REFERENCE MAGAZINE

PANORAMA 2962

"Germany's highest underfloor heating system“

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A NEW HOTEL FOR DESIGN LOVERS IN RIGA

The newly completed Grand Poet Hotel is Latvia's premier design hotel, with five-star rooms and suites, fine dining, conference and wellness areas. An Uponor heating and cooling solution throughout the building means that guests can enjoy the historic architecture and luxury design in absolute comfort.

Smart.
Connected.
Innovation.

At Uponor, water is the heart of everything we do. Water moves the world around us, and every day we innovate to enhance the possibilities of what water can achieve. But today, more than ever, industry professionals need more than just innovation. New technologies bring new challenges – and require more and more specialist knowhow. We know, because at Uponor we've been building new ideas for 100 years. It's why we're among the world's leading providers of drinking water, radiant heating and cooling solutions.

It's why we create:

Smart solutions that put intelligent technologies in your hands, taking comfort, hygiene, efficiency and safety to the next level.

Connected systems that give you advanced control across locations, on any size of project – with intelligent management tools.

Innovation that makes planning, installing and operating easier, faster, and more efficient.

These are some of the ways we go beyond innovation, and we can partner with you to set new standards in the industry. Because when you need the confidence to meet the biggest challenges, you need a solution as unique as your project.

Let's set a new standard. Let's build your ideas.

uponor

Project facts

- Location: Zugspitze, Germany
- Building type: restaurant
- Gross floor area: 2,160 m²
- Floors: 4
- Project year: 2018
- Cost of project: EUR 50 million

Uponor contribution

- 720 m² Uponor Classic underfloor heating
- 250 m² Uponor heating composite pipe system
- 500 m² Uponor drinking water composite pipe system

PANORAMA 2962

TAKING COMFORT TO NEW HEIGHTS AT THE ZUGSPITZE

AN UNDERFLOOR HEATING SOLUTION FOR A RESTAURANT 3,000 METERS ABOVE SEA LEVEL WAS AMONG UPONOR'S MOST INTERESTING PROJECTS – AND PRESENTED SOME UNIQUE CHALLENGES.

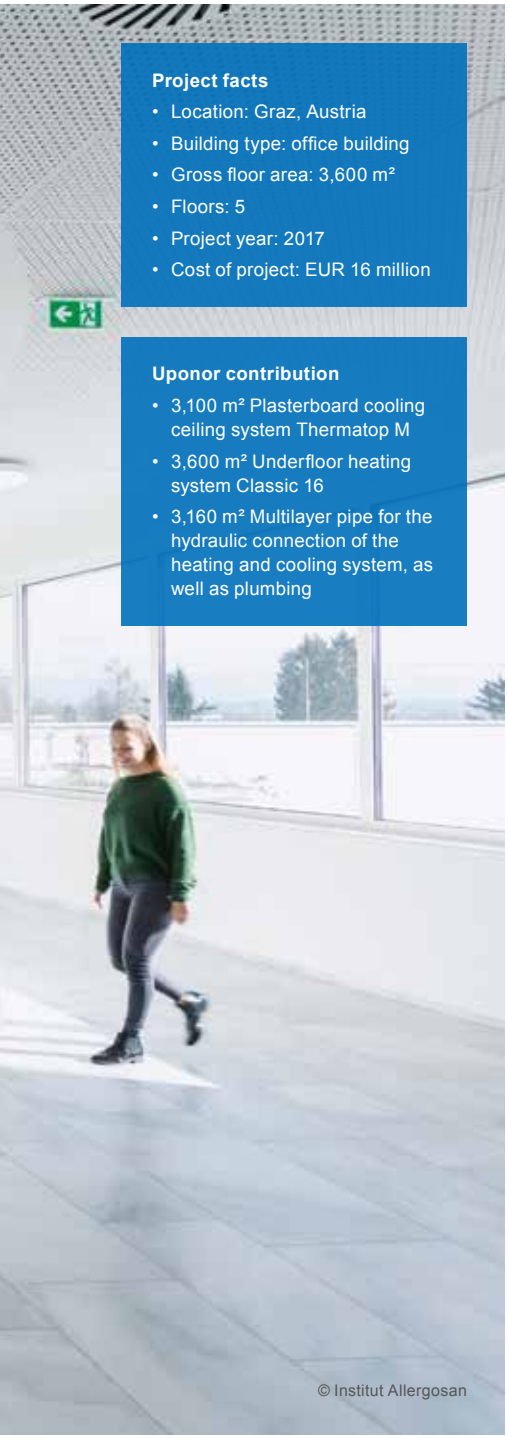
The station at the top of Germany's tallest mountain, the Zugspitze, is visited by over half a million people every year. A world-record breaking cable car transports tourists to the summit, which offers breathtaking views of the German, Austrian, Italian and Swiss Alps. The newly built Panorama 2962 restaurant tasked Uponor with creating an underfloor heating and drinking water solution, which was no mean feat.

Building at 2962 meters above sea level presented unique challenges, especially while ensuring that water utilities were fully operational throughout the process. Michael Singer, project manager for Zugspitze mountain station, explained: „I had to specify the goods to be transported and the exact weight one week in advance and then I was assigned a time window. We quickly cleared out the transport crates on the roof, as the space was already needed for the next material delivery."

THE NEW HEADQUARTERS FOR INSTITUT ALLERGOSAN IS A WORLD-LEADING CENTER FOR MEDICAL R&D. A UNIQUE BUILDING, IT REQUIRED A UNIQUE HEATING AND COOLING SOLUTION.

Uponor was recruited by Institut AllergoSan to create a heating and cooling solution for its new headquarters in Graz, Austria. The challenge was to find a customized solution to meet the precise needs of the institute, a state-of-the-art medical research and development facility.

Like the building's exceptional design, Uponor's solution was a unique combination of energy efficiency and aesthetic design. Uponor's innovative Thermatop M ceiling cooling system now provides a comfortable indoor climate, without any noise or draught. Perforated ceiling panels were chosen specifically to improve the room acoustics throughout the building.



Project facts

- Location: Graz, Austria
- Building type: office building
- Gross floor area: 3,600 m²
- Floors: 5
- Project year: 2017
- Cost of project: EUR 16 million

Uponor contribution

- 3,100 m² Plasterboard cooling ceiling system Thermatop M
- 3,600 m² Underfloor heating system Classic 16
- 3,160 m² Multilayer pipe for the hydraulic connection of the heating and cooling system, as well as plumbing

INSTITUT ALERGOSAN

EFFICIENCY AND AESTHETICS GO HAND IN HAND

AQUATURM HOTEL

A HIGH-RISE WITH THE LOWEST ENERGY USE

UPONOR SOLUTIONS HAVE HELPED TO TRANSFORM A 60-YEAR-OLD WATER TOWER ON THE EDGE OF LAKE CONSTANCE INTO AN ENERGY-NEUTRAL DESIGN HOTEL.

An exceptional feat of engineering built within the structure of a water tower in Radolfzell, the aquaTurm Hotel supplies itself with energy using solar and geothermal power, wind power and photovoltaics. The result is the world's first construction of its kind – a zero-energy high-rise building that sets a new industry standard for environmentally friendly architecture.

In luxury rooms and dining areas which offer the hotel's guests breath-taking views of Lake Constance, Uponor's Klett radiant heating system provides comfortable room temperatures quickly and easily. In addition, a Smatrix Base control module ensures protection against condensation damage, with an intelligent auto-balancing function to guarantee consistent ground temperatures, quick response times and the best possible energy efficiency, all year round.

Project facts

- Location: Radolfzell, Germany
- Building type: hotel
- Floors: 14

© aquaTurm

DEICHMAN LIBRARY

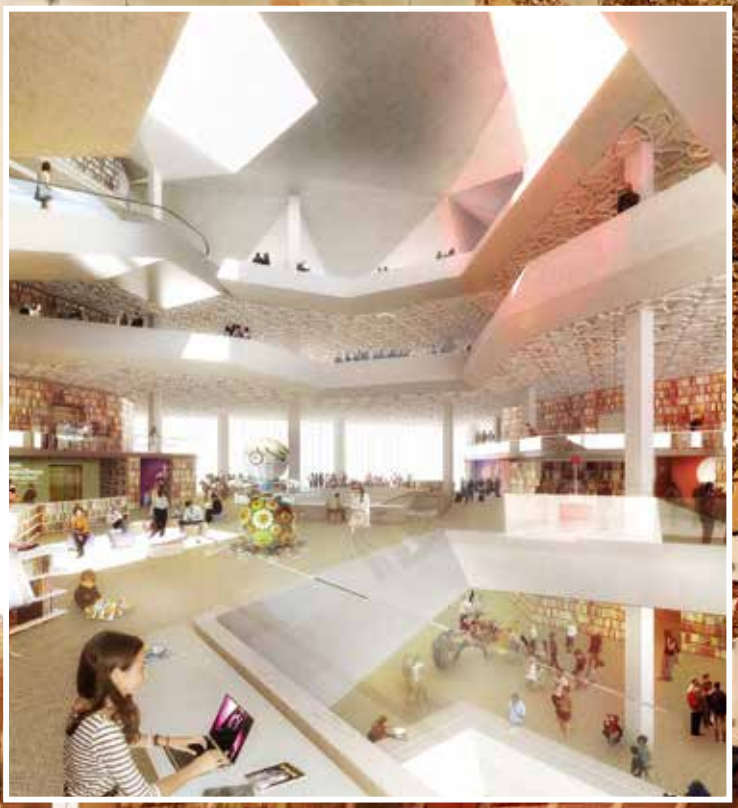
CUTTING THE COST OF CUTTING-EDGE ARCHITECTURE

THE NEW DEICHMASKE LIBRARY IS LOCATED ON THE NEW WATERFRONT IN OSLO, OVERLOOKING ANOTHER SIGNATURE UPONOR PROJECT, THE OSLO OPERA.

Uponor is a proud partner in the construction of the New Deichmaske Library in Oslo, Norway. Due to be opened in 2019, four of the floors in the library are equipped with Uponor TABS (Thermally Active Building System) which reduces the need for installed power. The operating costs of TABS are also significantly lower than air-based cooling systems. The project has been a successful collaborative effort with main contractor SKANSKA and other professional partners.

TABS is new to Norway, but is a proven concept in central parts of Europe, where, since 1997, Uponor has designed and delivered more than 1000 buildings with the system. When in cooling mode, TABS stores unused energy in the concrete ceiling, which is then used to cool the building. Due to the complex geometric design of the library, the TABS project has been adapted to each individual element in the building, with 480 different sizes in total.

„Uponor has designed and delivered more than 1000 buildings with TABS.“



Project facts

- Location: Oslo, Norway
- Building type: public library
- Gross floor area: 23,500 m²
- Floors: 7
- Completion date: 2019

©Lund Hagem Arkitekter/Oslo Kommune

Project facts

- Location: Copenhagen, Denmark
- Building type: residential buildings

SLUSEHOLMEN

INNOVATING FOR FASTER INSTALLATION IN RESIDENTIAL BUILDINGS

A MAJOR CONSTRUCTION PROJECT IN DENMARK INSPIRED UPONOR TO DEVELOP A BRAND-NEW PLUMBING SOLUTION.

The Sluseholmen Project is an extensive development of residential buildings and public squares in the prestigious canal district of Copenhagen. With Uponor as a major partner, stage 1 of the project was completed as planned in 2018, while stages 2 and 3 are already underway. Part of the reason for this success is the new prefab shaft unit developed specially by Uponor, in collaboration with KPC, Midtconsult and VVS Søberg, for modern floor buildings and terraced houses.

Uponor's solution was to create new shaft units as a timesaving HVAC solution. The units offer an optimised, compact and easy-use unit with flexible connectivity options for managing water and heating in varying types of housing. Among the benefits are much faster and smoother plumbing installation, greater flexibility, and an extremely high level of technical quality. As a result, the new Uponor units are already being implemented in a growing number of planned projects on the construction market.

GRAND TOWER FRANKFURT

MEETING THE DEMANDS OF HIGH-RISE HEATING

Project facts

- Location: Frankfurt, Germany
- Building type: residential
- Floors: 47
- Project year: 2019

Uponor contribution

- 401 custom-designed heat interface units Combi Port
- 300,000 m Uponor Comfort Pipe

TO MEET THE DISCERNING NEEDS OF GERMANY'S HIGHEST RESIDENTIAL COMPLEX, UPONOR IS DELIVERING A PACKAGE OF CUSTOM-MADE HEATING SOLUTIONS.

Together with subsidiary KaMo, Uponor is currently working on one of its largest contracts to date. In Frankfurt's Grand Tower, Germany's highest residential complex, all 401 luxury apartments and penthouses are being fitted with compact heat interface units. Custom-made for the project, these units will enable optimum temperature control and convenience for all residents to meet the high demands of the award-winning construction project.

The heat interface units are being supplied as a complete package from Uponor with ready-wired control technology to ensure fast and efficient installation. In addition, around 300,000 metres of Uponor comfort piping will be used for underfloor heating throughout the 47-floor high-rise. Together, this package of solutions will help reduce system pressure, support easy retrofitting tasks, and enable faults to be quickly identified.

Project facts

- Location: St. Albans, UK
- Building type: retirement homes
- Units: 81 across 2 sites
- Project year: 2017

Uponor contribution

- Combi Port heat interface units
- Multilayer composite risers
- Multilayer commercial plumbing
- Quick & Easy tap water connections

CUSTOM-SPECIFIED HEAT INTERFACE UNITS FROM UPONOR PROVIDE AFFORDABLE HEAT AND HOT WATER FOR RETIREMENT HOMES IN THE UK.

As the latest project in a long-standing supply relationship with GP Plumbing, Uponor was asked to provide an energy-efficient solution for two new McCarthy & Stone retirement home developments in St. Albans and Southsea, UK. The project includes apartments for different age groups, with a seafront scheme that includes retail units, including a Co-Op supermarket.

Uponor was briefed to maximise comfort for residents, while minimising operating costs and service charges. The solution included 97 custom-specified heat interface units supplied across the two sites, with isolation valves situated at the top of the unit ready for connection to the centralised plant heating network. Uponor also partnered with GP to install commercial plumbing for all water distribution networks, and Quick & Easy tap water connections.

MCCARTHY & STONE

A HEATING SOLUTION THAT MAKES A DIFFERENCE

GRAND POET HOTEL

A NEW DESIGN CLASSIC IN THE HEART OF RIGA

„The Grand Poet is a must for design lovers, tourists, and business travellers.“

Project facts

- Location: Riga, Latvia
- Building type: hotel
- Floors: 5
- Project year: 2018

THE NEWLY RENOVATED GRAND POET HOTEL COMBINES HISTORIC LATVIAN ARCHITECTURE WITH EXCEPTIONAL CONTEMPORARY DESIGN AND LUXURY LIVING.

An outstanding bohemian restoration of a historic building in the heart of the Latvian capital, the Grand Poet is Riga's first artist-designed hotel. Comprising 168 five-star accommodations, 20 luxury suites, fine dining and conference rooms, Wellness centre, and three spa rooms, the hotel is a must for design lovers, tourists, and business travellers.

Uponor was approached by the hotel to install a water supply, heating and cooling solution across all five storeys of the hotel. Throughout the guest rooms and public spaces, Uponor multi-layer composite pipes were used in the hotel water supply and radiator heating systems as well as the cooling system.

Project facts

- Location: Darmstadt, Germany
- Building type: student accommodation
- Floors: 2
- Project year: 2014

CUBITY

NEW ARCHITECTURE FOR THE NEXT GENERATION

THE UNIVERSITY OF DARMSTADT TEAMED UP WITH UPONOR TO BUILD A MODULAR STUDENT ACCOMMODATION THAT REIMAGINES HOW WE USE SPACE.

Escalating property prices in the German market led Professors Anett Maud-Joppien and Manfred Hegger, together with students at the University of Darmstadt, to design CUBITY – a radically new form of housing developed in collaboration with Uponor. CUBITY is the world's first student accommodation to meet the Plus Energy standard, a modular and transportable living space built for 12 students at a time, on a plot that only measures an incredible 16 m².

CUBITY may well be a window into the architecture of the future. Twelve sleeping cubes are heated and cooled with an Uponor Comfort Panel HL ceiling panel system, ideal for controlling the temperature due to the practical panel size and high heating and cooling performance of the 3.5 m² active area. In addition, the residential pavilion is heated using Uponor's Siccus drywall radiant heating system, which offers outstanding flexibility and efficient installation.

THE MADISON TOWER AND SOUTH QUAY PLAZA

FROM AFFORDABLE TO LUXURY LIVING

„Key to the success of the projects is Uponor's ability to provide high-specification, fire-resistant pre-insulated MLC combined with expert consultation."

Project facts

- Location: Canary Wharf, London, Uk
- Building type: residential
- Floors: 53/ 68
- Project year: 2020

Uponor contribution

- 28,000 m of pre-insulated MLC piping for first 15 floors of Maddison Tower
- MLC piping for pre-fabricated bathroom pods in the South Quay Plaza

TWO NEW HIGH-END AND AFFORDABLE HOUSING PROJECTS ARE SET TO OPEN IN LONDON, WITH UPONOR'S HIGH-SPEC SOLUTIONS KEY TO MAXIMISING HEATING AND COOLING COMFORT.

As part of the ongoing redevelopment of London's Canary Wharf, two new construction projects are set to become the highest residential blocks in the area – the 53-floor The Madison Tower and the 68-floor South Quay Plaza, opening in 2020. Uponor UK has been chosen as a key supplier for both housing projects, suppling heating and cooling solutions for a mix of luxury and affordable apartments for thousands of new residents.

So far, Uponor has delivered over 28,000 metres of pre-insulated multi-layer composite piping, together with manifolds and connections, for heating and cooling in the first 15 floors of The Madison Tower. Supply for the remaining floors will take place throughout 2019. In the South Quay Plaza, meanwhile, plumbing system installation is well underway, with Uponor's multi-layer composite piping chosen for the building's pre-fabricated bathroom pods.

Project facts

- Location: Riga, Latvia
- Building type: public library
- Gross floor area: 40 000 m²
- Project year: 2014
- Cost of project: EUR 163 million

Uponor contribution

- Area of 2200 m² covered with Uponor underfloor heating
- 4100 m of Uponor MLCP

„The NLL is a mountain-shaped symbol of Latvia's culture and national identity.“

THE NATIONAL LIBRARY OF LATVIA

A 'CASTLE OF LIGHT' FOR THE 21ST CENTURY

AN ARCHITECTURAL MASTERPIECE ON THE BANKS OF THE DAUGAVA RIVER IN RIGA, THE NATIONAL LIBRARY OF LATVIA IS KNOWN TO LOCALS AS THE 'CASTLE OF LIGHT'.

Designed by the Latvian-Americal architect Gunnar Birkets, the National Library of Latvia (NLL) is a mountain-shaped symbol of Latvia's culture and national identity, based on the myth of a 'caste of light' that would rise when the country gained its freedom. To celebrate the achievement, 14,000 Latvians formed a 2 km chain to pass books from the old library to the new one, which now houses four million volumes of Latvian and international literature. The library was completed in 2014 and measures 170 metres long by 68 metres high.

Uponor has been involved in the project already from the design phase, initiated in 2007. Uponor solutions were chosen not only because our products met all requirements; the biggest role played our capability to share our technical knowledge with designers, installers and supervisors. The building is equipped with Uponor underfloor heating solution, which has been installed to a total area of total 2200 m². Done this way, the heating is operating in the economical way, saving up to 12% on energy and operation costs when compared to conventional systems. Also, the water supply built into the building has been accomplished utilising Uponor's reliable plumbing systems.

Project facts

- Location: Šventoji, Lithuania
- Building type: single house family
- Gross floor area: 340 m²
- Floors: 2
- Project year: 2015

Uponor contribution

- Classic underfloor heating
- Comfort Pipe PLUS heating connections
- Smatrix Wave PLUS room temperature control system

„The Uponor system is important especially during the hot weather, when temperature can be easily adjusted in all rooms.“

D. Daliboga, homeowner

Photos: © L.Garbačauskas
Architecture: ©„Architektų biuras G. Natkevičius ir partneriai“, T.Kuleša, A.Rimšelis, D.Diškevičiūtė, G.Natkevičius

PRIVATE HOME RESIDENCE

THE PERFECT CLIMATE FOR THE HOLIDAYS

AN EXCEPTIONAL NEW RESIDENCE ON LITHUANIA'S BALTIC COAST ENJOYS YEAR-ROUND COMFORT THANKS TO UPONOR HEATING AND ROOM TEMPERATURE SOLUTIONS.

An idyllic beach resort town in the Palanga region on the northern shore of the Baltic Sea, during the off-season Šventoji has a population of just 1700 – a number that balloons during the summer months when its famous Soviet-era holiday cabins are visited by thousands of tourists. This picturesque setting formed the backdrop for a unique project for Uponor, which was asked to provide a heating and indoor climate solution for a luxury new build residence.

Choosing Uponor as a partner was an obvious choice for the owner of the new house. After using Uponor underfloor heating, cooling and water supply systems without any disturbances for over 15 years, the customer told us his criteria when choosing systems are efficiency, durability and quality. In keeping with the high-end design of the house, Uponor's Smatrix Wave Plus radiant heating and cooling control system enables control of indoor temperature, which can be easily adjusted in all rooms.

Project facts

- Location: Kuala Lumpur, Malaysia
- Building type: school campus
- Gross floor area: 11,000 m²

Uponor contribution

- Radiant cooling solution with Uponor TABS (Thermal Active Building System)

„The project's focus is on clean air for the students to breathe, natural light that illuminates their classrooms, and shaded outdoor spaces that connect them to nature.“

THE NEW CAMPUS FOR THE INTERNATIONAL SCHOOL OF KUALA LUMPUR CREATES AN INNOVATIVE AND SUSTAINABLE LEARNING ENVIRONMENT FOR OVER 1,600 STUDENTS.

Working closely with the faculty, students and parents, the designers of the new International School of Kuala Lumpur created a campus that unifies a kindergarten, an elementary school, a middle school and a high school. The project's focus is on clean air for the students to breathe, natural light that illuminates their classrooms, and shaded outdoor spaces that connect them to nature, and will be a best-in-class example of sustainability that aims to secure a platinum Green Building Index (GBI).

Uponor was selected to provide a radiant cooling solution to the campus, a task which involves conditioning an area of 11,000 m². To provide an energy-efficient solution, an Uponor TABS (Thermal Active Building System) was embedded in the concrete structure of the teaching blocks to thermally activate concrete slabs and cool the building. The system is noiseless, draught-free, and invisible – all except for sub meters that have been cleverly integrated into the building management system, acting as a teaching tool that reveals the school's real-time resource consumption, and encouraging students to look for ways to save energy.

INTERNATIONAL SCHOOL OF KUALA LUMPUR

THE BEST CLIMATE FOR MINDS TO GROW

GOROD STOLITS

MULTIPLE SYSTEMS FOR A MULTI-FUNCTIONAL BUILDING

THE SOARING TWIN-TOWER GOROD STOLITS COMPLEX IN MOSCOW TURNED TO UPONOR TO MEET ALL ITS HEATING AND PLUMBING DEMANDS.

Opened in 2008, the multi-functional building Gorod Stolits (Capital City) is part of the Moscow International Business Center – one of Europe's biggest investment-construction projects. Comprising two towers named after the Russian cities Moscow and St. Petersburg, Gorod Stolits features a range of modern apartments, offices, shops and sports facilities, with Uponor supplying all heating and plumbing systems.

In addition to heat and water supply systems, the complex features sewer and groundwater drainage for households and production, as well as indoor downpipes for rain, and defrost water disposal for roofing. These systems include Uponor PEX plumbing, and heating with PPSU connections, and marks one of the first instances of flexible plastic fittings being used in such a tall building project.

„The Gorod Stolits complex marks one of the first instances of flexible plastic fittings being used in such a tall building project."

Project facts

- Location: Moscow, Russia
- Building type: multi-functional
- Gross floor area: 184,756 m²
- Floors: 62/ 73
- Project year: 2008

Uponor contribution

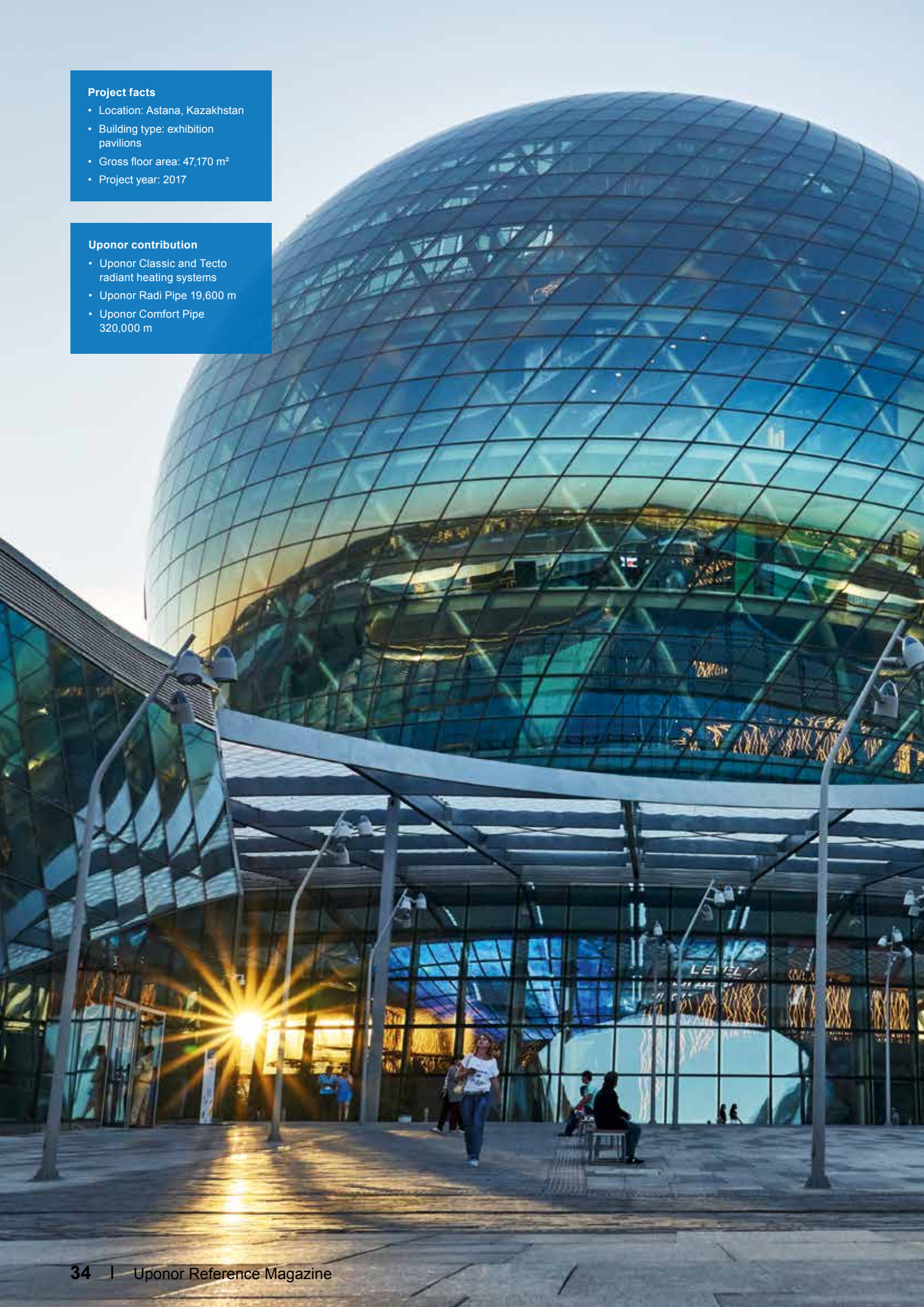
- Uponor PEX plumbing, and heating with PPSU connections

Project facts

- Location: Astana, Kazakhstan
- Building type: exhibition pavilions
- Gross floor area: 47,170 m²
- Project year: 2017

Uponor contribution

- Uponor Classic and Tecto radiant heating systems
- Uponor Radi Pipe 19,600 m
- Uponor Comfort Pipe 320,000 m



ASTANA EXPO

BUILDING A CLEANER FUTURE TOGETHER

THE THEME OF EXPO ASTANA 2017 WAS „FUTURE ENERGY“, AND TOGETHER WITH UPONOR, ENERGY-EFFICIENCY WAS A KEY FACTOR IN PLANNING THE INTERNATIONAL EXPOSITION'S PAVILIONS.

The organisers of Expo Astana 2017 aimed to focus debate around the future of energy, and on finding innovative and practical energy solutions for some of the world's toughest challenges. It's not surprising then, that the design concept for the exposition pavilions was based around buildings that use modern high-tech solutions to increase productivity and efficient use of resources.

One such solution was to use sensors to determine the number of people in each building, a technology that enables the reduction of energy without reducing comfort. It was decided that for creating a comfortable indoor microclimate with the best use of resources, Uponor's Classic and Tecto radiant heating and cooling systems were the optimum solution. In order to make the systems as efficient as possible, energy was supplied by pumps that extract heat from the earth, which is currently the most environmentally friendly heating and air-conditioning solution available.

„It was of fundamental importance for us to design pavilions with the use of energy-efficient solutions, which is why we used Uponor heating and cooling systems.“

Hakan Chiman, Engineering Networks Manager, IT Engineering S.A.

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