MAAT, AL_A
Making waves
Port House, Zaha Hadid Architects
A stunning filigree structure
Quality, comfort and design are always in vogue.
Dear readers,

There is an easy-to-recognise message in the way in which this magazine is structured: from the “Living” section right through to the “Public” projects, we take you on a journey from private to public facilities. As one would expect, some of the reference projects we touch upon along the way are more well known than others. While the Port House in Antwerp, which was designed by the late architect Zaha Hadid, is no doubt among the most well-known and much-discussed projects from 2016.

Other projects have been less in the news and are therefore not as widely known by the general public. The considerations that underlie our selection are manifold. The project’s relationship to the respective spatial context naturally plays a key role. The Port House, which serves as a new link between the city of Antwerp and its expansive port area, is a good example in this regard. The wave-shaped MAAT in Lisbon, which was designed by Amanda Levete and is pictured on the front cover, and WOHA’s verdant Oasia Hotel Downtown in the heart of the densely populated city of Singapore are also worthy of particular mention.

We at the Geberit Group are proud to be part of such projects and to support our partners worldwide in managing their tasks by providing them with our extensive know-how and experience. These tasks are becoming more and more diverse and require a great deal of dedication. If you take the time to browse through the pages of this magazine, you will get a sense of what it means to work together with the building pros to create the perfect solution for the respective construction project. I therefore invite you to join us on our journey to selected venues around the globe and to see the results of this partnership. Further examples can be found on our website www.geberit.com.

Christian Buhl, Chief Executive Officer (CEO) of the Geberit Group
↑ A look through the glass roof of the atrium at Antwerp’s new landmark: Port House by Zaha Hadid Architects.

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↑ Thanks to the skilful design by Fran Silvestre Arquitectos, the Casa de Aluminio in Madrid appeals to the senses.

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The Blavatnik School of Government in Oxford is organised around a central forum.
Sunshine serenade
Casa de Aluminio, Madrid, Spain
This Madrid villa, which was designed by Fran Silvestre, is all about natural light. It permeates the entire structure, from the shimmering building shell right through to the bathroom with its minimalist design.

Fran Silvestre’s work is influenced by his mentor Álvaro Siza Vieira and Andreu Alfaro, an artist famous for his metal sculptures; in the case of Casa de Aluminio (which translates as Aluminium House), the name already alludes to a “material” bond. One of the most outstanding features of the Madrid villa is its skilfully orchestrated lighting effects, which are made possible by the compact arrangement of the rooms around a central, light-flooded staircase. This design feature ensures that the bathroom area also benefits from the natural light.

The space is functionally arranged, with a day zone on the ground floor and a night zone on the level above it. During the day, the glaring brightness is guided inwards by the white granite and thus toned down, while the private nature of the expansive terrace on the aluminium-clad upper floor provides a perfect setting in which to enjoy the exterior at night.

Good air, good mood
Just as light influences our well-being, so do odours. The Geberit actuator plate Sigma40 combines dual flush with efficient odour extraction. Thanks to DuoFresh technology, unpleasant odours are extracted directly in the WC ceramic appliance and neutralised via an active carbon filter.
Stara Fužina is a place like no other. The tranquil farming village on the edge of Triglav National Park in Slovenia is subject to particularly stringent planning permission processes. The restrictions imposed when designing this home for a local family were therefore very tight. The architecture firm Skupaj Arhitekti successfully managed this balancing act, incorporating typical local stylistic elements, such as the overhanging roof sections, in a targeted manner while at the same time displaying an eagerness to experiment, as demonstrated by the exposed concrete in the interior. Overall, the combination of traditional and modern elements creates an environment that exudes true Alpine cosiness.

Instead of purely decorative effects, the architects at Skupaj Arhitekti focus on clear lines and functional strictness, particularly in the bathroom. Here, Geberit’s proven flush technology – whose famed reliability is based on extensive testing and has been demonstrated in practice millions of times over – is used.

↑ The Alpine context is ever-present in the living areas.

↑ The bathroom is bright and inviting.
The brief when it came to this dream house was to ensure an unobstructed view of Freshwater Beach. The multi-storey building, which was built for a young family, is located on a rock ledge overlooking the popular surfing beach to the north of Sydney. The building was designed to offer spacious living areas and large windows on the side facing the sea, while the side facing away from the sea – where the bathrooms are located – was more restricted in terms of the space available.

All five bathrooms nevertheless exude a harmonious and modern ambience thanks to prewall technology from Geberit. Adam Powell from Powell Plumbing, who has been working with Geberit products for 13 years, was commissioned with the installation of the concealed cisterns. “Geberit’s reputation as the leading Swiss manufacturer of sanitary technology gave the homeowners the necessary confidence in the products.”

Pouné Parsanejad, Director of Studio P

“The actuator plate Sigma50 combines well with the building’s overall finish.”

Coastview Residence
Building owner: Private
Architecture: Studio P
Planning & execution: Powell Plumbing
Geberit know-how
Sigma75 concealed cistern
Sigma50 actuator plate

↑ On the side facing the sea, Coastview Residence really lives up to its name.

↑ Despite the limited space available, the bathrooms on the side facing away from the sea are surprisingly spacious.

Freedom of space

Coastview Residence, Freshwater, Australia
Following troubled times, the “Paris of the Middle East” is revived – a fact highlighted, amongst other things, by buzzing building activities going on in the Lebanese capital. In addition to Bernard Khoury and other architects with Beirut roots, global architecture firms are also increasingly active here. As a result, the Beirut Museum of Art by Hala Wardé and the new Banque Libano-Française headquarters by Snøhetta are just two of the exciting projects that we have to look forward to here.

The residential high-rise Beirut Terraces by Herzog & de Meuron is already completed. The 119-metre-tall, 26-storey building is part of the ambitious master plan for the Minet el Hosn district and focuses on superior comfort and environment-friendly technologies. The offset arrangement of the individual floors creates a variety of different living experiences. In fact, each of the 130 apartments is unique.

The offset arrangement of the 26 floors creates a playful indoor versus outdoor experience. The terraces offer fantastic views of the nearby Mediterranean Sea.

Excerpt from the project description by Herzog & de Meuron

“Remains of Phoenician, Roman, Mamluk, Ottoman and colonial rule have shaped the city and its buildings. The design of Beirut Terraces was quite literally influenced by the layers of the city’s rich and tumultuous history.”

Beirut Terraces
Building owner: Benchmark
Architecture: Herzog & de Meuron
Interior design: Vincent Van Duysen
Geberit know-how
Keramag washbasin Preciosa II
Keramag WC ceramic appliance 4U
An update to a classic

Geberit actuator plate Sigma20

Christoph Behling, product designer

“The technology and the construction, i.e., the know-how behind these, are invisible. You don’t even suspect that it is there. At Geberit, innovation doesn’t stop at the exterior. Instead, each product is designed starting at its very core.”

Christoph Behling, who was born in Geneva and raised in Germany, founded his own design studio in London in 2004. In collaboration with the developers at Geberit, he has since designed a range of actuator plates, his first one being the Geberit Sigma20. Ten years after its market launch, the model with the two rings – which are closely associated with the Geberit brand due to their presence all over the world – has now been redesigned. Rather than a simple marketing gimmick, the classic has seen “a gentle evolution of the same theme”, as the designer himself puts it.

Reference objects featuring Geberit Sigma20: Living in Alpine Village (page 8), NZS Headquarters (page 19), MAAT (page 26)
All hands on deck!

Port House, Antwerp, Belgium

↑ The sparkling glass panels on the extension pay homage to the diamond trade that brought prosperity to Antwerp.

↑ Located in a strategic position at the end of Kattendijkdok, the original building served as a fire station for a long time. With this in mind, the new Port House plays an important role as a link between the city and its port.

Port House
Building owner: Antwerp Port Authority
Architecture: Zaha Hadid Architects
Planning and execution: Vliegen NV
Geberit know-how
Duofix installation system
Electronic urinal flush controls
Mepla supply system
HDPE building drainage system
Pluvia roof drainage system

Greenbuilding: BREEAM
Around 500 Antwerp Port Authority employees have taken up quarters. Their new workplaces are strategically located in a former fire station that Zaha Hadid Architects extended by placing a sparkling diamond on top.

Antwerp has the world’s largest cargo port in terms of area – something that is difficult to grasp the scale of from the roof terrace of the Museum aan de Stroom (MAS). The container terminals and petrochemical facilities span an impressive 130 square kilometres right up to the Dutch border. Unlike its eternal rival in Rotterdam, the Port of Antwerp did not become so large due to land reclamation. Bit by bit, each of the 48 docks was created by excavating the land and flooding it with water from the Scheldt.

Renewing the bonds

The labyrinth of warehouses, locks and canals is impossible for outsiders to get their head around, which is perhaps why the inhabitants of Antwerp have a peculiar aloofness when it comes to their relationship with the port. However, the tide turned with the approval of the widely acclaimed Strategic Spatial Structure Plan from 2006 – Antwerp was finally claiming its port. In the area around Montevideostraat, the residential towers
A project that builds bridges

The transformation of the historical Eilandje docklands – to which the areas around Montevideoostraat and Cadixstraat belong – is now reaching its provisional conclusion with the addition of the Port House by Zaha Hadid. Located at the end of historic Kattendijkdock, this is a strategic project that serves as a link between the city and the port. The Port Authority employs a total of 1,650 people, and this project brings together 500 members of staff who had previously been working in different locations scattered all over the city.

The interior of the extension features an interesting interplay between spacious reception and office areas and separate zones where meetings can be held in a private atmosphere. Because all sides of the extension are clad with glass panels, you can also experience the vastness of the port area from inside the building. At night, these panels transform the Port House into a new landmark of the city of Antwerp that can be seen for miles around.

designed by Diener & Diener, David Chipperfield and Gigon & Guyer bear witness to this. On the other side of Kattendijkdock, the area around Cadixstraat is a major building site where residential property continues to be developed at a frantic pace.

↑ The interior of the extension features an interesting interplay between spacious reception and office areas and separate zones where meetings can be held in a private atmosphere. Because all sides of the extension are clad with glass panels, you can also experience the vastness of the port area from inside the building. At night, these panels transform the Port House into a new landmark of the city of Antwerp that can be seen for miles around.

↓ View – Reference magazine 2017

Working
Winding paths

Interview with Raf Vliegen, Managing Director of Vliegen NV

“A precise calculation was required in order to bridge the horizontal distance. We went over the whole thing several times.”

Spectacular projects – such as the Port House – usually have a very ambitious schedule. How was it in this case?
At the outset, the schedule for the work was indeed very tight, particularly when it came to the existing, lower building. In the extension, on the other hand, there was a little bit more leeway due to alterations to the initial brief.

What sanitary technology issues arose due to the new port building’s unique design?
Because the upper building structure is very complex from a statics perspective, there were a few changes to the steel structure during the course of the project. If you look at the isometric drawings of the building, it is clear that our plumbers and the Geberit advisors had to do a top job in order to adapt various things – particularly the drainage system – to the specific circumstances.

What circumstances do you mean?
The building stands on two concrete pillars, with the one in the inner courtyard used to access the upper part of the building. All the drainage pipes had to be routed through this pillar. Precise calculation was required in order to bridge this horizontal distance. We went over the whole thing several times.

What support did you receive from Geberit over the course of this project?
Extremely valuable support, particularly with regard to the aforementioned calculations. In my experience, it is much easier to convince the planning offices of a solution when they know that Geberit is signing off on the underlying calculations or even doing them itself.

Vliegen NV
Raf Vliegen has been managing Vliegen NV – a company that his father founded in 1960 – since 2000. He currently employs 25 sanitary specialists and works together with an additional 25 external contractors. Vliegen NV specialises in major projects. Current such projects include a hospital in Mechelen and Tour Paradis in Liège.
Any start-up wishing to become a player in a billion-dollar industry needs an innovative idea, a passion for perfection and a great deal of perseverance. The new running-shoe label On embodies all three virtues, and also implements them consistently when it comes to designing its office.
Since its foundation in 2010, the running-shoe manufacturer On has already won multiple awards for its innovative products. Today, its revolutionary shoes – which resulted from experiments involving garden hoses that had been cut into pieces – are sold at over 2,500 specialist running stores in more than 50 countries. With the workforce having expanded constantly and outgrown the old premises, the team moved to the trendy Zurich-West district at the beginning of 2016.

The highly flexible open-plan office was designed by the product designers Thilo Alex Brunner and Jörg Mettler, the men who are also behind the typical Swiss look of the On running shoes. Instead of dividing the 1,000-square-metre room into countless separate offices, they created an expanse that is interspersed with work areas and contains a large lounge area and a kitchen. The trendy office also has a fitness area, where the employees can work out each day.

Marc Maurer, Head of Operations at On

“It was important to us to offer our employees the luxury of a shower toilet. We were won over by the exceptional design and functions of the Mera.”

Anywho develops lifestyle products also has to make lifestyle a key principle when designing their workplaces.

A new level of comfort

The Geberit AquaClean Mera is characterised by high-quality materials, smooth lines and seamless transitions. All the power and water supply connections are incorporated into the housing. The spray functionality is the core feature of every shower toilet, and the Mera has come up with a revolutionary innovation here. The specially developed, patented WhirlSpray shower technology with two nozzles ensures targeted and thorough yet particularly gentle cleaning. A further highlight is the rimless WC ceramic appliance with its unmistakable asymmetrical inner geometry, upon which TurboFlush – the innovative technology that enables a thorough and yet quiet flush – is based.

More about the Geberit AquaClean Mera:

→ www.geberit.com/insights→
A masterpiece of function and design
Bringing together what belongs together. In line with this motto, the Erste Bank Österreich decided to unite the some 20 scattered administration branches on the site of Vienna’s former South Station. Due to its long-standing tradition, only the historic head office in the city centre was to remain. The plans for the Erste Campus were developed by the Vienna-based architecture firm Henke Schreieck Architekten.

The goal of the centralisation is to create shorter lines of communication, simplify internal processes and promote teamwork. The days of individual offices are therefore also numbered, with the Campus consistently focusing on open space – including on the executive floor. The conscious decision was taken to do away with fixed desks in the open-plan offices, with mobile workstations enabling the 4,500 employees to decide for themselves where they work. The modern working environment, which has comfortable lounge furniture, a green inner courtyard and quiet zones, offers plenty of alternatives in this regard.
Slovenia’s footballers have taken up quarters. From the new training centre in the rural town of Brdo, they are getting ready to make their mark on the world stage. The football association’s head honchos are now also based right next to the training ground – in an elegant, two-storey building with an ingenious spatial structure. Two horseshoe-shaped levels pivoted by 90 degrees in relation to one another offer changing views of the lush green surroundings.

The unobstructed view of the outside is mirrored by the room design inside, which is geared towards maximum transparency. This enabled the architects from the Ljubljana-based firm Ark Arhitektura Krušec to do justice to the building’s dual function as a place of work and as a conference centre for prestigious events.

Let it rain
Great design freedom in planning, high cost-effectiveness during installation and operation – all good reasons to choose Geberit Pluvia, the roof drainage system, that works with negative pressure. On top of that, for more than 40 years sanitary engineers, plumbers and building owners have relied on the technical support by Geberit with experience from more than 50,000 projects.
A new lease on life
The LondonHouse, Chicago, USA

In Chicago, the trend towards converting historic properties is being readily embraced. The most recent example here is a listed building in the Loop – the commercial district in downtown Chicago – that impresses on the urban skyline.
What was once the headquarters of the London Guarantee & Accident Company now shines in new splendour at the prominent intersection of Michigan Avenue and Wacker Drive. Together with Tribune Tower, the Wrigley Building and Mather Tower, the building – completed in 1923 and originally designed by the architect Alfred S. Alschuler – forms part of the Windy City’s old high-rise elite. The attraction was declared a listed building in 1996.

This status had a major impact on the plans to convert the magnificent neo-Gothic building into a luxury hotel, which got under way in 2013. For example, technical solutions were needed in order to ensure that the Oxford Capital Group’s project complied with the official requirements. A particularly tricky problem that needed to be overcome was connecting the 452 hotel rooms to the pipe system when ceiling feed-throughs were strictly limited. Early in the design stage, Geberit’s technical staff raised the possibility of horizontal storey-based drainage in combination with the Duofix installation system. This solution ensured that the concrete floors remained intact and there was no longer anything standing in the way of the historic giant being given a new lease on life.

Mark Scharff, Architectural Specifications Manager, Geberit North America

“Thanks to the Duofix installation system, it was possible to dispense with ceiling feed-throughs, which saved the building owners a great deal of time and money. This solution also created exceptional freedom with regard to the design of the interior.”
A red trellis

Oasia Downtown, Singapore
Singapore is a good place for innovative hotel projects. With Parkroyal on Pickering, the architects from WOHA have already made an impressive statement in this regard, and Oasia Downtown represents a continuation of this theme.

Founded by Wong Mun Summ and Richard Hassell in 1994, WOHA is notable for its innovative solutions in high-density environments. The firm has given its architectural approach a catchy name – club sandwich. This term refers to the layering of independent functional levels, whose mutual influence enables a maximum quality of life in limited space. Tropical vegetation plays a key role here, a fact that makes WOHA projects both unmistakable and extremely appealing on the eye.

Oasia Downtown, a 27-storey high-rise, forms a particularly colourful highlight on the downtown Singapore skyline in this regard. In a city where space is at an absolute premium, the almost extravagant spaciousness of the layout is all the more surprising. 21 different climbing plants wind around the outer facade, which is made of red aluminium mesh. In Oasia Downtown, WOHA has – in line with its credo – created a perfect example of its concept of the “mini city”, where sustainability and social interaction are represented in equal terms.
A for amazing
A’DAM Toren, Amsterdam, Netherlands

Amsterdam's latest attraction is anything but ordinary. The former Shell headquarters has been transformed from a monofunctional office tower into a hip, vertical centre of creativity.

In 2012, 37 submissions were received for the contract to more or less reinvent the Shell headquarters, which was originally designed by the architect Arthur Staal and opened in 1971. However, the characteristic trichotomy of filigree building base, bulky building structure and twisted crown were to remain integral features of the tower following the transformation.

Felix Claus Dick van Wageningen Architecten created a vertical city – a place where people get married, play, sweat, dance, dine and muse, where one can enjoy an exceptional panoramic view of Amsterdam (from an observation deck with a swing that sends thrill-seekers flying back and forth over the edge), and where the young, the creative, the loud and the quiet Amsterdam meet. Everything here is a bit different to anywhere else in the city – and very different compared to when it used to solely be a place of work.

A’DAM Toren
Building owner: A’DAM
Architecture: Felix Claus Dick van Wageningen Architecten
Interior design: TANK/ICRAVE
Execution: PBM Construction
Geberit know-how
Sigma01 and Sigma10 concealed cisterns
Mepla supply system
HDPE drainage system
Pluvia roof drainage system

↑ In addition to a range of entertainment options, the Amsterdam landmark is also home to artists’ studios.

A’DAM’s neighbour – the EYE Film Institute designed by Delugan Meissl and opened in 2012 – is also equipped with products from Geberit. For more information, please visit: www.geberit.com/products → References
Scott Derbyshire, Geberit product designer

“For IDO Glow, the inspiration came from the wintry landscapes. The snow creates wonderful formations, beautiful sculptural curves with a subtlety of shape. All this is reflected in the ceramics.”

To find such answers, Scott Derbyshire doesn’t wait for inspiration to strike, instead preferring to roll up his sleeves and make it happen. The brainchild of the 39-year-old designer, the bathroom series Glow from the Scandinavian Geberit subsidiary IDO stands out due to its harmonious shapes and a whole host of clever details.

Learn more about the bathroom series Glow from IDO:

→ www.idobathroom.com

Reference object with IDO Glow: Löyly, page 42
River and tiles
Museu de Arte, Arquitetura e Tecnologia (MAAT), Lisbon, Portugal
In the district of Belém, you feel like the wide world is within touching distance. Here, the Tagus is open, wide and expansive. So expansive that a remarkable engineering feat was needed to build the Ponte 25 de Abril bridge here exactly 50 years ago. On 5 October 2016 – the date on which the 4th edition of the Lisbon Architecture Triennale got under way –, the Museum of Art, Architecture and Technology opened its doors in the immediate vicinity of this impressive bridge, a structure that it also visually complements in style.

Spanning a length of 190 metres, the wave-shaped building continues the shoreline of the Tagus in imaginative fashion. The façade is comprised of 15,000 rhombus-shaped ceramic tiles and captures Lisbon’s diverse lighting conditions perfectly. The arch facing the river provides visitors with some very welcome shading, while the accessible roof cuts a fine figure as a stage overlooking the Tagus River.

To the west of Lisbon’s old city stands the MAAT – a wave-shaped building overlooking the Tagus that completely does justice to the historically important site on which it stands.
A respectful neighbour

Extension to the Kunstmuseum Basel, Switzerland

The Kunstmuseum Basel houses around 4,000 paintings, sculptures and installations as well as 300,000 drawings and prints from seven centuries. This collection is one of the most important of its kind anywhere in the world. In order to make it accessible to the public and create adequate premises for the increasingly important special exhibitions, an extension to the main building – which was designed by Christ & Bonatz and opened its doors in 1936 – was very much needed. This proved a difficult task and one that Emanuel Christ and Christoph Gantenbein tackled with confidence and respect in equal measure.

The result of their work is an elementary and striking cube that directly refers to the main building in terms of dimension and alignment, and whose grey brick façade features a kinked design. New and old are connected underground, with Christ & Gantenbein opting for a spacious spatial structure with room for exhibits as opposed to a simple underground passageway. Visitors see the area between the two sections more as something that adds to the museum experience than solely as an interruption to it.

The architects Christ & Gantenbein have caused quite a sensation with two museum expansions – one in Zurich and one in Basel. A look at an excellent dialogue between old and new.

↑ Inside the building, visitors to the museum are given some surprising perspectives.
The new neighbour makes a confident yet respectful impression in combination with the main building next door.

Karl Bissegger, project manager Klima AG

“In order to eliminate the roof drainage as a source of noise, a trapezoidal sheet was chosen for the roof structure instead of laying in concrete as normal. With this in mind, smooth cooperation with the metalworkers on site was essential.”
The proposal by DGT Architects boldly deviated from the competition brief. Instead of locating the building on the proposed site, the French studio chose a former Soviet military base as the setting for the Estonian National Museum. A narrow, 350-metre-long building structure – Memory Field – now extends over the area where disused runways are carved into the landscape like scars. The building rises towards the entrance area in reference to the aircraft that used to take off at this site.

In order to cope with the expected large number of visitors at all times, reliable and sustainable solutions were also needed in the sanitary facilities. In light of this, the durability of Geberit products proved decisive.

↑ With their choice of the Soviet airfield as the location for the national museum, the architects really made a statement: Estonia was part of the Soviet Union until 1990.

It is not every day that waste ground such as this is revitalised: the Estonian National Museum has found a new home on the site of a former airfield.
Estonian National Museum
Building owner: Riigi Kinnisvara
Architecture: DGT. Dorell. Ghotmeh. Tane/ Architects
Planning: Novasc Group AS, Aksiaal AS
Execution: Salehex OÜ
Geberit know-how
Duofix installation system
Sigma concealed cistern 12 cm
Tango actuator plate
Electronic washbasin taps

Inside the museum, artefacts from across the centuries render the Estonian history palpable for the visitors.

Jaanus Rätsep, Managing Director of Salehex OÜ

“Efficient maintenance was a key criterion when deciding on the products. The sensor-controlled washbasin taps from Geberit both save water and can also be easily adapted to the respective requirements.”
A Russian ensemble
Russian Orthodox Cultural Centre, Paris, France

Traces of the Russian diaspora can be found throughout Paris. The Russian spirit has now found a new home away from home not far from the Eiffel Tower. The ensemble at Quai Branly comprises four building structures: a cultural centre with a book shop, exhibition halls and a cafeteria; a primary school; a parish centre; and a Russian Orthodox cathedral.

↑ Usually made of copper sheets, the dull-gold onion domes are instead made of a composite material used in aviation. The large dome therefore only weighs eight as opposed to 42 tonnes.

Russian Orthodox Centre
Building owner: Russian Federation
Architecture: Wilmotte & Associés Architectes
Planning and execution: Bouygues Bâtiment Ile-de-France
Geberit know-how
Sigma flushing system
Omega flushing system
CleanLine shower channel

Simply clean
The Geberit shower channel CleanLine not only looks good, it also solves notorious hygiene issues in an intelligent manner: the water flows along the channel to the outlet, without giving dirt a chance to cling to hidden spots. A practical comb insert rounds off the product made of stainless steel, that is convincing both in optical and functional terms.
Economical by design
The Geberit urinal system

Christoph Behling, product designer
“The things that bother people are the real issues when it comes to design. As a designer, it is my job to understand the logic of the technical innovations during the many discussions with the Geberit engineers and to find a design that does them justice.”

Urinal facilities in public and semi-public areas have to be able to cope with variable demands – from the massive rush of visitors in football stadiums before and after the game as well as at half-time right through to continuous operation in busy airports. The high design demands seen in the catering trade also have to be met.

Geberit has developed an urinal system that can be configured for a wide range of different situations. It comprises rimless and flow-optimised ceramic appliances, a completely new type of control unit for the flush and easy-to-maintain traps – all backed up by installation technology that has been tried and tested millions of times over.
Forward was the only direction

BIM in practice

There is a lot of talk about Building Information Modelling, or BIM for short. These discussions are often of a theoretical nature. This is not the case, however, when you talk to Patrick Reijns. His plumbing company Beck & van de Kroef won its spurs the hard way at the high-security prison Pi2 in Zaanstad (NL).

PI2
Building owner: Pi2 Consortium
Architecture: EGM Mecanoo Fokkema & Partners
Planning: Ballast Nedam/Royal Imtech
Building Services
Execution: Beck & van de Kroef BV

Geberit know-how
Duofix and Kombifix installation systems
Mapress and Mepla supply systems
Silent-db20 drainage system
Pluvia roof drainage system

← The Penitentiaire inrichting 2 (Pi2) is located near Amsterdam – it has taken no more than 18 months to finish the huge project. Nowhere is virtual building planning via BIM used so consistently as in the Netherlands. This is predominantly due to the requirements set down by the Rijksgebouwendienst (RGD): since 2011, the executive building authority of the Ministry of the Interior and Kingdom Relations has required building projects involving the state to be carried out with BIM.
Mr Reijns, what kind of scale are we talking about with the high-security prison in Zaanstad?

Pi2 consists of seven individual buildings with a floor area of 68,000 square metres. The 667 prison cells only take up a relatively low amount of space here. It was therefore anything but an everyday project.

How much time in total was available for the construction work?

From the moment the first sod was turned, the work had to be completed within just under 18 months—the deadline was non-negotiable. In the end, the handover took place in April, on schedule.

What role did the digital planning tool BIM play in this project?

In the Netherlands, BIM has to be used with projects where the state is involved. This requirement has been in place for just over five years now and therefore also applied for Pi2.

What are your experiences with BIM?

As one of the companies carrying out the work, we were initially only users of the BIM data, which was provided by the planning office Imtech. However, the rapid rate at which the building work was progressing soon necessitated a rethink on this front.

Where was the issue?

As I said, the building work was progressing at a frantic pace. At one time, there were 700 trucks arriving each day with concrete for the foundations. The buildings, on the other hand, were prefabricated in modules and delivered on a continuous basis. As you would expect, the plans have to be absolutely reliable in such situations.

Were there deviations between the plans and the reality on the ground?

Deviations? No. The problem was with the accuracy of the data. We were forced to subsequently refine the plans using our CAD program. This caused us to lose a lot of time.

So the whole thing became a race between planning and execution?

Exactly, any leeway we had timewise was quickly wiped out. Around three months into the project, we arrived at a critical point. In consultation with Imtech, we therefore decided to take over responsibility for BIM.

How did you manage that?

We built up or redeployed the required resources within a very short period of time. With our planners, everything now revolved around the BIM software Autodesk Revit. Despite us obtaining support, it was very much a leap in the dark, so to speak. At this point, however, there was only one direction—forward!

How long did it take for you to get back to working according to schedule again?

We were back on track after around three months.

Geberit provided you with the required data packets. Were there any issues here?

At the start of the project, the data for Mepla was still not available in the correct format. When we took over the project, I pulled out all the stops. The technical advisors at Geberit Netherlands no doubt had a few sleepless nights during this period. However, that too was sorted out within two to three weeks.

The ultimate goal of BIM is to help increase planning and cost certainty. What’s your verdict here based on your experiences?

It may sound contradictory, but the human aspect is key to the success of such major projects. At the end of the day, BIM is still quite new. The obstacles are not predominantly of a technical nature. What’s important is that everyone involved is committed to a common approach from an early stage.

How did you hope to benefit from your participation in the Pi2 project?

For us as a company, the learning curve was steep. The good reputation that we have gained by successfully completing the project is something that we, of course, would like to capitalise on in future.
Since February, an international and interdisciplinary team comprising 320 scientists has been working in this new institution at the University of Lübeck. This collaborative research is a real promise for the future. After all, there is still so much that is unknown when it comes to the mutual interactions among the brain, behaviour and metabolism. Some of the secrets of the human body are now to be unlocked with the aid of specialised labs and other diagnostic facilities.

The Stuttgart-based firm hammeskrause architekten combines the strict functional requirements of a research institution with a room layout that is based on the principles of transparency and interactivity. Two bright atriums, which are visible from the adjacent labs, serve as communication hubs. Informal exchanges are facilitated by the fact that the individual building sections are connected by various stairs and galleries. Gone are the days when scientific work was carried out locked away in seclusion!
Cradle for aspirations
Blavatnik School of Government, Oxford, Great Britain

Radcliffe Observatory’s days as an observatory are long in the past. Anyone wishing to study distant celestial bodies nowadays would be best advised to travel to the Atacama Desert in Chile or to a faraway island. Yet the name lives on, with the Radcliffe Observatory Quarter (ROQ) representing the most important development project in the recent history of Oxford University. The Blavatnik School of Government, which was officially inaugurated in spring 2016, is located on this prestigious city centre site. The architects Jacques Herzog and Pierre de Meuron saw this building as an opportunity to connect back to traditional building typologies. Accordingly, they reinterpreted the interior courtyard – a characteristic feature of the local colleges – as a central forum that picks up on the school’s ethos of openness and transparency.

↑ The building is mostly made up of offset circular discs. Only the first level deviates from this logic, with its orthogonal shape establishing a link to the buildings in the immediate vicinity. The staggered arrangement of the building’s levels creates projections and recesses that – according to the architects – reflect the principles of the master plan for the ROQ.

↑ The forum plays a pivotal role within the building, allowing an open view of the entire situation. All building sections – from the areas on the ground floor that are partly open to the public right up to the offices and seminar rooms of various sizes – are connected to it.

Blavatnik School of Government
Building owner: The University of Oxford
Architecture: Herzog & de Meuron
Planning and execution: Crownhouse
Geberit know-how
Duofix installation system

Greenbuilding: BREEAM Excellent
Madiba’s legacy

Nelson Mandela Children’s Hospital, Johannesburg, South Africa

When Nelson Mandela passed away in December 2013, the world lost one of the luminaries of the 20th century. Institutions such as the eponymous children’s hospital in Johannesburg keep the memory of “Madiba” alive – and provide desperately needed help.
The dream became reality thanks to donations from all over the world: In April 2014, the groundbreaking ceremony for the hospital, which is owned by the Nelson Mandela Children’s Hospital Trust, took place in the Parktown district of Johannesburg. The 200-bed facility, where 150 doctors – including oncologists, neuroscientists, cardiologists and surgeons – and 450 nursing staff look after young children and babies, plugs a gap in South Africa’s public health system.

The ambitious schedule meant that the plumbers from the company Modern Plumbing Works had to work at pace, with no room for mistakes of any kind. Skilled in butt-welding Geberit drainage pipes, the some 20-strong team overcame the challenge and constructed a reliably functioning drainage system within the agreed time limit. The system consists of around five kilometres of pipes and over 2,900 fittings.

Fabio Conte, contracts manager at Modern Plumbing Works

“Our work had to be 100 percent right with no comebacks. With the support of Geberit South Africa and our employees’ extensive knowledge and skill in welding and installing the Geberit products and systems, we were able to accomplish the task at hand.”

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A bright hub

Den Haag Nieuw Centraal, The Hague, Netherlands
Featuring diamond-shaped elements, the 120-metre-long, 96-metre-wide glass roof extends over the platforms of Den Haag Centraal railway station at a height of 22 metres. As the royal city is teeming with national and international institutions, it is only fitting that its main transport hub has a representative character – something that has been achieved perfectly with this welcome facelift. The architects at Benthem Crouwel were guided by three principles in their design considerations – clarity in spatial organisation, transparency and openness towards all sides.

Built in 1979, the railway terminus is used by 190,000 travellers daily, many of whom change here from the train to local public transport.

The enormous roof structure made of steel and glass that covers the whole of the transport hub immediately springs to mind when one thinks of transparency. Such a roof needs to be reliably drained. The Pluvia roof drainage system is based on the principle of negative pressure: cleverly designed outlets and small pipe diameters enable closed water columns to develop in the pipes and an increased discharge capacity to be achieved. As a result, fewer discharge stacks are required when compared to conventional drainage solutions.

In the drinking water systems at public facilities, it can occur that entire pipe sections are not used for long periods at a time. The fully automated sanitary flush unit prevents the microbial contamination of these water pipes. The flush cycle and other settings can now be programmed comfortably via smartphone.
One for all
Public sauna, Helsinki, Finland

Löyly, a public sauna close to the centre of Helsinki, has proven very popular right from the get-go.

There are over three million saunas in Finland – an incredible number for a country with just 5.4 million inhabitants. However, the vast majority of them are not open to the public, but instead found in people’s homes. An exceptionally atmospheric public counterpoint now adorns the Helsinki coastline in the former industrial area of Hernesaari.

Löyly owes its name to the steam that forms when water is poured over the hot sauna stones. The architects responsible for the project go by the name of Avanto – the Finnish word for the hole cut into frozen lakes by particularly hardy sauna-goers – it is plain to see, then, that this project is a veritable declaration of love for Finland’s cultural heritage.

↑ The three different saunas are the main attraction inside the building shell.

↑ Löyly is a popular meeting place thanks to its prime location close to Helsinki’s city centre.
Nordic design

The WC ceramic appliance IDO Seven D fits perfectly with the sauna’s minimalist Nordic style. The wall-hung WC excels from a hygiene perspective, with the applied ceramic glaze preventing dirt and bacteria from building up. Thanks to the QuickRelease function, the WC seat and lid can be easily removed for cleaning.
The most important internationally recognised certificates for green building:

**BREEAM**
The Building Research Establishment Environmental Assessment Method was developed in Great Britain in 1990 and is the oldest certification system used around the world in the area of green building. The criteria take into consideration the impact on a global, regional, local and building-internal level. Certification levels: Pass, Good, Very Good, Excellent and Outstanding.

**LEED**
The Leadership in Energy and Environmental Design certificate was developed in the USA in 1998 based on the -BREEAM standard. It defines a range of standards for environmentally friendly, resource-conserving and sustainable building. Certification levels: Certified, Silver, Gold and Platinum.

**ÖGNI**
The German Sustainable Building Certificate was launched in 2009 and has since been developed into a comprehensive certification system for various building uses and districts. The fulfilment of up to 40 sustainability criteria from the quality sections ecology, economy, sociocultural and functional aspects, technology, process work flows and site is certified. Certification levels: Bronze, Silver, Gold and Platinum.

**KFW Efficiency House 70**
The KFW Efficiency House 70 is a German certification system for low-energy houses and is comparable with the Swiss Minergie standard. This system stipulates that the annual energy required per square metre of living area must lie 45 per cent below that of standard houses.

**Minergie**
The Minergie label was developed in Switzerland in 1994 and is a globally protected trademark in the area of sustainable building. To achieve certification, a compact, well-insulated building shell is required, complemented by an automatic ventilation system with heat recovery. Certification levels: Minergie, Minergie-P, Minergie-A and Minergie-Eco.

**HQE**
The Haute Qualité Environnementale certificate was launched in France in 1992. This standard focuses on two aspects – the ecological management of construction projects and sustainable building design. To obtain HQE certification, obligatory categories such as energy management, water efficiency and freedom from pollutants must be covered.

**Green Mark**
The BCA Green Mark Scheme was launched in Singapore in 2005. The assessment criteria include energy efficiency, water efficiency, environmental protection, indoor environmental quality as well as other green features and innovations. Certification levels: Certified, Gold, GoldPlus and Platinum.
Added value by design

The name Geberit stands for comprehensive know-how in sanitary technology as well as in bathroom equipment and furnishings.

Geberit is a one-stop shop for perfect solutions that are known for their quality and durability. Geberit continually makes targeted investments in research and development. Our customers benefit from this in a very direct way: the know-how of proven specialists from a wide range of disciplines can be found in every Geberit product. And this know-how is regularly shared: Geberit conducts an intensive dialogue with its partners in the construction industry around the globe and also organises countless information and training events.

Geberit is a system provider. In other words, every product that bears the company logo has been tested and optimised within its overall context. This applies to the sanitary technology behind the wall – such as concealed cisterns, installation elements and all the piping systems – as well as to the products in front of the wall, such as the bathroom series with their ceramic sanitary appliances and bathroom furniture.
A journey through time

The Infinite Bridge, Aarhus, Denmark

The Infinite Bridge
Architecture: Gjøde & Povlsgaard Arkitekter

Back when steamships still traversed the waters off the coast of Aarhus, Marselisborg’s piers in the south of the Danish city were very much the catwalks of weekenders. With its radical reinterpretation of this historical background, The Infinite Bridge from Johan Gjøde and Niels Bjørn Povlsgaard is a real eye-catcher. ←