

# SOLUTIONS

for Smart Urban Areas

Commercial & Institution



*wilo*



## WILO PROFILE

The Wilo Group is one of the **world's leading premium providers** of pumps and pump systems for the building services, water management and industrial sectors. In the past decade, we have developed from a hidden champion into a visible and connected champion. Today, Wilo has around 8,000 employees worldwide.

Our innovative solutions, smart products and individual services move water in an **intelligent, efficient and climate-friendly** manner. We are also making an important contribution to climate protection with our sustainability strategy and in conjunction with our partners. We are systematically pressing ahead with the digital transformation of the Group. We are already the digital pioneer in the industry with our products and solutions, processes and business models.

## SMART URBAN ZONES



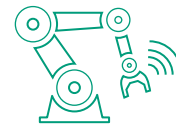
RECREATION



COMMERCIAL  
& INSTITUTION



HOUSING & LIVING



INDUSTRY



TRANSPORTATION  
& INFRASTRUCTURE



AGRICULTURE

**“WITH OUR INTELLIGENT AND CONNECTED SOLUTIONS, WE CAN MAKE AN IMPORTANT CONTRIBUTION TO THE EVOLUTION OF CITIES INTO SMART URBAN AREAS. THANKS TO THE SIGNIFICANTLY LOWER ENERGY CONSUMPTION, WE ARE HELPING TO SLOW DOWN CLIMATE CHANGE.”**

Oliver Hermes, Chairman of the Executive Board and Chief Executive Officer (CEO)



**55 %**

of all people live in cities. In 2050, it will be around 70%.

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**75 %**

of all greenhouse gases are produced in cities.

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**90 %**

of all urban areas are near the coast, which makes them particularly vulnerable to rising sea levels.

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**70 %**

of all cities are already feeling the effects of climate change.

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## THE FIGHT FOR THE CLIMATE WILL BE WON IN THE CITIES.

Advancing urbanisation, digital transformation and the challenges of climate change are making it necessary to rethink cities. Climate change can only be halted if intelligent technologies and networked systems can be used successfully to drastically reduce cities' energy consumption. Pumps consume around ten percent of the electricity generated worldwide. Most of them are outdated and used in urban areas. Highly efficient and smart Wilo products of the latest generation offer significant energy-saving potential and allow more conservative use of the precious resource that is water.





DUBAI

# GROWING SMART

Urbanisation will advance rapidly in the coming decades. More and more people will move from the country to the city. City infrastructure will be tested to its limits. At the same time, climate change is necessitating a fundamental realignment to CO<sub>2</sub>-neutral energy management. In order to meet these challenges while making the cities of the future fit places to live, people around the world are coming up with intelligent, digital concepts for cities: **Smart Urban Areas**.

## INTELLIGENT

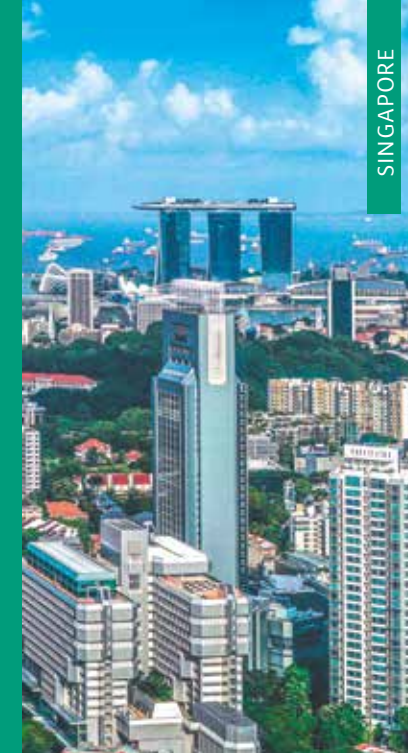
All smart-city concepts are based on data. Data is the essential requirement for clever planning and digital solutions. More and more cities are therefore establishing structures to collect this data – such as Chicago. The US metropolis has installed an interactive network of sensors that gather data on factors from air quality to water levels that forms the basis for optimizing how the city is run.



CHICAGO

## CONNECTED

Collected data only becomes smart data through communication. Interconnection links individual technological solutions together into intelligent concepts. For example, interconnected mobility services can significantly reduce commute times. Networked water meters can save up to 80 litres of water per person per day. A trailblazer among smart cities is Singapore. The city on the equator is installing smart transport, water supply and waste recycling systems and gradually offering ever more government services in digital form. However, Dubai has also pledged to become the smartest city in the world by 2021. In order to reach this goal, over 500 interconnected initiatives have already been launched.



SINGAPORE

## LIVEABLE

Innovative technologies will make sure that people are provided for in the long term. They enable the efficiency and flexibility necessary to adapt urban infrastructure to the growing population while conserving resources. The primary objective of forward-looking smart-city concepts is to preserve and improve people's quality of life. This depends on the protection of natural resources so that they are still available for future generations. However, it is also necessary to make urban areas more green and attractive, such as in Milan, where the twin "Bosco Verticale" (Vertical Forest) towers enrich the climate with around 900 trees and roughly 2,000 other plants.

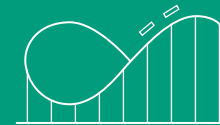


MILAN



# WE PROVIDE SOLUTIONS FOR SMART URBAN AREAS

In Smart Urban Areas, urban infrastructure and many areas of life are connected with each other digitally and intelligently. They can be divided into **six zones**. These zones represent different requirements and functions. Wilo develops customised, energy-efficient and smart solutions to meet the various challenges.



## RECREATION

This zone encompasses all the areas that serve recreation, such as leisure parks, opera houses or sports stadiums. The strongly fluctuating need for water supply and water disposal over time with periodic peaks constitutes a particular challenge for the pump systems. Wilo's flexible and comprehensive portfolio meets this need perfectly, and has solutions on hand for all tasks.



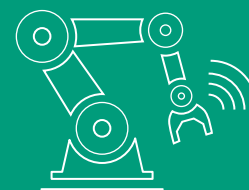
## COMMERCIAL & INSTITUTION

Office towers, universities, hotel complexes – this zone encompasses large buildings, primarily for commercial use. The growth of towns means increasing complexity in building management and new challenges in terms of technical connectivity. Wilo products offer the opportunity of connectivity, and can always be integrated everywhere into existing building services.



## HOUSING & LIVING

The zone that encompasses the living spaces within a town or city is characterised primarily by the need for amenities and individualisation. This means the most demanding requirements for the selection and operation of heating and air-conditioning systems. Drinking water applications must also meet the maximum hygiene standards. Wilo solutions can also be easily integrated into existing smart-living concepts.



## INDUSTRY

Alongside operational reliability and energy efficiency, material quality and the maintenance of standards also have a particular role to play in industry. Industrial locations will also change with the transformation of cityscapes. With the highest quality requirements for our products, Wilo systems offer high efficiency, long service life and operational reliability for a variety of industrial applications.



## TRANSPORTATION & INFRASTRUCTURE

The hubs of the city's infrastructure, such as airports, stations or harbours, are integrated into this zone. The reliable sewage transport is particularly important, given constant population growth. Wilo solutions ensure simple and highly efficient sewage transport with robust and reliable solid separation systems.



## AGRICULTURE

Areas used for agriculture are extending into city structures with growing Smart Urban Areas. Green roofs, vertical farms or inner-city parcels used for agriculture will improve the supply and climate of urban areas. Reliable and sustainable irrigation is indispensable. For this, Wilo offers highly efficient and resource-efficient solutions, from raw water intake to irrigation.



ST. PETERSBURG, RUSSIA



DUBLIN, IRELAND



NUR-SULTAN, KAZAKHSTAN



## COMMERCIAL & INSTITUTION

Skyscrapers, universities, hotel complexes – this zone comprises buildings that are used primarily for commercial purposes. Growing cities mean increasing complexity in facility management and new requirements in terms of connectivity. In the smart cities of the future, almost everything will be connected. Buildings will have to be capable of communicating within themselves and with each other in order to optimise processes.

Digital developments like artificial intelligence and smart, connective products will control buildings efficiently and sustainably, making a positive contribution to urban development – not least in terms of energy efficiency and CO<sub>2</sub> prevention.

# ENERGY- SAVING GLASS FLAME

**LOCATION**  
St. Petersburg, Russia

**PROJECT**  
Lakhta Center



## TOWERINGLY EFFICIENT

At 462 metres, the Lakhta Center in St. Petersburg is the tallest building in Europe. Gazprom's glass headquarters is designed to resemble a flame, the logo of the Russian gas giant, and was awarded LEED® Platinum certification for its outstanding energy efficiency. This is thanks in large part to over 530 high-efficiency Wilo pumps of the latest generation, including the electronically controlled Wilo-CronoLine-IL-E, the multi-stage Wilo-Helix and the extremely economical Wilo-Stratos-D.



# HIGH-EFFICIENT HEADQUARTERS



**LOCATION**  
Dublin, Ireland  
**PROJECT**  
Central Bank

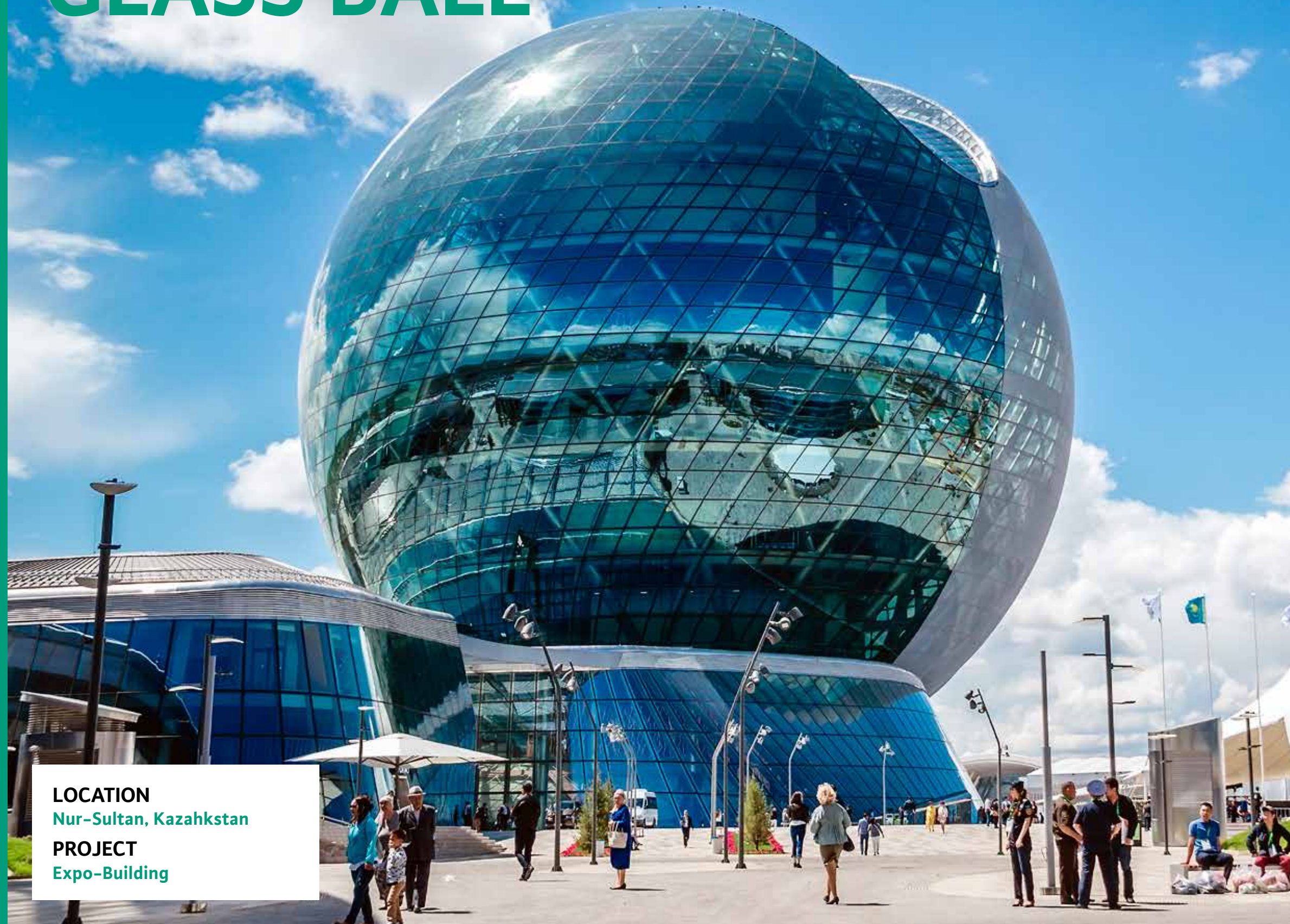


## SUSTAINABLY CONSTRUCTED

The Central Bank of Ireland has moved into new headquarters right on the waterfront. More than 1,400 people work at North Wall Quay in Dublin. The eight-storey building was designed with energy and resource efficiency in mind. It also holds BREEAM certification, the most widely established distinction for sustainable construction. Among other things, this is thanks to highly efficient IE4 pumps from Wilo, which are responsible for heating and cooling, cold water, and rainwater recycling.



# FUTURISTIC GLASS BALL



**LOCATION**  
Nur-Sultan, Kazakhstan  
**PROJECT**  
Expo-Building



## ENERGY-SAVING AND PERSISTENT

Future Energy was the theme of Expo 2017 in Nur-Sultan, which was still called Astana at the time. The aim was to stimulate a dialogue between companies and the public about how best to reconcile economic success and sustainability. The centrepiece of the Expo, the Kazakhstan Pavilion, is now a centre for culture and science. Highly efficient, long-lasting Wilo pumps are ensuring the water supply to the futuristic globe-shaped building.





# WELCOME TO THE FUTURE

The largest location development programme in the company's history is bringing Wilo's headquarters in Dortmund into the digital future. Production, administration, product development and customer service are being interconnected and combined into the Wilo Group's number one digital location – the WiloPark Dortmund.

The WiloPark Dortmund is not only a pioneering company headquarters where machinery, workstations and buildings will be interlinked. It will also network with the surrounding infrastructure. The Wilo headquarters will therefore become a part of the nascent Ruhr Smart Urban Area.

## PUBLISHING INFORMATION

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Wilo Group Marketing

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### Photos

Alamy  
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