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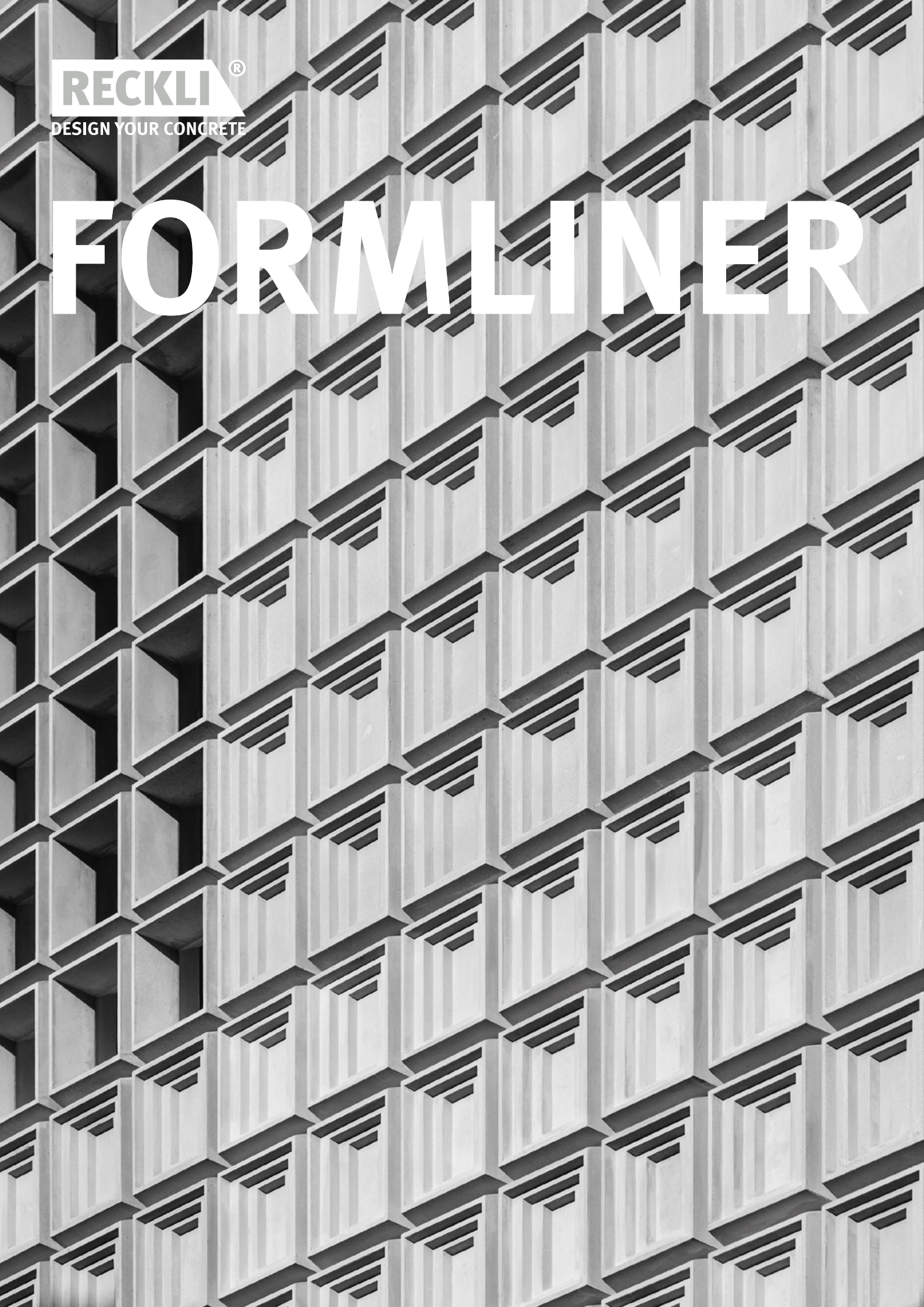



SOLO WALKS
Eine Galerie
des Gehens
25.06.–
06.11.2016
BUNDES
KUNST
MUSEUM
BONN

FORMLINER

Dear Readers,
What drives us? The curiosity to discover and understand things. To question and change them. The desire to create the exceptional.

As time passes, we see changes in appearances, trends and even our ideals. Processes of change such as digitalization and globalization require us to rethink the way we act.

How do we want to live and work in the future? How can tried and tested realities be transformed in a thoughtful manner to create something remarkable? The Mannheim urban development project Q6 Q7 shows how it is possible to change the image of an entire metropolis. In Melbourne, a residential facility demonstrates that even prison walls can benefit from a makeover. And old bunkers are suddenly being transformed into modern residential properties.

And because time is changing not only architectural trends, but also the construction material concrete, our case study will take a look at the Swiss city of Chur. The Spanish architectural firm Barozzi Veiga designed a museum building there, which makes impressively clear that while times may be changing, concrete is losing none of its fascination.

RECKLI has been following this fascination for five decades already: in 2018 we are celebrating 50 years in business.

FORMLINER will take this opportunity to look back on the company's beginnings, and at how some elements have survived all the changes. We firmly believe that great things can be achieved through cooperation. We demonstrate this not only through the cooperation with our customers and partners, but also in our interaction with our own employees.

We need pioneers, because they are the ones who change our world. An agency from Hamburg showed us that courage does not mean recklessness. With meticulous care, a Mercedes G-class was preserved for eternity in 40,000 liters of synthetic resin, in a project called »Amber Cube«. The architect Félix Candela was also a pioneer, and gave buildings breathtaking lightness and elegance with his groundbreaking rooftop structures. He had the courage to change things.

If you want to create something great, you have to be daring.

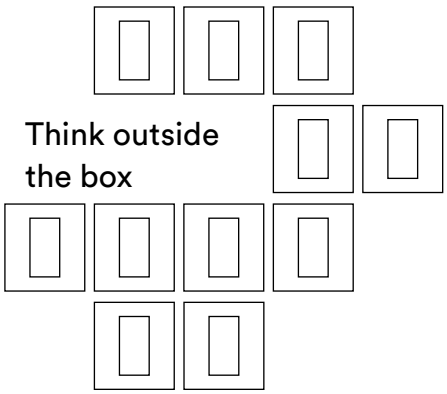
We wish you pleasant reading!
Dr. Bernd Trompeter (center),
Lutz Hammer & Corinna Uphaus

Buildings

Subject: Change

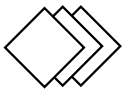
50 years of RECKLI

Case study

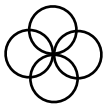


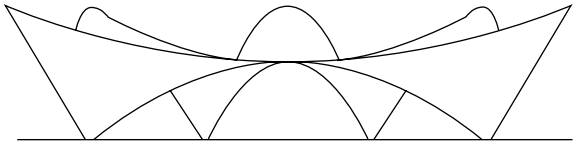
Essay:

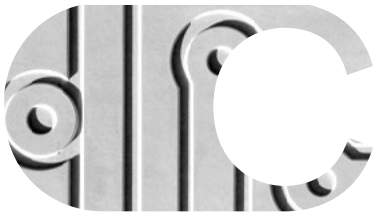
Processes



People



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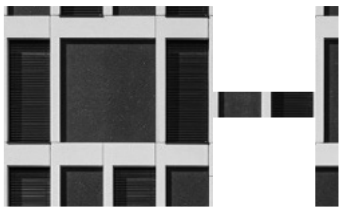
C  ANGE

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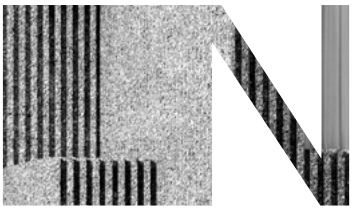
CHA  GE

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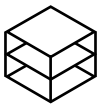
Subject: Change

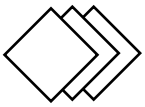
Architecture cannot shut itself off from change. It is always an expression of the zeitgeist, of cultural self-image and national creative talent.
Change means transformation – architecture publicly acts as a clearly visible memorial to this fact.



p. 08

Change can represent a correction, for example when new urban planning approaches are intended to increase the quality of life in a metropolis. It can also be a process of redesign, where relics of a dark past take on a new life. Or it can bring renewal, when a traditional building model is rethought.

All of these new beginnings require a willingness to take unknown paths and to be bold. What is needed is vision, which can even break through prison walls. And creativity, which further expands the possible applications of the construction material concrete.



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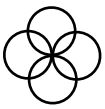
Ultimately, the ones behind such visions are always pioneering thinkers who refuse to accept the existing limitations, and believe for example that concrete can also take on delicate, featherlight forms.



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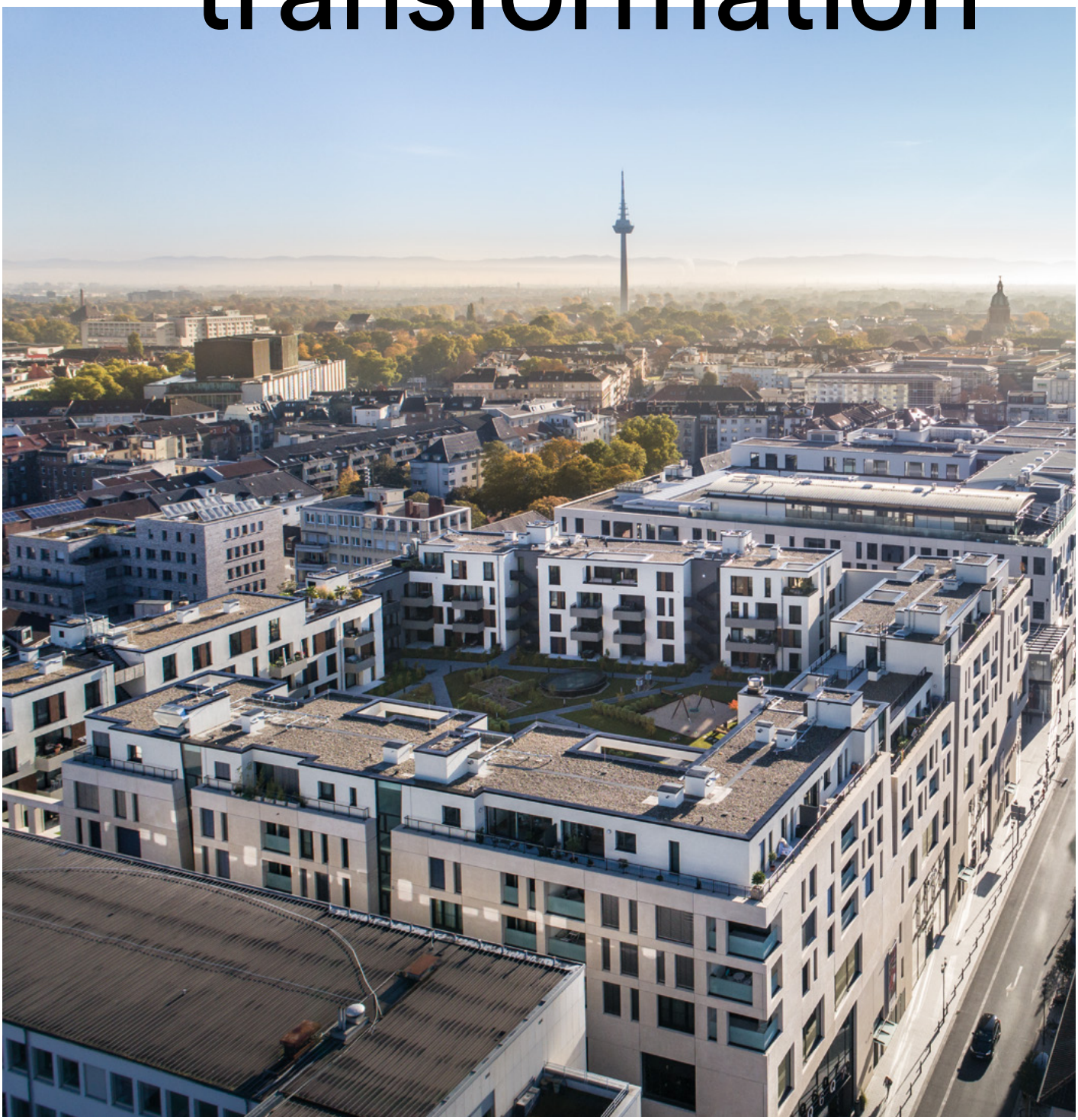
The squares of transformation



A bird's eye view of Q6 Q7. In the background you see the Mannheim television tower.

Mannheim wants to shed its wretched post-war image and score points for architectural diversity. For the urban planners, this is both an opportunity and a challenge: they dedicate themselves to land use conversions, shopping streets and problem neighborhoods.

Text: Michaela Maria Müller

Photos: Johannes Vogt, Adrian Schulz

Project: Q6 Q7
Location: Mannheim, Germany
Architects: Diringer & Scheidel
Concrete design: Individual


Massimo Dutti
ZONE

top: The façade of Eastsite VII explores the idea of digital communication.
bottom: Black suspended plates dominate Eastsite VI.

Mannheim is love at second sight. Even Mannheim residents will admit that. Surrounded by picturesque Heidelberg, neat Worms, and beautiful Speyer, Mannheim's architectural elegance is only obvious on the second glance.

But that is going to change. The city on the Rhine and Neckar rivers is facing a gargantuan urban planning task: with the final departure of the US military, over twelve thousand acres of land are being freed up in Mannheim, which are going to be converted into civilian residential properties. These include the Franklin Quarter, and the Spinelli and Coleman barracks: the plots are over 400 hectares in size. Converting them into civilian residential properties will change the face of Mannheim. On top of this, there is the challenge of replanning the infrastructure and creating local recreation options.

Because Mannheim is growing. There are currently around 300,000 people living in the Rhine-Neckar metropolitan region. By 2035, this figure will have risen to 338,000 residents, estimates Klaus-Jürgen Ammer from the Projektgruppe Konversion (the Conversion Project Group) for the City of Mannheim. In the Franklin Quarter alone, 4,500 new apartments will be built for around 9,000 people.

Alongside the numerous plots being converted, commercial spaces and shopping streets are being developed. Between the Court of Honor at Mannheim Palace and Kurpfalzstraße street lies the horseshoe-shaped city center. Mannheim was founded as a planned city at the start of the 16th century, by Frederick IV, Elector Palatine of the Rhine. Following a reform of the city at the end of the 18th century, the city blocks known as the 'Mannheim Squares' also began to be used as addresses.

The façade as a connecting element

The city center is one of the most lucrative retail spaces in Germany. One construction project has attracted particular attention there over recent years: the city district Q6 Q7 was developed and realized by the DIRINGER & SCHEIDEL consortium; today it is part of the portfolio of BMO Real Estate Partners Germany. Six storeys tall, it towers over Fressgasse street. It extends over two squares, which are connected by a glass footbridge. The fact that it fits so well into the existing architecture is thanks to the façade architecture: the surface structures and materials used vary. Glass windows, sand-colored artificial stone slabs, sometimes with a fine folded structure, sometimes smooth in appearance, basalt lava and limestone were brought together. The formliners for the prefabricated parts with their folded structure were produced by RECKLI.

The façade thus creates a link between the neighboring five and six-storey buildings. »We chose to use a façade that looks alive, with details that provide a clue as to what can be found behind it. Their use as residential properties, or for work and trade, fitness and wellness, can be clearly distinguished from the points where the architecture changes,« explains architect Dieter Blocher, who originally received the assignment.

The architecture firm Fischer Architekten demonstrates with Eastsite in Neuostheim how the gentle development of a commercial district can be achieved. The property was previously used by the German armed forces and a driving school for young people, and over the past 17 years, twelve new office buildings and a block of student apartments have been built. All of the buildings were planned by the same Mannheim-based firm. The architects were the ones who continued to provide new impulses, developed ideas and convinced investors.

Project: Eastsite, Neuostheim
Location: Mannheim, Germany
Architect: Fischer Architekten
Concrete design: Individual

Twelve office buildings and one block of student apartments built in Neuostheim.

Circuit boards as a template

All of the buildings have exposed concrete façades composed of prefabricated parts – but each one of them is different. There are façades with scales, and concave/convex surfaces woven into one another. And there is the façade of Eastsite VI: it consists of black suspended plates with a washed surface and white borders.

Immediately adjacent to it is Eastsite VII. The façade simultaneously reflects the idea of digital communication in two different ways. There is the 48-square-meter photographic concrete surface by artist Margret Eicher, which provides a striking surrounding for the entrance area. And there is the surface design of the façade, which was achieved by using magnified circuit boards when creating the formliners. However, the smooth and sleek surface structure was created by accident. By gently agitating the concrete, the cement paste was shaken to the surface, which is what now makes the façade so soft and smooth.

The team headed by Mannheim office manager Dominik Wirtgen, who teaches structural and concrete design at the Frankfurt University of Applied Sciences, has developed innovative design and shaping techniques. These include the textile-reinforced concrete sandwich, which allows the creation of an artistic façade, as well as enormous savings in material and time. This is a major advantage when it comes to construction projects in locations with high commercial or residential rents.

A breath of fresh air for the district

The structural transformation of Mannheim is most striking, however, in the city district known as Jungbusch. Once the port and trade district of Mannheim, with a bourgeois atmosphere and grand façades, it fell from grace after World War II and the cheap and hurried reconstruction of the city, until it was predominantly known as a red-light district. Today, people of over 150 nationalities live in Jungbusch, including many low-income families. With the help of funding from the European Union, an attempt has been made on Hafenstraße street to promote sustainable investment by locating so-called incubators there. Since 2003, the Popakademie Baden-Wuerttemberg has been based there, which was followed by the Musikpark and the creative business center C-HUB, where 50 entrepreneurs have their offices.
In the immediate vicinity, just opposite, lies Port25, a gallery for contemporary art.

The former problem neighborhood has now changed. The creative minds brought a breath of fresh air to the district. Since 2004, a night of culture has been held in Jungbusch on the last weekend in October each year, known as the Nachtwandel ('Night Transformation'). Thanks to its proximity to the city center, the district is increasingly becoming attractive for investors and apartmenthunters. The historical Kauffmannmühle was the first of six steam mills which formed the basis for Mannheim's advancement around 1900 to become the most important milling center in southern Germany. Its restoration got stuck in the planning phase for many years – but all 32 of the loft apartments created inside the silo were sold soon after construction began. Mannheim could soon become love at first sight.

From apocalyptic gloom to comfort

They are defiant, bleak reminders of World War II. In recent years, a number of architecture firms have specialized

Text: Anousch Mueller
Photos: Euroboden, hiepler, brunier,
Olaf Mahlstedt, Christine Dempf Architekturfotografie

in repurposing bunkers. The formerly dismal structures thus become desirable show properties.

Floor-to-ceiling windows, through which light falls on solid wood parquet floors. Walk-in wardrobes in the bedroom, a fireplace and enough space for tables yards long in the dining room. The blue sky shows through the skylight above the freestanding tub in the bathroom. There is nothing left here to indicate that people once sought shelter from air raids. For a good ten years, it has been permitted to repurpose air-raid bunkers as apartment buildings, restaurants and galleries, and many have since developed into popular pieces of real estate.

There are still more than 700 high-rise bunkers from World War II in German cities. The solid walls once served as safe spaces to protect the civilian population. The buildings were reserved for civil protection purposes until after the turn of the millennium, and were thus prepared for major emergencies. It was only in the year 2007 that the Federal government office responsible for real estate approved the sale of the majority of the facilities.

The hour had come for Bremen-based architects Rainer Mielke and Claus Freudenberg. Rainer Mielke had already converted a bunker in Bremen-Schwachhausen into a residential building. When searching for a house for himself and his wife, this lump of concrete caught his eye: He was fascinated by the idea of transforming this gray monolith into a livable and aesthetically pleasing home. At first, however, Mielke was only permitted to put a penthouse on the existing building, and to run a gallery in the bunker itself. It was only possible for him to develop the bunker itself into apartments after the civil protection clause was repealed.

From concrete block to loft apartment building

Mielke and his partner Claus Freudenberg have since been performing pioneering work. They have since completely renovated nine bunkers, and are at the project planning phase for fifteen more.

In recent years, a number of architecture firms have gotten into converting bunkers. In Munich, the architecture firm raumstation collaborated with the project developer Euroboden to transform a high-rise bunker on Ungererstraße street in the city district of Schwabing. Euroboden founder Stefan F. Höglmaier had often thought about the structural potential of the building, which represented more than just a challenge: burdened by its historical significance as a relic of the Nazi era, it is located on the edge of the city close to a busy highway on-ramp, and is furthermore listed as a historic building. When the German government's Real Estate Office publicly offered it for sale in 2010, he and his raumstation collaborators let their imagination run wild. »We believed from the start that an obsolete high-rise bunker can be converted into high-quality residential architecture, and thus made into a unique piece of real estate,« explains Höglmaier.

He refers to the result as »a chapter on architectural culture«: what was once a hermetically sealed concrete block has become a loft building. The ground floor and the second floor house a gallery, and the three floors above have been converted into modern loft apartments, each with a living space of just under 1300 square feet, which are rented out. The top three floors are a penthouse, where Höglmaier himself has moved in, full of enthusiasm for the unique atmosphere in the residential bunker.

Precision demolition work

Between the defiant military fortresses and loft apartments, fancy penthouses and attractive exhibition spaces, however, there lay a quite literally rocky path. The shelters had no windows, only ventilation holes. In order to let light into the murky rooms, tons upon tons of concrete had to be cut out of the meter-thick masonry and removed from the building. For a simple window seven feet by seven feet, ten tons of concrete had to be removed. »That always has been the greatest challenge when converting a bunker,« says Rainer Mielke.

As hardly anyone had any experience in demolishing such monstrous buildings, Mielke and Freudenberg had to start out with an experimental approach. They finally settled on a process also used for mining marble in Italy's Carrara quarries: water is added while rope saws studded with industrial diamonds cut through the masonry. The sawn concrete blocks are then disposed of using a special process. The concrete blocks are subsequently crushed and used as substrate for road engineering.

In order to convert a bunker into a modern residential building, up to 1500 metric tons of concrete need to be disposed of, which is more than the weight of a normal detached house. In addition to the sheer thickness of the walls, at up to six and a half feet thick, there is also the fact that steel reinforcement was installed in the concrete. As a result, cutting out the blocks became precision work, which could only be performed by specially trained concretecutting technicians.

Sophisticated lighting concept

Höglmaier had similar experiences in Munich. Around 2000 metric tons of material were sawn out and broken up during the conversion process. »The concrete core for the spiral staircase between the upper two floors weighed 35 metric tons on its own, which would have been too heavy for the ceiling below it. It therefore had to be cut up and removed a bit at a time,« says the project developer. A technically challenging and time-consuming undertaking. »The dismantling process alone took over half a year in total.«

The fact that it was listed as a historic building brought with it another challenge for the architects in Munich: the external appearance of the bunker needed to be retained, as a result of which the team were not permitted to cut windows into the base area. They were thus faced with the challenge of providing enough light for the gallery in the ground floor. Raumstation and Euroboden developed a sophisticated concept for allowing indirect light in: exhibition and office spaces were internally connected with one another. Light from large openings in the second floor of the façade is allowed into the lower part of the building through angled embrasures.

But who actually wants to live an a former airraid bunker, and why? For Höglmaier, the charm lies in the skillful marriage of the original structure with modern architectural expression. The Renaissance Revival elements of the façade were renovated as appropriate to their listed status, and inside, the stairwell indicates the history of the building as an airraid bunker. The unconcealed view of the plank-formed concrete ceilings permits a figurative insight into the history of the building. The almost room-high windows lend the indoor spaces depth and lightness, offering the occupants views over Munich in all four cardinal directions. »In addition, with walls seven feet thick, the generous niches in front of the new windows create a kind of interspace at the transition from inside to outside. Window embrasures or ledges in dimensions never to be seen elsewhere: an expanded level of space within the wall,« says Höglmaier. All this excitement over the unique details quickly makes clear why he fell in love with the project during the conversion and moved in himself.

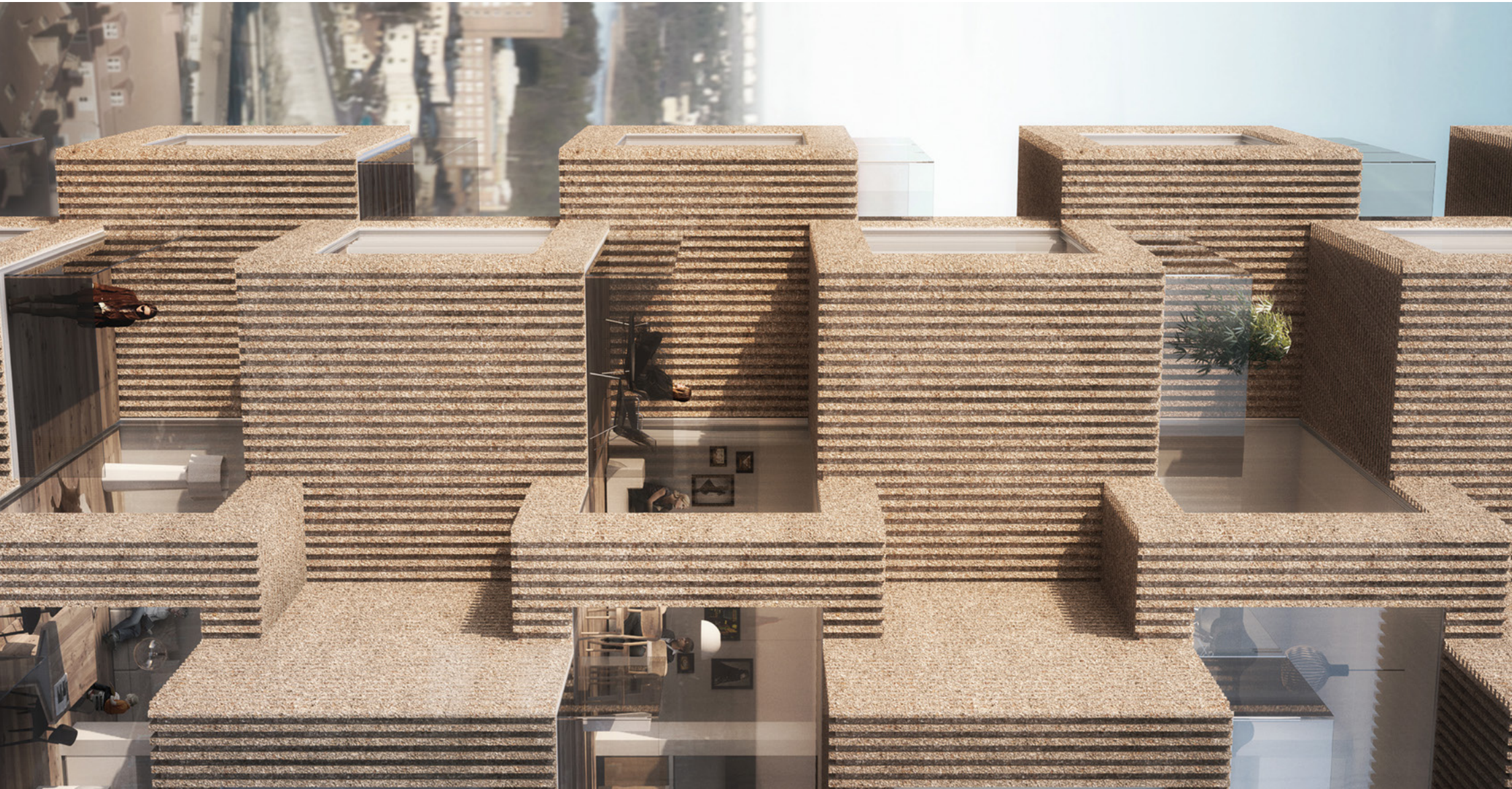
Bunkers score points for location

Mielke's customers come from all segments: they are couples, families, and even seniors, all united by the desire for individuality. »We develop apartments without load-bearing walls. As a result, the floor plans are freely available, allowing the rooms to be designed as individually desired,« says Mielke.

But there is also another decisive factor: »Bunkers give a feeling of safety and security.« The residents will simply feel comfortable behind walls several meters thick. It is important, however, that an apartment in a bunker should not actually look like an apartment in a bunker, explains the architect. A bunker has a bad image, after all. It was not least for this reason that the windows and interior rooms were so generously dimensioned.

The location also plays a role for many buyers. The World War II bunkers were built in the middle of the city centers, which today makes them properties in desirable residential areas. And what is the situation with the historic site status? Mielke emphasizes that there are extensive special opportunities for creative design during these repurposing projects. However, it is still important to recognize the historical value of the building. The concrete surfaces were therefore sandblasted to make the old structures visible. Sometimes a concrete block is deliberately retained in the revitalized bunker, as a kind of memorial: »We always leave something as it was.«

Comeback in the clouds



The construction of the first high-rise buildings marked the beginning of the modern age. What started as a technical triumph became an expression of power and ego, and ultimately just interchangeable blocks. More than a century after their triumphant creation, high-rises are making a comeback as an architectural art form.

Text: Jasmin Lörchner
Images: OMA - bloomimages

The success story of the high-rise started with a construction stoppage. What the architect William Le Baron Jenney presented to the city fathers of Chicago was so revolutionary that they stopped work in the middle of the construction phase and personally inspected the safety of the building.

Jenney had designed the headquarters for an insurance company. The principal wanted to fit as many offices as possible into a small space – and Jenney therefore stacked them above one another. The building was projected to rise to a height of ten storeys. His concept for the Home Insurance Building utilized a metal structure as a frame for the building, behind the façade. The architect explained to the city fathers that the change of materials not only improved the fire safety of the building – an important argument after the fire that devastated large parts of Chicago's city center in 1871 – it also weighed just a third as much as other buildings of this size. Jenney was able to convince the city fathers his plan was sound. The Home Insurance Building was completed in 1885, and was the first modern high-rise with its height of 138 feet.

»A high-rise represents romanticism, drama, passion, and is a symbol of architectural beauty. The icons of a city, community, and sometimes even of an entire country,« says architecture critic Paul Goldberger.

Monstrous structures provoke regulation

The high-rise symbolized the technical progress of America just before the turn of the century. It was Elisha Otis's invention of the safety locking device for passenger elevators that even made the construction of high-rise buildings possible. No one wanted to walk up ten flights of stairs. The metal structure as a base frame saved construction material, and made the high buildings lighter, meaning that they no longer sank into the ground as much. Time-optimized work processes and cranes soon came along to additionally speed up the high-rise construction process. In 1902 the Flatiron Building in New York rose to a height of 300 feet at the junction of 5th Avenue, Broadway and 23rd Street, with a total of 22 floors.

The first critics were soon on the scene: the Equitable Building completed in 1915 was a full 538 feet in height. This dark monstrosity threw a shadow over the surrounding houses, stealing their light and depressing real estate prices. The streets of New York were transformed into deep gullies between the buildings.

The voices of criticism became so loud that the city intervened. Stricter regulations were passed in 1916 – there was no question of a height limit, however. Instead, high-rises would have to taper towards the top in future, so that space was left for light. The 1916 Zoning Resolution led to a new form of high-rise design: the introduction of setbacks ensured that buildings could grow upwards in a new and elegant manner.

Sudden end to the skyscraper boom

The most powerful and richest residents of New York built their own memorials in the form of high-rises. Retail king Frank Woolworth contracted architect Cass Gilbert to plan the Woolworth Building. Automobile pioneer Walter Chrysler contracted architect William Van Alen to build the Chrysler Building. The Bank of Manhattan hired H. Craig Severance to build the company skyscraper of the same name. Severance and Van Alen were soon competing for the title of tallest building in the world. At the last minute, Van Alen had a 56-meter metal spike in the form of a needle mounted on the Chrysler Building in 1930, which thus reached a height of 1046 feet, trumping the height record of the Bank of Manhattan building. It was overtaken just one year later by the Empire State Building, whose 102 storeys reached the previously unheard-of height of 1454 feet.

The cube format makes the residential towers real eye-catchers.

Living in a cube: Norra Tornen houses 300 residential units.

Project: Norra Tornen
Location: Stockholm, Sweden
Architect: OMA, Reinier De Graaf
Concrete design: Individual

At the start of the Great Recession, the money for expensive and imaginative buildings dried up. Soon there was hardly a company in New York that could afford the rent. The Empire State Building was jokingly nicknamed the »Empty State Building«. To make matters worse, on a foggy Saturday in July 1945, a B-25 bomber strayed off course into New York airspace, and flew into the 78th floor of the skyscraper. Fourteen people died. The building survived the crash, and was opened again the very next day. And although New Yorkers loved their landmarks, the outbreak of World War II had abruptly applied the brakes to the skyscraper boom in the USA.

This situation only changed with the upturn after the war. The economy prospered, and larger office buildings and more impressive headquarters were needed. Transparency was the trendy buzzword for the corporations. Spurred on by new trends, countless skyscrapers with glass façades shot up, soon to be decried as glass cabinets. »Boring and banal« was what architecture critic Goldberger called the designs.

New impulses for office buildings

Prefabricated manufacturing became the established method for apartment buildings. This construction method saves time and money, making it the preferred approach for state-subsidized social housing projects. Residential tower blocks with uniform façades could be built quickly and cheaply, and were no longer exceptional feats of architecture. They became soulless blocks. One of the most infamous examples: the Pruitt-Igoe urban housing projects in the state of Missouri, which from 1954 onwards were intended to improve the housing situation of poorer citizens. A total of 2,800 social housing units in 33 buildings, each eleven storeys high, arose. Strict racial segregation was enforced. In less than a decade, the unattractive residential surroundings had led to shockingly low occupancy levels, and soon only poor African-Americans lived in the complex. The structures were demolished in 1972. Pruitt-Igoe remains an emotive term to this day.

Even on other continents and under other governments, this construction method has borne brutally aesthetic fruit. In Berlin's Karl-Marx-Allee, for example, or in the countless »Khrushchyovkas« in Moscow – named after statesman Nikita Khrushchev, who had these structures built to quickly and cheaply resolve the housing shortage. Prefabricated high-rises symbolized the standardization of their inhabitants. No space for individualism – entirely in accord with the socialist ideal.

Decisive new impulses came in the mid-seventies. Designs by the architects Philip Johnson and John Burgee rethought the concept of the high-rise. The IDS Center in Minneapolis had an impressive 51-storey office tower and a 19-storey hotel, tied together by a glass façade. »Although breathtakingly beautiful, the design seemed to place more emphasis on public use than on aesthetics,« says Goldberger. With Pennzoil Place in Houston, the architects were making a visual statement: two trapezoidal towers with angled tops, almost like they were cut off with a scythe, tied together at the base by glass structures. The draft looks like a sculpture.

Breaking away from uniform designs

Around the world, architects began to rethink utilization concepts, and to focus on the basics: the high-rise as a city landmark.

In Paris, »La Defense« became an entire city district built around a futuristic vision. The Commerzbank Tower serves as symbol of the major international banking center of Frankfurt, and broke new ground in 1997 as the first »green« skyscraper. With its sailboat design, on an artificial island under the unforgiving desert sun, the Burj al Arab is a symbol of extravagance in Dubai. The unique design of the Petronas Towers in Kuala Lumpur is based on traditional Islamic structures, an expression of Malaysia's hard-earned status. The CCTV headquarters in Beijing were completed in 2012, making the skyscraper design a three-dimensional experience.

In Sweden, Reinier De Graaf and the architects Alex De Jong and Michel Van De Kar of the firm OMA are making creative waves: the Norra Tornen twin towers are being built in the Stockholm district of Hagastaden, and will provide space for 300 residential units. The larger of the two towers will measure 394 feet, and the smaller one 341 feet. They are covered in a ribbed concrete façade. The asymmetrical vertical form will be given additional tension in the horizontal plane using a cube-based design: alternating pre-cast concrete elements jump out or are inset, creating the impression of a stack of apartment cubes. Balcony areas alternate with living spaces boasting large-format windows. »The intended monumental architecture makes space for residential articulation,« say the architects.

The heterogeneous form and the rough exterior of the towers are expressions of De Graaf's desire to break away from the familiar uniformity and homogeneity of façade design in high-rises. The ribbed appearance contradicts conventional expectations, making the building an object of fascination. The façade thus not only serves as a visual complement to the design, but acts as its ambassador, symbolizing the individuality of the residential units within.

If walls could talk

Between 1851 and 1997, Pentridge Prison was home to some of the most notorious criminals in Australia. Twenty years after its closure, the prison complex in Melbourne is now developing into the new heart of the district of Coburg.

Text: Jasmin Lörchner
Photos: David Fowler Photography,
Bianca Conwell

A century ago, Coburg was considered the end of the line. Starting in 1851, the careers of countless criminals ended in Pentridge Prison. After over 140 years, the penal facility in the north of Melbourne was finally closed in 1997, and changed hands a number of times over the following years. Twenty years after its closure, Pentridge is being revitalized – not as a prison, but as a modern and active center of the district of Coburg.

Where dangerous criminals once slept, ate and worked, residential buildings, shops and offices are now being built. Creative professionals will move in and revive the neighborhood. »The redevelopment of Pentridge Prison is very close to our hearts. It was actually the heritage of the site that appealed to us,« explains the project developer Shayher.

The first prisoners were moved to Pentridge in 1851, which was originally a camp with wooden huts and low security measures – nearby residents were dismayed. Over subsequent years, Melbourne grew – and with it the crime rates and the prison: »Her Majesty's Pentridge Prison« was expanded between 1857 and 1864 by the construction of three barracks and a continuous enclosing wall. Starting in 1870, the prisoners performed work in the prison's own wool spinning mill, tailoring shop, forge, and woodshop. In 1884, a self-contained women's prison was created inside Pentridge, whose inmates were supervised exclusively by female prison guards.

Escape attempt and fire

In 1967, Ronald Ryan became the last Australian prisoner to be executed, in D Division of Pentridge Prison. The justice system in Australia was reformed, and Pentridge drew unwanted attention when its inmates rioted in 1970. The prison also had no shortage of spectacular escape attempts. The Jika Jika high-security complex built in 1980 was intended to bring relief and modern standards. It was closed again just eight years later, after five inmates lost their lives in a fire at the complex. The process of change could no longer be stopped, and in 1997, Pentridge closed its gates.

Given the history of the site, the proposal of the project developers to tear down part of the facility to make space for new structures was not unanimously well received. Shayher emphasizes, however, that they take the heritage of the site very seriously. »We want to preserve this historical treasure and keep it open to the public, so that it can continue to be used for decades.«

One of the first projects realized was the »Coburg Horizons« designed by PRO-ARK, which were completed in February 2017. The firm has been specializing in architecture and interior design for over twenty years. »PRO-ARK researched the unique history of Pentridge, and developed a design that unifies its heritage, as an answer to the site, sustainability, architectural expression and sound business sense,« say the architect Mario Duvnjak and his partner Danny Chiang.
The Coburg Horizons are two residential buildings with an airy modern look. Each extends over six floors, for a total of 53 apartments with optionally two or three bedrooms. The residents of the upper floors have private balconies, from which they have a view of the Melbourne skyline and the Dandenong mountain range.

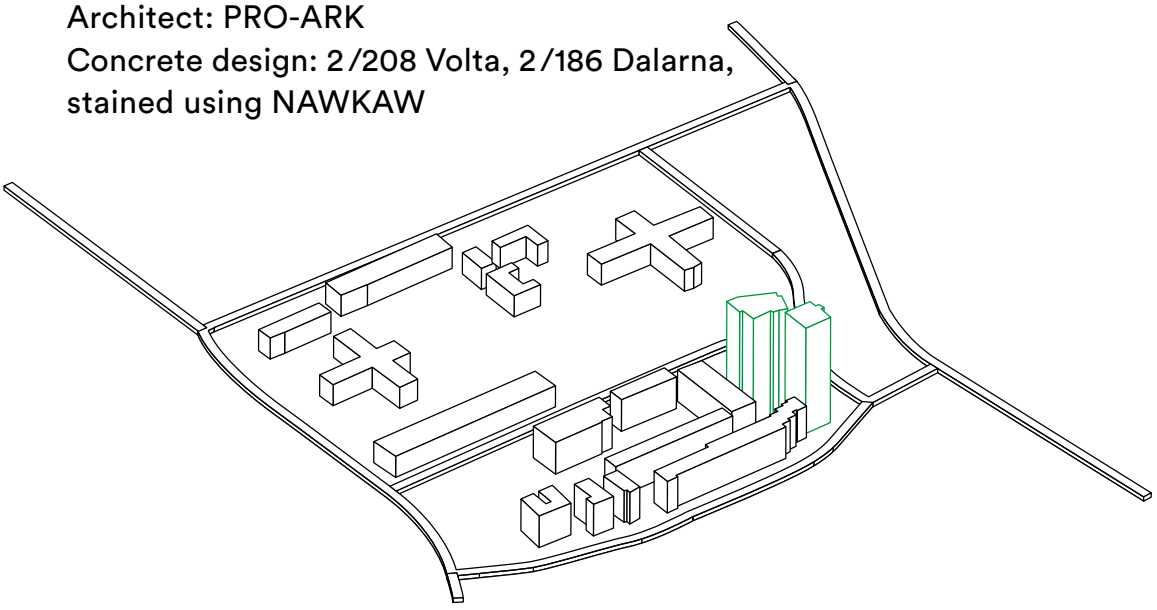
Historical photos of the prisoners

The planning process confronted Managing Director Duvnjak and his partner Chiang with the question of how they would set about reconciling the history of the site with their project. The architects decided to make the basalt stones used in the construction of Pentridge as the figurative cornerstone of their new design: these form the lower part of the façade in both buildings, which house parking lots for the residents. »The form, texture, and pure material of the basalt stones not only played an important role in the façade of the two new buildings, but are also used as a prominent element, interacting with the modern decorative panels.« The panels are designed with historical photos showing the former inmates at work.

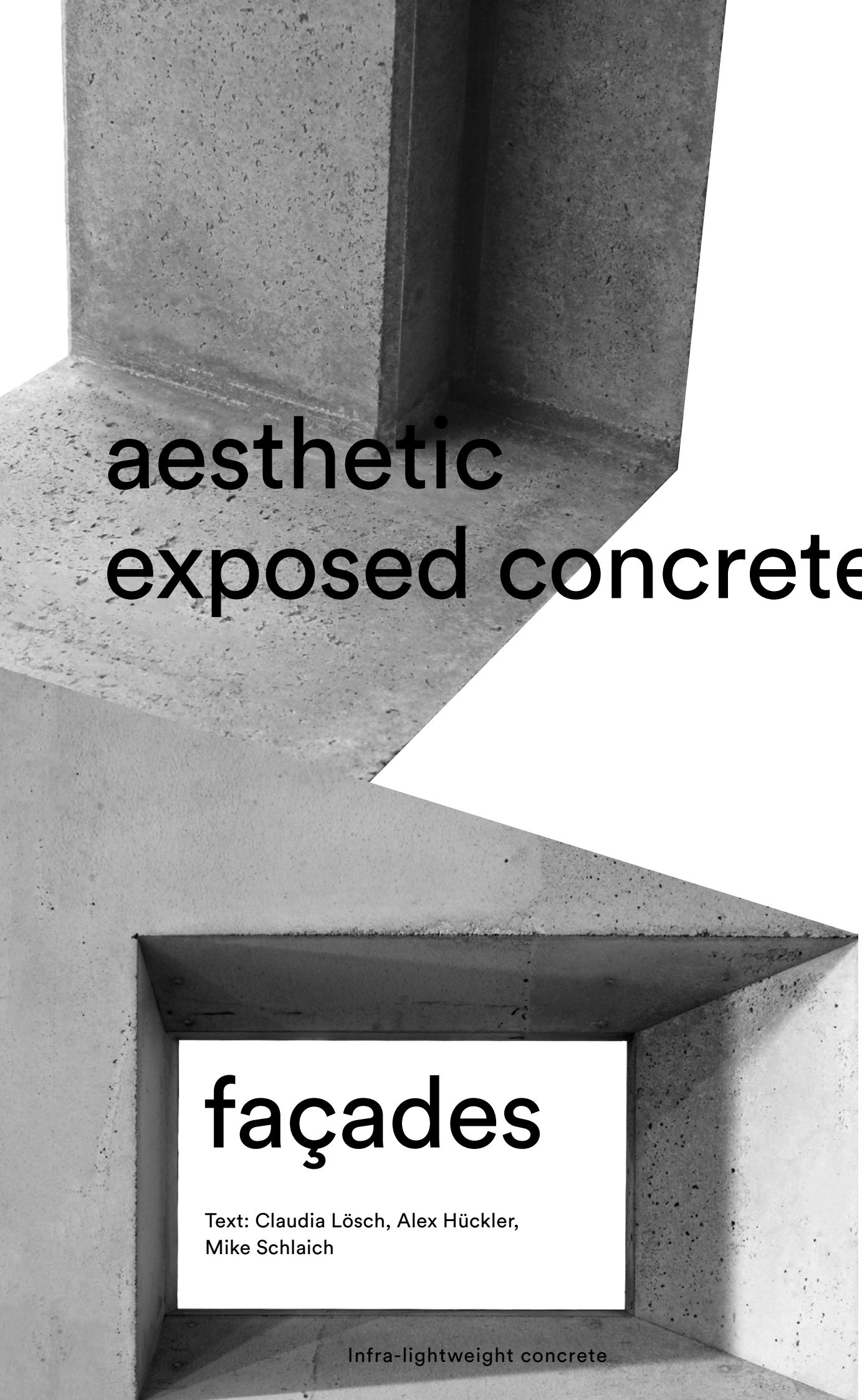
Above the masonry look, the residential buildings are connected with an emphatically airy design, dominated by glass and a structured concrete façade.
RECKLI formliners were used to imprint a natural design in the concrete, which is reminiscent of bent blades of grass. The natural design loosens up the façade of the building, and gives it an additional radiance. The effect was intensified by painting it with the NAWKAW color system. Unlike paint, NAWKAW penetrates into the concrete, producing a lasting staining effect. The system simultaneously stained the surface against weathering. This not only limits the damaging effects of water, but also prevents dirt particles from settling into the masonry. The staining allows the modern concrete façade to be matched to the color of the basalt.

The carefully selected elements of the building reconcile history and the modern world in Pentridge. The »Coburg Horizons« not only provide a view of the surrounding beauties of the city, but also the possibility to broaden their personal horizons.

Project: Coburg Horizons
Location: Melbourne, Australia
Architect: PRO-ARK
Concrete design: 2/208 Volta, 2/186 Dalarna, stained using NAWKAW



Infra-lightweight concrete – New potential for



aesthetic exposed concrete

façades

Text: Claudia Lösch, Alex Hückler,
Mike Schlaich

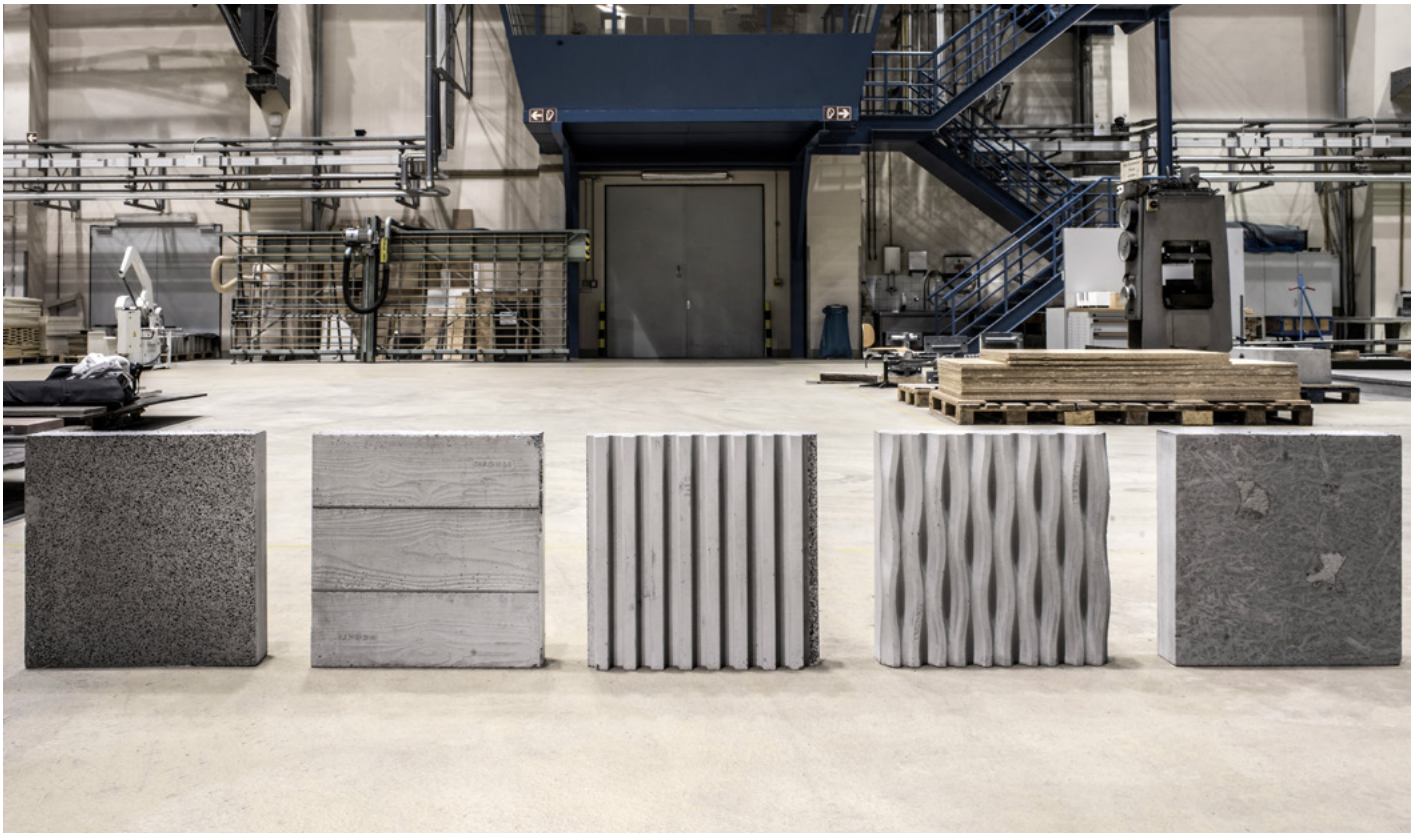
Resource efficiency and sustainability are steadily growing in importance everywhere, but particularly in the construction industry. Statutory regulations on saving energy in the operation of buildings are forcing limits onto architecture. Conventional multi-skin systems such as composite thermal insulation systems impose limitations on design options, are associated with complex structural details, and in some cases are criticized for their recycling and fire performance. The implementation of aesthetically sophisticated exposed concrete façades based on standard concrete, on the other hand, requires complex structures with intermediate or internal insulation. There has therefore long been a tendency towards monolithic designs, where a single material performs both the load-bearing and thermal insulation functions. The advantages are obvious: the single-skin structure reduces the number of work stages for additional insulating layers, connections become simpler, and the entire system is more robust and durable. Monolithic designs often also offer greater permeability, and thus positive effects in terms of indoor climate and user comfort.

Monolithic designs often offer greater permeability, and thus positive effects in terms of indoor climate and user comfort.

In structures with few storeys and lower loads, monolithic systems can be implemented using for example masonry blocks of lightweight brick or porous concrete, and walls can be built from porous lightweight concrete. Here, too, the architectural design scope is limited. The ability to combine the advantages of monolithic construction with the aesthetic potential of exposed concrete façades is provided by insulating concrete. This is a structural lightweight concrete with a significantly reduced bulk density, whose low thermal conductivity makes it suitable both for load-bearing and for thermal insulation.

Insulating concrete is nothing new, having been on the market for decades. However, this method of construction has been pushed to its limits by the stricter energy-saving regulations. The required reduction in thermal transmittance through the external walls is achieved either at the expense of strength, which limits potential applications in terms of building height and number of storeys, or it leads to unrealistically dimensioned wall thicknesses.

This is where infra-lightweight concrete (ILC) is different from other types of insulating concrete. At the Chair of Conceptual and Structural Design of the Technische Universität of Berlin (TU Berlin), Prof. Mike Schlaich has been developing and researching the material for more than ten years now. Infra-lightweight concrete is a structural lightweight concrete whose unusually good combination of low bulk density and excellent strength again makes it possible to build with insulating concrete, even for multi-storey structures. Depending on the design, wall thicknesses of around 45–60 cm facilitate compliance with energy-saving regulations. This also once again opens up the design potential for exposed concrete façades in multi-storey apartment construction.



Structural light-weight concrete

Fact sheet

①

Aggregate

Expanded clay / foam glass

Average compressive strength f_{cm}

approx. 6 – 15 N / mm²

Dry bulk density ρ_{tr}

500 – 800 kg / m³

Thermal conductivity $\lambda_{10,tr}$

approx. 0.12 – 0.19 W/(m·K)

②

③

④

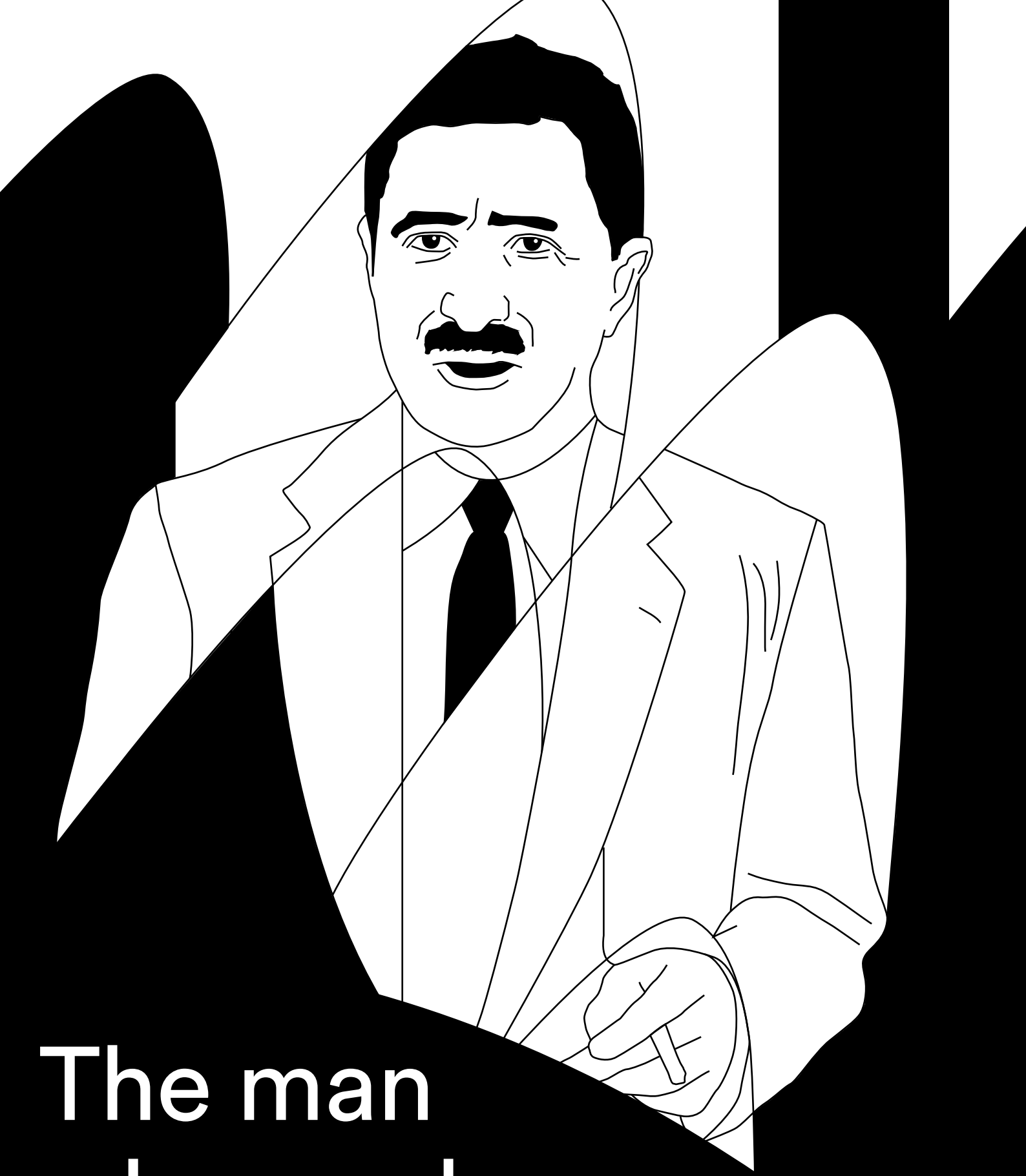
Insulating concrete for multi-storey structures

The applications of ILC were investigated for the first time in the context of the research project INBIG – Infra-lightweight concrete in multi-storey apartment construction (organized by the 'ZukunftBau' future construction research initiative of the Bundesamt für Bau, Stadt- und Raumforschung (Federal Institute for Research on Building, Urban Affairs and Spatial Development)), with an interdisciplinary team of architects from the Chair of Conceptual and Structural Design, Prof. Regine Leibinger, and engineers from the faculty of Prof. Mike Schlaich. To this end, various building typologies were considered, such as closing gaps between buildings, rows of housing, and tower blocks, and example designs and structural details were developed. A particular focus was on building appropriately to the material – that means creating the design based on the specific properties of the construction material. With ILC walls, for example, it is possible to make the building shell or its thermal limits shift flexibly over the depth of the building, and on the other hand, large overhangs should be avoided.

Design connection can be designed to be comparatively simple and yet robust. For example, windows can be positioned in the middle of concrete segments without additional insulation of the embrasure (→ ①). When using an ILC balcony on an ILC external wall, the otherwise customary thermal insulation between the balcony and the internal standard concrete storey ceiling becomes unnecessary (→ ②). Above all, the material can be formed freely. It is thus also possible to treat elements such as balconies not as supplementary structures mounted on the façade, but actually to develop them out of the façade itself (→ ③).

The investigation of the design capabilities of the surface identified extensive scope for creativity. Depending on the formwork material, it is possible either to present the natural porosity of the material, or to use absorbent formwork or felt to achieve a virtually pore-free surface. The excellent flow behavior of the material allows a wide range of different formwork structures to be achieved by using milled Styrodur or RECKLI formliners (→ ④). It is even possible to stain the ILC.

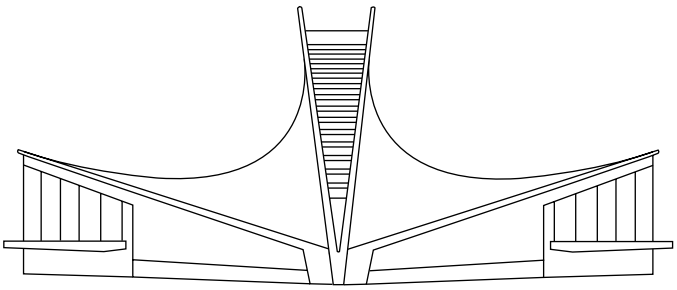
After many years of research, infra-lightweight concrete is ready to be used in practice. In addition to the numerous research studies in this field, both in Germany and abroad, the potential of the material is also demonstrated by a wide range of currently forthcoming implementation projects. The advantages of monolithic designs in terms of robustness and durability, combined with the aesthetic potential of exposed concrete façades will hopefully mean that infra-lightweight concrete can contribute to a culture in the construction industry that allows a wide range of architectural expression.



The man who made waves

Text: Jasmin Lörchner
Photos: HAKEBRY1, David Iliff,
See Imprint for licenses
Illustration: Carsten Nierobisch

Félix Candela was an architect, but his real passion was engineering. He perfected the hyperbolic paraboloid (hypar) roof, and used it to create groundbreaking buildings of breathtaking lightness and elegance.



His talent almost went untapped: when Félix Candela came to choosing a career, he was undecided. A friend of the family told him about the profession of architecture, and so the young Spaniard signed up to the University of Madrid at the end of the 1920s, more or less hoping for the best.

Félix Candela, born in Madrid on January 27, 1910, had by his own admission little talent when it came to drawing. During his studies, he developed a fascination for the technical aspects of architectural designs. He was interested in the pioneering thin-shell structures of Pier Luigi Nervi, the pre-stressed concrete designs of the Frenchman Eugène Freyssinet, and the work of the German engineers Ulrich Finsterwalder and Franz Dischinger.

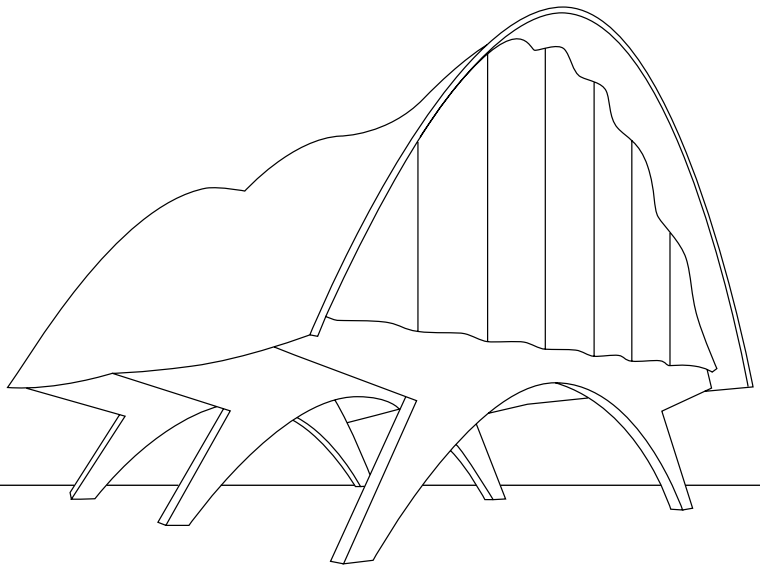
Because thin-shell designs were not covered during his studies, Candela copied out articles from German and French technical journals by hand, and translated them into Spanish at home, word by word. He also repeated all the calculations step-by-step, and thus acquired a basic, self-taught understanding of the thin-shell construction method. After his graduation from the Universidad Politénica de Madrid, he deepened his knowledge at the Real Academia de Bellas Artes de San Fernando. He studied the work of Eduardo Torroja, who became one of the first Spanish architects to experiment in the late 1930s with the hyperbolic paraboloid shell: a roof with regular curves in two directions, the shape of which is also referred to as a saddle roof. The realization of Torroja's spectacular draft for the »Hipódromo de la Zarzuela« racetrack was delayed, however, by the Spanish Civil War, which would lead to a remarkable turning point in Candela's life.

The outbreak of war in 1936 initially prevented Candela's planned research trip to Germany, where he had intended to learn about the influence of the still young reinforced steel construction method on architectural design. The 26-year-old sided with the republic and fought against Franco, wound up in the French prisoner-of-war camp at Perignon, and had to leave Spain after the war ended in 1939. In June of the same year, Candela emigrated to Mexico, where he had to build a new life.

Hypar roofs as a trademark

He married, took on Mexican citizenship in 1941, and began to work as an architect. For almost a decade, he mostly designed residential buildings and hotels, but his interest in thin-shelled structures never left him. At the end of the 1940s, Candela began to replicate the structures, and to experiment with them. The hyperbolic paraboloid, or hypar roof, held a particular fascination for him. It is attractive and elegant, the formwork can be manufactured from unbent wood, and its realization requires only a thin layer of concrete, which saves material and thus costs. Candela perfected his shells to the point that they each measured less than two inches at their thinnest point.

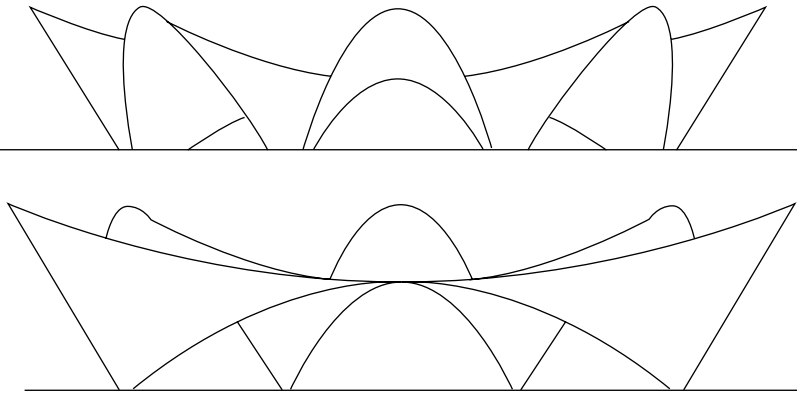
Eventually, he had acquired enough experience to produce the first of his own designs. During the construction of the Pabellón de Rayos Cósmicos at the University of Mexico City, Candela was contracted for the roof structure. The architect proposed a simple curved roof; Candela developed the idea further and argued for a double hypar roof. His proposal was accepted.



The hyperbolic paraboloid, or hypar roof held a particular fascination for Candela. It is attractive and elegant, the formwork can be manufactured from unbent wood, and its realization requires only a thin layer of concrete, which saves material and thus costs.

The hypar roof became Candela's trademark. »His bread-and-butter structure was the canopy roof,« says Maria Garlock, Professor of Civil and Environmental Engineering at Princeton. Garlock can list a series of industrial structures in Mexico City for which Candela created variants on the canopy roof: for the Rios factory hall, he combined a number of adjacent canopies with slightly offset heights, so that he could integrate skylight windows. An alternative design involved perforating the canopies and installing glass elements, in order to allow sufficient light into the large-scale halls, such as at the Highlife textile factory. For the church »Iglesia de la Medalla Milgrosa«, he worked with an asymmetrical canopy, which instead of four equally sized elements uses two short ones and two long ones. He angled the canopy to the side, so that the short side rested on the ground, and lifted it precisely in the middle of the short side, creating a triangle. By building an identical canopy opposite, resting on the long side, and repeating this design a number of times, he created the central nave of the church, and an exceptionally beautiful building.

An oceanarium as final design



The Los Manantiales restaurant in Xochimilco, a southeastern district of Mexico City, is considered one of his masterpieces. For this design, Candela crossed four truncated hypar roof shells, so that viewed from above they look like the arching petals of a flower. Although the entire structure is curved, the formwork was produced exclusively from straight wood. He started with a V-shaped structure that was reinforced with steel towards the ground, in order to distribute the weight. The formwork was applied to the V-structure plank by plank, and then the steel mesh was laid on top and the concrete poured. After the scaffolding and formwork were dismantled, a majestically curved structure rose before the eyes of the onlooker. Candela himself considered Los Manantiales one of his personal favorites.

L'Oceanogràfic is one of seven buildings in the »City of Arts and Sciences« complex in Valencia, Spain.

At the end of the 1950s, he accepted a teaching position in the faculty of Architecture at the Universidad Nacional Autónoma de México, which increasingly kept him away from active construction projects. In 1971 he moved to the USA, where from 1978 he taught at the University of Chicago.

His last big design, the L'Oceanogràfic in Valencia, Spain, is strongly reminiscent of his favorite project Los Manantiales. The complex is part of the »City of Arts and Sciences«, which was created in collaboration with the Spanish architect Santiago Calatrava, and which became the modern landmark of the Spanish city. The oceanarium demonstrated Candela's visionary work one final and impressive time. He died on December 7, 1997, in Durham, North Carolina. L'Oceanogràfic was completed after his death, and thus became his posthumous monument.

Part 1/4 Oskar Grabczewscy: »Searching for beauty«

Last October, I was invited to OSSA, the largest Polish architecture workshop for students, as a tutor. There were around 120 people present, including the tutors. It was great – we enjoyed the wonderful fall in the beautiful cities of Niemcza and Wrocław; we sat together, went for walks, drew, built models, and talked with one another a lot – about architecture, art, movies, philosophy and culture. We enjoyed the sun and wine, and had many ideas and thoughts about the subject matter of the work-

shop: The Great Beauty.

In conversations with the students, I was impressed by their intelligence and talent. They were thirsty for knowledge and artistically interested. It was a great opportunity for me to think about my own ideas about beauty. As architects, we often pretend we are not interested in beauty. We talk about business, craftsmanship, responsibility and sustainability. We talk about the needs of our clients, and about being state-of-the-art. We talk about ideas, concepts, typology, and analytical or parametric design. But we never talk ...

→ p. 56

Part 2/4 about beauty – as if we were afraid of it or ashamed.

For me, the most important aspect of beauty is sincerity. You can fool other people into thinking something is beautiful, but you cannot fool yourself. Whether architecture is complicated, big, detailed, expensive or conceptual, either you feel the beauty or you do not. I really appreciate sincerity. That is why I particularly like concrete architecture.

Concrete has the remarkable property of being able to take on an incredible array of forms. It can be rough or smooth, it can be

colored in different ways. And in each of these forms it is sincere and honest. Many years ago, when I had just founded our office together with friends, we won the competition for the Paleontology Museum in Krasiejów. We immediately agreed that we would only use materials in their pure form – solid concrete walls and roofs, glass windows, floors and ceilings, steel as a connecting element. We were young and stupid, and did not know it would get ...

Oskar Grabczewscy

... founded the nationally and internationally prize-winning firm OVO Grabczewscy Architekci in Katowice in 2002.

→ p. 104

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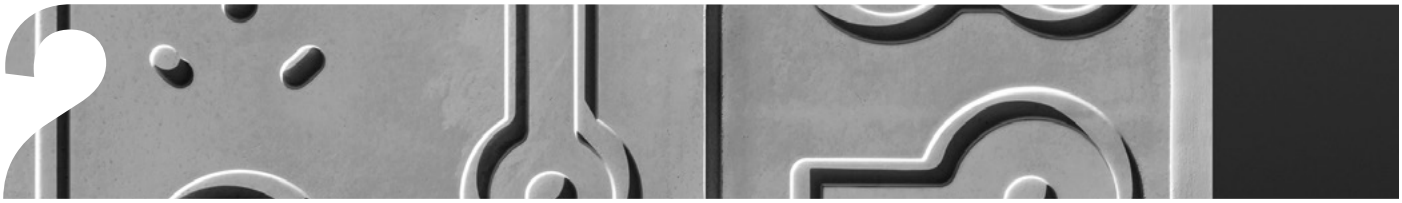

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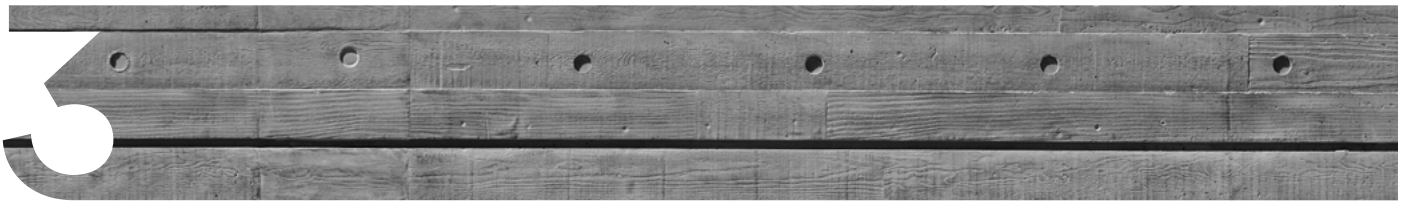

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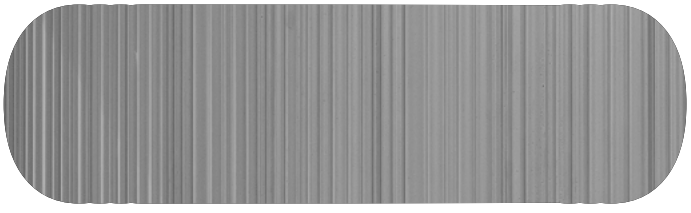

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50 years of RECKLI

The year 2018 is a significant one for RECKLI: born in 1968 out of the idea of minimizing visual defects in concrete, RECKLI has developed into a specialist in architectural concrete. The use of formliners has long since stopped being limited to exterior walls or near-natural structures. RECKLI leaves its mark everywhere.

It is now 50 years ago that Hans Jürgen Wiemers laid the cornerstone for the company and its success story. Inventiveness and craftsmanship make up the DNA of the company to this day. A glance at its beginnings makes clear how RECKLI could rise to become a hidden champion in the world of architectural concrete.

This ascent is a success story that was written around the world: RECKLI is represented on four continents, and works with architects to bring structural visions to life. Our local experts illuminate how the native culture and national self-image influence the architectural culture of their region.

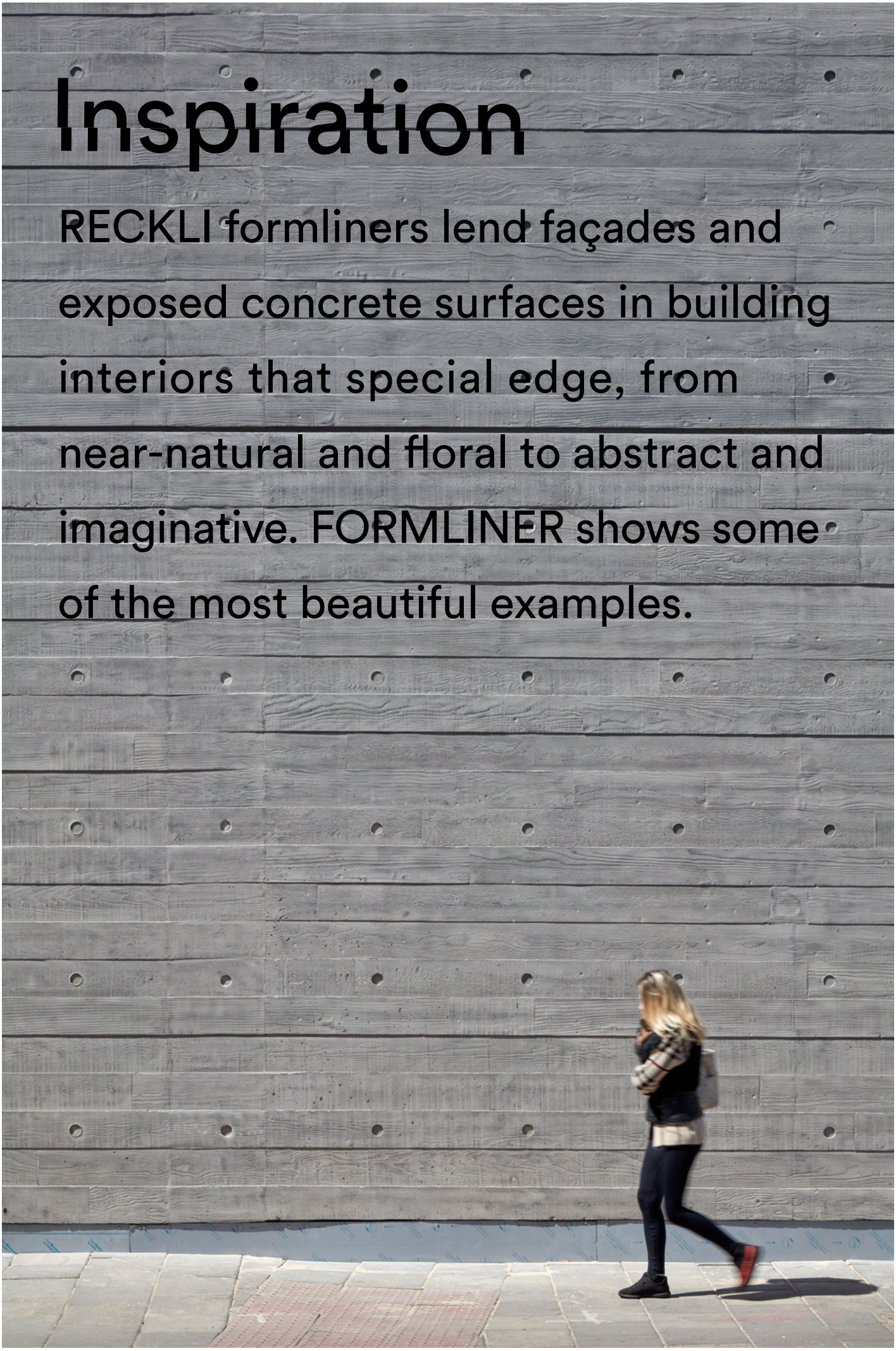
p. 60

p. 74

p. 90

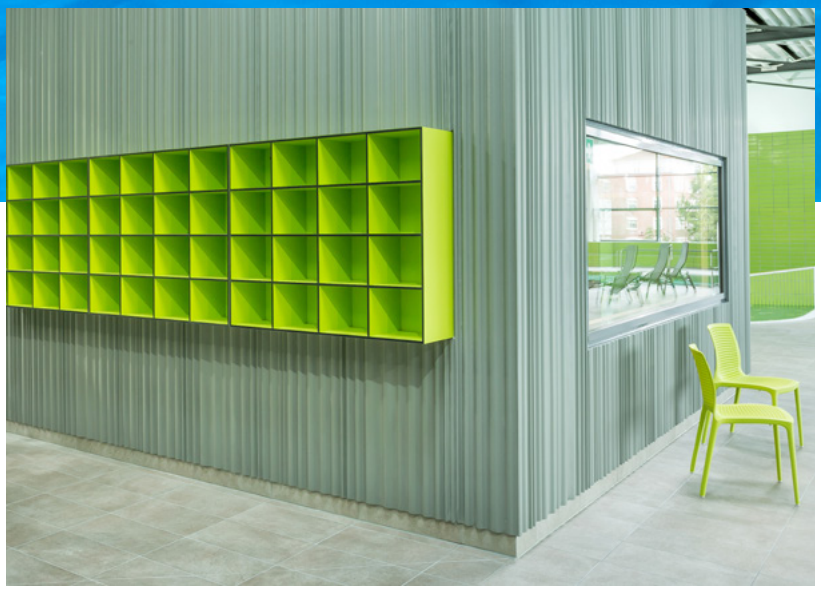
Inspiration

RECKLI formliners lend façades and exposed concrete surfaces in building interiors that special edge, from near-natural and floral to abstract and imaginative. FORMLINER shows some of the most beautiful examples.



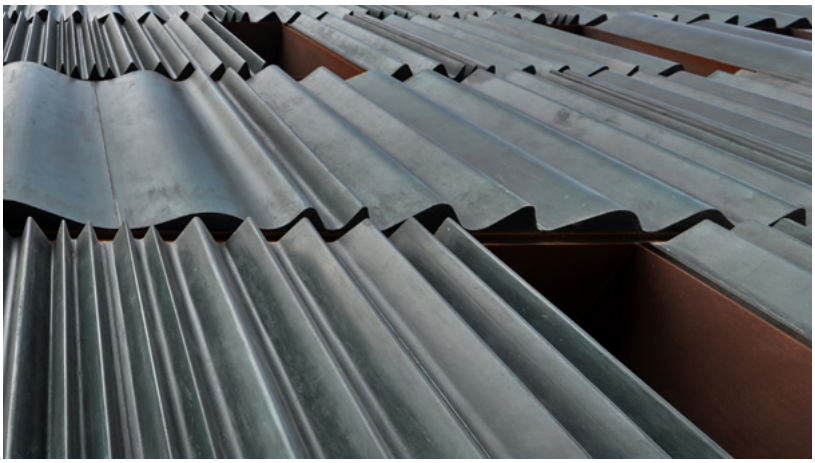
Project: White Collar Factory
Location: London, United Kingdom
Architect: AHMM - Allford Hall Monaghan Morris
Concrete design: Individual
Photos: Rob Parrish

Project: Link structure on Ackermann premises
Location: Gummersbach, Germany
Architect: Pape + Pape Architekten
Concrete design: 2/98 Vltava, acidified
Photos: Dietmar Brensing



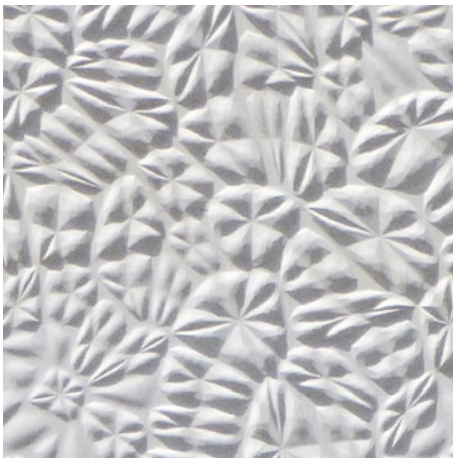
Project: Grosser Dreesch Indoor Swimming Pool
Location: Schwerin, Germany
Architect: Bauconzept
Concrete design: 2/169 Columbia
Photos: Rüdiger Eichhorn, Berlin

Project: Yunchou Building of Tongji University
Location: Shanghai, China
Architect: Archea Associati & Tongji Architectural Design Group
Concrete design: Individual
Photos: RECKLI



Project: Résidence les Gardenias
Location: Saint-Herblain, Frankreich
Architect: Emmanuelle Lecoq – DGL architectes Façade: Individual
Photos: RECKLI

Project: Störtebeker Elbphilharmonie
Location: Hamburg, Germany
Architect: formwaende, Marco Smith
Concrete design: Photographic engraving, Artico
Photos: Arne Vollstedt



Project: Forum Z, Kulturpark Zurich-West
Location: Zurich, Switzerland
Architect: pool Architekten
Concrete design: Individual
Photos: RECKLI

Project: Herbert Lechner AG
Location: Laas, Italy
Architect: Elke Ladurner, Marx/Ladurner
Concrete design: Individual
Photos: Jürgen Eheim

Project: Titanic Hotel Chausseestraße
Location: Berlin, Germany
Architect: Tchoban Voss Architekten
Concrete design: Individual
Photos: Martin Tervoort

The creative talent of company founder Hans-Jürgen Wiemers is the cornerstone on which RECKLI's company history is built. Skillful craftsmanship and entrepreneurship have carried on the success story to this day.

Text: Jasmin Lörchner
Photos: RECKLI archive, Jan Ladwig
Illustration: Carsten Nierobisch

At the start of it all was a lump of dirty concrete. For years, Hans-Jürgen Wiemers had been brooding over how visual defects could be avoided when pouring exposed concrete. Ironically, the inspiration came from a heap of concrete waste.

As a field technician for a construction chemicals manufacturer, Wiemers had been traveling from construction site to construction site since the start of the 1960s, listening to the concerns of the concrete engineers who had their hands full with the increasingly popular exposed concrete. Architects were delighted by the possibility of using concrete no longer just as a practical construction material, but also as a design element. Wiemers used to refer to exposed concrete as a building's »black suit« – but unfortunately the attractive exterior of buildings often ended up with crinkles and other defects.

Smooth exposed concrete surfaces mercilessly expose any error, whether in the craftsmanship, or the physical or chemical structure: pockets of water and air, sanding, bleeding, aggregate lines, rust stains, rebar contours, edge breaks, and color fluctuations. The concrete processors hardly knew where to start when enumerating their problems to Wiemers. He searched feverishly for an option that would make it possible to avoid laborious and costly subsequent repair work on the exposed concrete, by designing the concrete more attractively in the first place. The rigid formwork materials were a part of the problem – but how else could the thick concrete be kept in shape?

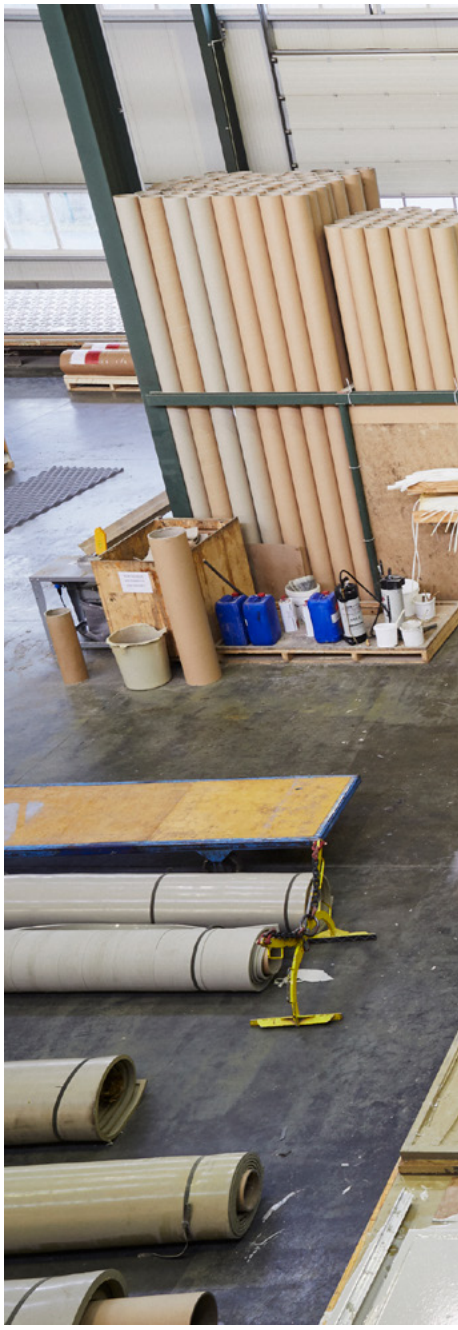
Hundreds of pouring tests

When a truck drove through wet leftover concrete on one of his construction sites, and Wiemers saw how the tire print was preserved in every detail, he was inspired: what was needed for the formwork was a solid but highly flexible material similar to rubber. The idea of the elastic structural formliner was born.

Together with Franz Ernst, who was both a customer and a friend, Wiemers searched for the right material for the elastic formwork insert. The duo tried synthetic resin – but hundreds of pouring tests later, the results were still far from satisfactory. Too hard, too soft, too fragile – the list of setbacks was long. A chemist friend eventually joined them, and helped the two of them to find the right mixture: a two-component polyurethane.

Convinced of the potential of their invention, Wiemers and Ernst founded the company RECKLI K.G. Wiemers und Co. on August 15, 1968, in Recklinghausen, Germany.

The name of the company was derived from the city where they founded the company. »No one will remember Wiemers & Ernst. What we need is a memorable word,« explains Wiemers. RECKLI was registered as a trademark, and protected worldwide.



The founders found themselves facing a new challenge: without any mechanical or industrial role models, they would have to develop all the stages of the production process for the elastic formliner themselves. Starting from determining dimensions, and right through the best possible use of the material properties. It almost seemed like every solution brought new problems with it: a formwork insert with a calculated optimal size of three meters by seven meters (10' x 23'), and a maximum structural depth of 3 centimeters (1.2"), could weigh in at up to 800 kilos (1764 lbs). This in turn had consequences for the production technology and transportation routes. The behavior of the liners under compression, tension and stretch conditions also needed to be precisely determined.

Defining standards, selecting patterns

When the casting of the formliners was transferred from the laboratory scale to a real production environment, almost everything was initially done by hand, because starting capital was tight. The work was performed manually and on a unit-by-unit basis: how much liquid plastic needed to be mixed in advance, how quickly it had to be processed, what mixing equipment was needed, how long the pot life was, when the formliner could be removed from the mold, how best to separate the mold from the formliner, and how the formliners should be cleaned and stored. Hundreds of test series later, the production standards for the RECKLI formliners had been defined.

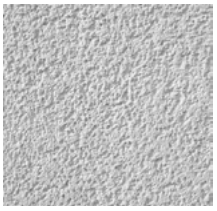
In October 1968, the first formliner was supplied to a pre-cast concrete element factory in Osnabrück, and proved most effective: it was used over 30 times without wear.

The production standards had barely been defined before Wiemers and Ernst needed to select some patterns to apply to the formliners. RECKLI oriented them based on the most widespread type of formwork in the industry, and casted molds of planks in all widths, from different wood grains and patterns, from sandblasted, brushed and scorched wooden surfaces. To this they soon added brick, stone and plaster structures, rib and wave patterns, and natural structures featuring grass, leaves and bark. Franz Ernst let his imagination run wild, and created the first abstract patterns. By the spring of 1969, half a year after the company was founded, RECKLI had a good 25 structures in its catalog. »Altmühl«, »Marne« and »Havel« are some of the oldest designs.

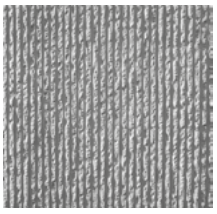
On marketing tour with an information movie

In order to simplify the production process, casts were likewise taken of the molds, which were stored as positive models, and served as templates for the formliners to be produced in future. The molding and subsequent manufacturing of positive models still form the basis of the formliner production process today.

2/22
Altmühl



2/69
Marne



2/30
Havel

Craftsmanship is still indispensable today
for individual and detailed patterns.

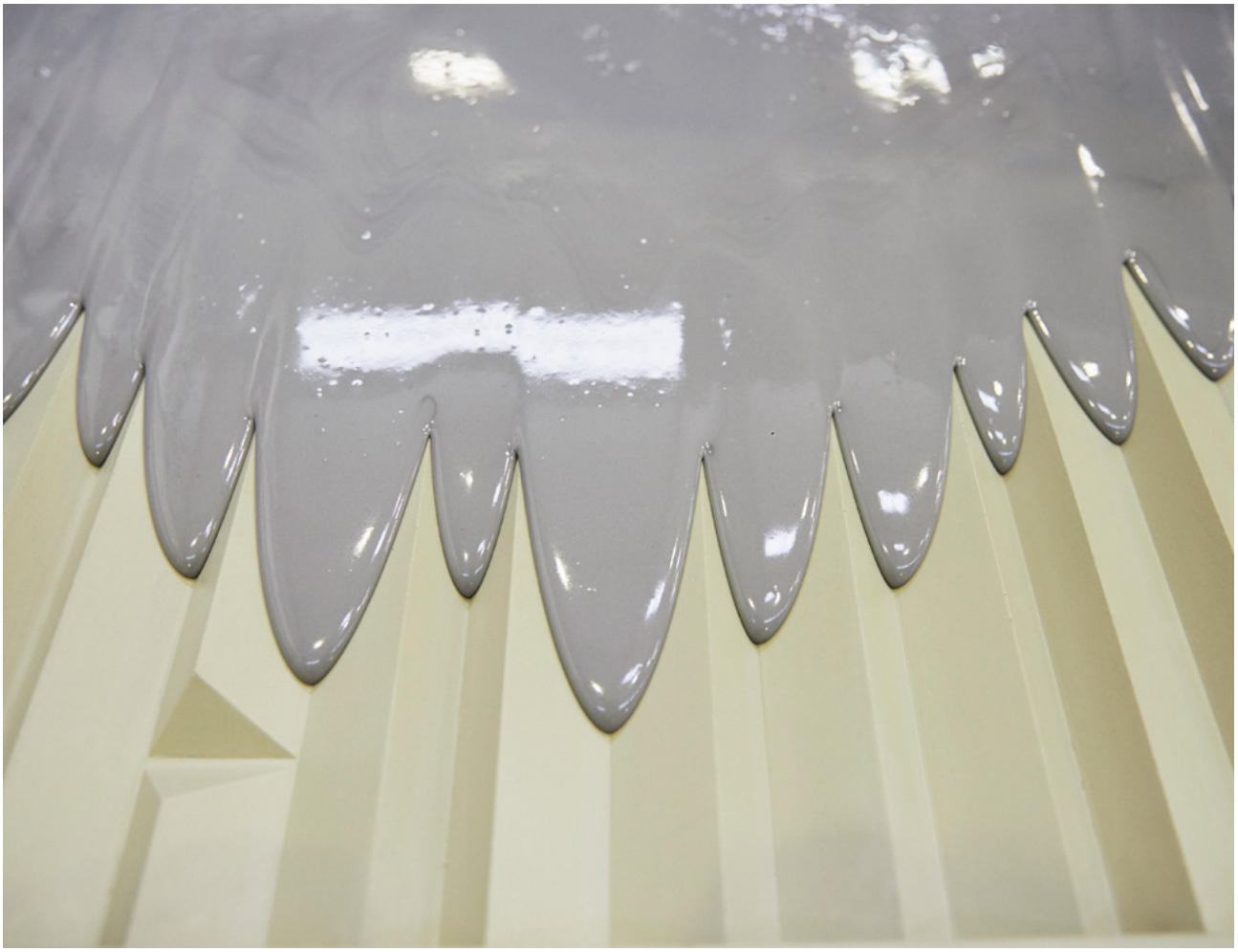
The new design possibilities were well received by architects, but Wiemers and his companions initially had to overcome the reservations of concrete construction engineers. Of all people it was the users, whose lives RECKLI was making easier with the formliners, who were afraid of the complex additional workload. The company founders knew what they needed to do, and started a marketing offensive: without further ado, Wiemers and Co. filmed an information movie on Super 8 and took it on a national tour. They showed architecture firms, planning offices and construction companies the significant advantages of using formliners in exposed concrete applications. The precast plants were given sample formliners, and brochures with photos of the first reference objects. Soon almost all the plants had set up their own show walls, to present to architects and construction principals.

In addition, RECKLI began going to regional and national trade fairs. By 1971, the young company was already promoting itself at the BAU Trade Fair (Trade Fair for Architecture Materials and Systems) in Munich, and met with particularly high levels of interest from Mediterranean architects. More individual and imaginative construction was taking place there, allowing RECKLI to fill a gap in the market. The imagination of the French is the reason RECKLI was able to start manufacturing custom products as soon as the early 1970s: increasingly frequent special requests from the French led to the birth of custom-made formliners. Since then, the templates for individual customer requests have been produced in the company's own mold-making department.

More than just formliners

The young company was swamped with inquiries. In 1971, RECKLI partnerships were set up in France, Italy, the Benelux countries and Switzerland. By 1973, RECKLI had branches all throughout Western Europe. Connections followed in Turkey, the Middle East, Iran and Iraq, India and China. The eastwards expansion of the EU in 2004 also increased business activities there and in Russia. RECKLI additionally set up agents in Australia, Canada and the USA. The foreign partners were ultimately the deciding factors in the decision to no longer just supply the finished formliners, but also to make the two-component plastic available to the customers. This step meant that the field of applications for the RECKLI elastomers was no longer limited to formliners for concrete surfaces, but was also moving into the sectors for replicas, mold-making, the ceramics industry, and even theatrical set construction.

While RECKLI has moved into faraway countries and new fields of production, and alongside custom-made formliners and concrete patterns now also supplies photo-engraving and 3D formliners, one thing has not changed: the virtues of the company founder Hans Jürgen Wiemers remain the leitmotif of the company to this day.



After the positive cast has been sealed with release wax, the liquid elastomer is poured onto it.

Sealed in amber

For the presentation of the new G-class, Mercedes Benz has sealed a model from 1979 in a gigantic block of synthetic resin. This record-breaking project was made possible by a RECKLI product.

Photos: antoni Berlin GmbH & Co. KG
Text: Jasmin Lörchner

Amidst the icy cold of Detroit, even time seemed to be frozen at the North American International Auto Show (NAIAS) in February 2018: a Mercedes G-class from the series built in 1979, sealed in a gigantic block of synthetic resin, welcomed the visitors outside the doors of the hall. The G-class seemed to be preserved right in its element, on a downhill stretch of road – like an insect trapped in amber. But instead of a single drop of amber, it took 44.4 metric tons of liquid synthetic resin to preserve the G-class for eternity. The largest synthetic resin casting in the world captivated visitors to the car show.

The Amber Cube is deliberately designed to mimic the phenomenon of insects preserved in amber. The latest G-class model is bringing the characteristics of the longest-running car series from Mercedes-Benz into the modern world: iconic design, superior handling off-road, driving comfort on the road. »For almost 40 years, our cult off-road vehicle has been developing continuously – without changing its character or its core values. Its DNA is stronger than time or any passing trends. This is expressively communicated by the cube, thus embodying the objectives for the ongoing development of the G-class,« said Dr. Gunnar Güthenke, Head of the Off-Road product division at Mercedes-Benz.

The Berlin-based agency Antoni developed this self-image into the idea for the »stronger than time« campaign with the G-class sealed in a block of synthetic amber.

But how do you preserve a car? The German Association for Materials Research and Testing had the answer: a two-component synthetic resin with minimal shrinkage behavior would encapsulate the car without causing deformations. In order to fully encapsulate the G-class, which is roughly 16 feet long, 6 feet wide and 6 feet high, immense quantities of liquid resin would be needed: RECKLI supplied more than 52 giant metal cans of the material for this gargantuan task – the largest quantity ever ordered for a single project.

»We have to do it,« was the first thought of Andreas Kleinmann from the Hamburg-based advertising film production company Markenfilm. The enthusiasm for this unique project outweighed the skepticism over how it was to be achieved. Kleinmann and his team seized the challenge: under his supervision, the resin cube took shape in a laboratory near Hamburg.

This required the team to first conduct a series of tests with the synthetic resin, in order to closely study its properties. When mixed together, the two components of the resin react with one another, generating warmth.

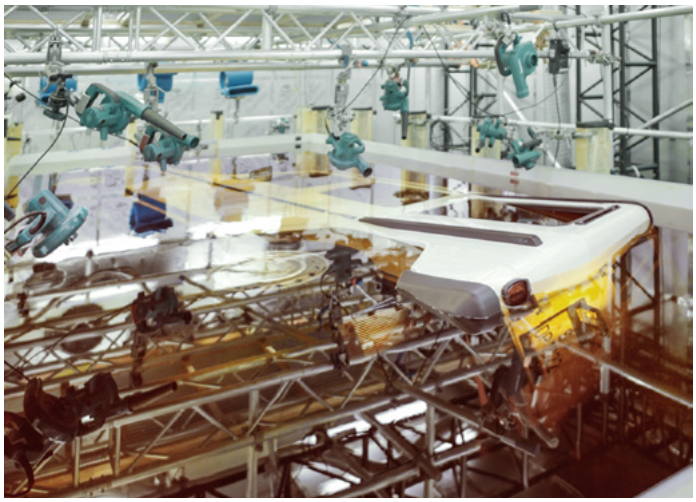
»Each stage of casting was a new thriller,« says Kleinmann. »The bigger the test objects were – seats, dashboard instruments, vehicle doors – the more we had to fight to keep the exothermic reaction under control.«

From the tests, the team determined the casting speed and the thickness of the individual layers: just over an inch per layer.

There was also no getting around the need for a special working environment. »In the end, we had a cleanroom whose atmosphere was completely isolated from the outside world,« says Kleinmann. This required dehumidification, air-conditioning systems, ventilation, and continuous temperature monitoring of the entire cast mass, in every corner of the vehicle. The team of 39 workers only entered the working environment with protective suits and masks, in order to avoid bringing in dust particles, and to protect them from the resin vapors.

The G-class was also not allowed to contain any dirt before the casting process. It was dismantled into virtually all of its component parts, and comprehensively cleaned, in order to avoid any uncontrolled reactions with the resin. After the engine had been ice-blasted, the vehicle was reassembled and positioned on its side, ready to be encapsulated. The resin cube took shape in 90 casting layers. Every 24 hours, the cube grew by the addition of another inch-thick layer. These layers weighed 550 kilograms (1210 lbs) each, and had to be poured within fifteen minutes, and without producing any bubbles. One of the team's main tasks was to remove bubbles that formed on seat cushions, on the underbody, on the carpet, or for example on the inside of the doors. At the same time, the technicians had to ensure absolutely consistent climate control. »After the actual reaction had taken place, the material always had to be cooled back to its optimal initial temperature. Then the next layer could be prepared,« explains Kleinmann. With each layer, the formwork also grew taller, board-by-board. The cube had been produced slightly larger than needed, and after the removal of the formwork, it was cut to its final dimensions using a diamond rope saw, and finally polished.

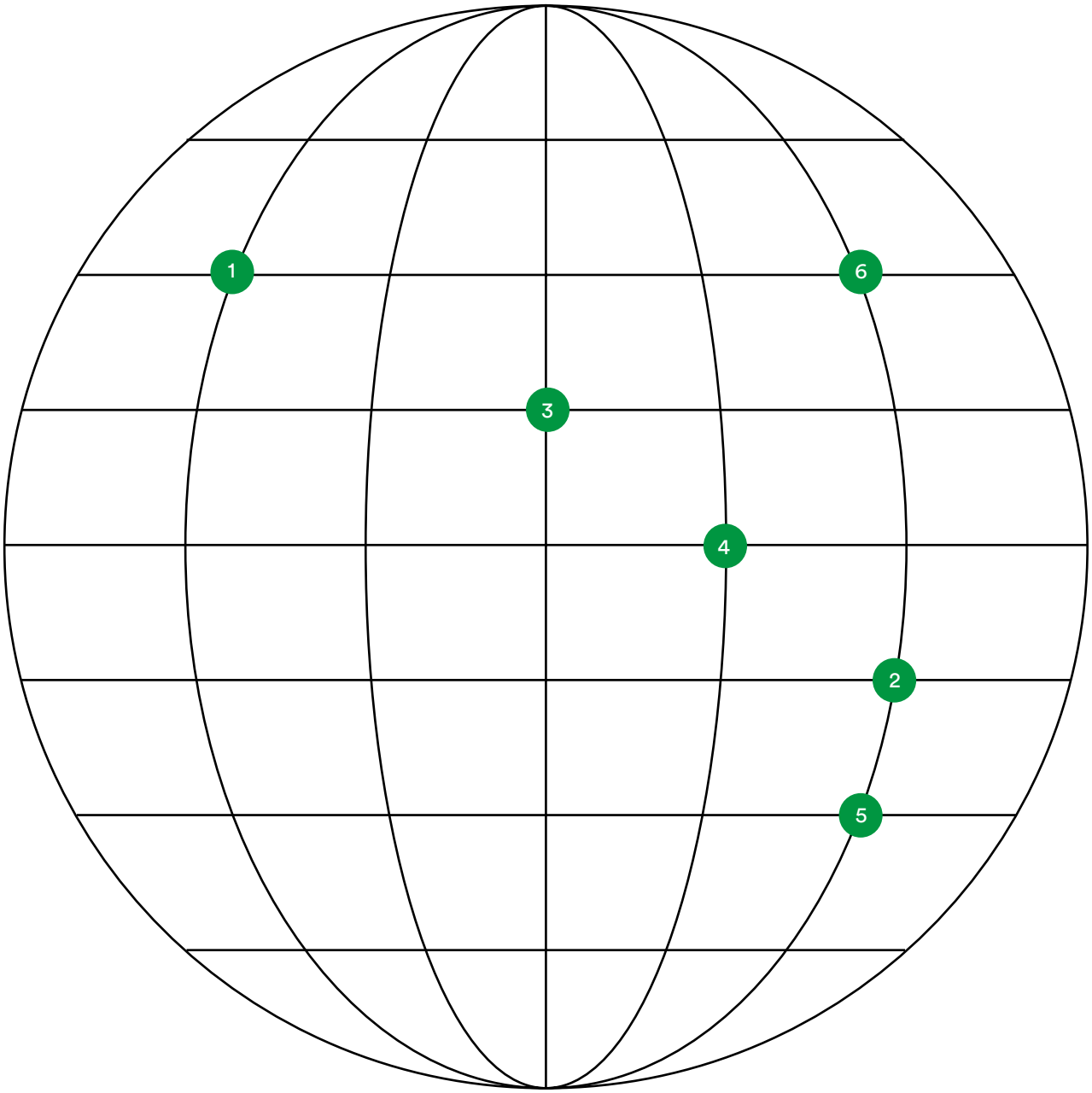
After a total of 8892 man-hours, it was complete: the G-class was encased in a resin cube measuring roughly 10 feet by 8 feet by 18 feet. Then the task was to maneuver the cube out of the lab and send it on a world trip: from its starting point in Hamburg, the 52-ton Amber Cube was shipped via Southampton to the American port of Baltimore, and transported from there to Detroit. But Detroit is not the end of the line for the cube: it will continue on its journey, and finally find a permanent home – where exactly is still a secret.



International

minds

Around the world, concrete has long since established itself not only as a construction material, but also as a design factor. But one façade is not like another – FORMLINER has spoken with RECKLI partners around the world to find out what makes their markets unique.



USA

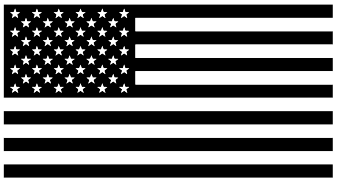
The American mantras of productivity and growth have long since done their work on the market: designs are heavily standardized, and the use of precast parts with in-situ concrete is widespread. Ray Clark is the General Manager of the RECKLI subsidiary US Formliner, and expects strong growth of the market over the coming ten years.

WHAT ARE THE CHALLENGES OF WORKING WITH ARCHITECTURAL CONCRETE?

In North America, the main issue is achieving more widespread knowledge about the design possibilities using architectural concrete. We often get into conversations with architects who are surprised by the designs that can be implemented using formliners.

General Manager
US Formliner

Ray Clark



US Trivia
America's architectural genius Frank Lloyd Wright designed the Hotel Imperial in Tokyo in 1915. The structure of the building inspired his son, John Lloyd Wright, to design a toy: the famous Lincoln Log building blocks.

WHAT CHARACTERIZES A TYPICAL FAÇADE?

Overall, I would say that wood, masonry and steel continue to dominate the market. Concrete is securing a place as a resilient and reliable construction material. Over recent years, we have already seen more creative façade designs, and some of the most remarkable designs were created using architectural concrete, because the material is so flexible. Exciting developments are under way, thanks to the exciting things that become possible when concrete is used as a design material.

WHAT TYPES OF STRUCTURES ARE RECKLI FORMLINERS PREDOMINANTLY USED FOR?

In the five years that US Formliner has been active on the market here, we have worked a lot with precast plants. The concrete elements are mostly installed in office and business buildings. Our formliners are also commonly used in the design of noise barriers and retaining walls. Among our standard patterns, the bestseller is Fraser. Because architects and planners are increasingly requesting something special for the project, we are producing more custom formliners all the time, or modifying one of our standard patterns for the individual purpose.

DO YOU HAVE A FAVORITE PROJECT?

In Reno, Nevada, we worked on a hioghway project right by the new Tesla factory. For that we produced custom formliners showing various scenes: people fishing, kite flying, and cycling. It was a very detailed project that took more than two months. We worked closely with RECKLI in Germany, and had the positive casts manufactured in the woodshop in Herne, before casting the formliners at our plant in Athens, Georgia.

Singapore

Sales Director
TR FORMLINERS PTE LTD

Darryl Lee

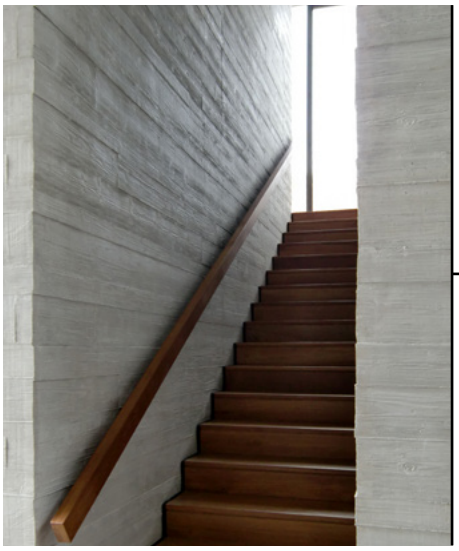
Singapore Trivia
In the city state of Singapore, skyscrapers are subject to a height limit of 918 feet. The one exception is the Tanjong Pagar Center, at 951 feet. Singapore's first high-rise was the Cathay Building, which was completed in 1939: it measured 230 feet.

The city state of Singapore has one of the highest costs of living in the world, and real estate lots limited in size.
So it comes as no surprise that the market in Singapore is highly competitive. Top quality, presentability and sustainability are big issues. RECKLI's partner Darryl Lee is following big developments towards innovative and more efficient construction methods, which are supported by the government.

WHAT CHARACTERIZES A TYPICAL FAÇADE?

Modern and contemporary designs, which are often implemented with concrete elements, glass and aluminum. Façades were traditionally designed more functional rather than aesthetic. The trend is now slowly changing, and we are seeing architects discovering and exploiting new design possibilities with each project.

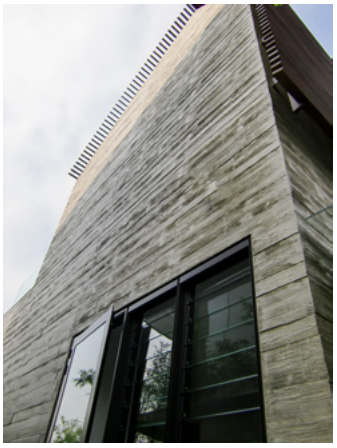
WHAT TYPES OF STRUCTURES ARE RECKLI FORMLINERS PREDOMINANTLY USED FOR?

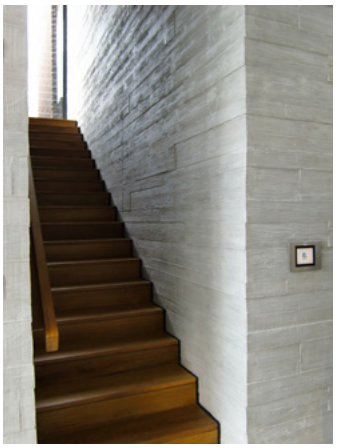


In Singapore these are residential buildings in particular, but also business and industrial buildings. Public institutions and infrastructure account for a small proportion. For freestanding houses and bungalows, our 2/163 Fraser concrete pattern is very popular. Architects also like to use our standard patterns for high-rises.

DO YOU HAVE A FAVORITE PROJECT?

The private house at 19 Sunset Place, designed by ipli Architects in Singapore. The owner wanted to add an extension to the house, but the existing building was to be retained. The architect designed a concrete shell that extends over the entire existing building. This shell was designed using our formliners, including in parts of the interior.





WHAT ARE THE CHALLENGES OF WORKING WITH ARCHITECTURAL CONCRETE?

The market is very cost-oriented, but simultaneously has high requirements in terms of quality. When working with subcontractors and precast plants, the budget pressure is inescapable.

France

The French market is RECKLI's biggest single market for formliners. Architectural concrete has secured a permanent place in construction engineering.
The demand on the housing market is spurring growth in particular, observes Eric Mortier, Head of Sales at Soceco RECKLI.

Head of Sales
Soceco RECKLI (right)

Eric Mortier

France Trivia
For 33 years, the French postman Ferdinand Cheval collected curiously shaped pieces of sandstone on his daily route. In his free time, he used them to build a palace: Le Palais Idéal can be visited to this day in the French village of Hauterives.

WHAT CHARACTERIZES A TYPICAL FAÇADE?

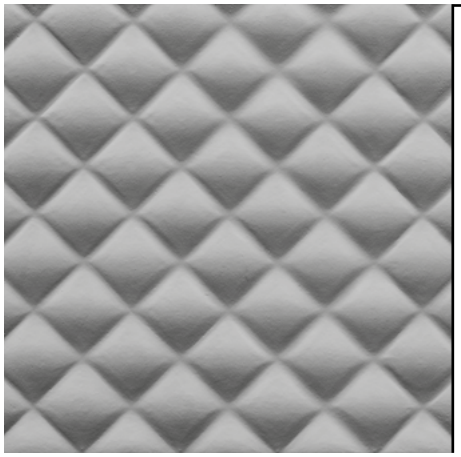
It is difficult to define what is typical. Architects in France have always endeavored to leave their signature on buildings by giving their exterior an individual touch. Traditionally you can see a lot of concrete façades.

WHAT TYPES OF STRUCTURES ARE RECKLI FORMLINERS PREDOMINANTLY USED FOR?

We are particularly active on the housing market, closely followed by public buildings, office buildings, shopping centers and infrastructure projects. There are two noticeable trends: architects are regularly choosing plant motifs or lively patterns such as Somme, Gironde or Columbia. Over recent years, the wood pattern Inn has been especially popular.

DO YOU HAVE A FAVORITE PROJECT?

Together with the architects from ECDM, we developed the formliner pattern 2/210 Venezia. This is a very attractive, geometrical abstract pattern with outwardly bulging squares that are turned onto their tips and symmetrically arranged.



WHAT ARE THE CHALLENGES OF WORKING WITH ARCHITECTURAL CONCRETE?

We are continuously attempting to break through the limits of creativity for architects and offer them new possibilities. To achieve this, we have to ensure that we adapt our formliner range to architectural trends.

United Arab Emirates

The Middle East has been one of our most active markets for years. Many designs are so original that numerous factories are producing their own forms using RECKLI elastomers. Javed Raja is the Managing Director at RECKLI Middle East. He sees the biggest developments in infrastructure projects and in residential and office buildings in the United Arab Emirates and Qatar. For years, Saudi Arabia has been indulging in the most expensive projects.

WHAT CHARACTERIZES A TYPICAL FAÇADE?

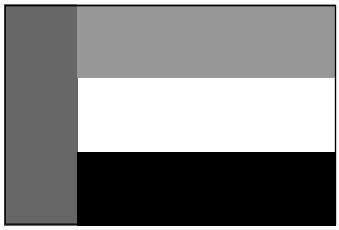
Almost every building has an individual façade. Decorative glass fiber-reinforced concrete (GFRC) and pre-cast concrete elements definitely set the tone. Glass and aluminum façades are also widespread.

WHAT TYPES OF STRUCTURES ARE RECKLI FORMLINERS PREDOMINANTLY USED FOR?

GFRC is very popular here, and is suitable for use with RECKLI formliners. As a result, a lot of RECKLI designs can be found as decorative elements on residential buildings. Not including individual designs, the most popular patterns have oriental motifs. In addition, architects for infrastructure projects also rely on our formliners.

Managing Director
RECKLI Middle East

Javed Raja



Middle East Trivia
Located three miles from Mecca, the tent city of Mina has 100,000 air-conditioned tents. During the annual Hajj pilgrimage, up to three million pilgrims find accommodation here. The rest of the year the tents stand empty.

DO YOU HAVE A FAVORITE PROJECT?

My personal favorite is Masdar City. Our formliners were used there for a drape structure with an oriental-style floral motif.

WHAT ARE THE CHALLENGES OF WORKING WITH ARCHITECTURAL CONCRETE?

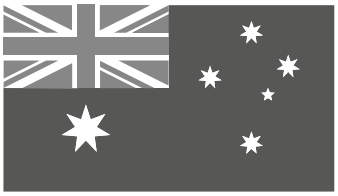
Despite all its love for detail, the market is increasingly price-oriented. We convince architects that the quality of our products and service are worth the prices we charge.

Australia

They like it unique down under: custom designs set the tone in the construction industry, because Australian architects consider them a calling card. John Joveski from RECKLI Australia very often finds himself in the concrete-loving eastern states of New South Wales and Victoria, and predicts healthy demand over the next two years.

Managing Director
RECKLI Australia

John Joveski



Australia Trivia
Three of the four jury members rejected the design of Danish architect Jørn Utzon for the Sydney Opera House. Jury member number four, Eero Saarinen, recognized its significance. Utzon had not yet visited the construction site, and had developed his design after studying nautical charts of the harbor.

WHAT CHARACTERIZES A TYPICAL FAÇADE?

In this country, glass façades are particularly popular. Structures with concrete façades come in a close second; and currently, around 20 percent are being designed with patterns.

DO YOU HAVE A FAVORITE PROJECT?

The Twisted Brick Design on Stanley Street in Collingwood, Victoria. We developed different formliners for this project. One of them creates the effect that the bricks in the masonry are turning together like a candy cane.

WHAT TYPES OF STRUCTURES ARE RECKLI FORMLINERS PREDOMINANTLY USED FOR?

We are supplying formliners for amazing projects in the housing and business sectors. We are also getting involved more often in infrastructure. The architects mostly pick designs with clear lines and delicate profiles: those are often our ribbed patterns. Or they have custom ideas for us to manufacture.

WHAT ARE THE CHALLENGES OF WORKING WITH ARCHITECTURAL CONCRETE?

For us, the current challenge is to keep up with the high demand for custom designs.

Russia

The Russian market is characterized by high levels of construction activity, where precast parts are very commonly used. Many large construction companies work with their own architects, who have a great affinity for concrete. Alexander Turpakov, RECKLI's partner in Russia, predicts a great deal of development potential for work with architectural concrete.

WHAT CHARACTERIZES A TYPICAL FAÇADE?

The masonry look is widespread, particularly in housing construction. If the architects have a higher budget at their disposal, they use custom façades to get away from the apartment block look. In the business segment, too, unconventional façade designs serve to make buildings distinctive.

WHAT TYPES OF STRUCTURES ARE RECKLI FORMLINERS PREDOMINANTLY USED FOR?

We are most active in the housing sector. Our formliners are used for creating the masonry look: together with the appropriate coloration, which we also supply, the concrete looks like natural silicate or brick. In infrastructure projects, we frequently design bridges, tunnels, overpasses and retaining walls.

Technical Sales
Manager for Russia

Alexander Turpakov

Russia Trivia
Legend says that Ivan the Terrible had the architects of Saint Basil's Cathedral in Moscow blinded, so that they could never again design such a beautiful building. But it is probably just a legend: at least one of the two architects, Postnik Yakovlev, was later involved in the construction of the Kremlin.

DO YOU HAVE A FAVORITE PROJECT?

One of the most beautiful projects is the Hidalgo complex in Kommunarka, not far from Moscow. Very attractive and individual façades are combined there with different-colored balconies, structured exposed concrete walls in the interiors, and a landscaping concept designed for nature and pedestrians rather than for cars. It is a very unusual project for Russia, and we were very happy to be involved in working on it.

WHAT ARE THE CHALLENGES OF WORKING WITH ARCHITECTURAL CONCRETE?

The Hidalgo project shows that we are at the start of a significant development. Just a few years ago, the buyers of residential complexes, particularly for social housing, were focused above all on the lowest price per square meter. Now the expectation of residential quality has experienced a major change. Higher expectations and more details naturally bring with them a different price level. Principals and investors still have to get used to this new situation.

Part 3/4 difficult – and that is the exact reason why we succeeded.

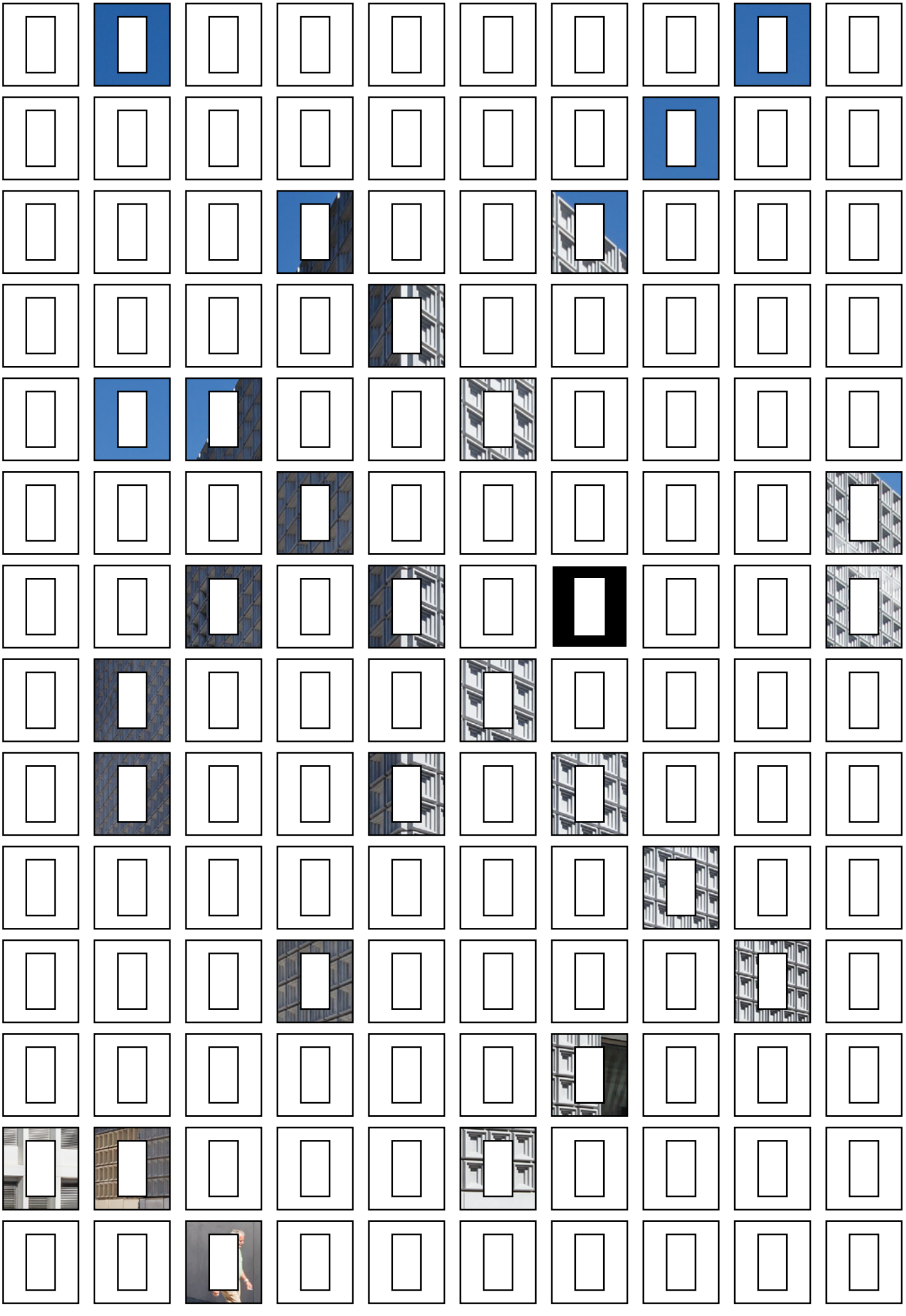
That was the first time that we used elastic formliners for concrete. It was an amazing experience, planning the patterns and creating abstract compositions on the walls.

We regularly talked to investors, contractors and technical consultants. We were very curious, but were also concerned about the results. When the moment finally came and the formliners were removed, we saw the finished walls with their pattern, which was clean and clearly visible in the concrete. The distinct ...

→ p. 106

Part 4/4

but subtle shadowing was exactly like we had imagined. From then on, we designed many different kinds of buildings using formliners: brick façades in different colors and sizes, stone façades, buildings with copper and wood. I do not want to be so presumptuous as to say we built beautiful buildings – it is not up to us to judge that, and I think it would demonstrate a major lack of self-awareness to claim we had. But we always dream of creating beauty.



Case study

Public structures can be tricky for architects: the design has to respect the urban space, meet the needs of the public, and create a suitable backdrop. The challenge increases when the design is for an extension, and the tone is already defined by an existing building.

p. 110

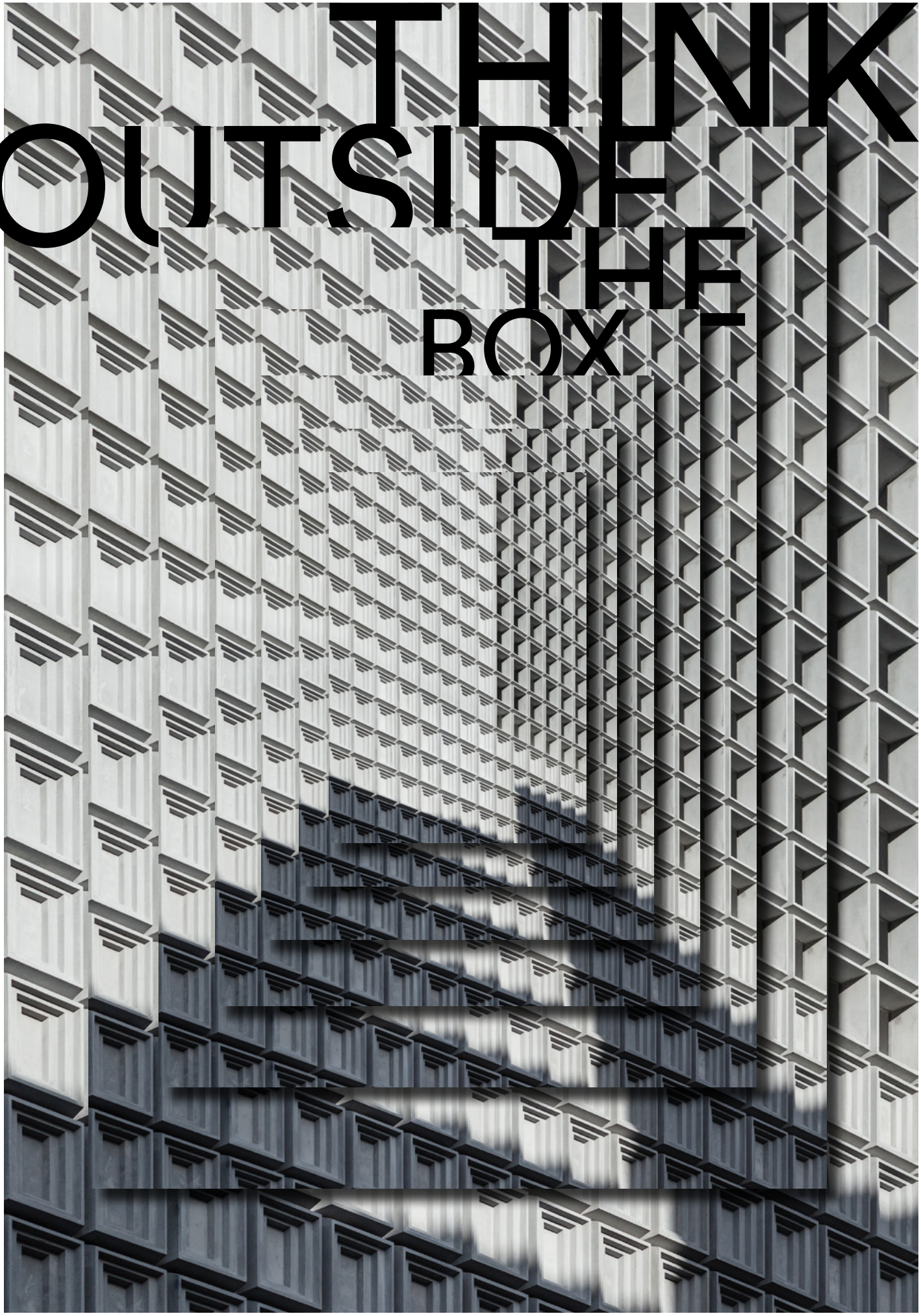
Such projects demonstrate the ability of the architect to respect the existing structure, to draw inspiration from it, and to leave their own mark through a new interpretation. The extension of the Bündner Museum in Chur, Switzerland, is an impressive example of this.

p. 120

Located in the Canton of Graubünden, the ornament became the centerpiece of inspiration. The architects Fabrizio Barozzi and Alberto Veiga used it to create an individual, captivatingly beautiful façade. It proves that reduction to a simple form can take on a complex significance.

This was possible because Barozzi and Veiga engaged with the surroundings without giving in to them. The process of developing new designs, and the influence of teamwork and their different nationalities on their creative process, is explained in this interview with Alberto Veiga.

p. 126


THINK
OUTSIDE
THE
BOX

The extension for the art museum in Chur would represent a glaring contrast to the main building,were it not for the numerous subtle parallels created by the architects.

Text: Jasmin Lörchner
Photos: Marcela Veronica Grassi

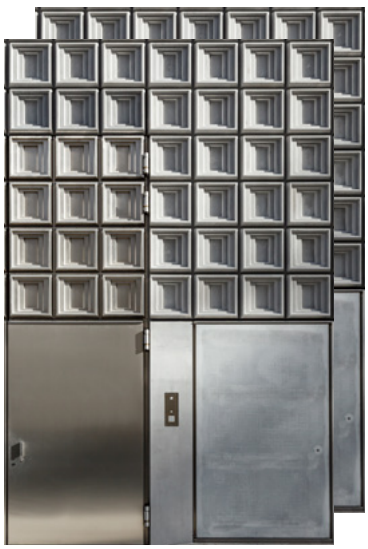
The gray cube rises impressively over the square on Bahnhofstraße in Chur. Its sheer volume and the clear lines are imposing, but a number of simple touches give it lightness. It keeps its distance from the surrounding buildings: an office building on the right; on the left a charming palladio with oriental details. The cube is an extension of the neighboring Villa Planta, which houses a museum. A gray monolith next to an extravagant villa – how can that work?

For the extension of the Bündner Kunstmuseum in Chur, Fabrizio Barozzi and Alberto Veiga delivered a design that draws attention to itself without continuously stealing the limelight. Its structure stands proudly beside the no less impressive main building, without competing with it. »We wanted an extension with its own identity and character,« explains Alberto Veiga the approach taken by the architects. Subtle structural details create a connection with the main building, giving it the due respect.

»We wanted an extension with its own identity and character«

The Villa Planta is the headquarters of the museum. The building was originally the home of a merchant. The villa was built between 1874 and 1876, following the plans of the architect Johannes Ludwig. Ludwig who was self-taught, progressing from a stonemason and carpenter to an architect, designed the structure for the cotton industrialist Jacques Ambrosius von Planta. The merchant had made his fortune doing business in Egypt, and enjoyed foreign architectural styles. He asked Ludwig for a house based on Venetian palladios and with oriental details. With its wealth of façade decorations, Sphinx-like sculptures at the main steps, an imposing entrance portal and opulent interior decor, complete with a domed atrium, the Villa Planta is highly impressive.


ZONE
30



Project: Extension of the Bündner Museum
Location: Chur, Switzerland
Architect: Barozzi/Veiga

The idea of ornamentation is everywhere

In the more than 140 years since it was built, the building has been repurposed a number of times and carefully restored, most recently with conversion work to ensure the fire safety of the museum. Over the years, an extension was added for the artworks, which was connected to the villa by means of a glass walkway. In 2011, an international competition was announced, in order to replace the existing extension with a new and more modern one. The architecture firm Barozzi Veiga won the contract. »Their project impressed us through its precise and clear positioning in the architectural environment,« explained the museum operators.

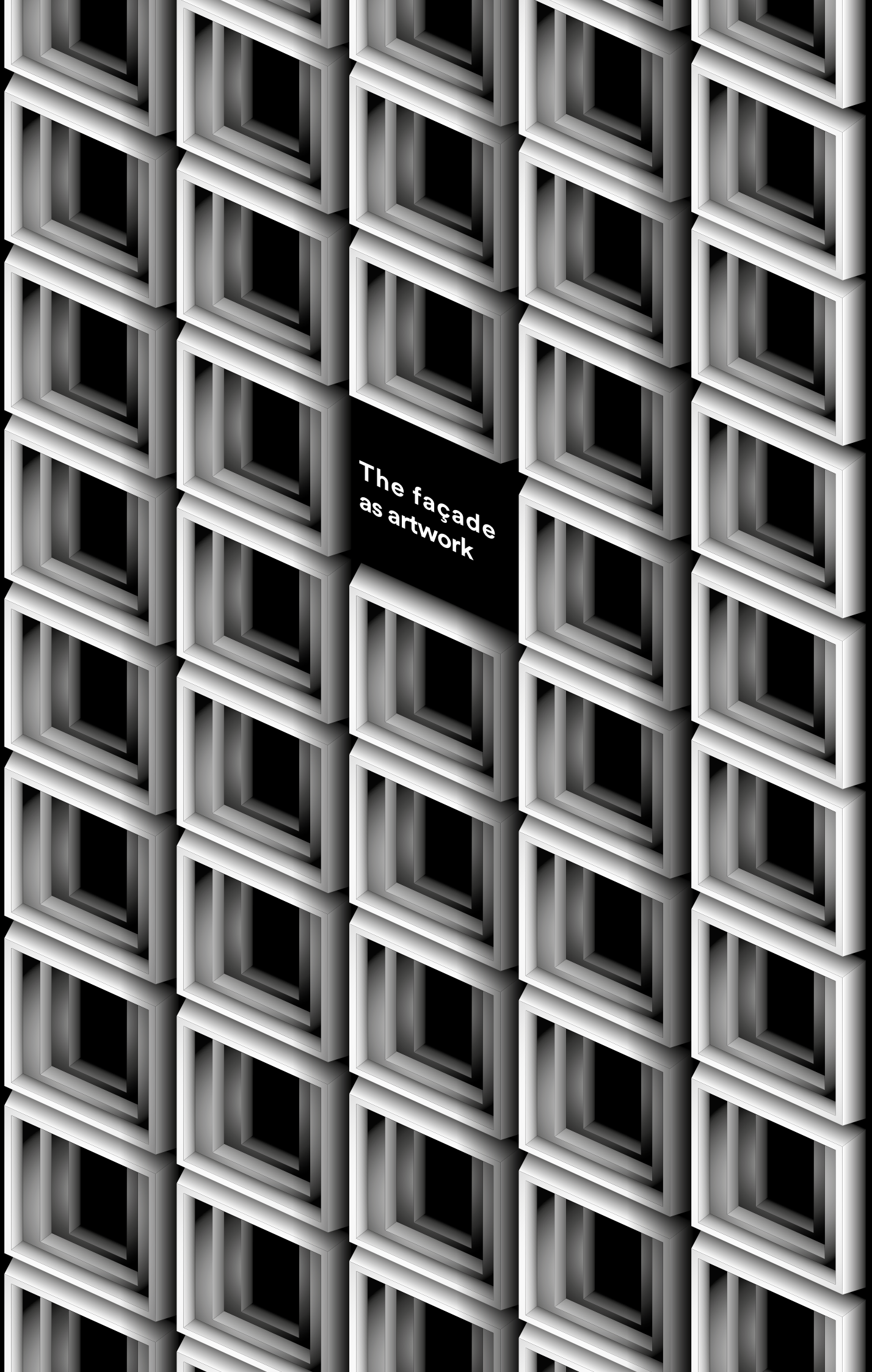
The two architects achieved this by carefully studying the existing building. »It is a very interesting copy of a palladios, with an interior full of ornamentation. The idea of ornamentation was everywhere in Chur,« says Veiga. For the competition, he and Barozzi wanted to submit a design that went beyond simply fulfilling the requirements for the building and the location where it would be built. They could not get away from the idea of ornamentation. »The idea of ornamentation meant giving the design that decisive detail.«

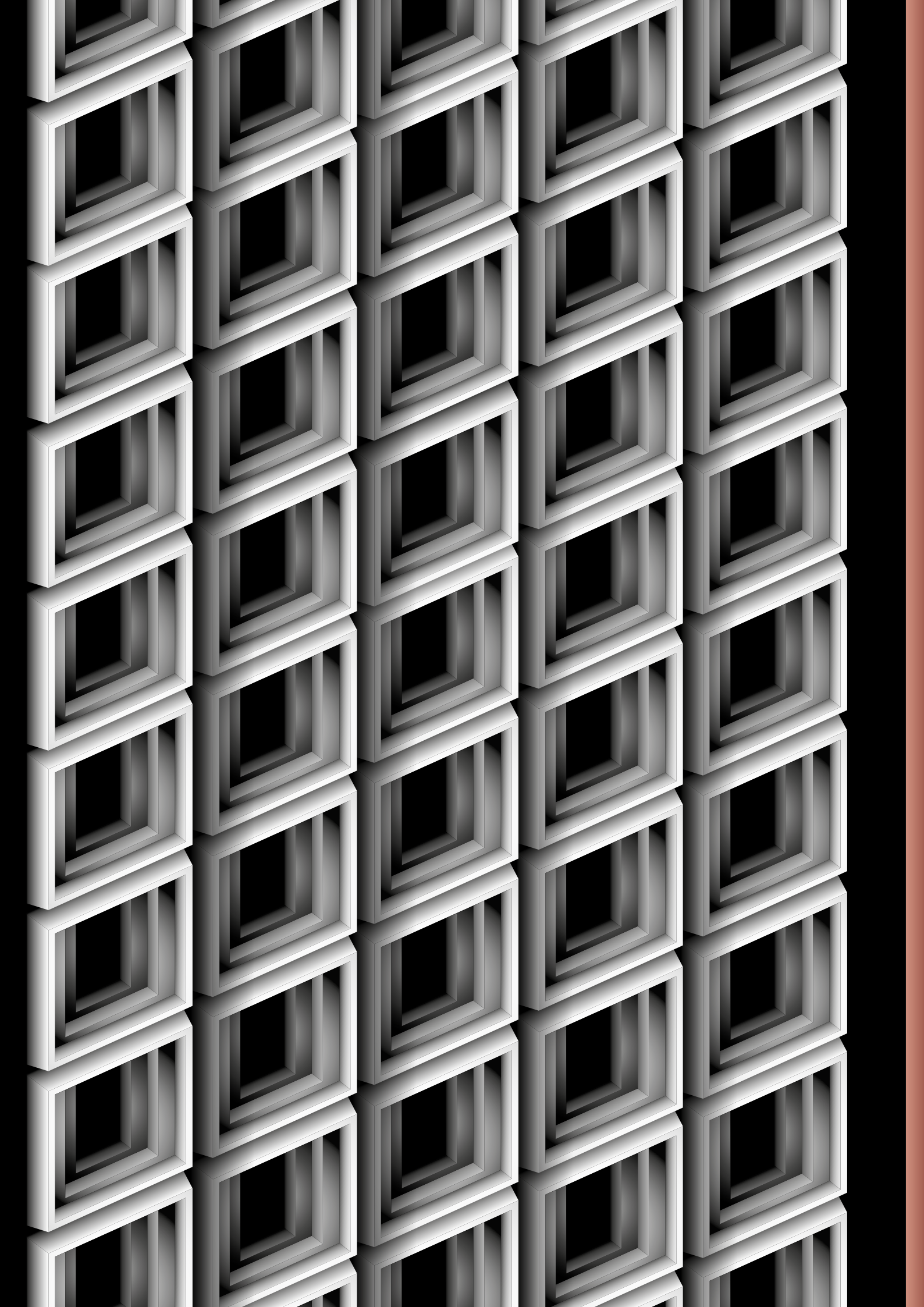
This resulted in the relief-like façade, with its repeated, simplified ornamentation. The square element picks up the form of the structure as a whole. Utilized as a relief, it gives it depth and lightness. The façade is what makes the structure so unique. »Without the ornamentation, the volume of the building would have quite a different effect,« says the architect. It creates a connection between the new structure and the villa.

The façade is what makes the structure so unique. »Without the ornamentation, the volume of the building would have quite a different effect«

On the other hand, the architect duo created the interiors in clear contrast to the main building: overall the interior is very restrained, and signs were only mounted where they are absolutely necessary. The stairwell has been retained in gray exposed concrete, while the exhibition rooms are white. The rooms are arranged around the stairwell in such a way that the visitor is guided gradually from the new structure to the main building. The interior goes without pomp and ornamentation, in order to allow the exhibition pieces to have their effect, and to give the visitor space to reflect. It is only the small, steep stairway to the new exhibition rooms in the villa that welcomes the visitor with colorful and luxuriant contrasts. The visitor then emerges from the restrained, modern rooms into the richly detailed, historical world of the main building.

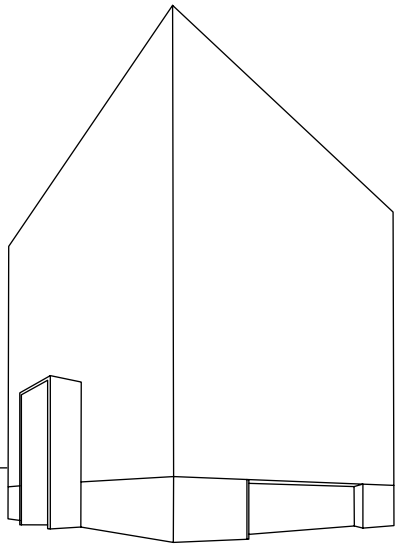
With his cleverly selected quotations and its own proud attitude, the building by Barozzi Veiga is more than just an extension of the Villa Planta: it is an enhancement.


The façade
as artwork



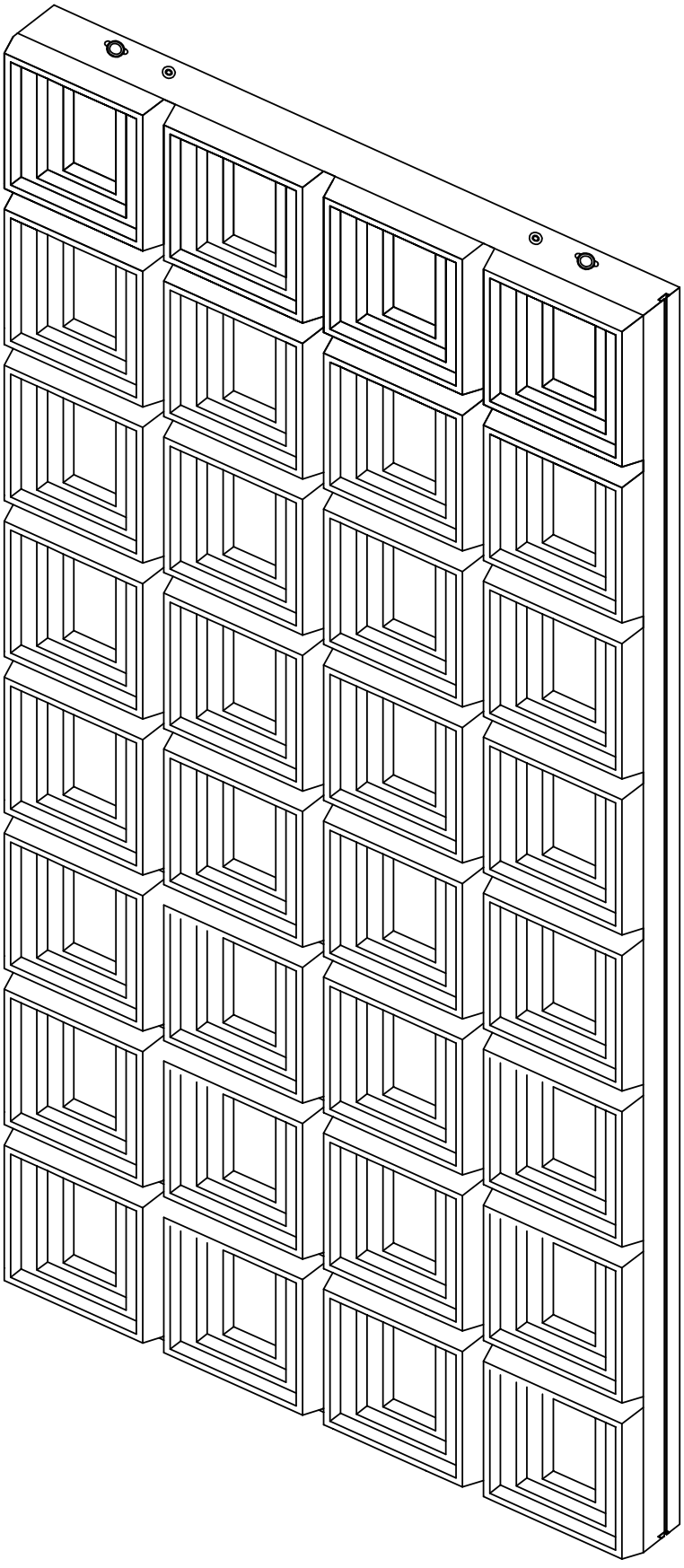
A simple geometric form dominates the façade of the new building in Chur. However, this supposedly simply detail was more complex to create and implement than you might think.

Countless caisson elements clad the exterior of the extension to the Villa Planta in Chur: a repeated quadratic element that can only really be experienced on the second glance. From a distance, the Villa Planta impresses the onlooker with its ornate and varied details. The new building by Alberto Veiga and Fabrizio Barozzi radiates confidence with these squares as the dominant detail, which the building reflects on a number of levels: from the shape of the structure as a whole to the geometry of the interior, to the details on the façade.



While the form of the new building was quickly defined – a restrained, simple structure with clear lines – the idea for the design of the façade came relatively late on, says Veiga. »We were still looking for something to enhance the design, something contemporary and modern.«

While searching for the connecting element, the architectural duo again studied the Villa Planta – and identified ornamentation as a detail that creates a relationship to the existing building, and which simultaneously gives them enough freedom for their own interpretation. »Without the ornamentation, the volume of the building would have quite a different effect. It is a characteristic, very concise element,« says Veiga. Not a secondary detail, but an element of special significance. He feels that the combination of the robustness of the structure itself and the delicate details is an expression of the environment: »Graubünden is a strong location, full of small details and aspects.« The intentions of the architects regarding their language of forms, which had to radiate strength and lightness simultaneously, the choice of materials was easy. »Concrete is an incredible material, because you can play with it. Nowadays you can do anything you want with it, it's really fascinating.«

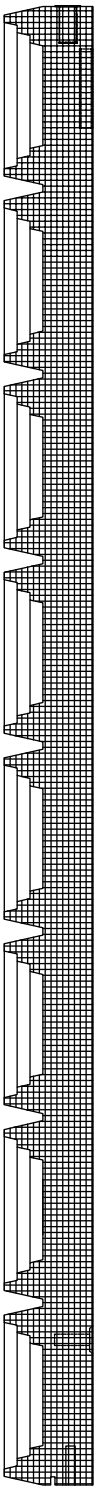


Text: Jasmin Lörchner
Illustration: Carsten Nierobisch
Technical drawings: Barozzi Veiga

The façade detail gives the impression of being simultaneously both simple and complex. This impression is created not least by the depth of the element: on closer inspection, you can see that it is composed of not one square, but of three, deeply offset from one another. A complex design, the implementation of which took 36 months from the idea to the finished façade.

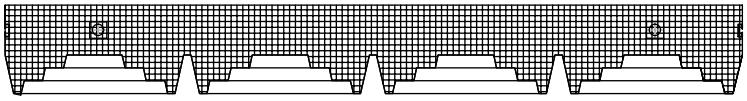
Barozzi Veiga tested the façade plan together with the Zurich-based architecture firm Feroplan Engineering and the Sulser concrete factory, and trialed five different designs.

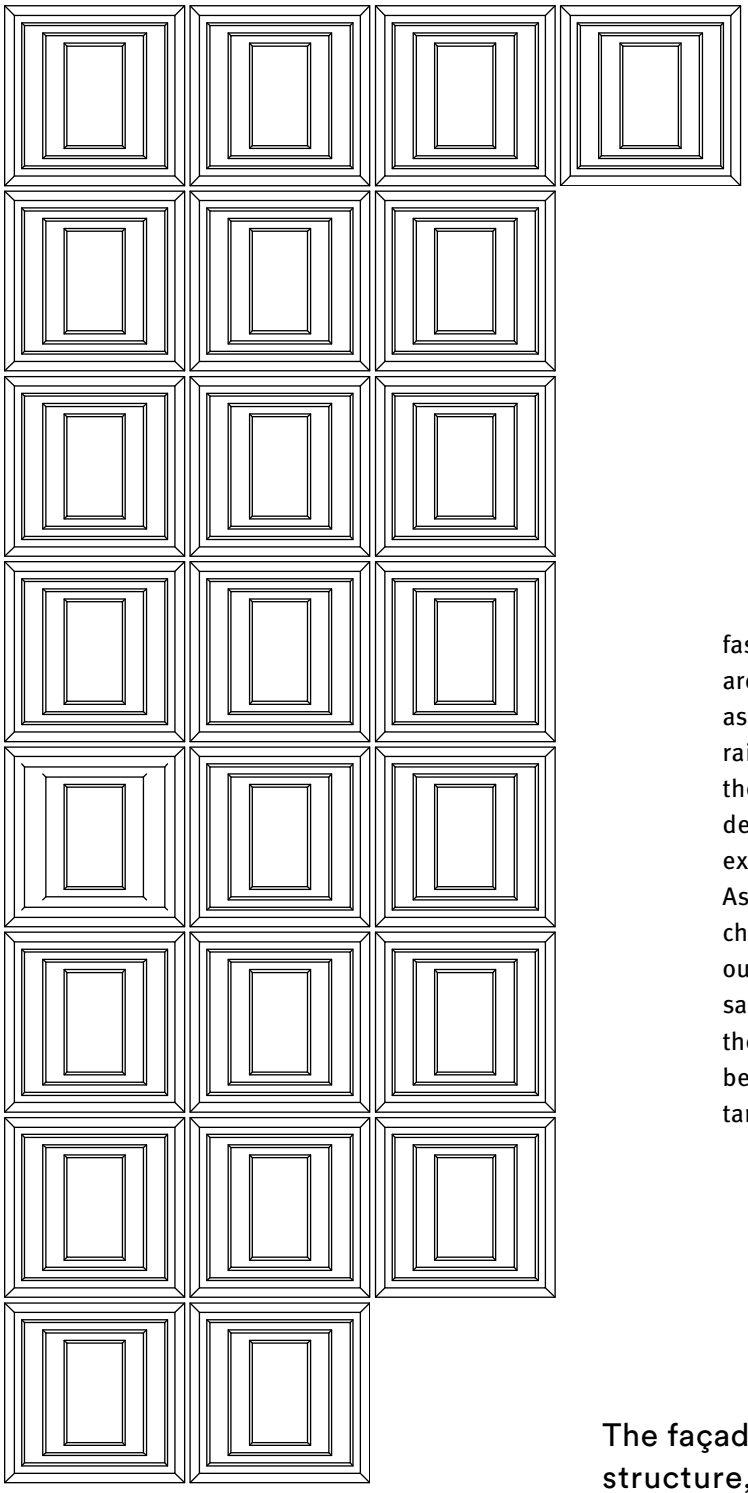
RECKLI representative Elmar Pallasch saw the plans for the first time at the Swissbau construction trade show in January 2014, when an engineer from Feroplan asked him whether RECKLI could manufacture the necessary formliners. Pallasch replied in the affirmative. Because Sulser and RECKLI had already conducted a number of projects together, the companies worked together hand-in-hand. RECKLI would supply the raw material for the formliners, Sulser would cast the molds itself in Switzerland. »The staff at the concrete factory are very experienced in casting PUR custom molds, and in manufacturing the corresponding concrete elements,« says Pallasch.



After the first models were made from plaster and wood, Sulser built the original mold for the façade details in its own woodshop. The actual casts were then made from a concrete element. For this purpose, the Swiss company ordered a series of deliveries starting in May 2016, and totaling 200 containers of RECKLI's liquid plastic PUR elastomer A55.

In order to form the three squares in the concrete, the formliners manufactured needed to be over three inches thick. The technicians decided to reinforce the formliners by casting in a wooden element, so that the offsetting of the elements could be absolutely precise. The specialists also paid particular attention to ensuring the dimensional accuracy of the individual shapes, so that later they would be reflected in the concrete with uniform spacing and without displacement. After this highly detailed production process, the concrete elements were delivered and installed at the construction site in the summer of 2016.





The finished façade lends the building a fascinating multifaceted appearance. For the two architects, the fact that light changes the building as the sun moves throughout the day, and that the rain marks the façade differently on each side of the building, are further enhancements of their design. Light and water allow the observer to experience the building in many different ways. As the years pass, each side of the structure will change in a different way. »Time changes all of our lives, and it changes a building in exactly the same way,« says Veiga. Barozzi Veiga believe that the aging process is not an inevitable process that begins after construction, but is rather an important element of their design.

The façade gives the building depth and structure, lending elegance to the colossal construction. The architects have achieved their aim: »We wanted to show concrete from a different perspective.«

»We are not kindred spirits«

Bündner Museum – People

Alberto Veiga and Fabrizio Barozzi have been leaving their unmistakeable tracks in the cities of Europe since 2004. FORMLINER spoke with Veiga about the architectural vision of the duo and the principles on which their collaboration is based.

Interview: Jasmin Lörchner Photos: Barozzi Veiga

FORMLINER
Many of your designs are public buildings. What is your approach to public spaces?

ALBERTO VEIGA
For us, the thinking process begins at the outside. We do not start by analyzing the relationship between a building and its use, and then try to develop the form from that. Instead, we think about how the city interacts with the building, and how the building reacts to the city. This results in the question of how we can shape the public space.

The connection between the personal and public spheres is the machine that drives our thinking. Our designs aim to identify its limits: for example, in the concert hall in Poland, where we have a very generous foyer that also functions as a public space. We challenge ourselves to show responsibility through our architecture.

FORMLINER
So the urban setting plays a decisive role in your work?

VEIGA
Yes. We always look at the city first. It is more important than our building. Simply focusing on whether one likes the surroundings of the building or not is the wrong approach. There is no point simply paying attention to which building you dislike, or which structure is more beautiful than your own design. To take the museum in Chur as an example, the Villa Planta and the other surrounding buildings are part of our family. We have to live with them and share the city with them. Our building is part of the city. Our aim is therefore to rediscover the city, and to develop good answers that harmonize as well as possible with the surrounding conditions and circumstances. The best advice for an architect confronted with a complex environment is to respect the city, and to improve it if at all possible. That is the challenge.

FORMLINER
You mentioned Chur, where you planned an extension. Are projects like that harder than stand-alone designs?

VEIGA
In my view, it is more difficult when you have to start from nothing and have no points of reference. Context in the form of an existing building makes starting the work simpler: you can begin a dialogue. In Chur, the villa provoked the question as to what attitude we wanted our building to take. Our response needed to be neither too obtrusive nor too modest. When we were searching for ideas, we were able to respond to the very special context created by the villa. From that perspective, I find it easier when there is a lot of input.

FORMLINER
You work in a team with your office partner Fabrizio Barozzi. How harmonious is your work together as an architectural duo?

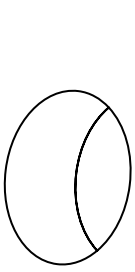
VEIGA
We are not kindred spirits. We continuously have different opinions, despite sharing many common interests. At the start of a new project, it is always a kind of competition between the two of us. Who has the more compelling idea? We have learned to put aside our own interests when we notice that the other has a better proposal. The decisive factor is which design has a better chance of success in the tender process. Then we push together to get the maximum leverage out of the idea. It is very important to us that we have all four hands on the table, to put it colorfully. So we talk a lot of things out. Our partnership is a lot like that of a couple: sometimes everything is perfect, sometimes it is a nightmare, and sometimes we talk for five hours and get nowhere.

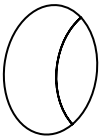
FORMLINER
Do you sometimes take time off to pursue your own ideas?

VEIGA
No, we always plan together. It is true, of course, that we cannot both always play the lead role. But we always discuss and develop the key topics of our work and new projects together. After a certain point in the project supervision, we divide up the roles, simply so we can work more effectively.

FORMLINER
You have been based in Catalonia since 2004. What motivated you to open your office in Barcelona?

VEIGA
From a professional perspective, there was no compelling reason to choose Barcelona as a base. The deciding factor was private developments. But we liked the idea that Barcelona is well connected to European cities. It seemed like a good starting point for our work. Back then, we admittedly had no idea whether we would stay here for a few years or even maybe a whole decade. It seemed a good idea back then – and today, 13 years later, it still does.





BAROZZI VEIGA

Fabrizio Barozzi and Alberto Veiga founded the firm Barozzi Veiga in Barcelona in 2004. The architectural duo is known for strong designs with clear lines and surprising shape effects. They are credited with the headquarters of Ribera del Duero in Roa, Spain, the New Philharmonic concert hall in Szczecin, Poland, the Art Museum in Lausanne, Switzerland, and the Dance Academy in Zurich, Switzerland. Barozzi Veiga have won numerous prizes for their work. In 2015, they won the Mies van der Rohe Prize for Contemporary Architecture.

FORMLINER
Your partner described your office as an »atypical studio« – what did he mean by that?

VEIGA
Normally, young architects start out focusing on small, private projects. Step-by-step the designs get larger, and with them the challenges. That allows the architect to grow with the projects, year by year. In the process, they learn about themselves and what kind of architecture they want to create.

We started out on big designs, right at the start of our career. In 2004, when we founded our office, there were many public invitations to tender in Spain. We immediately dived into that market and submitted designs. That was a challenge of course, both because of the scale and because of the decisions we had to deal with. This had a significant formative effect on us, because we had to engage with these challenges very early on.

Nowadays we also work more frequently on private assignments.

FORMLINER
It must also reflect your different nationalities?

VEIGA
Of course that also plays a role in how our office works. Fabrizio is an Italian, and many of our staff are also other nationalities.

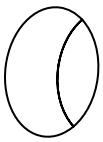
Our common ground is Europe, rather than Spain or Barcelona. This is why it was also easy for us to take projects in Germany or Italy, right from the start, and to consider Europe our workplace.

That was an advantage when the crisis hit Mediterranean countries: we were used to working outside our national borders. It is just another part of the job that we have to fly two or three times a week to attend meetings and supervise projects. For us it was obvious that we should come to the projects, and not vice versa.

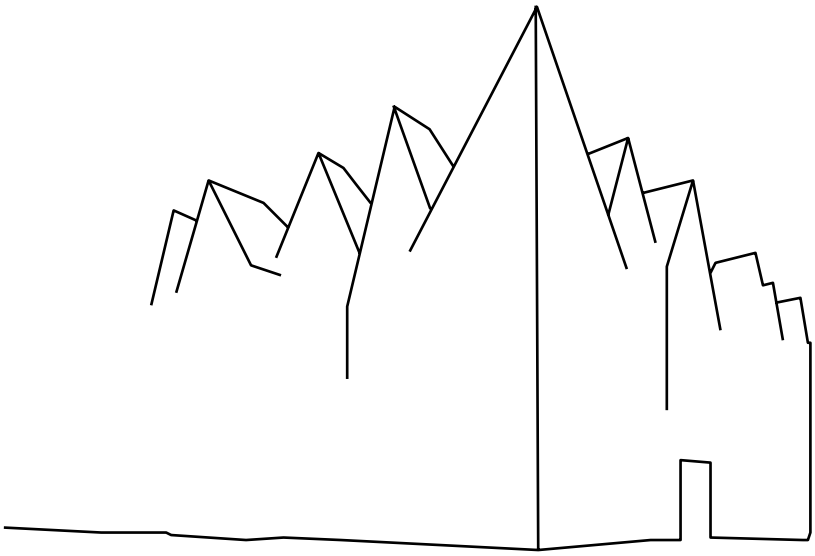
FORMLINER
How do you manage such a heterogeneous working environment?

VEIGA
Fabrizio was educated in Venice, while I studied in Pamplona. This entails different approaches to architecture, but that is something we appreciate. When we met in the south of Spain, we were just desk neighbors in a big architecture firm. After we had decided to found our own firm, we had to work out together what our key themes would be. We had to go on that journey together, so we laid all our cards on the table and talked it out.

That was how we identified our architectural language: simple and expressive. We like to solve a building challenge with a few gestures, not with 100.



Because of our different backgrounds, our discussions are very intensive and real. We love diversity. That is why we have a lot of staff in our office with very different histories and specialisms. This allows us to bring very heterogeneous ideas to the table. We approach these differences with the attitude that we want to discover them together.

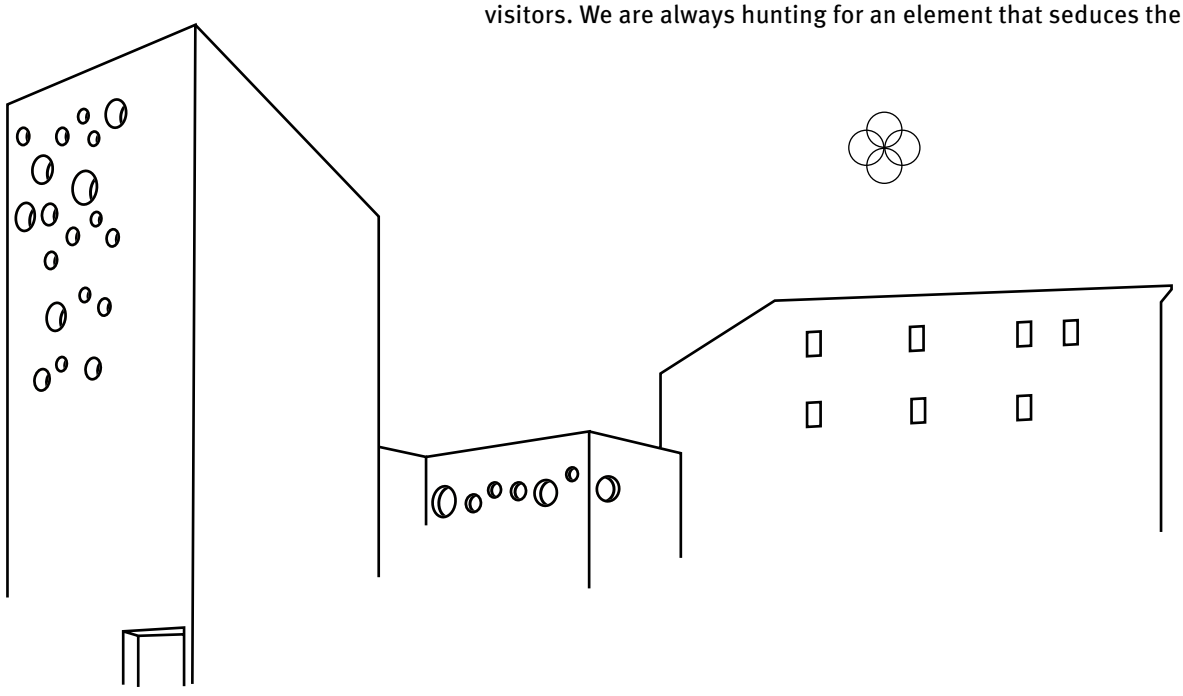


FORMLINER
What does the process look like when developing a new design?

VEIGA
When there is an invitation to tender, the first thing we do is always to visit the construction location. We like to take the time to think about the tender, and to let the location sink in. This is difficult if you have to produce a design in a hurry.
We want to see the location and discover it with our own eyes.

Sometimes we visit the location up to five times, sometimes only once. At the beginning, we try to crank up our imagination as much as possible. So we search for references, for input from the location, and take a close look at the context. The social context always plays a role. We attempt to research and gather information as much as possible without becoming obsessive. At a certain point a vision forms, and then the imagination starts working. Then everything takes its natural course. It just suddenly pops up – sometimes you know exactly what the source is, and sometimes you don't.

The main task of an architect is to seduce people and draw them in. This means the building needs to be sexy, to arouse the interest of the visitors. We are always hunting for an element that seduces the visitor.



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