is poured – make sure that it fulfills all requirements.

SUPPLIERS TRUST SIKA

All this is done with Sika’s high-performance concrete admixtures. “We source all our additives from Sika,” says Michael Gisonda, Tec Crete’s Sales and Quality Control Manager. The company adapts the additive mixture it uses to the specific requirements of the building. The additives it uses include Sika® ViscoCrete®, Sika® ViscoFlow®, Sika® Stabilizer, and SikaTard®. The mix design is constantly adapted to take account of weather-related temperature fluctuations.

LESS NOISE, MORE EFFICIENCY

A major city-center construction site brings an additional challenge in the form of noise. Local residents are particularly sensitive to it. But here again, Sika has the right solutions. Because Sika additives make concrete softer, it does not have to be mixed in the truck for as long, needs less pressure to pump, and, as a result, is much quieter to work. Furthermore, it flows better, which reduces both the amount of compacting it needs and the associated noise emissions. Using self-compacting concrete completely eliminates the need for vibration, the method of compaction typically used, and which is often felt to be a nuisance. The lower noise levels mean that many building sites can continue to work at night or weekends, which reduces overall construction time.

LOGISTICAL MASTERPIECE THANKS TO SIKA SYSTEM SOLUTIONS

> 400 M

is the height to which the high-strength, self-compacting concrete has to be pumped to get to the current job section of the One Vanderbilt in New York.

1.5 HOURS

is the time it can take to drive the 6.5 kilometers from the ready-mix plant to the One Vanderbilt site, depending on traffic.

100

is the number of trips the trucks make daily to deliver the close-on 70,010 m³ of concrete needed for the One Vanderbilt.

EVERY FIFTH

truckload of concrete is tested by an independent laboratory to ensure it meets the quality standards for the One Vanderbilt high-rise.

200 BAR

is the pressure at which the concrete is continuously pumped up the building. The concrete must remain cohesive throughout and the pipes must not block up.
Tec Crete is delivering all the concrete for the One Vanderbilt office skyscraper using concrete admixtures sourced entirely from Sika. Michael G. Gisonda (Jr.), Sales & Quality Control Manager at Tec Crete, and son of the company founder, explains why.

Tec Crete is delivering the concrete for several major construction projects in Manhattan. From your perspective, what are the biggest challenges of building with concrete right in the heart of the city?

The biggest issue is traffic. Some days, it can take our drivers over an hour to get to most jobsites. There are no longer any manufacturing plants in Manhattan for environmental reasons. We solve the problem by using Sika admixtures, which guarantee that the concrete stays workable for several hours. This allows us to control its slump and other properties. We also work at night in New York because there’s less congestion.

More concrete is being used to build high-rises. What particular quality requirements does this create?

The concrete we deliver for high-rises has to meet very specific requirements. These buildings have to withstand enormous loads. That means using concrete capable of withstanding pressures of 100–110 MPa. That’s three to four times more than average-strength buildings. To ensure that’s the case, there is continual testing on the jobsite. Building can only continue if the concrete meets the requirements. The concrete also needs to be fluid enough to be pumped up 50 to 80 stories, after which it has to cure very quickly. If the aggregates aren’t evenly distributed or if it’s not possible to pump the concrete for a different reason, construction comes to a standstill and things start to get very expensive.

What effect do these requirements have on the quantity of additives you use?

We use specially developed additives to achieve the right properties. The quantity of additives we put in the mix is three to five times higher than for conventional concrete.

Concrete’s behavior changes when temperature and air humidity change. What does Tec Crete do to compensate for this?

In summer, when temperatures are high, we need more hydration control to keep the concrete workable and pumpable. In winter though, we need more accelerators to speed up the curing process. I decide every morning exactly which chemical adjustments need to be made before we load the first truck. The decision depends on the weather, how much concrete we’re going to need that day, and how high we have to pump it.

Tec Crete purchases all concrete additives from Sika. Why?

The answer is simple: Because they work! Tec Crete has been a customer of Sika for decades. We have tried other suppliers in the past as well, but we always came right back to Sika as our sole supplier. Sika products are much more efficient. The support we get from Sika experts is fantastic. They help us prepare mix designs so that we get the specifications just right for every project. That way we can win prestigious major projects such as the One Vanderbilt. A Sika engineer comes with me to every important meeting with customers. I can rely entirely on Sika’s expertise.

Looking to the future, what developments do you expect to see, or would you like to see, in concrete technology?

It would be nice to see multiple additives that can accomplish more than one thing. For instance, an additive that could be a high-range water reducer with hydration control properties. That would simplify the process for us. I can see already that Sika is going in that direction. A good example is Sika® Stabilizer-4R. This product significantly improves the concrete’s pumpability while simultaneously keeping it from segregating. For this reason alone, I love including it in all my high-strength mix designs.

Michael G. Gisonda (Jr.) is Sales and Quality Control Manager at Tec Crete Transit Mix Corporation. The family-owned New York company specializes in ready-mix concrete.

“I ALWAYS HAVE A SIKA ENGINEER WITH ME”
LIVING ENVIRONMENT

Thousands of trees and bushes grow in the park of the Stavros Niarchos Foundation Cultural Center in Athens, while the buildings have green roofs or photovoltaic installations to deliver renewable energy. The complex, which has been designed by acclaimed architect Renzo Piano and is home to the new Greek National Opera and National Library of Greece, is a clear illustration of the contribution that sustainable construction can make to quality of life in cities.

SUSTAINABILITY FROM THE BOTTOM UP

The Cultural Center meets the strictest environmental standards and has become the first European cultural building of its size to earn LEED Platinum Certification. The materials chosen combine with engineering innovations to ensure maximum energy efficiency and economic use of water. However, it takes more than that to make the top grade in environmental building. Sustainability has to be factored in right from the planning stage and all the way through construction; in other words, it’s in the Cultural Center’s DNA.

FEWER EMISSIONS THANKS TO SIKA

This is why Sika has been involved in this major project and proposing solutions for it right from the outset. The Sika products impressed the client, and were used for everything from waterproofing the foundations to the roof installations. They increase energy efficiency, guarantee outstanding air quality inside the building, shorten transportation routes, and thus improve the building’s whole environmental footprint.

SUSTAINABLE FROM THE CONSTRUCTION STAGE

Sustainability is essential in urban construction. Sika solutions are helping the new cultural center in Athens meet maximum environmental standards.

In recent years, Sika has expanded its presence in the fast-growing concrete reinforcing fiber market. Most recently, during 2018, the company acquired Fibermesh®, the fiber technology developed by the US company Propex.

Just five percent of installed concrete contains fibers. Experts anticipate that concrete reinforcing fibers will usher in the same magnitude of progress in construction as admixtures have since their introduction to the market.

Sika invested in forward-looking concrete reinforcing fibers.

In recent years, Sika has expanded its presence in the fast-growing concrete reinforcing fiber market. Most recently, during 2018, the company acquired Fibermesh®, the fiber technology developed by the US company Propex.

Five percent of installed concrete contains fibers. Experts anticipate that concrete reinforcing fibers will usher in the same magnitude of progress in construction as admixtures have since their introduction to the market.

Studies have shown that adding fibers to concrete increases flexural strength 2.5-fold. Fibers also provide improved corrosion protection, fire resistance, and extend service life.

Because of its greater efficiency, fiber-reinforced concrete is set to grow at an estimated average of 7.2 percent a year in the period between 2015 and 2025. The advantages of using fibers include a reduced site workload because less rebar needs to be used.

CONVENTIONAL CONCRETE REINFORCED WITH REBARS

Fiber-reinforced concrete is less prone to cracking than conventional concrete. However, if fiber-reinforced concrete does crack, the cracks are generally shorter and thus less of a threat to component stability.

FIBER-REINFORCED CONCRETE

Fiber-reinforced concrete has a greater tensile strength. Furthermore, the fibers make the concrete more impact-resistant.

Fibers provide protection in a fire. For example, temperatures in a tunnel fire can exceed 1,000 degrees Celsius. Under these circumstances conventional concrete will spall, which reduces its load capacity. Fibers hold the concrete together.

Energy efficiency

The reflective Sikalastic® liquid-applied membrane system was used on the opera house roof to improve the efficiency of the photovoltaic installations. The complex’s extensive green roofs were lined with Sika roofing membranes.

Indoor air quality

Harmful emissions from volatile organic compounds (VOC) were avoided by using Sikafloor® floor coverings and Sikaflex® sealants.

SIKA INVESTS IN FORWARD-LOOKING CONCRETE REINFORCING FIBERS

In recent years, Sika has expanded its presence in the fast-growing concrete reinforcing fiber market. Most recently, during 2018, the company acquired Fibermesh®, the fiber technology developed by the US company Propex.
São Paulo is investing in public transportation. The city has recently built new subway and monorail lines, or extended existing lines, with the aid of Sika solutions – further ones are planned. These programs are intended to put an end to the Brazilian metropolis’s notorious traffic congestion. The chances of success are good, with over 80% of drivers saying they are willing to switch to public transportation if the service fits their needs.

**DEALING WITH THE DAILY PEAKS**

The only way to cope with commuter numbers that are growing every day and avoid congestion is to have an efficient traffic infrastructure. Experts regard resolving the biggest traffic issues as a key factor in economic growth and a major selling point when competing with other business locations worldwide. Many major cities are aware of this, and there is heavy investment in transport links and transportation worldwide.

**EFFICIENT, LONG-LASTING, AND COMFORTABLE**

The investment often takes place underground, as in São Paulo, Lahore, or Santiago de Chile, as well in New York, which is building the East Side Access to connect the Long Island Rail Road to Grand Central Terminal. The water pressure that the concrete and waterproofing used in such projects have to withstand places huge demands on them. Sika® ViscoCrete®, SikaProof®, Sikaplan®, and Sika® Hydrotite are high-quality solutions that meet these needs, enabling rapid construction progress and guaranteeing long infrastructure service life.

Sika solutions play a key role not only in the construction of underground or overground rail lines, they are also vitally important in the construction or modernization of stations and in rail vehicle manufacture. They help to carry public transportation forward into the future, as in Copenhagen, where Sika adhesives and sealants are in service in the city’s autonomous, multi-award-winning, driverless metro trains.

**READY FOR THE COMMUTERS OF TOMORROW**

Every morning, millions of people travel into the centers of the world’s major cities, and every evening they return home. The number of commuters continues to rise with increasing urbanization. Sika has the solutions to adapt traffic infrastructure to the growing demands placed on it.

Various residential and commercial districts need efficient public transportation for people’s daily commute, as the example of London shows. On the left is population distribution by where people live, on the right by where they work.

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**Public Infrastructure**

OUR YEAR 2018

53 BN passengers carried by urban public transportation in 2017 – an increase of 17% on five years ago.

1,900 KM of track were laid for urban public transportation between 2015 and 2017. 30% of this track was for new lines in China and India.
Sika technologies such as Sika Hydro-Prep®, Sikaflex® NS Series, and Sikaflex® STP produce no harmful emissions in vehicle interiors and offer superior environmental performance.

**DESIGN FLEXIBILITY**

Sika products bond and seal the widest range of materials and are flexible and resilient. When it comes to train design, there are no limits in terms of shape and materials.

**LIGHTWEIGHT CONSTRUCTION**

Sika solutions support lightweight construction for lower energy consumption during operations. At the same time, passenger comfort is enhanced thanks to excellent sound and vibration damping.
THE BUILT CITY IS BEING RENEWED

Densification is increasing the requirements that buildings have to satisfy, and a growing number of structures is becoming technically and environmentally obsolete. Sika has the solutions to extend buildings' service lives.

Every five years, Singapore’s engineers give the cities’ buildings a thorough inspection, checking that their piles are stable and looking for cracks in walls and ceilings. Their diligence pays off because the sooner damage is discovered, the more easily and cost-effective it can be remedied – and the safer the building becomes.

GROWING DEMANDS

Although a large number of buildings are being constructed in big cities, much of the building stock in many of them has been in place for decades, and is exposed to fresh stresses on a daily basis. The greater the density of buildings, the greater the forces acting on their structures. Heavy traffic is increasing vibrations, while high-rises have to contend with strong wind loads and changing weather conditions. Climate change is amplifying these effects. Periodic inspections are therefore mandatory in many big cities. In addition to the building’s structure, the quality of its roofs, facades, and balconies is also inspected, while increasing attention is being paid to improving energy efficiency, fire protection, and earthquake resistance.

The growing demand for attractive residential and office space is a further incentive to refurbish existing building fabric. Aging properties are being modernized, repurposed, or, as densification progresses, extended by having additional stories built on. All such refurbishments generally entail structural reinforcement.

SIKA HAS THE SOLUTION

However varied the modifications, Sika always has the right product technology to hand; from repair and facade mortars to structural reinforcements, from protective coatings to window insulation. Given the specific requirements, higher-quality products are often used in refurbishment and modernization projects. Innovative products and processes are one important reason why developers and architects rely on Sika in refurbishment and modernization projects. The company’s expertise and experience in developing end-to-end repair solutions are another. Consequently, Sika can ensure that the right refurbishment scheme is defined and implemented for every building.

Thanks to Sika, buildings’ service lives can be extended, something which pays dividends in terms of both cost efficiency and environmental compatibility. Maintaining structural fabric is particularly important in mature markets – also at times when the economy is going through a slow patch.
One of the challenges encountered while modernizing and upgrading the highway was strengthening the bridge piers in poorly accessible terrain.

Maintaining and Expanding Infrastructure

The expressways that link a country’s cities are its nerve paths. As loads increase, safety is a major issue, especially on bridges. The A9 in southern France is one of the most heavily used highways in the country. After a five-year construction period, the modernized and upgraded section between Montpellier and Spain opened six months early, thanks partly to Sika’s expertise and technologies.

16,000 M² of Sika® CarboDur® carbon fiber-reinforced polymer plates reinforce the structure supporting the bridge sections.

3,000 M² of SikaWrap®-230 C carbon fiber fabric protect the bridge piers against vibration and wear.

8,000 KG of Sikadur®-30 and 3,000 kg of Sikadur®-330 were used to attach and protect the reinforcement systems.
Cities in developed markets commonly have a large number of decades-old, dilapidated buildings. In such situations, refurbishing the existing building structure is often the most sustainable and cost-efficient solution. Sika is strongly positioned in the area, which is generally more resilient to economic developments than other sectors. Michael Winge, a member of Sika’s Greater New York sales team, explains why.

Refurbishment and modernization account for a large proportion of Sika’s business in mature markets. What, in your opinion, are the key factors driving this business? 70 to 75% of Sika’s sales in major cities such as New York come from renovating existing buildings. Buildings and infrastructure are aging and need to be repaired and protected against environmental influences. We are noticing a continuous rise in the requirements that structures have to fulfil. This is due firstly to direct factors such as climate change or heavy wear and tear resulting from increased use and increasing traffic, and secondly to more stringent building regulations. For this reason, periodic inspections are mandatory in major cities such as New York. They ensure that buildings are correctly maintained and guarantee safety.

What is the key to extending buildings’ lifespans? We have to ensure that the best possible refurbishment scheme is prepared and implemented for each individual building. It is not sufficient simply to rectify such shortcomings as they come to light. We have to make sure that the underlying problems that have caused deterioration in the building envelope do not recur. Structural stability and water resistance are key to this, and energy efficiency is gaining in importance too.

What are the challenges of refurbishing buildings in big cities? Logistics is a major challenge. If you have to repair the facade of a fifty-story building, for example, it can be difficult to obtain safe access. The materials and containers for the job have to be the correct size so that it is possible to mix and apply them from a scaffold or suspended scaffold hanging from the high-rise building.

Sika is the leader in the New York repairs and refurbishment market. Why has the company been so successful? It’s down to people and products. Sika understands the importance of having the right people. Our sales force is very technically oriented. Reps can advise engineers and architects who are facing the task of developing end-to-end refurbishment solutions and specifications. This also has the advantage that we can make sure that repairs are carried out properly. Furthermore, Sika systematically pursues the goal of bringing new and innovative products to the market and assisting customers at every stage of the construction process by providing the best products and systems adapted to their particular needs. We have a very broad range of products and solutions that encompasses concrete repair and protection including repair mortars, protective coatings, joint sealants, waterproofing and structural reinforcement systems. Put simply, Sika has the expertise and solutions to get buildings and infrastructure in good shape for the future.
CARS ARE IMPROVING

In the future, private transport in urban areas will be characterized by decarbonization, deprivatization, and intelligent networking. That means light, comfortable vehicles with more electrification components. Sika is helping to drive this trend with structural and heat-conductive adhesives and products for damping and reinforcing body construction.

64% is how much global sales of battery-powered electric vehicles have increased during 2018 alone. The potential for sales of Sika products is 20% higher in electric vehicles than in combustion engine-powered vehicles.

8% is how much less fuel a combustion-engined vehicle consumes when its weight is reduced by 10%. Using Sika products helps manufacturers make cars lighter.

50% weight reduction can be achieved if the vehicle body is constructed with lightweight materials. Structural adhesives such as SikaPower® are extensively used to join these new materials.

LIGHTWEIGHT CONSTRUCTION
Systematically using SikaPower® systems can reduce the amount of CO₂ emitted by cars with internal combustion engines by 150 kg a year. This structural adhesive technology is the key to multi-material design, an approach that enables car builders to systematically reduce the weight of bodywork. Furthermore, adhesives have other advantages. They increase the stiffness of the car body and therefore make cars safer. Corrosion resistance and service life are also improved. Sika is driving the trend forward by launching adhesives that help make production more efficient by gearing product performance properties to customers process requirements.

ELECTRIFICATION
As electric vehicles, safety systems, or even self-driving vehicles become more widespread, demand is being created for new solutions. This is because electrification systems generate heat, which create a risk of overheating or even fire. By establishing and expanding its Advanced Resins unit, Sika has further strengthened business in this area. Sika supplies heat-conductive adhesives and materials for encapsulating and insulating electrical systems. These help ensure that the vehicles of the future will be safer, longer-lived, and more efficient.

25 MN of the 95 million cars built worldwide each year contain Sikaflex®. The primerless, high-performance adhesive is used for direct glazing, composite materials, and interior trims.

STRONG SIKA GROWTH
The average value of the Sika materials to be found in vehicles is constantly increasing. Sika continues to outperform the automotive market growth.

21% is the average annual rate at which sales of the SikaPower® product family have grown over the past five years. The outlook is good. A study by CAR Research estimates that adhesives will have replaced welding as the preferred bonding technology in automotive manufacturing by 2030 at the latest.

ACOUSTICS
The combined, strong offering of Sika and Faist ChemTec, the specialist for structure-borne noise management, is making cars quieter and less susceptible to vibrations. These lightweight, multi-layer, industry leading products enable car manufacturers to build lighter vehicles that emit less CO₂ without having to compromise on acoustic comfort. The newly acquired technologies complement Sika’s existing portfolio of airborne noise treatments with solutions for structure-borne noise. With Faist ChemTec, Sika has become the clear technology leader in acoustic solutions for automotive construction.
DEMAND FOR PARKING GARAGES

In 1990, 26% of China’s population lived in cities. At the end of 2017, this figure had jumped to 60%. This went hand in hand with an increase in not only density and prosperity for the population, but also in the number of car owners. Experts estimate that China already has a shortfall of 50 million parking spaces, resulting in long queues and streets choked with parked vehicles. The government has reacted accordingly by issuing new regulations for new builds. Sika China successfully launched a tailored solution for the efficient construction of low-maintenance, safe car parks.

Sika set itself the goal of harnessing the business potential offered by the growing demand for parking spaces in China by developing a specific product system and bringing the corresponding marketing resources on stream. And the success speaks for itself: in 2018, “Sikafloor® Car Park” was the most successful single product for the national subsidiary. Average growth amounted to 39% between 2015 and 2018. On top of this, car parks are often a good entry point for cross-selling on large-scale projects such as the Suzhou Central Plaza.

PARKING SAFELY IN CHINA’S LARGEST BUILDING COMPLEX

At 1.82 million m², Suzhou Central Plaza is currently the largest urban building complex in China. It includes a shopping mall, office blocks, hotels, and serviced apartments, and has attracted an average of 100,000 visitors every day since its opening. In addition to ensuring public transport connections, the construction of a safe, bright car park was a key priority. For the construction of the 140,000 m² car park, the Sika Flooring Team was involved right from the planning stages in order to define solutions to meet the extremely stringent requirements on the floor in terms of mechanical properties, fire protection, aesthetics, durability, and maintenance. Sikafiber® concrete fibers were used to improve the crack resistance of the floor screed. Sikafloor® 3 QuartzTop and Sikafloor® CureHard Pro ensure the requisite hardness, wear resistance, and glossy surface for the floor, and help convey the all-important sense of safety in China. Sika also supplied concrete admixtures and roofing products for the building complex.

THE POTENTIAL IN CHINA’S CITIES

Today, Beijing has an average of 2.5 cars for every 10 people. This number is increasing, and it is estimated that it will double to 5 cars for every 10 people by 2030.

Beijing currently has 4 parking spaces for every 10 cars. In 2015, cities with over 500,000 inhabitants were instructed to factor a ratio of 1.3 parking spaces per vehicle into plans for residential and commercial properties.

Suzhou Central Plaza is a construction project of extreme proportions. Not only is it the largest building complex in China with a total area of 1.82 million m², it also houses the largest shopping mall (400,000 m²), rooftop garden (50,000 m²), and subterranean area (520,000 m²).
URBANIZATION DRIVES SUCCESS

SOLVING CUSTOMER CHALLENGES

All around the world, Sika’s solutions are helping raise building standards in fast-growing urban areas. More importantly: they make living together in increasingly dense areas in numerous different ways possible. Top-quality products for construction, civil engineering, infrastructure projects, and vehicle manufacturing are only one part of the Sika solution. Innovations, technical advice, and training both before and during the construction phase as well as the focus on people-, environment-, and budget-friendly applications – that is what stands out about Sika. Finally, it’s all down to Sika’s dedicated employees who work with customers to seek the best possible solutions each and every day. Let them tell you how.

SIKA CHILE – TEAM CONSTRUCTION

Sika opened its first office in Chile in 1942. Since then Sika has been involved in numerous construction projects which have helped shape the development of Chile. By understanding the needs and demands of our society and by listening to our customers, we will continue to develop technologies and solutions to meet rising requirements and future challenges.

SIKA DENMARK – TEAM INDUSTRY

With our knowledge and solutions we support and collaborate with our customers on a long-term basis. Not only do we supply the rail vehicle manufacturer in the production phase of the driverless trains, we are also active in the maintenance work by supporting the replacement of the glass windows when needed.

SIKA DENMARK – TEAM CONCRETE AND WATERPROOFING

We are proud to offer our expertise and solutions to a project that supports urban development and population growth in Copenhagen. The driverless metro system, which will be extended in 2019, gets you to the airport in less than 15 minutes. We help make this a reality by supporting the construction of the stations.

SIKA INDONESIA – TEAM LOGISTICS

As a growing economy, Indonesia is seeing an increasing amount of high-rise developments and a growing need for infrastructure. With our local supply chain and technical expertise we work together with our customers to realize such large projects.

SIKA CHILE – TEAM CONSTRUCTION
SIKA CHINA – TEAM SALES, QUALITY CONTROL, AND CONCRETE LABORATORY

As a pioneer in the Cambodian market, Sika supplies the full range of products to meet the requirements posed by urbanization. With the expansion of our production capacity, we intend to meet the increasing demand of more than 3,000 ongoing projects.

SIKA ARGENTINA – TEAM WATERPROOFING

Our team is focused on participating in every stage of major infrastructure projects. Starting with strong specification selling, designing solutions that meet waterproofing requirements, as well as extending the durability of the structures. One of the most prominent projects supplied by us is Paseo del Bajo, a 7 km underground highway that will connect the north with the south of Buenos Aires.

SIKA CHINA – PROJECT TEAM SUZHOU CENTER

Suzhou Central Plaza is the largest urban complex in China with two metro lines, several buildings, a total construction area of 1.82 million m², and total investment of around CHF 4.4 billion. We are working closely with our customers to provide concrete admixtures, car park flooring systems, and liquid waterproofing membranes for this project.

SIKA TEAM CORPORATE R&D AND OPERATIONS

We have combined different technologies and developed a new, fully bonded membrane system for basements: SikaProof® A+. Since space is limited in urban areas, more and more living environments are moving underground. Such environments are becoming areas where people work, live, and spend their leisure time. Thanks to SikaProof® A+, there is now a new solution for these new challenges.

SIKA CORPORATE TEAMS WITH INNOVATION FOR BELOW-GROUND WATERPROOFING

SIKA TEAM CORPORATE WATERPROOFING

In 2018, SikaProof® A+ was successfully tested for launch in 2019. Against the background of increased urbanization, quality requirements for dry basements and below-ground structures are rising. The SikaProof® A+ system protects any concrete structure against gas, water, and chemical ingress, and therefore significantly increases its durability. The robustness of the membrane enables simple, flexible installation in all climates and long-lasting quality.

SIKA POLAND – DEPUTY OF TARGET MARKET MANAGER CONCRETE WITH CUSTOMER

For more than two decades we have been working successfully with the leading pre-cast producer “Pekabex”. The cooperation is based on long-term experience and understanding of customer needs. Our newest and innovative solutions accelerate the implementation of the most complex projects, making collaboration with our customer a real pleasure. That’s what we call building trust!

SIKA PERU – TEAM OPERATIONS

In 2018 we opened a new plant for the production of concrete admixtures, mortar products, and acrylic liquid applied membranes in Peru, tripling our production capacity. We are now ready and fully committed to meet the rising demands of the city of Lima, with its population of 10 million.
SIKA ECUADOR – GENERAL MANAGER WITH TEAM

Urban development and migration from rural areas to large cities have increased the demand for developments such as housing, roads, tunnels, recreational areas, etc. This in turn increases the demand for our products in the market. Sika is a benchmark in the construction sector in our country; it has grown hand in hand with the big cities and their development.

SIKA HUNGARY – TEAM KAM, TECHNICAL SUPPORT, SALES, MARKETING

The real power lies in cross-functional teams. Here in Hungary employees from different departments such as Key Account Management, Technical Support, Sales, and Marketing work together on an increasing amount of urbanization projects. We can grow our business when we speak the same “Sika language”.

SIKA GERMANY – TEAM SALES

Berlin is the largest city in Germany. The Berlin sales representatives of all construction target markets meet regularly to increase collaboration. One of our goals is to improve the knowledge of specifiers when it comes to our huge range of solutions. To reach that goal Sika Germany has organized an event with the theme “Berlin baut” – Berlin is building. During the event 200 planners were trained on the different solutions Sika has to offer for renovations and new constructions.

SIKA EGYPT – TEAM CONCRETE AND WATERPROOFING

The construction of Rod-Al-Farag Bridge, considered to be one of the widest bridges in the world, is challenging as it is located in one of the most crowded and densely populated areas of Cairo. With our new technologies and solutions we successfully contributed to the realization of the project.

SIKA AUSTRIA – PROJECT TEAM

Buildings and infrastructure in cities are in continuous need of repair and refurbishment. We are currently developing a special pump that transports mortars at a rate of five tons per hour, compared to one ton per hour with the traditional method, and to a height of 80 m. We are helping our customers to increase the efficiency of their refurbishment projects.

SIKA HONG KONG – TEAM REFURBISHMENT

We, as sales and technical service professionals, are proud to help our customers face the challenges of external facade refurbishments with strong product knowledge and site support.

SIKA PAKISTAN – GENERAL MANAGER WITH TEAM SALES, MARKETING AND FINANCE

Lahore is the second-largest urban center in Pakistan with an estimated population of 10 million. Due to continuous population growth the Orange Line Metro Rapid Transit (MRT) was developed to meet the predicted passenger demand across the city. We have played an integral part in this large project by fulfilling needs with a wide range of Sika products.
SIKA SWITZERLAND – DESIGN AND BUILDING CONSULTANTS

Urbanization is creating new challenges in architecture and fueling demand for state-of-the-art construction materials and integral technical solutions. As design and building consultants, we are often called in as early as at the planning phase so that we can work together with architects and planners to formulate tailored system solutions. With regard to “The Circle” in particular – Switzerland’s biggest-ever building construction project – we have been involved as consultants for a number of years and are supporting the project with waterproofing, corrosion protection, facade, concrete, and mortar systems.

SIKA SOUTH AFRICA – TEAM TECHNICAL SALES, R&D WITH CUSTOMER

Our team has been aiding the refurbishment of the South Waste Water Treatment Works in Durban by providing technical advice and adapting solutions to solve the challenges that arise. We strive to create close partnerships with responsible engineers and our experienced employees.

SIKA BOLIVIA – TEAM R&D, OPERATIONS, AND SALES

At Sika Bolivia we understand that teamwork is a key pillar of success. R&D, operations, and commercial staff collaborate to create new ideas and solutions for our customers. Therefore, we are the most important supplier of admixtures and other products for road integration projects in Bolivia. These projects are rising in demand as urbanization continues.

SIKA SRI LANKA – TEAM PRODUCTION

With our local production and expertise, we support our customers with many large-scale projects in Sri Lanka. Whether it be a more than 200-meter high mixed development in Colombo where we provide continuously pumped concrete or solutions for several highways connecting different parts of Sri Lanka.

SIKA TANZANIA – GENERAL MANAGER WITH TEAM

Sika opened the first concrete admixtures plant in Dar es Salaam, Tanzania, in 2017. This enables us to efficiently supply top-level admixtures to the main infrastructure projects in the country, including the new terminal at the Julius Nyerere International Airport, the Tazara Flyover, and the SGR project, the new railway line that will connect Dar es Salaam with Kampala, Uganda. Our global footprint, combined with our know-how and support on a local level, is contributing to the urbanization of the major cities in Tanzania.

SIKA SLOVENIA – TEAM WATERPROOFING AND ROOFING

Building trust starts within the team. With the knowledge of our technical sales teams and high-level solutions, we can support our customers in challenging projects on a daily basis. We are convinced that trust and our philosophy to provide solutions from the basement to the roof make us invincible.

SIKA ALGERIA – SALES TEAM WITH CUSTOMERS

Together as a team we listen to our customers to understand their needs and provide them with solutions to increase efficiency that not only meet but exceed their expectations. This was also the case at the construction of the new hotel complex close to Algier Airport, which connects the vibrant city with the world.

SIKA RUSSIA – TEAM FLOORING, REFURBISHMENT, CONCRETE

We are proud to work for a company that emphasizes employee development in accordance with professional qualifications and personal capacities. Each employee knows that success is a question of solid teamwork and having the right strategy in order to benefit from important megatrends such as urbanization.

SIKA RUSSIA – TEAM FLOORING, REFURBISHMENT, CONCRETE

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The eight members of Sika’s Group Management. In the background is “The Circle” – currently Switzerland’s largest construction project and a commercial extension of Zurich Airport. Sika has been helping make the architecturally challenging, 180,000 m² building complex a reality by contributing comprehensive expertise as well as system solutions and products right from the start of planning. The company’s waterproofing systems, concrete admixtures, mortars, corrosion protection systems, and coatings are being used in the project. “The Circle” is due to open in fall 2020.
Sika takes the long view when it comes to developing its business. The relationship with customers, employees, and other stakeholders is shaped by respect and responsibility. Sika operates with a strong focus on safety, quality, environmental protection, fair treatment, social responsibility, responsible growth, and value creation.

At the Extraordinary General Meeting on June 11, 2018, Sika shareholders approved the introduction of unitary shares with a par value of CHF 0.01. The Sika share weakened slightly in the course of a very mixed year on the stock markets, with a 3.4% drop in value, but still fell less sharply than the SMI Swiss blue chip index (-10.2%).

SIKA HOLDS GROUND BETTER THAN SMI

SUMMARY

With a decline of 3.4%, the Sika share price performed better than the SMI index.

Closing price of the Sika share in 2017: CHF 129.00
Closing price of the Sika share in 2018: CHF 124.60

The key global share indices performed as follows in 2018:
- SMI: -10.2%
- DAX: -18.3%
- Dow Jones: -5.6%
- Nikkei: -12.0%

Sika shareholders benefit additionally from the company’s good result: dividend increase of 10.8% proposed

STOCK EXCHANGE RATIOS SIKA

in CHF 2018

Market capitalization as at 31.12.2018 in CHF mn 17,666.00
Yearly High 149.00
Yearly Low 112.70
Year end 124.60
Dividend 2017 1.85
Dividend 2018² 2.05
Earnings per Share (EPS)³ 4.69

1) Due to the share split, the dividend per share of the previous year has been adjusted by the factor 60 to ensure comparability.
2) Pursuant to proposal to Annual General Meeting
3) Undiluted
**CONSOLIDATED BALANCE SHEET**

<table>
<thead>
<tr>
<th>in CHF mn</th>
<th>Notes</th>
<th>12/31/2017</th>
<th>12/31/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>10, 26</td>
<td>1,037.9</td>
<td>954.0</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>11, 26</td>
<td>1,188.8</td>
<td>1,322.9</td>
</tr>
<tr>
<td>Inventories</td>
<td>12</td>
<td>729.6</td>
<td>800.7</td>
</tr>
<tr>
<td>Prepaid expenses and accrued income</td>
<td>13</td>
<td>116.2</td>
<td>112.0</td>
</tr>
<tr>
<td>Other assets</td>
<td>14, 26</td>
<td>12.7</td>
<td>27.1</td>
</tr>
<tr>
<td>Current assets</td>
<td>3,085.1</td>
<td>3,176.7</td>
<td></td>
</tr>
<tr>
<td>Property, plant, and equipment</td>
<td>15</td>
<td>1,065.2</td>
<td>1,214.2</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>16</td>
<td>1,317.1</td>
<td>1,693.9</td>
</tr>
<tr>
<td>Investments in associated companies</td>
<td>17</td>
<td>6.2</td>
<td>6.2</td>
</tr>
<tr>
<td>Deferred tax assets</td>
<td>8</td>
<td>228.1</td>
<td>233.0</td>
</tr>
<tr>
<td>Other assets</td>
<td>14, 22, 26</td>
<td>94.1</td>
<td>68.2</td>
</tr>
<tr>
<td>Non-current assets</td>
<td>2,710.7</td>
<td>3,205.5</td>
<td></td>
</tr>
<tr>
<td><strong>ASSETS</strong></td>
<td></td>
<td>5,795.8</td>
<td>6,382.2</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>18, 26</td>
<td>730.9</td>
<td>733.8</td>
</tr>
<tr>
<td>Accrued expenses and deferred income</td>
<td>19</td>
<td>253.4</td>
<td>265.5</td>
</tr>
<tr>
<td>Financial liabilities</td>
<td>20, 26</td>
<td>202.3</td>
<td>237.5</td>
</tr>
<tr>
<td>Income tax liabilities</td>
<td>21</td>
<td>147.0</td>
<td>147.9</td>
</tr>
<tr>
<td>Provisions</td>
<td>21</td>
<td>20.8</td>
<td>22.1</td>
</tr>
<tr>
<td>Current liabilities</td>
<td>1,953.6</td>
<td>2,406.8</td>
<td></td>
</tr>
<tr>
<td>Financial liabilities</td>
<td>20, 26</td>
<td>533.3</td>
<td>795.9</td>
</tr>
<tr>
<td>Provisions</td>
<td>21</td>
<td>56.4</td>
<td>48.1</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>8</td>
<td>129.3</td>
<td>154.0</td>
</tr>
<tr>
<td>Employee benefit obligations</td>
<td>22</td>
<td>260.0</td>
<td>268.7</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>23</td>
<td>32.1</td>
<td>34.2</td>
</tr>
<tr>
<td>Non-current liabilities</td>
<td>1,031.1</td>
<td>3,300.0</td>
<td></td>
</tr>
<tr>
<td><strong>LIABILITIES</strong></td>
<td></td>
<td>2,384.7</td>
<td>4,706.8</td>
</tr>
<tr>
<td>Capital stock</td>
<td></td>
<td>1.5</td>
<td>1.4</td>
</tr>
<tr>
<td>Treasury shares</td>
<td></td>
<td>-6.6</td>
<td>-11.1</td>
</tr>
<tr>
<td>Reserves</td>
<td></td>
<td>3,389.8</td>
<td>1,655.6</td>
</tr>
<tr>
<td>Equity attributable to Sika shareholders</td>
<td></td>
<td>3,384.7</td>
<td>1,645.9</td>
</tr>
<tr>
<td>Non-controlling interests</td>
<td></td>
<td>26.4</td>
<td>29.5</td>
</tr>
<tr>
<td><strong>SHAREHOLDERS’ EQUITY</strong></td>
<td>24</td>
<td>3,411.1</td>
<td>1,675.4</td>
</tr>
<tr>
<td><strong>LIABILITIES AND SHAREHOLDERS’ EQUITY</strong></td>
<td></td>
<td>5,795.8</td>
<td>6,382.2</td>
</tr>
</tbody>
</table>

Strong growth with sales exceeding CHF 7 billion for the first time. New record figures for operating profit at CHF 945.9 million (+5.5%) and for net profit at CHF 687.1 million (+5.9%).

**CONSOLIDATED INCOME STATEMENT FROM JANUARY 1 TO DECEMBER 31**

<table>
<thead>
<tr>
<th>in CHF mn</th>
<th>Notes</th>
<th>% 2017</th>
<th>% 2018</th>
<th>Change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>1, 2</td>
<td>100.0</td>
<td>6,248.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Material expenses</td>
<td>3</td>
<td>-45.6</td>
<td>-2,849.2</td>
<td>-47.0</td>
</tr>
<tr>
<td>Gross result</td>
<td></td>
<td>54.4</td>
<td>3,399.1</td>
<td>53.0</td>
</tr>
<tr>
<td>Personnel expenses</td>
<td>4</td>
<td>-19.4</td>
<td>-1,212.1</td>
<td>-19.0</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>5</td>
<td>-17.9</td>
<td>-1,116.6</td>
<td>-17.7</td>
</tr>
<tr>
<td>Operating profit before depreciation</td>
<td>2, 15, 16</td>
<td>17.1</td>
<td>1,068.5</td>
<td>16.3</td>
</tr>
<tr>
<td>Depreciation and amortization expenses</td>
<td></td>
<td>2.8</td>
<td>-172.2</td>
<td>-2.9</td>
</tr>
<tr>
<td>Operating profit</td>
<td>2</td>
<td>14.3</td>
<td>896.3</td>
<td>13.4</td>
</tr>
<tr>
<td>Interest Income</td>
<td>7</td>
<td>0.1</td>
<td>1.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Interest expenses</td>
<td>6</td>
<td>-0.1</td>
<td>-1.8</td>
<td>-0.1</td>
</tr>
<tr>
<td>Other financial income</td>
<td>7</td>
<td>0.2</td>
<td>5.9</td>
<td>0.1</td>
</tr>
<tr>
<td>Other financial expenses</td>
<td>6</td>
<td>-0.4</td>
<td>-24.0</td>
<td>-0.5</td>
</tr>
<tr>
<td>Income from associated companies</td>
<td>7</td>
<td>0.0</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Profit before taxes</td>
<td></td>
<td>13.8</td>
<td>862.1</td>
<td>12.6</td>
</tr>
<tr>
<td>Income taxes</td>
<td>8</td>
<td>-3.4</td>
<td>-213.1</td>
<td>-2.9</td>
</tr>
<tr>
<td>Net profit</td>
<td></td>
<td>10.4</td>
<td>649.0</td>
<td>9.7</td>
</tr>
<tr>
<td>Profit attributable to Sika shareholders</td>
<td></td>
<td>10.3</td>
<td>643.5</td>
<td>9.6</td>
</tr>
<tr>
<td>Profit attributable to non-controlling interests</td>
<td></td>
<td>0.1</td>
<td>5.5</td>
<td>0.1</td>
</tr>
<tr>
<td>Undiluted earnings per share (in CHF)</td>
<td></td>
<td>4.23</td>
<td>4.69</td>
<td>10.9</td>
</tr>
<tr>
<td>Diluted earnings per share (in CHF)</td>
<td>1, 2</td>
<td>4.23</td>
<td>4.58</td>
<td>8.3</td>
</tr>
</tbody>
</table>

1 Due to the share split, the earnings per share as of December 31, 2017, were adjusted for comparability. Our calculation took this into account with 1/60 of the earnings per share as of December 31, 2017. For details see note 24. 
2 Dilutive effect due to the convertible bond issued (see note 20).

**DETAILS TO STATEMENT OF CASH FLOWS**

<table>
<thead>
<tr>
<th>in CHF mn</th>
<th>Notes</th>
<th>% 2017</th>
<th>% 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating activities</td>
<td></td>
<td>651.9</td>
<td>744.0</td>
</tr>
<tr>
<td>Investing activities</td>
<td></td>
<td>-478.2</td>
<td>-705.2</td>
</tr>
<tr>
<td>Financing activities</td>
<td></td>
<td>-269.2</td>
<td>-149.6</td>
</tr>
<tr>
<td>Exchange differences on cash and cash equivalents</td>
<td></td>
<td>-16.6</td>
<td>-13.1</td>
</tr>
<tr>
<td>Net change in cash and cash equivalents</td>
<td></td>
<td>-117.1</td>
<td>-123.9</td>
</tr>
<tr>
<td>Acquisitions less cash and cash equivalents</td>
<td></td>
<td>320.4</td>
<td>471.2</td>
</tr>
<tr>
<td>Acquisitions (+)/disposals (-) of financial assets</td>
<td></td>
<td>2.7</td>
<td>3.2</td>
</tr>
<tr>
<td><strong>OPERATING FREE CASH FLOW</strong></td>
<td></td>
<td>496.8</td>
<td>513.2</td>
</tr>
</tbody>
</table>
PHOTOS: COVER AND PAGE “HIGHLIGHTS”

Cover: aerial photography of Manhattan, New York, USA, one of the most densely populated urban areas in the world, where Sika is currently supplying 293 different projects.


As at: February 2019